Exhibit 5

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Confidential Memorandum

To: Srikant Datar
Harvard Business School Dean of the Faculty

From: Teresa Amabile, Investigation Committee Chair
Robert (Bob) Kaplan, Investigation Committee Member
Shawn Cole, Investigation Committee Member

Re: Final Report of Investigation Committee Concerning Allegations against Professor Francesca Gino – Case RI21-001

Date: March 7, 2023

I. EXECUTIVE SUMMARY

After reviewing the available evidence and interviewing Professor Gino and several witnesses, the Investigation Committee has determined, by a preponderance of the evidence, that Professor Gino significantly departed from accepted practices of the relevant research community and committed research misconduct intentionally, knowingly, or recklessly, with regard to all five allegations examined herein. For one allegation, the determination of the Investigation Committee, as described herein, was not unanimous. Examination of each allegation, independently, is presented in the "Investigation Analysis" section of this report (pp. 8-39) and a set of recommendations for institutional actions is included in the "Conclusion and Recommendations" section (pp. 40-41).

II. ALLEGATIONS

Five allegations of research misconduct related to the work of Professor Francesca Gino ("Respondent") were examined as part of case RI21-001. Below are the relevant publications and allegations under consideration:

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Relevant Publications

Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. *Journal of Personality and Social Psychology*, 119(6), 1221–1238 **("*2020 JPSP Paper*")**

Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. *Psychological Science*, 26(7), 983–996 **("*2015 Psychological Science Paper*")**

Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. *Psychological Science*, 25(4), 973–981 **("*2014 Psychological Science Paper*")**

Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. *Proceedings of the National Academy of Sciences of the United States of America*, 109, 15197–15200 **("*2012 PNAS Paper*")**

Allegation 1

Dr. Gino falsified and/or fabricated the dataset for ***Study 3a in the 2020 JPSP Paper*** by altering observations to affect the significance of findings of the study in the hypothesized direction.

Allegation 2

Dr. Gino falsified and/or fabricated portions of the datasets for ***Study 4 in the 2015 Psychological Science Paper*** by altering, adding, or deleting a number of observations. These changes resulted in significant effects supporting the hypotheses, as reported in the published paper. Analyses of the original[1] Qualtrics data do not support the hypotheses.

Allegation 3

Dr. Gino falsified and/or fabricated data within the datasets for ***Study 4 in the 2014 Psychological Science Paper***. In particular:

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[1] In her 2/17/2023 response to the final draft of this Report (Exhibit 29 here), Professor Gino objected to our use of the word "original" when referring to datasets in her Qualtrics account (in Allegations 1 and 2), on her hard drive (in Allegation 3), and provided by her former RA, [redacted] (in Allegation 4b). She contended that "original" implied an unfounded assumption on our part. Although we cannot, at this point, clarify or change our use of that word in the formal allegations, we did change that wording, where appropriate, throughout the rest of this Report.

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- some participant conditions appear to have been switched in a direction that favored the hypothesized and reported results;
- some participants' RAT scores appear to have been altered in a direction favoring the hypothesized and reported results; and
- 13 observations within the cheating condition are out of sort when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found. These 13 observations substantially contribute to the significance of the hypothesized effects.

Allegation 4

With respect to Study 1 in the 2012 PNAS Paper:

a) Dr. Gino falsified and/or fabricated the results by removing or altering parts of the descriptions of study procedures from drafts of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. The original procedure descriptions (subsequently removed or altered by Professor Gino) pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.

b) Dr. Gino falsified and/or fabricated the original[2] dataset by altering a number of observations in a way that favored the hypothesized results.

III. BACKGROUND

The final report of the Inquiry Committee, which was comprised of Professor Teresa Amabile (Chair) and Professor Robert Kaplan, is contained in Exhibit 1.[3] As described more fully therein, allegations of research misconduct against Professor Gino were submitted to the Harvard Business School ("HBS") Research Integrity Officer ("RIO") on October 12, 2021, by a Complainant who wished to remain anonymous. Upon receiving the RIO's preliminary assessment on October 15, 2021, Dean Datar, the HBS Deciding Official, asked the RIO to start an official inquiry into the allegations in accordance with the Harvard Business School's Interim Policy and Procedures for Responding to Allegations of Research Misconduct ("HBS Policy" – Inquiry Report, Exhibit 1). Upon sequestration of Professor

[2] See previous footnote.
[3] The accompanying Exhibits to the Inquiry Report are referenced herein as "Inquiry Report, Exhibit X." All Inquiry Report exhibits can be found as part of Exhibit 1 to this Investigation Report.

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Gino's research records (see Exhibit 2 for a list of the sequestered evidence), the RIO sent a notice of inquiry to Professor Gino on October 27, 2021 (Inquiry Report, Exhibit 2). The inquiry started on November 5, 2021. After reviewing the evidence and conducting interviews with Professor Gino, the Inquiry Committee concluded that an investigation into the allegations was warranted.[4] On April 13, 2022, the Deciding Official accepted the findings, conclusions, and recommendations of the Inquiry Committee, and an investigation was initiated (Exhibit 3).

IV. INVESTIGATION PROCESS

The RIO sent the Respondent a notice of investigation related to allegations of research misconduct on April 15, 2022 (Exhibit 4). Dean Datar proposed appointing Professor Teresa Amabile (Chair), Professor Robert (Bob) Kaplan, and Professor Shawn Cole to the Investigation Committee, pending any objections lodged by the Respondent based upon a proposed Committee member's alleged personal, professional, or financial conflict of interest. Professor Gino had no such objections. Upon confirmation of the Committee members, the official investigation started on May 13, 2022.

Both the Inquiry and the Investigation were conducted in accordance with the HBS Policy, which aligns with the Public Health Services Rule, 42 C.F.R. Part 93, and were administratively staffed by Alain Bonacossa, Research Integrity Officer; John Galvin, Associate Director, Research Administration; Alma Castro, Assistant Director, Research Administration.[5] In addition, third-party forensic experts, Dr. Mary Walsh and Dr. Corinna Raimondo of Maidstone Consulting Group ("MCG"), conducted a forensic analysis for the Committee's review.

The summary table below provides a chronology of the investigation, including the meetings of the Investigation Committee.[6]

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[4] "An investigation is warranted if there is - (1) A reasonable basis for concluding that the allegation falls within the definition of research misconduct under this part and involves PHS supported biomedical or behavioral research, research training or activities related to that research or research training, as provided in § 93.102; and (2) Preliminary information-gathering and preliminary fact-finding from the inquiry indicates that the allegation may have substance." 42 C.F.R. § 93.307.

[5] In addition, a representative from the Harvard University Office of the General Counsel (Heather Quay, J.D.) was available to advise the Committee throughout the proceedings. Professor Gino has been represented in the proceedings by Ms. Sydney Smith Forquer, Associate Attorney with Cohen Seglias Pallas Greenhall & Furman PC.

[6] All meetings were conducted through the Zoom platform unless otherwise stated.

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Event Date	Description
April 15, 2022	Notice of investigation sent to Professor Gino (Exhibit 4).
May 13, 2022	Committee Meeting: • Orientation, review of charge for investigation; • Discussion of requests for external forensic firm, Maidstone Consulting Group ("MCG"); • Discussion of possible list of interviewees; • Request for Professor Gino to: o Produce a list of research associates, doctoral students and anyone else who had or might have had access to the data at any stage related to Allegations 1, 2, 3, and 4b; o Provide a chronology of the publication process for each of the papers under investigation; o Articulate whether paper co-authors had access to the data in any way; o Provide information about when the write-up of Study 1 (Allegation 4a) was first drafted, by whom, and who reviewed that write-up.
May - July, 2022	Professor Gino provided information about the publication process, access to the data, and her collaborators for each of the papers related to the five allegations (Exhibit 5).
June 1, 2022	Committee Meeting: • Preparation for interview with Professor [redacted] (Allegations 1 and 2); • Review of witness interview questions for Allegation 1 and 2; • Discussion of written questions for [redacted] (Allegations 4a and 4b).
June 2, 2022	Interview with Professor [redacted] (Allegations 1 and 2), which was recorded and transcribed. On June 6, 2022, a copy of the transcript was provided to Professor [redacted] for her review, correction and attestation (Exhibit 6).
June 8, 2022	Committee Meeting: • Preparation for interview with Professor [redacted] (Allegation 3); • Review of witness interview questions for Allegation 3; • Review of written questions for [redacted] (Allegations 4a and 4b).
June 9, 2022	Interview with Professor [redacted] (Allegation 3), which was recorded and transcribed. On June 15, 2022, a copy of the transcript was provided to Professor [redacted] for his review, correction and attestation (Exhibit 7).

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June 9, 2022	Committee Meeting: • Review of written questions for [redacted] (Allegations 4a and 4b)
June 13, 2022	Written questions sent to [redacted] (Allegations 4a and 4b). On July 5, 2022, [redacted] notified the RIO that she had decided not to participate in the Investigation.
June 16, 2022	Interview with [redacted] (Allegation 1), which was recorded and transcribed. On June 23, 2022, a copy of the transcript was provided to [redacted] for his review, correction and attestation (Exhibit 8).
June 24, 2022	Committee Meeting: • Preparation for interview with Professor [redacted] (Allegation 2); • Review of witness interview questions for Allegation 2; • Review of draft MCG forensic report on Allegation 1.
June 24, 2022	Interview with Professor [redacted] (Allegation 2), which was recorded and transcribed. On June 29, 2022, a copy of the transcript was provided to Professor [redacted] for his review, correction and attestation (Exhibit 9).
July 22, 2022	Interview with Professor [redacted] (Allegation 1), which was recorded and transcribed. On July 29, 2022, a copy of the transcript was provided to Professor [redacted] for her review, correction and attestation (Exhibit 10).
August 2, 2022	Interview with [redacted] (Allegations 4a and 4b), which was recorded and transcribed. On August 9, 2022, a copy of the transcript was provided to [redacted] for her review, correction and attestation (Exhibit 11).
August 26, 2022	Committee Meeting: • Review of MCG forensic report on Allegations 4a and 4b; • Review written questions for [redacted] and Professor [redacted] (Allegations 4a and 4b); • Discussion of final forensic report by MCG on Allegation 1 (Exhibit 12); • Discussion of questions for Respondent interview related to Allegation 1.
September 30, 2022	Committee Meeting: • Discussion of draft MCG forensic report for Allegation 2; • Discussion of questions for Respondent interview related to Allegation 2; • Preparation for Respondent interview.
September 30, 2022	MCG forensic report for Allegation 1 provided to Professor Gino

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October 3, 2022	Committee Meeting: • Discussion of written responses from [redacted] (received on September 25, 27, and 28, 2022 – see Exhibit 13) about Allegations 4a and 4b.
October 7, 2022	Committee Meeting: • Discussion of written response from Professor [redacted] (received on October 3, 2022 – see Exhibit 14) about Allegations 4a and 4b; • Discussion of final MCG forensic reports for Allegations 4a and 4b (Exhibit 15 and Exhibit 16); • Discussion of questions for Professor Gino's interview related to Allegation 4a and 4b.
October 12, 2022	MCG forensic reports for Allegation 4a and 4b provided to Professor Gino
October 20, 2022	Committee Meeting: • Discussion of final MCG forensic report for Allegation 2 (Exhibit 17); • Discussion of questions for Professor Gino's interview related to Allegation 2, 4a and 4b; • Discussion of revisions to Allegations 1, 2, 4a, and 4b.
October 21, 2022	• Notice of change to Allegations 1, 2, 4a, and 4b sent to Professor Gino (Exhibit 18); • MCG forensic report for Allegation 2 provided to Professor Gino.
October 28, 2022	Committee Meeting: • Discussion of final MCG forensic report for Allegation 3 (Exhibit 19); • Discussion of questions for Professor Gino's interview related to Allegation 3; • Discussion of revisions to language for Allegation 3.
October 29, 2022	Committee Meeting: • Preparation for Respondent interview.
October 31, 2022	• Notice of change to Allegation 3 sent to Respondent (Exhibit 20); • MCG forensic report for Allegation 3 provided to Respondent
November 11, 2022	Written statement from Respondent received (Exhibit 21).
November 13, 2022	Committee Meeting: • Discussion of Respondent's written response to the Committee; • Finalization of Respondent's interview questions.
November 14, 2022	Interview with Respondent, which was recorded and transcribed. On November 17, 2022, a copy of the transcript was provided to Respondent for her review, correction and attestation (Exhibit 22).

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November 19, 2022	Additional information was received from Respondent (Exhibit 23).
November 21 and 28, 2022	Committee Decision Conferences.
December 14, 2022	Draft investigation report provided to Respondent for review and comment.
February 17, 2023	Professor Gino's response to the draft investigation report ("Response") was received and is appended to this report (Exhibit 29).
February 22, 2023	Committee Meeting: • Discussion of changes to the draft investigation report based on Professor Gino's Response.

V. RESPONDENT BACKGROUND

Professor Gino is the Tandon Family Professor of Business Administration at Harvard Business School ("HBS"). She joined the Negotiation, Organizations, and Markets (NOM) unit at HBS as an Associate Professor of Business Administration in 2010 and became a full Professor in 2014. Before joining HBS, Professor Gino was an Assistant Professor of Organizational Behavior at The University of North Carolina, Chapel Hill from 2008-2010. From 2006-2008, Professor Gino was a Visiting Assistant Professor of Organizational Behavior at Carnegie Mellon University and from 2004-2006 she was a Post-Doctoral Fellow in the Technology & Operations Management unit at HBS.

Professor Gino earned a B.A. in Business Economics from the University of Trento in Trento, Italy in 2001. She received her Ph.D. in Economics and Management from the Sant'Anna School of Advanced Studies in Pisa, Italy in 2004.

VI. INVESTIGATION ANALYSIS

As part of this investigation, we conducted interviews with seven individuals, including the Respondent, and have reviewed the evidence relating to the allegations against Professor Gino, including: the sequestered materials, the forensic analyses of the allegations under investigation, interview transcripts with Professor Francesca Gino, Professor [redacted], [redacted], Professor [redacted], Professor [redacted], [redacted], and Professor [redacted], and written responses from [redacted] and Professor [redacted]. We begin this Investigation Analysis by discussing the standard of review we apply to our findings and presenting observations applicable to

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all allegations. Subsequently, we set forth each allegation under investigation, the specific evidence considered for the allegation, and our conclusions.

Investigation Standard of Review

As members of this Committee, we are charged with determining whether Professor Gino committed research misconduct, defined as the "fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results" by both 42 C.F.R. § 93.103 and the HBS Policy (Inquiry Report, Exhibit 1). Pursuant to the HBS Policy, a finding of research misconduct requires that: (a) there be a significant departure from accepted practices of the relevant research community; (b) the respondent committed the research misconduct intentionally, knowingly, or recklessly; and (c) the allegation be proven by a preponderance of the evidence. (Inquiry Report, Exhibit 1). The HBS Policy further explains that the Respondent "has the burden of proving, by a preponderance of the evidence, any and all affirmative defenses raised (such as honest error)" (Inquiry Report, Exhibit 1). We conducted our Investigation in accordance with both the federal standard and the HBS Policy.

General Observations Concerning All Testimony and the Respondent's Credibility

In this section, we discuss factors relevant to our decision-making across all four studies at issue in the five allegations, including Professor Gino's own explanation for the evidence of data anomalies and discrepancies in four of the five allegations.

We acknowledge, and we took seriously in our decision-making, statements by all witnesses that they never doubted the integrity of the data in the study or studies in question. One witness who knew Professor Gino well said they never doubted her integrity in any way. In addition, several exhibits appended by Professor Gino to her Response (Exhibit 29) contained messages to her from co-authors, colleagues, and former doctoral students expressing their admiration for her research rigor and integrity. The witnesses we interviewed also said that they had no evidence that Professor Gino had ever pressured colleagues, doctoral students, post-docs, or research associates, including themselves, to produce particular results in a study, or that Professor Gino had created a negative atmosphere in her lab. Moreover, some witnesses spontaneously said that they had worked on multiple studies with Professor Gino that were never published because the studies didn't work out. We carefully considered all these statements, but did not find them germane to the specific allegations before us or a plausible explanation of data anomalies or discrepancies.

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Throughout this process, and across the allegations, Professor Gino offered two primary explanations in defense of her assertion that she did not commit any research misconduct.[7] The first is honest error. As we will detail in the sections addressing specific data anomalies and discrepancies, Professor Gino suggests that her RAs may have made errors in data coding, checking, or cleaning. She says that, if such errors occurred, she takes full responsibility because she was the PI ultimately responsible for supervising the research in her lab. However, she does not provide any evidence of RA error that we find persuasive in explaining the major anomalies and discrepancies. In addition, for Allegation 4a, she says that she, herself, may have made honest errors in early drafts of the relevant manuscript before it was first submitted for publication. We will discuss this possibility in detail in the section on that specific allegation.

Professor Gino's second primary explanation is that someone other than herself tampered with the data. Four of the five allegations involve anomalies and/or discrepancies within or between study datasets accessed from one or more of the following sources: the Open Science Framework ("OSF") website, where publicly available versions of study data can be posted by researchers; the sequestered hard drive of Professor Gino's computer; Professor Gino's Qualtrics account; and the RA who collected the data. Professor Gino maintains that she never altered or falsified research data for any of the four studies, or any other study that she has conducted in her career. She states that the data she analyzed for publication were, to the best of her knowledge, the true, valid data that were collected for each study cited in the allegations. However, she does not question or convincingly explain any of the analyses, data anomalies, or data discrepancies described in the forensic reports.

Professor Gino offered only one potential explanation for the data discrepancies described in Allegations 1, 2, and 4b: one or more persons who had access to her computer, Qualtrics account, and/or data files altered copies of data in those locations, after the studies were published and data had been posted on OSF, in a malicious effort to plant false evidence of data manipulation. Professor Gino described this possibility first in her November 11, 2022 memo to the Committee, and subsequently in the

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[7] In her Response, Professor Gino offers some additional defenses, which we consider irrelevant to the heart of the allegations: (1) that, if "one were to engage in data manipulation, it would make little sense" (Exhibit 29 at p. 15) to do it in such an obvious manner as is evident in some of the allegations; (2) that testimony from RAs [redacted] and [redacted] should be disregarded because they could not accurately recall certain details of their work for her; (3) that it's unsurprising that witnesses could not explain data anomalies presented to them in interviews; and (4) that, as is evident in several emails from colleagues, she has often abandoned projects because the data didn't reveal significant/interpretable effects.

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interview on November 14, 2022. She asserted that an unknown actor with malicious intentions was a more plausible explanation than honest errors or intentional data falsification by herself, or by research associates at the time the studies were conducted, because: (a) she knows that she never falsified data; and (b) she is confident that her training and supervision of research associates renders such errors or falsifications exceedingly unlikely. She named Professor [redacted], a collaborator on several research projects, as the person she believed most likely to be such an actor.

Professor Gino indicated that, for most of her career, she routinely and frequently shared her computer and Qualtrics account login credentials with collaborators, research associates, doctoral students, and lab staff, and that she had not changed her Qualtrics password for 12 years, until October 2022—giving many people the means to commit the manipulations. In November 2022, in support of this assertion, Professor Gino provided a list of seven emails she sent to seven different individuals, in 2015, 2016, and 2018, in which she shared her credentials; none of those individuals is a collaborator, RA, or doctoral student named in this report. In her Response of February 2023, she provided emails from one RA ([redacted]) and two Faculty Support Specialists ([redacted] and [redacted]) who had previously worked for her, stating that she had shared her Qualtrics login credentials with RAs, doctoral students, collaborators, and the FSSs themselves, using email and oral communication; aside from [redacted], [redacted], and [redacted], no names of people who had the login credentials were shared. In addition, in February 2023, she provided letters from collaborators and former doctoral students confirming that she had sometimes worked with them on research by sitting together, side by side, as they collaborated on data analysis or writing on her laptop or theirs. By providing evidence of this type of physical collaboration, and in describing it in her interview of November 2022, Professor Gino implies (but does not directly state) that a malicious actor could have accessed her hard drive, unbeknownst to her, and tampered with the data in Allegation 3, the only study for which the data can be found only on her hard drive.

Professor Gino suggested that Professor [redacted] is the most likely actor with malicious intentions, saying that Professor [redacted] had both the means – access to Professor Gino's Qualtrics account – and the motive – being angry at Professor Gino for not sufficiently defending Professor [redacted] against perceived attacks by another co-author concerning the field experiment in the 2012 PNAS paper. Although we have no evidence that Professor [redacted] actually had Professor Gino's login credentials, we believe it is possible that she may have had them and, thus, the means to enter Professor Gino's Qualtrics account, undetected, at any time from the creation of that account in 2010 or 2011 until Professor Gino changed her Qualtrics password in October 2022. As evidence of motive on the part of Professor [redacted] Professor Gino

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provided in her Response (Exhibit 29) a large volume of email correspondence among the co-authors of her 2012 PNAS paper (the subject of Allegations 4a and 4b), and among the co-authors of a 2020 PNAS paper that failed to replicate the 2012 paper (a group that included all five of the co-authors of the original 2012 paper). That correspondence indicated some tension, disagreement, and harsh feelings among those five co-authors, but no tension or harsh feeling (that we could detect) between Professors [redacted] and Gino specifically.

In her November 14, 2022 interview with us (Exhibit 22), and also in her Response (Exhibit 29), Professor Gino describes a remark that Professor [redacted] made to her on June 28, 2019 during a private conversation at a conference: "During this conversation, [redacted] expressed to me her anger and disappointment that I had not done more to support her [against perceived attacks by co-author [redacted]]. It was during this conversation that [redacted] said to me that she wished I 'would suffer as much as she did'" (Response, Exhibit 29 at p. 21). On p. 22 of the Response, Professor Gino described this remark as a "threat," and said that she told HBS colleague Professor [redacted] of this threat on August 15, 2021. A letter that Professor Gino solicited from Professor [redacted], corroborating this account, is appended as Exhibit 1 to the Response. While we can believe that this unpleasant remark was, indeed, made by Professor [redacted] we do not view it as a clear threat. Even if it were a clear threat, we recognize that words do not equate to action. Moreover, based on the available evidence, we do not believe that any negative feelings that Professor [redacted] may have had toward Professor Gino were sufficiently strong to motivate the extreme and extensive degree of data falsification observed across the four studies at issue in the present allegations (including a study in a paper on which [redacted] was a co-author).

Professor Gino's Response (Exhibit 29) also included a series of audiotaped and transcribed statements from former HBS doctoral student [redacted]. These statements, responses to questions that Professor Gino had asked about their work together in general and, specifically, about the failure-to-replicate project that resulted in the 2020 PNAS paper, were offered to support Professor Gino's speculation that the malicious actor could be Professor [redacted] In our view, although [redacted]'s replies describe considerable tension among the more senior co-authors of the 2020 PNAS paper ([redacted]), they do not provide evidence of specific hostility on the part of Professor [redacted] toward Professor Gino. Therefore, given the evidence before us, we do not see a plausible motive for Professor [redacted] to have committed research misconduct by falsifying Professor Gino's data. In her Response, Professor Gino also suggests that that there might have been one or more other, unknown,

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individuals, besides Professor [redacted] with both means and motive to plant false data in order to harm her. However, she offers no evidence of such other actors or their possible actions.

In her interview of November 14, 2022, Professor Gino also mentioned "the Data Colada team"[8] and [redacted] as individuals who might have acted with malicious intentions. [redacted] was Professor Gino's lab manager at the University of North Carolina, Chapel Hill at the time Study 1 in the 2012 PNAS paper was being conducted, and it was [redacted] who provided the data files for that study to the Committee in May 2022 – data files that subsequent forensic analysis showed to be highly discrepant with the dataset publicly posted for that study. In the interview, Professor Gino implied that the data files provided to us may have been altered before being sent. In support of these speculations, Professor Gino said that: (a) the Data Colada team members were friendly with Professor [redacted]; and (b) [redacted] had become friendly with Professor [redacted] when [redacted] served as research associate for Professor [redacted] at Duke University, after leaving UNC, on projects that included collaborative work between [redacted] and [redacted] Ultimately, however, in all of these statements, Professor Gino's explanation focused on Professor [redacted] as the sole or initiating bad actor.

In evaluating the malicious-actor explanation, we note that: (1) Professor Gino has not claimed that the Data Colada team or [redacted] had direct access to her Qualtrics account or to her HBS laptop; (2) speculations about [redacted] pertain only to one data-falsification allegation (Allegation 4b), and not to the other three; (3) to be responsible for the data falsifications in all four of the data-related allegations, the malicious actor(s) would have needed access to Professor Gino's Qualtrics account (Allegations 1 and 2) and HBS laptop (Allegation 3), and to [redacted] or the dataset held by [redacted] (Allegation 4b); and (4) the malicious actor theory cannot explain the anomalies in the OSF data sets.

Although we acknowledge that the theory of a malicious actor might be remotely possible, we do not find it plausible, for several reasons. First, Professor Gino has provided no evidence that anyone accessed her Qualtrics account or her computer's hard drive for the purposes of falsifying data at any time, or that [redacted] falsified the Study 1 data used in the 2012 PNAS paper or allowed it to be falsified. We acknowledge that such evidence would be very difficult to obtain. However, Professor Gino proposes this theory as one of her two primary affirmative defenses against the allegations (the other being honest

[8] The "Data Colada" team refers to three academics (Simonsohn, Nelson, and Simmons) who maintain a blog (datacolada.org) that publishes short posts that "involve quantitative analyses, replications, and/or discussions of interest to at least three behavioral scientists."

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error) and, according to the HBS policy on research integrity, she bears the burden of proof for such an affirmative defense by showing that her explanation meets the preponderance of the evidence standard.

Second, although we do not doubt that she shared her login credentials with multiple collaborators, doctoral students, and RAs, we have no evidence that Professor [redacted] her prime suspect, had any of her login credentials or access to her laptop.

Third, in order to falsify data across all four studies' records, actors with malicious intentions would have needed the following: First, they would have needed access to **both** Professor Gino's Qualtrics accounts **and** her computer's hard drive, as two allegations (1 and 2) involve discrepancies in Qualtrics data and one allegation (3) involves discrepancies in the computer's data. Second, with respect to the fourth data-relevant allegation (4b), actors with malicious intentions would have needed access either to [redacted] personal computer or to [redacted] herself; if the latter, they would have needed the ability to convince [redacted] to collude with them in falsifying data, and the ability to either instruct her in how to falsify the data or obtain the data from her, falsify it, and then return it to her before she forwarded it to us in May 2022 (accomplishing all of this in the relatively short timeframe – one week – between our request for [redacted] records from this study and her submission of those records).

Furthermore, actors with malicious intentions would have needed a significant amount of time, most likely over a very long period of time, and the ability to find multiple relevant versions of datasets in various locations that had idiosyncratic file names, structures, and variable names across the projects. They would also have needed great expertise to make changes to eliminate significant effects on the dependent variables and/or to change condition assignments, while leaving remaining data intact. In order to cause the intended harm and avoid discovery, they would have needed to time their data manipulation carefully, after Professor Gino had accessed and analyzed the data for each study. For hard drive data manipulation, in addition to Professor Gino's HBS login information, they would have needed access to her second "factor," probably her cell phone, in HBS's two-factor authentication system, which was implemented at HBS in 2015. (Notably, before this time, passwords were required to be changed annually, meaning that a bad actor would have had to learn Professor Gino's log-in credentials for the particular year that they accessed the hard drive data cited in Allegation 3.)

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Finally, actors with malicious intentions also would have had to somehow plant anomalies in the publicly-available datasets for these allegations[9] – anomalies sufficient to raise the suspicions of the Complainant who initially brought these allegations to HBS and to motivate the Complainant to do the extensive work documented in the Complainant's memo. In this scenario, the malicious actors, after planting the anomalies, could have alerted the Complainant to look for the planted anomalies or served as the Complainant themselves.

Additional information was useful to us in assessing Professor Gino's speculation about data falsification with respect to allegation 4b. As we have noted, [redacted] provided the data files that the forensic experts compared to the publicly posted version, revealing data discrepancies. Those data files did not come from Professor Gino's Qualtrics account or her computer's hard drive, so the question of unauthorized access to those locations is moot for this allegation. Above, we addressed the possibility that other individuals with malicious intent falsified the data by accessing [redacted]'s computer without her knowledge or convinced [redacted] to either send them the data for falsification or falsify the data herself, following their instructions. However, Professor Gino's explanation also suggests that [redacted] on her own initiative, could have falsified the data. We find this possibility highly implausible. [redacted]'s online information indicates that she holds [redacted] and that she has had no involvement in academic research since she ended her research associate work in 2012. In our interview with her, [redacted] revealed a lack of knowledge about the basics of experimental design and statistical analysis; [redacted] herself said as much in her witness testimony. We think it extremely unlikely that [redacted] had the statistical and methodological expertise necessary to falsify data such that significant effects were eliminated while remaining data were left intact. We found her to be a credible witness and do not believe that she had a motive to falsify data or to participate in data falsification. We also find it exceedingly unlikely that actors with malicious intentions would have gained unauthorized, undetected access to [redacted]'s computer or accounts in order to introduce discrepancies in the data files that she later provided to the Investigation Committee.

To reiterate, Professor Gino presented no evidence of any data falsification actions by actors with malicious intentions. She offered only speculation that one or more such actors were responsible for the

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[9] The publicly available datasets for Allegations 1, 2, and 4b are on OSF. The dataset for Allegation 3 is not on OSF, but was provided by Professor Gino to a number of faculty members and doctoral students at U.C. Berkeley and HBS (as documented in the Response, Exhibit 29) and is, thus, publicly available in a more limited fashion.

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data anomalies and discrepancies at issue in the allegations. We note that such acts, had they occurred, would themselves constitute research misconduct. Moreover, either accessing her laptop and falsifying data on the hard drive, or communicating with [redacted] for the purpose of falsifying data, would carry a high risk of discovery, followed by severe consequences for the individuals responsible. In light of this, and considering what would have been required to successfully plant false data, as Professor Gino suggests happened, we find the "bad actor" explanation highly implausible. Moreover, our investigation revealed that Professor Gino was the only person involved in all four studies. Thus, with respect to this affirmative defense, we conclude that the Respondent, Professor Gino, has not fulfilled "the burden of proving, by a preponderance of the evidence, any and all affirmative defenses raised (such as honest error)" as required by the HBS Policy (Inquiry Report, Exhibit 1). Moreover, Professor Gino's repeated and strenuous argument for a scenario of data falsification by bad actors across four different studies, an argument we find to be highly implausible, leads us to doubt the credibility of her written and oral statements to this Committee more generally.

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Allegation 1

Dr. Gino falsified and/or fabricated the dataset for *Study 3a in the 2020 JPSP Paper* by altering observations to affect the significance of findings of the study in the hypothesized direction.

Finding of Fact for Allegation 1

In order to evaluate this allegation, the Investigation Committee considered the following evidence: a) a description of the data anomalies identified by the Complainant in the Open Science Framework ("OSF") dataset available to the public (Inquiry Report, Exhibit 3); b) the Inquiry Committee's own analysis of the dataset from Professor Gino's Qualtrics account and the dataset available on OSF (Inquiry Report, Exhibit 4); c) witness testimony by Professor Gino's co-authors on the 2020 JPSP paper, Professor [redacted] and Professor [redacted] as well as testimony by Professor Gino's HBS research associate at the time the data were being collected and analyzed, [redacted] (see interview transcripts in Exhibits 6, 10, and 8, respectively); d) email records found on Professor Gino's sequestered hard drive (Exhibit 24); and e) MCG's forensic report detailing discrepancies between the Qualtrics dataset and the OSF dataset (Exhibit 12). A description of the referenced evidence is provided below and appended as exhibits to this report.

In their written response to the Inquiry Committee, the Complainant identified 79 anomalous observations wherein higher ratings of felt moral impurity were paired with positive descriptors of the networking event, all of which were in the prevention-focus condition, and 9 anomalous observations wherein the lowest possible ratings of felt moral impurity (all 1s) were paired with negative descriptors of the networking event, 7 of which were in the promotion-focus condition (Inquiry Report, Exhibit 3, pp. 9-14). All but 2 of these 88 anomalous observations favored the hypothesized effects. In addition, the Inquiry Committee performed its own comparison of the dataset from Professor Gino's Qualtrics account with the publicly posted dataset on OSF, which revealed that the means of the experimental conditions are directionally opposite in the two datasets. An initial analysis by the Inquiry Committee of a small sample of otherwise identical rows of data showed large discrepancies between the two datasets in the numerical ratings of moral impurity feelings, with the numbers in the OSF dataset all strongly favoring the hypothesized and reported effects (Inquiry Report, Exhibit 4, pp. 8-11).

The Investigation Committee separately interviewed each of Professor Gino's co-authors on this paper, Professor [redacted] and Professor [redacted] and found both of them to be credible. The two co-

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authors expressed surprise at the data discrepancies displayed during their interviews, discrepancies that had been identified by the forensic analysts. Neither of the co-author witnesses had explanations for the discrepancies. In addition, each co-author stated that Professor Gino was responsible for the data collection and analyses for Study 3a, that they, personally, had neither access to the data nor any involvement in analyzing the data, and that they were unaware of anyone besides Professor Gino having access to the data. The Investigation Committee also interviewed [redacted] Professor Gino's RA at the time of data collection for these studies, and found him to be a credible witness. In his testimony, [redacted] indicated that he didn't use Professor Gino's Qualtrics account or have her computer's login credentials, and that he didn't perform any data cleaning beyond simple checking for bot responses or incomplete responses for this study. He also indicated that he didn't analyze the data for this study and didn't know what the hypotheses for this study were.

Email correspondence between Professor Gino and [redacted] appeared to indicate that [redacted] did not have access to the Qualtrics survey data. In addition, emails from Professor Gino to [redacted] suggested that Professor Gino created the Qualtrics survey and posted it online. Lastly, upon studying the email records closely, the Investigation Committee concluded that, in some of his interview responses (specifically, his responses about coding participant essays), [redacted] was actually recalling his involvement in the very similar Study 3b in the same paper, not Study 3a (the subject of this allegation).

The Investigation Committee closely examined the forensic report produced by Maidstone Consulting Group for this allegation. The forensic analysis, which compared the dataset retrieved from Professor Gino's Qualtrics account with the dataset posted on OSF, revealed a large number of discrepancies in both dependent variable measures in the two experimental conditions, all of which favored the hypothesized and reported effects, and an absence of any discrepancies in the control condition. Overall, 168 surveys in the promotion-focus and prevention-focus conditions, accounting for 28% of the total data for Study 3a, had discrepancies between the Qualtrics dataset and the publicly available dataset posted on OSF that favored the hypothesized and reported results. (See pp. 8-16. in Exhibit 12.)

Professor Gino's Response for Allegation 1

In her November 11, 2022 memorandum to the Investigation Committee and during her November 14, 2022 interview with the committee (see Exhibits 21 and 22, respectively), Professor Gino responded to the evidence of data anomalies by stating that she never falsified or fabricated any data. She

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speculated that an actor with malicious intentions to "hurt" her, an actor with whom she may have shared her login information in the past, may have altered the Study 3a data directly in her Qualtrics account, after the paper was published and the dataset posted on OSF. She reiterated this theory in her Response (Exhibit 29). The Investigation Committee did not find this theory to be plausible for the reasons articulated in the "General Observations Concerning All Testimony and the Respondent's Credibility" section of this report.

In her Response, Professor Gino included several other statements and materials in defense against this allegation. The Investigation Committee carefully considered and discussed these statements and materials, but did not find any of them to be persuasive.[10]

Conclusion for Allegation 1

By a preponderance of the evidence, the Investigation Committee finds that Professor Gino intentionally, knowingly, or recklessly falsified and/or fabricated the dataset for Study 3a in the 2020 JPSP Paper by altering observations to affect the findings of the study in the hypothesized direction. Accordingly, we find Professor Gino responsible for research misconduct with respect to Allegation 1.

[10] In brief, Professor Gino: (1) stated that she wasn't placing a high priority on publishing this paper (irrelevant to data anomalies and discrepancies; also, we have removed from this Report language suggesting she desired publishing the results); (2) stated that she often exchanged data with RAs using flash drives (irrelevant); (3) reiterated her statements in 2022 that it is unsurprising that some participants' words don't match their numerical ratings (irrelevant); (4) stated that she did not have access to the data files used or analyses done by MCG (inaccurate; she received those along with the MCG report); (5) stated that a co-author on this paper, Professor [redacted], had access to her Qualtrics account (no evidence of this provided); and (6) questioned this Report's statement that email correspondence between her and RA [redacted] appears to indicate that he did not have access to the Qualtrics survey data for this study (such evidence appears in her emails of January 7, 2020 and January 14, 2020).

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Allegation 2

Dr. Gino falsified and/or fabricated portions of the datasets for *Study 4 in the 2015 Psychological Science Paper* by altering, adding, or deleting a number of observations. These changes resulted in significant effects supporting the hypotheses, as reported in the published paper. Analyses of the original Qualtrics data do not support the hypotheses.

Finding of Fact for Allegation 2

In order to evaluate this allegation, the Investigation Committee considered the following evidence: a) a description of the data anomalies identified by the Complainant in the Open Science Framework ("OSF") dataset available to the public (Inquiry Report, Exhibit 3); b) the Inquiry Committee's replication of the anomalies identified by the Complainant (Inquiry Report, Exhibit 4) and its identification of other anomalies; c) witness testimony by Professor Gino's co-authors on the 2015 *Psychological Science* paper, Professor [redacted] and Professor [redacted] (see interview transcripts in Exhibits 6 and 9, respectively); and d) MCG's forensic report detailing discrepancies between the two datasets for this study in Professor Gino's Qualtrics account and the OSF dataset (Exhibit 17). A description of the referenced evidence is provided below and appended as exhibits to this report.

In their written response to the Inquiry Committee, the Complainant identified 20 lines of data that had "Harvard" as the response to the "Year in School" question in this study and showed that these observations strongly support the hypothesized and reported effects (see Inquiry Report, Exhibit 3, pp. 6-8). The Inquiry Committee replicated the anomalies identified by the Complainant by conducting its own comparison of the datasets from Professor Gino's Qualtrics account and the publicly posted dataset on OSF. In addition, the Inquiry Committee found that some participants who appeared in the datasets from Professor Gino's sequestered hard drive were not in the OSF dataset and that some participants who appeared in the OSF dataset were not in the datasets from Professor Gino's sequestered hard drive (Inquiry Report, Exhibit 4, pp. 16-17). Building on the analyses conducted by the Inquiry Committee, the Investigation Committee noted four additional peculiar features of the 24 lines of data that had "Harvard"

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as the response for "Year in school" in the Respondent's Qualtrics datasets for this study."[11] First, the text (essay) responses are much shorter than almost all the others. Second, these responses were submitted on three specific dates: September 28, 2014, October 1, 2014 and October 2, 2014, all towards the end of the study's data collection period. Third, almost all the other participants provided a Harvard email address, but none of the 24 participants who responded with "Harvard" as "Year in school" provided a Harvard email address. Fourth, almost all the other participants provided a Harvard ID, but none of the 24 participants who responded with "Harvard" as "Year in school" did so.

The Investigation Committee separately interviewed each of Professor Gino's co-authors on this paper, Professor [redacted] and Professor [redacted] and found both of them to be credible. Neither of these co-author witnesses had compelling explanations for the discrepancies identified at Inquiry. (The forensic report on Allegation 2 was not complete at the time of these two interviews, so these witnesses could not be shown the discrepancies identified therein.) In addition, each of these co-authors stated that Professor Gino was responsible for the data collection and analyses for Study 4, and each stated that they did not have access to the data or any involvement in analyzing them.

The Investigation Committee closely examined the forensic report produced by Maidstone Consulting Group for this allegation. MCG compared the publicly available data posted on OSF with the datasets for this study found in Professor Gino's Qualtrics account. This analysis showed that some data in the OSF dataset do not appear in either of the two Qualtrics datasets for this study, that those data strongly support the hypothesized and reported results, and that some data in the two Qualtrics datasets do not appear in the OSF dataset. In addition, when the analyses reported in the published paper were run on the data from Professor Gino's Qualtrics account, the key result – that participants in the pro-attitudinal condition expressed significantly lower desirability of cleaning products – failed to replicate. (See pp. 9-14 in Exhibit 17.)

Professor Gino's Response for Allegation 2

In her November 11, 2022 memorandum to the Investigation Committee and during her November 14, 2022 interview with the committee (see Exhibits 21 and 22, respectively), Professor Gino asserted that she never falsified or fabricated any data, and speculated that an actor with malicious

[11] The "ONLINE data" tab from MCG0022_Allegation 2_Alldata.xlsx contains 24 entries where the year in school is reported as "Harvard" or "harvard."

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intentions to "hurt" her, an actor with whom she may have shared her login information in the past, may have altered the data collected for this study directly in her Qualtrics account, after the paper was published and the dataset posted on OSF. She reiterated this theory in her Response (Exhibit 29). The Investigation Committee did not find this theory to be plausible, for the reasons articulated in the "General Observations Concerning All Testimony and the Respondent's Credibility" section of this report.

In her Response, Professor Gino included several other statements and materials in defense against this allegation. The Investigation Committee carefully considered and discussed these statements and materials but did not find any of them to be persuasive.[12]

Conclusion for Allegation 2

By a preponderance of the evidence, the Investigation Committee finds that Professor Gino intentionally, knowingly, or recklessly falsified and/or fabricated portions of the datasets by altering, adding, or deleting a number of observations in a way that favored the hypothesized and reported results. Accordingly, we find Professor Gino responsible for research misconduct with respect to Allegation 2.

[12] In brief, Professor Gino: (1) stated that many different RAs and CLER Lab staff helped with this study (irrelevant to the substance of this allegation); (2) provided an email from an RA on this study, stating that some participants weren't following instructions about entering the computer ID number (irrelevant to the Committee's finding that data for the people who did not enter a Harvard ID number – as the vast majority of participants did – strongly supported the hypothesized and reported results); and (3) provided an "Explanation of data anomalies" section (pp. 13-15) that fails to address two key MCG findings: first, that a number of observations in the OSF dataset could not be found in the Qualtrics datasets, and these observations strongly supported the hypothesized and reported results; and, second, that the MCG analyses conducted on the combined Qualtrics datasets revealed that the key reported result was no longer significant.

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Allegation 3

Dr. Gino falsified and/or fabricated data within the datasets for *Study 4 in the 2014 Psychological Science Paper*. In particular:

- **some participant conditions appear to have been switched in a direction that favored the hypothesized and reported results;**
- **some participants' RAT scores appear to have been altered in a direction favoring the hypothesized and reported results; and**
- **13 observations within the cheating condition are out of sort when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found. These 13 observations substantially contribute to the significance of the hypothesized effects.**

Finding of Fact for Allegation 3

In order to evaluate this allegation, the Investigation Committee considered the following evidence: a) a description of the data anomalies identified by the Complainant in the dataset that the Complainant had received "from a researcher who had years ago obtained it from Professor Gino" (Inquiry Report, Exhibit 3, p. 15), a dataset that was not provided to the Committee; b) the Inquiry Committee's replication of the anomalies identified by the Complainant (Inquiry Report, Exhibit 4), using a dataset found on Professor Gino's computer; c) witness testimony by Professor Gino's co-author on the 2014 Psychological Science paper, Professor [redacted] (see interview transcript in Exhibit 7); and d) MCG's forensic report detailing an apparent series of manipulations to the dataset for this study prior to its publication (Exhibit 19), based on examination of the two datasets for this study found on Professor Gino's computer. (Although the data for this study were presumably collected using Qualtrics, no such data file could be found in Professor Gino's Qualtrics account.) A description of the referenced evidence is provided below and appended as exhibits to this report.

In their written response to the Inquiry Committee, the Complainant identified 13 observations within the cheating condition that are out of sort when the dataset is sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found. These observations substantially contribute to the significance of the hypothesized and reported effects (Inquiry Report, Exhibit 3, pp. 15-18). In addition, the Inquiry Committee replicated the anomalies identified by the Complainant by conducting its own comparison and analysis of the dataset from Professor Gino's

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sequestered hard drive. It found that the mean "#Responses" score of "in-sequence" observations in the cheating condition was 7.5, while the mean "# Responses" score of "out-of-sequence" observations was much higher, at 10.1. When the Committee made an adjustment, similar to that made by the Complainant, by replacing an out-of-sequence entry in the "#Responses" column with an adjacent "in sequence" score, the mean score of respondents in the Cheating condition decreased from 8.3 to 7.0, greatly closing the gap to the mean score of 6.5 for Honest respondents (see p. 23 in Exhibit 4 of the inquiry report).

The Investigation Committee interviewed Professor Gino's co-author on this paper, Professor [redacted], and found him to be a credible witness. Professor [redacted] was puzzled by the data anomalies displayed during his interview; he tried to come up with benign explanations for how those patterns might have come about, but noted that the possibilities he generated were "unlikely." In addition, he stated that he never had access to the data and that he wasn't involved in writing up the method or findings sections for this study.

The Investigation Committee closely examined the forensic report produced by Maidstone Consulting Group for this allegation. This analysis revealed three anomalies in the earliest versions of the data available in Professor Gino's sequestered hard drive (see pp. 6-10 in Exhibit 19): a) In the 2012 dataset, 12 lines of data had grey highlighting in the "cheat" column. These 12 participants' conditions seemed to have been manually switched, after data collection, from the non-cheating to the cheating condition; all 12 had scores on the RAT (the creativity test) above the mid-point, thus favoring the hypothesized and reported results. The grey highlighting in the 2012 dataset was absent in the 2014 dataset; b) In the 2012 dataset, 4 lines of data in the "cheat" condition had grey highlighting (highlighting also absent in the 2014 dataset), and those 4 participants' scores on the RAT appeared to have been manually entered rather than being computed values. The apparently manually-entered values did not derive from underlying data in any discernible way. Importantly, all these values were much higher than the values that would have resulted from application of the computation formula, in a direction that supported the hypothesized and reported results; and c) recalculation of the statistical analysis of differences between conditions, using the original condition assignments and the original RAT scores (using the underlying data) apparent in the 2012 dataset, revealed that the key RAT creativity result for this study, as reported in the published paper, disappeared. In fact, recomputed means revealed the reverse: non-cheaters scored higher on the RAT than cheaters did.

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Professor Gino's Response for Allegation 3

In her November 11, 2022 memorandum to the Investigation Committee and during her November 14, 2022 interview with the Committee (see Exhibits 21 and 22, respectively), Professor Gino asserted that she never falsified or fabricated any data and speculated that either (a) an actor with malicious intentions to "hurt" her, an actor with whom she may have shared her login information in the past, may have altered the data collected for this study directly in her personal computer, after the paper was published, or (b) her RAs may have made errors, which she couldn't ascertain without access to the raw data in Qualtrics. (As noted earlier, the raw data for this study cannot be found in her Qualtrics account.) The Investigation Committee did not find the first of these theories to be plausible, for the reasons articulated in the "General Observations Concerning All Testimony and Respondent's Credibility" section of this report. Moreover, the Investigation Committee did not find the second of these theories to be plausible, given the nature of the forensic evidence.

Professor Gino's Response (Exhibit 29) reiterated the defenses described above. In addition, she argued that apparent discrepancies between the 2012 and 2014 datasets on her computer, and the anomalies noted by the Complainant, may have resulted not from malicious tampering with her datasets or RA error but, rather, from perfectly appropriate data source merging, data cleaning, and manual data coding and data entry. Professor Gino maintains that, without Qualtrics datasets for this study, it's impossible to ascertain whether the available datasets contain actual anomalies and discrepancies. However, she fails to address the findings by MCG that all of the apparent alterations in the 2012 dataset favor the hypothesized and reported results, and that analyses using the 2012 dataset, with the apparently original condition assignments and calculations based on raw RAT data, fail to replicate the reported RAT results.

In her Response (Exhibit 29), Professor Gino included several other statements and materials in defense against this allegation. The Investigation Committee carefully considered and discussed these statements and materials, but did not find any of them to be persuasive.[13]

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[13] In brief, Professor Gino: (1) asserted on p. 8 of the Response that, the MCG report on this allegation, at p. 2, concluded that "without the original data, no conclusion of research misconduct can be made" (a gross misstatement of what the Executive Summary of that report actually says); (2) described having shared the 2014 dataset freely for use in a doctoral "journal club" at UC Berkeley and a doctoral course at HBS, stating that no irregularities were identified by the doctoral students (irrelevant to this allegation); and (3) stated that the inability of her co-author

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Conclusion for Allegation 3

By a preponderance of the evidence, the Investigation Committee finds that Professor Gino intentionally, knowingly, or recklessly falsified and/or fabricated data within the dataset on her hard drive by altering a number of observations in a way that favored the hypothesized results. Accordingly, we find Professor Gino responsible for research misconduct with respect to Allegation 3.

([redacted] to provide an adequate explanation of apparent anomalies is not, in itself, evidence of research misconduct (irrelevant; although the Committee asked Prof. [redacted] if he could explain the anomalies to make sure we had not overlooked a possible explanation for them, the Committee did not rely on his failure to provide an explanation in reaching its finding).

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Allegation 4a

With respect to *Study 1 in the 2012 PNAS Paper:*
Dr. Gino falsified and/or fabricated the results by removing or altering parts of the descriptions of study procedures from drafts of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. The original procedure descriptions (subsequently removed or altered by Professor Gino) pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.

Finding of Fact for Allegation 4a

In order to evaluate this allegation, the Investigation Committee considered the following evidence: a) the Inquiry Committee's initial analysis of the available evidence from Professor Gino's sequestered hard drive outlined in a memorandum to Professor Gino dated January 24, 2022 (Inquiry Report, Exhibit 5); b) oral and written testimony by Professor Gino's lab manager at the time the data were collected, [redacted], and written testimony by Professor Gino's co-author on the 2012 *PNAS* paper, Professor [redacted] (see Exhibits 11, Exhibit 13, and Exhibit 14, respectively); the Investigation Committee also reached out to the first author of this paper, [redacted] who decided not to participate in the process after receiving the Committee's written questions; c) email records found on Professor Gino's sequestered hard drive (Exhibit 25); d) MCG's forensic report detailing multiple modifications to the content of the manuscript as it went through drafting and revision in the period of February 2011 through May 2011, before its initial journal submission in May 2011 (Exhibit 15); and (e) the Investigation Committee's own assessment of the manuscript changes during that period, with particular focus on **descriptions of participants' payment for performance, collection of the dependent variable measure, and the purpose of the collection slip** (Exhibit 26 and Exhibit 27). A description of the referenced evidence is provided below and appended as exhibits to this report.

The Inquiry Committee's initial analysis of this allegation identified two specific issues, having to do with: (1) a potential procedural flaw related to the timing of the collection of a dependent variable – specifically, that participants' self-report of their puzzle performance (and their opportunity to cheat on that self-report) might have occurred before the independent variable (seeing the tax form, which required signing at the top or the bottom) was manipulated; and (2) the description of the study's procedure in the

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published article, which could be seen as ambiguous or potentially misleading about the timing of this dependent variable (see Exhibit 5 in the inquiry report).

The study in question was conducted in Professor Gino's lab at the University of North Carolina, Chapel Hill (UNC) in the summer of 2010, a summer during which she transitioned from her faculty appointment at UNC to her faculty appointment at Harvard Business School. The Investigation Committee interviewed [redacted], who was Professor Gino's UNC lab manager at the time this study was conducted. We found [redacted] to be a credible witness. In her testimony, [redacted] indicated that, other than helping Professor Gino with her submissions to the UNC IRB, she was never involved with any write-up of the procedure for any study. She also indicated that she was never involved in data analysis for any of the studies conducted in the lab. She told the Committee that her duties focused primarily on the precise implementation of each study, collecting data according to Professor Gino's directives. [redacted] stated that, to the best of her knowledge and recollection, for every study that she ran for Professor Gino, it was Professor Gino (along with, possibly, her study co-authors) who was responsible for the overall conceptualization and design of the study. [redacted] also asserted that, as a regular practice, she executed the data collection for a study in line with the description of the study procedure as submitted to the UNC IRB, even though, at that time at UNC, small tweaks were usually allowed without requiring an IRB modification to a previously-approved protocol. Due to the passage of time since data collection in 2010 and the large number of similar studies she conducted or supervised at UNC, [redacted] could not confirm with certainty whether one or two experimenters conducted Study 1; whether she, herself, was an experimenter for this study (or whether, as lab manager, she supervised one or more other RAs conducting the study); whether participants were paid only once or twice (i.e., only in room 2 or in both room 1 and room 2); or whether changes were made to the study materials after IRB approval. She made clear, however, that she always executed a study precisely according to the instructions provided to her by Professor Gino. [redacted] also said that, in examining the available materials from Professor Gino's sequestered hard drive (which we displayed during our interview with her), it appeared to her that participants may have calculated and reported their puzzle performance, and received payment for it from the experimenter, in room 1, before being exposed to the tax form (which contained the experimental manipulation) in room 2.

The Investigation Committee closely examined the forensic report produced by Maidstone Consulting Group for this allegation (Exhibit 15). Based on that report and its own close review of the manuscript versions, the Committee summarized and analyzed the key changes to the descriptions of the

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three central, inter-related elements of the Study 1 procedure (participants' payment for performance, collection of the dependent variable measure of cheating on the self-report of performance, and the purpose of the collection slip) across different versions of the manuscript (Exhibit 26). This analysis revealed the following:

1. Versions dated 2011-02-23 and 2011-03-08: The earliest drafts of the manuscript described the dependent variable of self-reported matrix puzzle performance as derived from the collection slip, which participants filled out in room 1, and on the basis of which participants were paid for puzzle performance before being given the tax form that contained the independent variable manipulation (signature required on the top or the bottom). This is the way the procedure was laid out in the IRB application, and it's the way the procedure was described in the first draft of the manuscript, dated February 23, 2011.That description survived, basically intact, through revisions of the manuscript by [redacted] and Professor [redacted] in early March 2011. In the March 8, 2011, revision, [redacted] added a clear and explicit statement that the cheating dependent variable was the difference between actual performance on the matrix sheet and the self-report on the collection slip.

2. Version dated 2011-03-09: In a comment inserted in the March 9, 2011 version, and also in the body of the email to which it was attached, Professor [redacted] raised concerns about whether the dependent variable of cheating on puzzle performance self-report had been collected before the independent variable (the tax form) was introduced.

3. Version dated 2011-03-15: On the next version of the manuscript, dated March 15, 2011, Professor Gino made four key alterations:

    a. First, Professor Gino deleted the material that [redacted] had added to the manuscript on March 8, which had explicitly stated that the source of the dependent variable of cheating on the puzzle performance self-report was the self-report made on the collection slip in room 1.

    b. Second, Professor Gino added a section called "Opportunity to cheat." This section explicitly stated that the puzzle performance dependent variable came from the self-report that participants made on the tax form (which was also referred to as the "payment form") in room 2.

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c. Third, in the new "Opportunity to cheat" section, Professor Gino included a sentence relevant to a change she later made to the April 5th revision. That sentence explicitly stated that participants received payment after completing the matrix task and before seeing the tax form (or "payment form"). ("When participants received payment **after completing the first part of the study** [emphasis added], the experimenter gave them a payment form and asked each participant to go to a second room to fill it out…", p. 12).

d. Fourth, Professor Gino made another change that was also relevant to her subsequent edits to the April 5th revision. She added a phrase explicitly stating that participants were told to submit their collection slip to the experimenter in room 1 "so that she could check their work and give them payment."

4. Version dated 2011-04-05: Professor Gino's April 5, 2011 revision of the manuscript contained new alterations. Specifically, she removed all mention of participants being paid in room 1 (statements she had previously inserted, see 3c and 3d above, in her March 15 revision). These deletions appear to have been prompted by comments Professor [redacted] inserted to the April 4 version, which, again, raised concerns about participants' self-reporting of their puzzle performance on the collection slip and being paid for that performance before they saw the tax form.

This analysis shows that Professor Gino's own written statements about the procedure, added to the manuscript in the March 15, 2011 revision, conflict meaningfully with the published version of the paper. The published paper does not mention any payment to participants until the very end of the study, and it explicitly states that the only purpose of the collection slip was "for the participants themselves to learn how many puzzles in total they had solved correctly" (p. 15199). Moreover, the published paper contains this statement about the dependent variable: *"*All of the instructions and dependent measures appeared on one page to ensure that participants knew from the outset that a signature would be required.*"* (p. 15199).

The Investigation Committee considered Professor [redacted]'s written response to a series of questions the Committee submitted to her on October 3, 2022 (Exhibit 14). Professor [redacted] responded that she joined the project in January 2011, upon receiving an invitation from Professor Gino and that, to the best of her knowledge, Professor Gino, Professor [redacted] (a tenured professor at Harvard Business School), and HBS doctoral student [redacted] were involved in the study, with the two professors supervising or leading its conceptualization and design. Professor [redacted] responded, multiple times, that

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she had no direct, first-hand knowledge of how Study 1 had been carried out. She noted that, among all the study materials, she initially had access only to three tax forms embedded in the first draft of the manuscript that Professor Gino shared with her collaborators on February 23, 2011. She also indicated that she did not see or have access to additional study materials until September 16, 2018, when [redacted], then a doctoral student at HBS, embarked on a replication of Study 1 from the original PNAS paper. (In drafting this report, we assumed that [redacted] had obtained those materials from Professor Gino, because Professor [redacted] stated that some of them matched materials from Professor Gino's sequestered hard drive, which we had attached to our written questions. This was confirmed by the audio replies (previously described) sent by [redacted] to Professor Gino in February 2023 (see Exhibit 2 to Professor Gino's Response (Exhibit 29).) Professor [redacted] described questions that both she and [redacted] had about discrepancies between those materials and specifics of the procedure for Experiment 1 as described in the 2012 *PNAS* paper, questions specifically about the number, location, and timing of payments to participants. She also described conversations that the two of them had during September-November 2018 trying to resolve those discrepancies. According to Professor [redacted] she asked [redacted] to "check with Professor Gino and confirm which of the two procedures (i.e., payment in room 1 or in room 2) was implemented" (Exhibit 14, p. 6). Professor [redacted] stated that, a few weeks later, [redacted] sent "updated materials," which "suggested that the payment happened in room 2 only and that the DV was the matrixes solved as reported on the tax form" (Exhibit 14, p. 6); these materials fit the procedure description of Experiment 1 as published in 2012. Professor [redacted]'s account of interactions between herself and [redacted] in the Fall of 2018 is close to that provided by [redacted], with a key difference: [redacted] does not mention a specific perceived discrepancy or confusion about the number, location, and/or timing of payments to participants.

With respect to the Committee's questions about changes to the description of the study procedure across different drafts of the manuscript, Professor [redacted]'s responses closely match the Committee's own analysis, presented above (Exhibit 14, pp. 7-16). Professor [redacted] indicated that, to the best of her knowledge, none of the other co-authors commented on the concerns she had raised about the puzzle self-report dependent variable on March 9, 2011 and April 4, 2011, and that, given how her concerns were addressed in 2011 and in 2018, when the replication study was conducted, she was under the impression that the April 5, 2011 version of the manuscript accurately described the study procedure for experiment 1. Recently, however, the Committee noticed that one other co-author had, indeed, expressed a concern about collection of the dependent variable. Specifically, in an email to the co-author team dated March 6, 2011 (see Exhibit 14, p. 8), co-author [redacted] stated (after his first reading of

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the manuscript), "In multiple lab studies, we need to clarify how we know when someone cheats - I couldn't find that in the paper…this may be my error."

Professor Gino's Response for Allegation 4a

In both the Inquiry Committee and Investigation Committee proceedings, Professor Gino acknowledged that paying participants for their matrix puzzle performance on the basis of their self-reported performance to the experimenter in room 1, before they saw the tax form, would have represented a serious flaw in the procedure and invalidated the results for that dependent variable. In her November 11, 2022, memorandum to the Investigation Committee, during her November 14, 2022, interview, and in an email to the Committee dated November 19, 2022 (see Exhibits 21, 22, and 23 respectively), Professor Gino affirmed her confidence in the description of the study procedure as it appears in the published paper and asserted that she has never written anything in her publications with the intention to mislead. She indicated that the revisions she made to the manuscript, at each stage, were aimed at improving the accuracy and clarity of the procedure description. Moreover, she suggested that her changes to the April 5, 2011 version probably reflected what she understood the study procedure to be based on a conversation she would have had with [redacted] to clarify exactly what procedure had been used during data collection in July 2010. She also stated that it is possible that, in the first draft of the manuscript, she may have copied a study procedure from a previous, similar study, thereby introducing inaccuracies; she noted that, typically, she doesn't pay much attention to the procedure descriptions in early drafts of her manuscripts. In addition, Professor Gino argued that the UNC IRB application detailing the study procedure, which was on her sequestered hard drive, may not represent how Study 1 was actually run, since it was common to obtain IRB approval with a broad description of the study procedure and stimuli and to make small tweaks after approval without submitting a modification to the IRB to amend the originally approved protocol. ([redacted] said essentially the same thing about the IRB.) Finally, Professor Gino pointed out (and provided evidence in the form of an email in May 2011 from first author [redacted]) that different versions of the manuscript were exchanged in rapid succession among the co-authors of the paper and that the forensic analyses performed by MCG and the Committee may have erroneously assumed linearity across versions – that is, that each version took the previous one into proper consideration and improved on it.

The Investigation Committee carefully evaluated these possible explanations as it struggled to make sense of the key procedural issue concerning the validity of the dependent variable measure of cheating on self-reported puzzle performance: specifically, when, where, and how participants self-

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reported their puzzle performance to the experimenter. The Committee also struggled with two additional findings that emerged from available evidence. First, as shown in the MCG forensic report on allegation 4b, it appears that, in the data provided by [redacted] there *is* a significant difference on the matrix cheating measure between the sign-at-top and the sign-at-bottom conditions, with more cheating in the sign-at-bottom condition (see forensic report in Exhibit 16, pp. 12 and 14). The Committee discussed how that measure could show a significant effect, if collection of that dependent variable (self-report of puzzle performance for payment) had occurred before manipulation of the independent variable (location of the signature on the tax form). Second, the Committee noted that, as documented in the MCG forensic report for allegation 4a, if participants had been paid in room 1 for puzzle performance, and then again in room 2, those with claimed expense deductions that were lower than the tax due – 20 or 22 participants (depending on the dataset used) – would have owed money back to the experimenter in room 2 (see forensic report in Exhibit 15, p. 9). According to the Committee's calculations on the OSF data set, 20 of the participants would have owed money; two of these would have owed more than $1 ($1.60 and $2.40). [redacted] indicated that she has no memory of ever asking for money back from participants during her time as a lab manager at UNC, nor does she recall an experiment where several participants owed money back at the end of the experiment. Moreover, both Professor Gino and [redacted] argued that it is implausible that an experimenter would demand money back from participants at the end of an experiment. The Committee similarly finds this implausible. However, as noted below, the Committee has evidence from [redacted]'s testimony suggesting that participants could have both owed money at the end of the experiment and been allowed to leave with the money they had already received.

In her Response (Exhibit 29), Professor Gino reiterated the explanations she had given in November 2022, again highlighting the implausibility of so many participants owing the experimenter money at the end of the experiment. In addition, she provided materials to support her earlier defense of possible honest error on her part in the earlier drafts of the Study 1 procedure section of the manuscript. Specifically, in her Exhibit 5, she provided passages of procedure sections from several earlier papers she had published with studies using the same matrix task. Her described purpose in providing these passages was to support her supposition that, in her haste to prepare the early drafts in 2011, she might have simply copied a procedure section from a previous manuscript and inserted it into this manuscript. We found this possibility, as well as her statement that she rarely pays close attention to the procedure sections of manuscripts until they near the final version, to be quite plausible. However, we did not find wording in the passages provided to us to be sufficiently close to the actual wording inserted in the February and March 2011 drafts to support her explanation of a hasty copy-and-paste writing process.

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In her Response, Professor Gino also proposed a different form of honest error on her part as an explanation for the manuscript changes, namely that, in her haste to prepare the first draft, she might not have paid close attention to what she wrote in the procedure section, intending to fix it in later drafts. This explanation, too, seemed plausible at face value. However, it became less plausible to us as we considered the specific nature of the revisions made to the procedure section of Study 1 in the March 15 and April 5, 2011 versions of the manuscript.

In her Response (Exhibit 29), Professor Gino included several other statements and materials in defense against this allegation. The Investigation Committee carefully considered and discussed these statements and materials, but did not find any of them to be persuasive.[14]

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[14] In brief, Professor Gino: (1) attempted to undermine the testimony of Professor [redacted] (irrelevant, because we based our decision-making primarily on our analysis of February-May 2011 versions of the manuscript, which Professor [redacted]'s testimony merely confirmed); (2) questioned Professor [redacted]'s stance on the Study 1 procedure, for example, on p. 31 of the Response, Professor Gino stated, "I find it really puzzling that [redacted] agreed to conduct a direct replication using language and a procedure she apparently had issues with. Or that she agreed to replicate a study that may have used a different procedure, without raising this concern." (This is based on a false assumption, because Professor [redacted] never said, in her testimony or her emails in evidence, that she doubted the procedure in Study 1 as it appeared in the published paper. In fact, on p. 14 of her written testimony to us, Professor [redacted] said, "Given how my comments/concerns about Experiment 1's procedure were handled in 2011 and 2018, I have been under the impression that the sentences you have noted in the screenshots below more or less accurately describe the procedure of Experiment 1." Those screenshots were of the April 5, 2011 version of the manuscript, which were substantively the same in the final, published paper.); (3) asserted, on p. 31 of the Response, that neither she nor we have the final, approved version of the IRB for Study 1 (speculative, as Professor Gino has produced no evidence that what we found on her hard drive is *not* the final, approved version.); (4) asserted, on p. 32 of the Response, that she may have inserted inaccuracies into the March 15 and April 5, 2011 versions of the manuscript because she was distracted by her duties as a new faculty member at HBS, and teaching at HBS for the first time (implausible, as she proactively inserted changes that we view as serious misstatements); (5) asserted, also on p. 32 of the Response, that Professor [redacted]'s concerns about the procedure, raised in her comment in and email about the March 9, 2011 version of the manuscript, "did not seem like such a serious question about the procedure" (implausible, because a researcher with Professor Gino's experience should have understood a question about the validity of one of the two dependent variables to be serious); (6) asserted that [redacted]'s audio replies to her questions, and the fact that the 2020 direct replication study followed the procedure as described in the procedure section of Study 1 in the 2012 paper, including the same tax form, are evidence that the true Study 1 procedure was, in fact, as it was published in 2012 (circular reasoning, because all of the information [redacted] had about Study 1, which she and Professor [redacted] used to develop the materials and RA instructions for running the 2020 replication study, came from Professor Gino. The procedures of the 2020 direct replication study are irrelevant to this investigation.); (7) reported on p. 4 of the Response that when she contacted her former RA, [redacted], about the Study 1 procedure in 2019, [redacted] did not "raise any doubt about the validity of the studies or the procedures used." (irrelevant, given the passage of 9 years since the study had been conducted, the many similar studies that [redacted] had run or supervised, and the Committee's observation that [redacted] didn't possess sufficient knowledge of experimental design to have raised validity concerns at any point.); (8) asserted on pp. 3-4 of the Response that the Committee misinterpreted the past-tense wording of "payment you received" on the tax form as evidence that participants may have been paid for puzzle performance before seeing the tax form, based on the fact that neither [redacted] nor the 2020 replication

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The Investigation Committee struggled to reconcile Professor Gino's explanations, and the two puzzling pieces of evidence described above, with the rest of the available evidence presented herein, evidence that seemed to point to an intentional obfuscation of the actual study procedure by Professor Gino over manuscript versions and in the final publication. Ultimately, after considerable deliberation, the Investigation Committee was split as to whether a finding of research misconduct was warranted for this allegation. One Committee member felt that the burden of proof by a preponderance of the evidence standard was not met, primarily because of the significant difference found between the two experimental conditions in the MCG analysis of [redacted]'s dataset, and because of the implausibility that [redacted] would have no memory of an experiment with such an unusual situation as 20 or more participants owing money at the end of their sessions.

The other two Committee members were persuaded that research misconduct occurred, based on the following factors: a) The step-by-step experimental procedure outlined in the IRB document, and other study materials found on Professor Gino's sequestered hard drive, contradict the published paper in ways that go beyond small tweaks; b) Even if Professor Gino had copied a study procedure from a previous, similar study and pasted it into the new, first-draft document for this experiment, there is no explanation for why she proactively would have made subsequent revisions to the procedure description,

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RAs nor any 2020 co-authors nor (according to Professor Gino) the editor and reviewers of the 2012 and 2020 papers ever "had that misinterpretation" about the past-tense wording (inaccurate characterization of what [redacted] says; [redacted] (in her reply #4, p. 46 of Exhibit 29) – in our view, the person most likely to have noticed this wording because she was responsible for preparing study materials for the replication – says "I didn't notice it [the past-tense wording]," possibly because the print was so small, and she further says that the past-tense wording wasn't right and should be corrected in future studies. Thus, we reason that the failure of all these people to raise a concern about the past-tense wording could simply indicate that they hadn't noticed it.); (9) asserted on pp. 5-6 of the Response that the Committee inappropriately used as evidence the materials on her hard drive that were in a folder that she had previously indicated contained the materials for Study 1 ("Tax study") with "created" dates of spring-summer 2010. (unfounded, because she never provided the Committee with other files created in 2010 that, according to her, are the correct materials used in Study 1. Moreover, [redacted] provided some of those same files, identified as files for that study; they were attached to 2010 emails from Professor Gino to her, which she shared with the Committee.); and (10) noted (correctly) that the Committee relied primarily on the February-May 2011 versions of the manuscript that were found on her hard drive, and asserted that such reliance was inappropriate because there may have been other versions of the manuscript. Professor Gino further stated that the Committee assumed linearity of the versions, and provided some evidence (an email from [redacted] to the co-author team in May 2011) indicating that the versions being exchanged among co-authors may not have been purely linear, and that (as noted in the MCG report) there could have been other, non-email communications among the co-authors that could constitute important evidence (possible, but not material to our conclusions on this allegation. Upon our request for all versions of this manuscript as it was being prepared for first journal submission, Professor [redacted] provided us with the same documents found on Professor Gino's hard drive. Moreover, Professor Gino failed to provide any other versions of the manuscript or explain how a non-linearity of versions being exchanged among co-authors, or other communications that the co-authors may have had, could affect the observations we made about the changes made by Professor Gino in chronologically sequential versions.)

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on both March 15 and April 5, that were also inaccurate, as these subsequent modifications go to the heart of experimental methodology (i.e., the requirement that the independent variable manipulation must occur before the dependent variable is measured) and, moreover, Professor Gino provided no evidence of a prior manuscript with the procedural wording close to that found in the first draft of the manuscript; c) Professor Gino suggested that she probably didn't talk to [redacted] to clear up the procedure until after her March 15th revision, which seems unlikely, given that Professor [redacted] raised serious questions about the procedure on March 9 (i.e., Professor [redacted] described her concern about the dependent variable at the beginning of her brief March 9th email to co-authors and also described it in a comment within the document); d) Given that Professor Gino's major changes to the aspect of the procedure description at issue (i.e., payment for the puzzle task based on the collection slip submitted to the experimenter in room 1) occurred in the revisions that she made on March 15 and April 5 – in each case, immediately following the versions in which Professor [redacted] had raised questions about that aspect (see March 9 and April 4 emails in Exhibit 25) – it is plausible that Professor Gino made changes to drafts of the manuscript in order to obscure the problem with the dependent variable collection that Professor [redacted] had detected; e) It is possible that the significant effect detected by MCG on the cheating measure in the dataset provided by Ms. [redacted] may be accounted for by some other, unidentified variable or factor, or by chance; and f) In her testimony, [redacted] indicated that, on the rare occasions when a participant in the UNC lab was mistakenly paid more money than they were due in an experiment, the experimenter in charge would not request money back from them but would instead simply let them keep what they had received. We thus believe it is possible that, in this study, with the relatively small amounts of money that were owed, the experimenters allowed participants with lower expenses than taxes to keep the money already received.

Conclusion for Allegation 4a

By a preponderance of the evidence, a majority of the Investigation Committee find that Professor Gino intentionally, knowingly, or recklessly falsified and/or fabricated the results by removing or altering parts of the descriptions of study procedures from drafts of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. Accordingly, we find Professor Gino responsible for research misconduct with respect to Allegation 4a.

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Allegation 4b

With respect to Study 1 in the 2012 PNAS Paper:
Dr. Gino falsified and/or fabricated the original dataset by altering a number of observations in a way that favored the hypothesized results.

Finding of Fact for Allegation 4b

In order to evaluate this allegation, the Investigation Committee considered the following evidence: a) a description of the data anomalies identified by the Complainant in the Open Science Framework ("OSF") dataset available to the public (Inquiry Report, Exhibit 3); b) the Inquiry Committee's replication of the anomalies identified by the Complainant (Inquiry Report, Exhibit 4); c) oral testimony by Professor Gino's lab manager at the time the data were collected, [redacted] and written testimony by Professor Gino's co-author on the 2012 *PNAS* paper, Professor [redacted] (see Exhibits 11 and Exhibit 14, respectively) (the first author of this paper, [redacted] decided not to participate in the process after receiving written questions from the Committee); and d) MCG's forensic report detailing discrepancies between the datasets provided by [redacted] and the OSF dataset (Exhibit 16). A description of the referenced evidence is provided below and appended as exhibits to this report.

In their written response to the Inquiry Committee, the Complainant identified 8 out-of-sort observations, including 1 duplicate observation, when the dataset is sorted by participants' condition assignment and by participant ID. The Complainant's analysis illustrated a strong directionality to the 8 anomalous responses, in the direction of the hypothesized effect (Inquiry Report, Exhibit 3, pp. 2-5). The Inquiry Committee replicated the anomalies identified by the Complainant by conducting its own comparison and analysis of the dataset from Professor Gino's sequestered hard drive. It found that when the anomalous observations were removed from the dataset, the mean score on travel expenses (one of the dependent measures of cheating) of the "Signature at Top" condition increased from 5.3 to 6.0, and the mean score of the "Signature at Bottom" condition decreased from 9.6 to 8.4. The adjustment reduced the difference between the two groups in a direction opposite to that of the authors' hypothesis (see p. 27 in Exhibit 4 of the inquiry report).

The Investigation Committee interviewed [redacted] Professor Gino's lab manager at the time, who oversaw the data collection for this study at the University of North Carolina, Chapel Hill. [redacted] asserted that she conducted the data collection under the direction and supervision of Professor Gino, following standard lab practices at the time, and that she emailed the raw data to Professor Gino upon

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completion of the data collection (see email correspondence in Exhibit 28). [redacted] also indicated that she did not have knowledge of the study hypotheses and that she was not involved in the analyses of the data, because she did not have the required statistical and methodological expertise. [redacted] also stated that she never felt pressured by Professor Gino to produce certain results in a study, and never doubted Professor Gino's integrity. The Investigation Committee also submitted written questions to Professor [redacted] In her written responses to these questions, Professor [redacted] indicated that she was not a collaborator on this project at the time the data for this study were being collected and analyzed, as she and Professor [redacted] joined the project as collaborators at a later time. Professor [redacted] also indicated she did not have access to the data and was not involved in the data analyses for this study. Professor Gino's testimony agrees with these statements about Professor [redacted]'s involvement. The Investigation Committee found the information provided by both [redacted] and Professor [redacted] to be credible.

The Investigation Committee closely examined the forensic report produced by Maidstone Consulting Group for this allegation (Exhibit 16). MCG compared the dataset provided by [redacted] with the dataset posted on OSF, and carried out the same analyses on both. This analysis revealed a large number of discrepancies between the two datasets. Two types of discrepancies are particularly notable: first, 6 participants' condition assignments differed in the two datasets and, second, 52% of the participants that could be confidently matched had data that were different in the two datasets, with no clearly identified reason for the discrepancies. All but one of these discrepancies favor the hypothesized and reported effects. Moreover, the forensic report pointed to differences in the statistical results for both dependent variables that contradict the published paper (see Exhibit 16, pp. 6-15).

Professor Gino's Response for Allegation 4b

In her November 11, 2022 memorandum to the Investigation Committee and during her November 14, 2022 interview with the Committee (see Exhibits 21 and 22, respectively), Professor Gino asserted that she never falsified or fabricated any data; she suggested that [redacted] may have falsified the dataset prior to sending it to the HBS RIO as part of these proceedings, possibly under the influence of Professor [redacted] whom Professor Gino speculated might be a bad actor with intentions to "hurt" her. The Investigation Committee did not find this theory to be plausible for the reasons articulated in the "General Observations Concerning All Testimony and Respondent's Credibility" section of this report.

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In her Response (Exhibit 29), Professor Gino included several other statements and materials in defense against this allegation. The Investigation Committee carefully considered and discussed these statements and materials, but did not find any of them to be persuasive.[15]

Conclusion for Allegation 4b

By a preponderance of the evidence, the Investigation Committee finds that Professor Gino intentionally, knowingly, or recklessly falsified and/or fabricated the dataset by altering a number of observations in a way that favored the hypothesized results. Accordingly, we find Professor Gino responsible for research misconduct with respect to Allegation 4b.

[15] In brief, Professor Gino: (1) stated on p. 6 of the Response that "Allegation 4b claims that I altered a number of observations in the data (8 of them)" (inaccurate, because the final wording of the allegation, which she received before the draft Report was provided to her in mid-December 2022, says that "a number of observations" were altered, without specifying a number. The MCG report reveals that over 50% of participants' data were altered.); (2) described in great detail her whereabouts in the summer of 2010 and whether/when she met with [redacted] to discuss Study 1, including a meeting with [redacted] on July 19, 2010 in order to, in Professor Gino's words, "make sure the data were accurate" (p. 6) (this information is largely irrelevant to our finding of research misconduct, except the information about the purpose of her July 19 meeting with [redacted], which in fact bolsters our confidence in the accuracy of the dataset that [redacted] had in her possession.); (3) asserted on p. 7 of the Response that she was never in favor of retracting the 2012 paper because she "did not believe the data had anomalies of any sort" (irrelevant to the substance of this allegation); (4) asserted on p. 7 and elsewhere in the Response that she has "walked away from" many research projects in her career, where she had doubts about the study or the data, and provided letters from collaborators, in Exhibits 10 and 11, to support her statement (accurate but irrelevant to the substance of this allegation); (5) addressed on pp. 7-8 of the Response the data anomalies noted by the Complainant (irrelevant: in our conclusions on Allegation 4b, we do not rely primarily on the Complainant's report or the anomalies it reports, but instead we rely primarily on the anomalies found by MCG and documented extensively in its report; Professor Gino fails to address those anomalies in her section on "Explaining the Data Anomalies for Allegation 4b" (pp. 7-8) or, indeed, anywhere else in her Response.)

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VII. CONCLUSION AND RECOMMENDATIONS

On the basis of the evidence gathered and evaluated by the Investigation Committee, the Committee concludes that Professor Gino has engaged in multiple instances of research misconduct, across all four studies at issue in these allegations. Because the papers reporting these studies span eight years in their publication dates, with different co-authors, in different journals, assisted by different lab personnel, and out of different home institutions for Professor Gino, the Committee is concerned about other possible instances of research misconduct in Professor Gino's studies.

Recognizing that integrity in scholarship and research is one of HBS's fundamental values, the Investigation Committee recommends the following institutional actions in response to its finding of multiple instances of research misconduct by Professor Gino.

1. Correction of the scientific record. We recommend that HBS contact the editors of each of the three journals that published the papers containing the four studies in question, to notify them that the School has found reasons to question the validity of the study or studies, and to suggest that appropriate steps be taken to retract the papers (or, in the case of the paper that has already been retracted, to suggest that other appropriate steps be taken).

2. An audit of Professor Gino's publications. We recommend that HBS conduct an audit of other published empirical studies by Professor Gino, beyond the four studies at issue in these allegations.

3. Consideration of Responsible Conduct of Research (RCR) training for the HBS faculty, doctoral students, and other research staff. We recommend that HBS consider the development and implementation of an RCR training program designed specifically for the HBS research community. RCR training is currently required at the University level for research using federal funds, and implementing an RCR training program specific to HBS would provide the HBS community with appropriate education and guidance with respect to the requirements and best practices related to research integrity, data management and planning, and mentorship.

4. Inclusion of this matter in any reference letters for Professor Gino. We recommend that any letters of reference, support, or recommendation provided for Professor Gino by HBS include the Committee's finding that she committed research misconduct.

5. Other institutional actions. The HBS Policy provides for a range of potential other administrative actions, including "probation, suspension, leave without pay, salary reduction, or initiation

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of steps leading to rank reduction or termination of employment" for those found to have committed research misconduct. The Investigation Committee believes that the severity of the research misconduct that Professor Gino has committed calls for appropriately severe institutional action, and so we recommend that the Deciding Official consider placing Professor Gino immediately on an unpaid leave and initiating steps leading to termination of employment.

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Exhibit 1
Inquiry Report

HARVARD | BUSINESS | SCHOOL

Confidential Memorandum

To: Srikant Datar
Harvard Business School Dean of the Faculty

From: Teresa Amabile, Chair - Inquiry Committee
Robert (Bob) Kaplan, Inquiry Committee Member

Re: Report of Inquiry Committee Concerning Allegations against Dr. Francesca Gino – Case RI21-001

Date: April 8, 2022

I. INTRODUCTION

The following is the report of an inquiry committee (the "Committee") established to examine four allegations of research misconduct reported to HBS related to the work of Dr. Francesca Gino ("Respondent") in case RI21-001. Below are the relevant publications and allegations:

Relevant Publications

Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. *Journal of Personality and Social Psychology*, 119(6), 1221–1238 ("*2020 JPSP Paper*")

Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. *Psychological Science*, 26(7), 983–996 ("*2015 Psychological Science Paper*")

Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. *Psychological Science*, 25(4), 973–981 ("*2014 Psychological Science Paper*")

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Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. *Proceedings of the National Academy of Sciences of the United States of America*, 109, 15197–15200 ("*2012 PNAS Paper*")

Allegation 1

Dr. Gino falsified and/or fabricated the dataset for ***Study 3a in the 2020 JPSP Paper*** by altering observations to affect the significance of findings of the study in the hypothesized direction. In particular:

- In the promotion-focus condition, by changing extreme values of "7" to "1" to drive the expected effect. Specifically, for 9 observations there seems to be a mismatch between participants' impurity ratings and the words participants chose to describe how they felt;
- In the prevention-focus condition, by changing some values of "1" to either "2" or "3" to drive the expected effect. A number of observations also show a mismatch between participants' impurity ratings and the words participants chose to describe how they felt.

Allegation 2

Dr. Gino falsified and/or fabricated the datasets for ***Study 4 in the 2015 Psychological Science Paper*** by altering a number of observations. Notably, 20 observations substantially contribute to the significance of the hypothesized effects, and these same 20 observations presented an anomalous response pattern, in which study participants seemingly entered "Harvard" as their response to a question asking them to indicate "Year in School," in contrast to the vast majority of research participants who correctly answered this question.

Allegation 3

Dr. Gino falsified and/or fabricated the datasets for ***Study 4 in the 2014 Psychological Science Paper*** by altering a number of observations. In particular, when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found, it appears there are 13 observations out of sort within the cheating condition. These observations substantially contribute to the significance of the hypothesized effects. When these observations are corrected with the values implied by the sort, the effect in the expected direction is no longer significant (from $p=.0003$ to $p>.17$).

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Allegation 4

With respect to ***Study 1 in the 2012 PNAS Paper:***

a) Dr. Gino falsified and/or fabricated the results by removing part of the description of study instructions to research participants from a draft of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. Such instructions pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.

b) Dr. Gino falsified and/or fabricated the datasets by altering a number of observations. In particular, when sorted by "experimental condition" and by "participant ID number," the dataset for Study 1 appears to include 1 duplicate observation and 8 observations where the "participant ID number" is out of sort. The out of sort observations substantially contribute to the significance of the hypothesized effects.

II. INQUIRY PROCESS

These allegations were submitted to the Harvard Business School ("HBS") Research Integrity Officer ("RIO") on October 12, 2021, by a complainant who wishes to remain anonymous. Upon receiving the allegation, the RIO conducted a preliminary assessment to determine whether each allegation fell within the definition of research misconduct and was sufficiently credible and specific so that potential evidence of research misconduct may be identified. The RIO concluded his preliminary assessment and shared it with Dean Datar, the HBS Deciding Official, on October 15, 2021. On that day, Dean Datar asked the RIO to start an official inquiry into the allegations following the Harvard Business School's Interim Policy and Procedures for Responding to Allegations of Research Misconduct ("HBS Policy" – Exhibit 1).

The RIO sent the Respondent a notice of inquiry related to allegations of research misconduct on October 27, 2021 (Exhibit 2). Dean Datar proposed appointing Professor Teresa Amabile (Chair) and Professor Robert (Bob) Kaplan to the inquiry committee, pending any objections lodged by the Respondent based upon a proposed committee member's alleged personal, professional, or financial conflict of interest. The Respondent had no such objections. Upon confirmation of the Committee

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members, the official inquiry started on November 5, 2021. The summary table below provides a chronology of the inquiry, including the six meetings of the inquiry committee.[1]

Event Date	Description
October 19-22, 2021	Sequestration of the Respondent's electronic research records, from sources other than her HBS-issued personal computers, including: HBS email; O365 OneDrive data; HBSFiles Project work space; HBSFiles home space; Qualtrics survey data.
October 27, 2021	Notice of Inquiry sent to the Respondent (Exhibit 2).
October 27, 2021	Sequestration of Dr. Gino's HBS-issued personal computers.
November 5, 2021	Committee Meeting: • Orientation, review of charge and allegations; • Formulation of a set of questions for the complainant to be addressed in writing; • Request for Dr. Gino to produce the raw datasets associated with each allegation.
November 16, 2021	Dr. Gino provided to the RIO the location, within the sequestered materials, of the raw datasets associated with each allegation.
December 3, 2021	Complainant provided to the RIO a written response to the Committee's questions, describing each allegation in detail (Exhibit 3).
January 6, 2022	Committee Meeting: • Review of the complainant's written response; • Discussion of the Committee's independent analysis of the raw and Open Science Framework ("OSF") datasets associated with each allegation.

[1] All meetings were conducted through the Zoom platform unless otherwise stated.

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January 14, 2022	Committee Meeting: Discussion of the Committee's memorandum to Dr. Gino regarding allegations 1, 2, 3, and 4b (Exhibit 4). The memorandum, which was provided to Dr. Gino on January 14 following this meeting, is a combination of excerpts from the complainant's written response and the Committee's own analyses of the raw datasets from Dr. Gino's research records and the datasets posted on OSF. Discussion of allegation 4a. Because the complainant's report did not include information on this allegation, the Committee requested that Dr. Gino's sequestered materials be searched for documents and emails relevant to this allegation.
January 24, 2022	An addendum to the Committee's memorandum, relating to allegation 4a, was provided to Dr. Gino (Exhibit 5).
February 25, 2022	Committee Meeting: • Review of Dr. Gino's written response to the Committee's memoranda (Exhibit 6); • Preparation for the Respondent interview.
February 28, 2022	Respondent Interview. On March 4, 2022, after the transcript was checked against the audio recording of the interview and corrected as necessary, a copy of the transcript was provided to Dr. Gino for her review, correction and attestation (Exhibit 7). Dr. Gino provided her corrections and attestation on March 8, 2022, including some clarifying comments (Exhibit 8).
March 2, 2022	Decision Conference: • Following a review of the information and evidence to date, the Committee conducted a decision conference.
March 10, 2022	• A draft of this report was provided to Dr. Gino for review and comment. Dr Gino's response, received on April 1, 2022, is appended to this report (Exhibit 9). • All documents upon which the Committee relied to make determinations are referenced and appended.

Justification for Length of Inquiry: Per HBS Policy, an inquiry into the allegations "must be completed within 60 calendar days of initiation of the inquiry, unless the RIO determines that circumstances clearly warrant a longer period." On December 10, 2021, the RIO made an initial determination that circumstances warranted a 45-day extension, thus extending the inquiry through February 18, 2022. In making this determination, the RIO noted that the Committee needed time to study

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a written report submitted by the complainant on December 3, 2022 and that Harvard University was closed for winter recess and other observed holidays from Monday, December 20, 2021 through Friday, December 31, 2021. On January 27, 2021, the RIO determined that circumstances warranted an additional 45-day extension to the inquiry and that the inquiry was expected to be completed by April 4, 2022. In making this determination, the RIO took into account the Respondent's request to have sufficient time to process the memoranda regarding the allegations that she received from the Committee on January 14, 2022 and on January 24, 2022. On March 16, 2022, the RIO determined that circumstances warranted an additional 7-day extension to the inquiry and that the inquiry was expected to be completed by April 11, 2022. In making this determination, the RIO considered the Respondent's request for additional time to provide her written response to the draft inquiry report, in addition to the 10 business days afforded to her by the HBS policy.

III. BACKGROUND

Dr. Gino is the Tandon Family Professor of Business Administration at Harvard Business School ("HBS"). She joined the Negotiation, Organizations, and Markets (NOM) unit at HBS as an Associate Professor of Business Administration in 2010 and became a full Professor in 2014. Before joining HBS, Dr. Gino was an Assistant Professor of Organizational Behavior at The University of North Carolina, Chapel Hill from 2008-2010. From 2006-2008, Dr. Gino was a Visiting Assistant Professor of Organizational Behavior at Carnegie Mellon University and from 2004-2006 she was a Post-Doctoral Fellow in the Technology & Operations Management unit at HBS.

Dr. Gino earned a B.A. in Business Economics from the University of Trento in Trento, Italy in 2001. She received her Ph.D. in Economics and Management from the Sant'Anna School of Advanced Studies in Pisa, Italy in 2004.

IV. STANDARD FOR INQUIRY

As the Committee considered each allegation, we were mindful that our review as an inquiry committee is a preliminary one. Pursuant to the HBS Policy and 42 CFR § 93.307(d), "An investigation is warranted into allegations of research misconduct following an inquiry if (i) there is a reasonable basis for concluding that the allegation falls within the definition of research misconduct;[2] and (ii) preliminary

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[2] Research misconduct is defined under 42 CFR § 93.103 as fabrication, falsification or plagiarism in proposing, performing or reviewing research or in reporting research results.

(a) Fabrication is making up data or results and recording or reporting them.

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information-gathering and preliminary fact-finding from the inquiry indicates that the allegation may have substance."[3]

V. INQUIRY ANALYSIS & CONCLUSIONS

The Committee determined there is a reasonable basis for concluding that allegations 1, 2, 3, 4a, and 4b fall within the definition of research misconduct and that its preliminary information-gathering and preliminary fact-finding indicates that these allegations may have substance. The basis for the Committee's determination, itemized by allegation, is outlined below.

Allegation 1

> **Dr. Gino falsified and/or fabricated the dataset for *Study 3a in the 2020 JPSP Paper* by altering observations to affect the significance of findings of the study in the hypothesized direction. In particular:**
>
> - **In the promotion-focus condition, by changing extreme values of "7" to "1" to drive the expected effect. Specifically, for 9 observations there seems to be a mismatch between participants' impurity ratings and the words participants chose to describe how they felt;**
> - **In the prevention-focus condition, by changing some values of "1" to either "2" or "3" to drive the expected effect. A number of observations also show a mismatch between participants' impurity ratings and the words participants chose to describe how they felt.**

The Committee compared the dataset for this study that was found in Dr. Gino's sequestered research records with the publicly posted dataset on OSF. The comparison shows a clear discrepancy between the two datasets, suggesting that the data may have been fabricated or falsified. Our preliminary analysis shows that: (a) the two datasets yield averages for the two experimental conditions that are

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(b) Falsification is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.
(c) Plagiarism is the appropriation of another person's ideas, processes, results or words without giving appropriate credit.
Research misconduct does not include honest error or differences of opinion.

[3] Following the investigation, a finding of research misconduct requires (42 CFR Sec. 93.104):
(a) There be a significant departure from accepted practices of the relevant research community; and
(b) The misconduct be committed intentionally, knowingly, or recklessly; and
(c) The allegation be proven by a preponderance of the evidence.

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completely switched in directionality (see Exhibit 4, page 9); in other words, the published data show a result that is opposite to the result yielded by the sequestered data; and (b) a comparison between the two datasets shows a clear mismatch, between otherwise identical lines of data, in the columns that contain the key dependent variable measures (see Exhibit 4, pages 10-11). Neither Dr. Gino's written response to our memos nor our interview with Dr. Gino on February 28, 2022 yielded information that, in our view, could explain these discrepancies. We therefore find that Allegation 1 of research misconduct against Dr. Gino falls within the definition of research misconduct and that our preliminary information-gathering and preliminary fact-finding indicates that the allegation may have substance. See Inquiry Committee Memo of Jan. 14, 2022, Exhibit 4, for details.

Allegation 2

> **Dr. Gino falsified and/or fabricated the datasets for Study 4 in the 2015 Psychological Science Paper by altering a number of observations. Notably, 20 observations substantially contribute to the significance of the hypothesized effects, and these same 20 observations presented an anomalous response pattern, in which study participants seemingly entered "Harvard" as their response to a question asking them to indicate "Year in School," in contrast to the vast majority of research participants who correctly answered this question.**

The Committee examined the dataset for this study that was found in Dr. Gino's sequestered research records as well as the publicly posted dataset on OSF. Both datasets include anomalous observations in which several study participants, who (according to the published paper) were all Harvard students, listed "Harvard" as their answer to a "Year in School" question (the "Harvard group"), and, unlike most other participants, provided an email address that was not "college.harvard.edu." The responses by the "Harvard group" on the key dependent variable strongly influenced the overall experimental findings in the hypothesized direction, suggesting that the data may have been fabricated or falsified. Furthermore, we also identified a discrepancy in the N (number of observations) for the dataset obtained from Dr. Gino's records and the N for the publicly posted dataset available on OSF, with the former file containing 455 observations while the latter had 491 observations (see Exhibit 4, pages 16-17), a discrepancy that we were unable to reconcile. Neither Dr. Gino's written response to our memos nor our interview with Dr. Gino on February 28, 2022 yielded information that, in our view, could explain these discrepancies. We therefore find that Allegation 2 of research misconduct against Dr. Gino falls within the definition of research misconduct and that our preliminary information-gathering and

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preliminary fact-finding indicates that the allegation may have substance. See Inquiry Committee Memo of Jan. 14, 2022, Exhibit 4, for details.

Allegation 3

> **Dr. Gino falsified and/or fabricated the datasets for Study 4 in the 2014 Psychological Science Paper by altering a number of observations. In particular, when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found, it appears there are 13 observations out of sort within the cheating condition. These observations substantially contribute to the significance of the hypothesized effects. When these observations are corrected with the values implied by the sort, the effect in the expected direction is no longer significant (from p=.0003 to p >.17).**

The Committee examined the dataset for this study that was found in Dr. Gino's sequestered research records and replicated the anomalies identified in the complainant's written response to the Committee (Exhibit 3). These anomalous, out-of-sequence observations substantially contribute to the significance of the hypothesized effects, suggesting that the data may have been fabricated or falsified, as set forth in more detail in Exhibit 4.[4] Neither Dr. Gino's written response to our memos nor our interview with Dr. Gino on February 28, 2022 yielded information that, in our view, could explain these discrepancies. We therefore find that Allegation 3 of research misconduct against Dr. Gino falls within the definition of research misconduct and that our preliminary information-gathering and preliminary fact-finding indicates that the allegation may have substance.

Allegation 4a

> **With respect to Study 1 in the 2012 PNAS Paper:**
>
> **Dr. Gino falsified and/or fabricated the results by removing part of the description of study instructions to research participants from a draft of the manuscript**

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[4] The Committee's memorandum to Dr. Gino (Exhibit 4, page 23) stated there was an additional anomaly in the number of participants in the dataset from Dr. Gino's research records compared to number of participants in the published paper. As pointed out by Dr. Gino in her written response (Exhibit 6), the Committee came to this conclusion because it mistakenly looked at the N for a different study in the published paper. The Committee agrees that there is, in fact, no anomaly in the reporting of the number of participants.

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submitted for publication, thus misrepresenting the study procedures in the final publication. Such instructions pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.

The Committee conducted a review of study documents that were found in Dr. Gino's sequestered research records and compared these documents to the written description of the study procedures in the published paper. This review revealed inconsistencies concerning the exact procedure used in the study, between the methodology described in the published paper and the methodology described in documents located in Dr. Gino's files, documents that date back to when the study procedure and results were being summarized and the paper was being drafted. Our analyses identified two issues, having to do with: (1) a potential flaw in the study design related to the timing of the dependent variable; and (2) the description of the study's procedure in the published article, which could be seen as ambiguous or potentially misleading, as set forth in more detail in Exhibit 5. Neither Dr. Gino's written response to our memos nor our interview with Dr. Gino on February 28, 2022 yielded information that, in our view, could explain these discrepancies. We therefore find that allegation 4a of research misconduct against Dr. Gino falls within the definition of research misconduct and that our preliminary information-gathering and preliminary fact-finding indicates that the allegation may have substance.

Allegation 4b

With respect to Study 1 in the 2012 PNAS Paper:

Dr. Gino falsified and/or fabricated the datasets by altering a number of observations. In particular, when sorted by "experimental condition" and by "participant ID number," the dataset for Study 1 appears to include 1 duplicate observation and 8 observations where the "participant ID number" is out of sort. The out of sort observations substantially contribute to the significance of the hypothesized effects.

The Committee analyzed the dataset for this study that was found in Dr. Gino's sequestered research records as well as the publicly posted dataset on OSF. When sorted by condition and participant ID number, both datasets include out-of-sequence observations, some in one experimental condition, and some in the other experimental condition, and these observations contribute to the significance of the hypothesized effects, suggesting that the data may have been fabricated or falsified, as set forth in more

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detail in Exhibit 4. Neither Dr. Gino's written response to our memos nor our interview with Dr. Gino on February 28, 2022 yielded information that, in our view, could explain these discrepancies. We therefore find that allegation 4b of research misconduct against Dr. Gino falls within the definition of research misconduct and that our preliminary information-gathering and preliminary fact-finding indicates that the allegation may have substance.

VI. RECOMMENDATIONS

As described above, we have reviewed the information presented to date relating to the allegations against Dr. Gino. In reviewing these materials, we have been mindful that our task as inquiry committee is a preliminary one. In light of the evidence referenced herein, we have determined that there is a reasonable basis for concluding that allegations 1, 2, 3, 4a, and 4b fall within the definition of research misconduct and that our preliminary information-gathering and preliminary fact-finding indicates that the allegations may have substance. Therefore, we recommend investigation of allegations 1, 2, 3, 4a, and 4b pursuant to the HBS Policy.

THIS DOCUMENT IS CONFIDENTIAL AS REQUIRED BY FEDERAL REGULATIONS AND INSTITUTIONAL POLICIES FOR REVIEW OF ALLEGATIONS OF RESEARCH MISCONDUCT. DISCLOSURE OF THIS DOCUMENT OR OF ANY OF THE INFORMATION IT CONTAINS IS PROHIBITED EXCEPT AS PERMITTED BY THOSE POLICIES OR AS REQUIRED BY LAW.

Exhibit 1

HBS Interim Policy and Procedures for Responding to Allegations of Research Misconduct

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Interim Policy and Procedures for Responding to Allegations of Research Misconduct

August 2021

I. Basis for Policy

Integrity in scholarship and research is one of Harvard University's—and Harvard Business School's—fundamental values. Allegations of misconduct in scholarship and research must be treated with the utmost seriousness, and examined carefully and responsibly in a timely and effective manner.

Toward that end, HBS has established this **Policy and Procedures for Responding to Allegations of Research Misconduct**[1] to guide its efforts in reviewing, investigating, and reporting allegations of research misconduct.[2]

II. Scope

This Policy applies to allegations of research misconduct—including fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results—involving any person who, at the time of the alleged research misconduct, was employed by, was an agent of, or was affiliated by contract or agreement with HBS, including without limitation tenured and non-tenured faculty, teaching and support staff, researchers and research associates, research coordinators, post-doctoral and other fellows, students, volunteers, officials, technicians. The Policy may be applied to any individual no longer affiliated with HBS if the alleged misconduct occurred while the person was employed by, an agent of, or affiliated with the School. This Policy does not apply to authorship or collaboration disputes. It applies only to allegations of research misconduct that occurred within six years of the date HBS received the allegation, unless: the respondent has continued or renewed an incident of alleged research misconduct through the citation, republication, or other use for the potential benefit of the respondent of the research record in question; or HBS determines that the alleged misconduct would possibly have a substantial adverse effect on the health or safety of the public.

III. General Policies and Principles

A. Research Misconduct Prohibited, Standard of Proof

HBS prohibits research misconduct and investigates and responds to allegations of research misconduct in accordance with this Policy. Throughout the research misconduct process, which begins at the time an allegation is made, all participants shall bear in mind the importance, both in fact and in appearance, of thoroughness, fairness, and objectivity.

[1] See Appendix 1 for a glossary of terms and definitions.

[2] See Appendix, here and throughout, for additional specifications and requirements when researchers have received federal or other external funding for their research.

A finding of research misconduct requires that:

- There be a significant departure from accepted practices of the relevant research community;
- The respondent committed the research misconduct intentionally, knowingly, or recklessly; and
- The allegation be proven by preponderance of the evidence.

The destruction of research records, absence of research records, or respondent's failure to provide research records adequately documenting the questioned research is evidence of research misconduct where the institution establishes by a preponderance of the evidence that the respondent intentionally, knowingly, or recklessly had research records and destroyed them, had the opportunity to maintain the records but did not do so, or maintained the records and failed to produce them in a timely manner and that the respondent's conduct constitutes a significant departure from accepted practices of the relevant research community.

HBS bears the burden of proof for making a finding of research misconduct. A respondent has the burden of proving, by a preponderance of the evidence, any and all affirmative defenses raised (such as honest error).

Individuals subject to this policy found to have committed research misconduct may be subject to sanctions up to and including termination.

B. Responsibility to Report Misconduct

All individuals subject to this Policy will report observed, suspected, or apparent research misconduct to the Research Integrity Officer (RIO).[3] If an individual is unsure whether a suspected incident falls within the definition of research misconduct, that individual may meet with or contact the RIO to discuss the suspected research misconduct informally, which may include discussing it anonymously and/or hypothetically. If the circumstances described by the individual do not meet the definition of research misconduct, then the RIO may refer the individual or allegation to other offices or officials, where appropriate.

C. Cooperation with Research Misconduct Proceedings

All individuals subject to this Policy shall cooperate with the RIO and other institutional officials in the review of allegations and the conduct of inquiries and investigations. All individuals subject to this Policy, including respondents, have an obligation to provide evidence relevant to research misconduct allegations to the RIO or other institutional officials.

D. Duty to Maintain Confidentiality

Because of the potential jeopardy to the reputation and rights of a respondent, the RIO and all Committee members (as defined in this Policy) as well as all others at HBS who may be involved in the research misconduct proceeding shall to the extent possible: (1) limit disclosure of the identity of respondents and complainants to those who need to know in order to carry out a thorough, competent, objective, and fair research misconduct proceeding; and (2) except as otherwise prescribed by law, limit

[3] For the 2021-2022 academic year, the Research Integrity Officer is Alain Bonacossa ([redacted]).

the disclosure of any records or evidence from which research subjects might be identified to those who need to know in order to carry out a research misconduct proceeding. Where communications about research misconduct proceedings may be considered necessary or advisable, University officials should be guided by the Guiding Principles for Communication in Research Misconduct Proceedings.[4] Inappropriate dissemination of information may result in sanctions up to and including termination.

E. Rights and Responsibilities of Complainant

The complainant is responsible for making allegations in good faith, maintaining confidentiality, and cooperating with the inquiry and investigation. If the inquiry committee deems it necessary, the complainant may be interviewed at the inquiry stage and, if so, will be given the transcript or recording of the interview for correction. The complainant ordinarily will be interviewed during the investigation phase, and given the transcript or recording of the interview for correction. After making an allegation of research misconduct, the complainant is responsible for providing evidence and information in connection with the research misconduct process but is not entitled to receive information about the status or outcome of that process.

F. Rights and Responsibilities of Respondent

The respondent is responsible for maintaining confidentiality and cooperating with the conduct of an inquiry and investigation. The respondent is entitled to the procedural rights and protections set forth in this Policy. Respondents may choose up to two personal advisors for support during the process. Personal advisors may be attorneys; they may not be principals or witnesses in the research misconduct matter. Personal advisors may be present at any proceedings or interviews that the respondent attends but may not question witnesses or otherwise take part in the research misconduct proceedings.

The respondent should be given the opportunity to admit that research misconduct occurred and that they committed the research misconduct. With the advice of the RIO and/or other institutional officials, the Dean or their designee may end HBS's review of an allegation that has been admitted.

G. Protecting Complainants, Witnesses, the RIO, and Committee Members

HBS community members may not retaliate in any way against complainants, witnesses, the RIO, or committee members. Any alleged or apparent retaliation against complainants, witnesses, the RIO, or committee members should be reported immediately to the
RIO (or to the Dean's Office, as applicable), who shall review the matter and, as necessary, make all reasonable and practical efforts to counter any potential or actual retaliation and protect and restore the position and reputation of the person against whom the retaliation is directed.

IV. Preliminary Assessment of Allegations

Upon receiving an allegation of research misconduct, the RIO immediately will assess the allegation to determine whether the allegation:

[4] https://files.vpr.harvard.edu/files/vpr-documents/files/guiding_principles_for_communication_in_research_misconduct_proceedings.pdf

- Falls within the definition of research misconduct, and
- Is sufficiently credible and specific so that potential evidence of research misconduct may be identified.

An inquiry must be conducted if these criteria are met.

If, upon receipt on the allegation, it appears that the RIO has any unresolved personal, professional, or financial conflicts of interest with those involved in the allegations, then another qualified individual shall be appointed by the Dean or their designee to serve as Interim RIO with respect to reviewing the allegation and conducting any research misconduct proceeding.

The assessment period should be brief, preferably concluded within a week. Where it is not feasible to conclude the assessment within a week, the process should proceed expeditiously. In conducting the assessment, it is not necessary to interview the complainant, respondent, or other witnesses, or to gather data beyond any that may have been submitted with the allegation, except as necessary to determine whether the allegation is sufficiently credible and specific so that potential evidence of research misconduct may be identified. The preliminary assessment shall be documented and all records pertaining to the review of allegations will be retained by the RIO for a period of seven (7) years following the completion of the proceeding.

V. Sequestration of Research Records and Notice to Respondent

A. Sequestration of Research Records

This Policy governs access to research records, including without limitation email records, for purposes of conducting research misconduct proceedings.[5] Those engaged in administering this Policy have all rights necessary to access research records created or maintained by individuals subject to this Policy.[6]

As to timing, on or before the date on which the respondent is notified, or the inquiry begins, whichever is earlier, the RIO must take all reasonable and practical steps to obtain custody of all the research records and evidence needed to conduct the research misconduct proceeding. The RIO also shall sequester any additional research records that become pertinent to an inquiry or investigation after the initial sequestration.

The RIO is responsible for inventorying the records and evidence and sequestering them in a secure manner.[7] Where appropriate, HBS shall give the respondent copies of, or reasonable supervised access to, the research records.

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[5] For clarification, Harvard's Policy on Access to Electronic Information specifically states that it does not apply to reviews of research misconduct allegations. Section I, Internal Investigations of Misconduct, p. 4.

[6] Harvard's Research Data Ownership Policy makes clear that "the University asserts ownership over research data for all projects conducted at the University, under the auspices of the University, or with University resources," and further states that "[w]hen it is necessary to secure access (e.g. during a research misconduct proceeding) the University may take custody of research data." Policy and Procedures, Section 1.B, p. 2.

[7] However, where the research records or evidence encompass scientific instruments shared by a number of users, custody may be limited to copies of the data or evidence on such instruments, so long as those copies are

B. Notice to Respondent

At the time of or before beginning an inquiry, the RIO must make a good faith effort to notify the respondent in writing, if the respondent is known. If the inquiry subsequently identifies additional respondents, they must be notified in writing.

VI. The Inquiry

A. Initiation and Purpose of the Inquiry

The purpose of the inquiry is to conduct an initial review of the available evidence to determine whether to conduct an investigation. An inquiry does not require a full review of all the evidence related to the allegation.

B. Appointment of the Inquiry Committee

The inquiry committee will be appointed by the Dean or their designee, in consultation with other institutional officials as appropriate, and will consist of one or more individuals who do not have unresolved personal, professional, or financial conflicts of interest with those involved with the research misconduct proceeding. The inquiry committee should include individuals with the appropriate subject-matter expertise to: evaluate the evidence and issues related to the allegation; interview the principals and key witnesses; and conduct the inquiry. When necessary to secure the necessary expertise or to avoid conflicts of interest, the Dean or their designee may select committee members from outside the institution.

Prior to the initiation of the Inquiry, the respondent will be notified in writing of the inquiry committee's membership and shall be afforded five (5) calendar days to lodge objections based upon a committee member's alleged personal, professional, or financial conflict of interest. The Dean or their designee will make the final determination of whether a conflict exists.

C. Charge to the Committee and First Meeting

The RIO will prepare a charge for the inquiry committee that sets forth the purpose of the inquiry and the expected timeframe, the committee's responsibilities, the allegations, and any related issues identified during the preliminary assessment. The charge also shall inform the committee that an investigation is warranted if the committee determines, based on its review during the inquiry, that: (1) there is a reasonable basis for concluding that the allegation falls within the definition of research misconduct; and (2) the preliminary information-gathering and preliminary fact-finding from the inquiry indicates that the allegation may have substance.

At the committee's first meeting, the RIO will review the charge with the committee, discuss the allegations, any related issues, and the appropriate procedures for conducting the inquiry, assist the committee with organizing plans for the inquiry, and answer any questions raised by the committee. The RIO will be present or available throughout the inquiry to advise the committee as needed.

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substantially equivalent to the evidentiary value of the instruments.

D. Inquiry Process

The inquiry committee ordinarily will interview the complainant, if any, the respondent, and key witnesses as well as examine relevant research records and materials. Any interviews will be recorded or transcribed, with recordings or transcripts provided to the interviewee for correction. Then the inquiry committee will evaluate the evidence, including the testimony obtained during the inquiry. In consultation with the RIO, the committee members will decide whether an investigation is warranted based on the criteria in this Policy.

The scope of the inquiry is not required to and does not normally include deciding whether misconduct definitely occurred, determining definitely who committed the research misconduct, or conducting exhaustive interviews and analyses.[8] However, if a legally sufficient admission of research misconduct is made by the respondent, misconduct may be determined at the inquiry stage if all relevant issues are resolved.

E. The Inquiry Report

A written inquiry report must be prepared that includes the following information: (1) the name and position of the respondent; (2) a description of the allegations of research misconduct; (3) the funding support, including without limitation any grant numbers, grant applications, contracts and publications listing all support; (4) the basis for recommending or not recommending that the allegations warrant an investigation; (5) any comments on the draft report by the respondent.

The Office of General Counsel shall be available to advise the inquiry committee and the RIO with respect to the report. Modifications should be made as appropriate in consultation with the RIO and the inquiry committee.

F. Notification of the Results of the Inquiry; Opportunity to Comment

The RIO shall notify the respondent as to whether the inquiry found an investigation to be warranted, include a copy of the draft inquiry report for comment within 10 business days, and include a copy of or link to this Policy.

Based on the comments, the inquiry committee may revise the draft report as appropriate and prepare it in final form. Any comments that are submitted by the respondent will be attached to the final inquiry report. The committee will deliver the final report to the RIO.

G. Institutional Decision and Notification

1. *Decision by Deciding Official* – The RIO will transmit the final inquiry report and any comments to the Dean or their designee, who will make a written determination as to whether an investigation is warranted. The inquiry is completed when this determination is made. The RIO will notify institutional officials who have a need to know of the decision.

[8] As noted above, an investigation is warranted if the committee determines, based on its review during the inquiry,that: (1) there is a reasonable basis for concluding that the allegation falls within the definition of research misconduct; and (2) the preliminary information-gathering and preliminary fact-finding from the inquiry indicates that the allegation may have substance.

2. *Documentation of Decision Not to Investigate* – If an investigation is not warranted, the RIO shall secure and maintain for 7 years after the termination of the inquiry sufficiently detailed documentation of the inquiry to permit a later assessment of the reasons why an investigation was not conducted.

H. Time for Completion

The inquiry, including preparation of the final inquiry report and the decision on whether an investigation is warranted, must be completed within 60 calendar days of initiation of the inquiry, unless the RIO determines that circumstances clearly warrant a longer period. If an extension is approved, the inquiry record must include documentation of the reasons for exceeding the 60-day period.

VII. Conducting the Investigation

A. Initiation and Purpose

The investigation ordinarily should begin shortly after completion of the inquiry and no later than 30 calendar days after the determination that an investigation is warranted. On or before the date on which the investigation begins, the RIO must notify the respondent in writing of the allegations to be investigated.

The purpose of the investigation is to develop a factual record by exploring the allegations in detail and examining the evidence in depth, leading to recommended findings on whether research misconduct has been committed, by whom, and to what extent. The investigation committee shall pursue diligently all significant issues and leads discovered that are determined relevant to the investigation, including any evidence of additional instances of possible research misconduct, and continue the investigation to completion. If new allegations are identified, the RIO must also give the respondent written notice of such allegations within a reasonable amount of time of deciding to pursue allegations not addressed during the inquiry or in the initial notice of the investigation.

B. Sequestration of Research Records

On or before the date on which the respondent is notified, or the investigation begins, whichever is earlier, the RIO must take all reasonable and practical steps to obtain custody of and sequester in a secure manner all the research records and evidence needed to conduct the research misconduct proceeding that were not previously sequestered during the inquiry. The need for additional sequestration of records may occur for any number of reasons, including the institution's decision to investigate additional allegations not considered during the inquiry stage or identification of records during the inquiry process that had not been previously secured. The procedures to be followed for sequestration during the investigation are the same procedures that apply during the inquiry.

C. Appointment of the Investigation Committee

The Dean or their designee, in consultation with other institutional officials as appropriate, will appoint an ad hoc investigation committee and committee chair. The investigation committee must consist of individuals who do not have unresolved personal, professional, or financial conflicts of interest with those involved with the investigation and should include individuals with the appropriate subject-matter

expertise to: evaluate the evidence and issues related to the allegation; interview the respondent and complainant; and conduct the investigation. Individuals appointed to the investigation committee also may have served on the inquiry committee. When necessary to secure the necessary expertise or to avoid conflicts of interest, the Dean or their designee may select investigation committee members from outside the institution.

Prior to the initiation of the Investigation, the respondent will be notified of the investigation committee's membership and shall be afforded five (5) calendar days to lodge objections based upon a committee member's alleged personal, professional, or financial conflict of interest. The Dean or their designee will make the final determination of whether a conflict exists.

D. Charge to the Committee and the First Meeting

1. Charge to the Committee – The RIO will define the subject matter of the investigation in a written charge to the committee that describes the allegations and related issues identified during the inquiry; identifies the respondent; informs the committee that it must conduct the investigation as prescribed by this Policy; defines research misconduct; and instructs the investigation committee on the burden of proof. The charge shall state that the committee is to evaluate the evidence and testimony of the respondent, complainant, and key witnesses to determine whether, based on a preponderance of the evidence, research misconduct occurred and, if so, to what extent, who was responsible, and its seriousness. Finally, the charge shall inform the committee that it must prepare a written investigation report that meets the requirements of this Policy.

2. First Meeting – At the committee's first meeting, the RIO will review the charge, the inquiry report, and the prescribed procedures and standards for the conduct of the investigation, including the necessity for confidentiality and for developing a specific investigation plan. The investigation committee will be provided with a copy of this Policy and, if applicable, federal regulations. The RIO will be present and available throughout the investigation to advise the committee as needed.

E. Investigation Process

The investigation committee and the RIO must:

- Use diligent efforts to ensure that the investigation is thorough and sufficiently documented and includes examination of all research records and evidence relevant to reaching a decision on the merits of each allegation;

- Take reasonable steps to ensure an impartial and unbiased investigation to the maximum extent practical;

- Offer each respondent, complainant, and any other available person who has been reasonably identified as having information regarding any relevant aspects of the investigation, including witnesses identified by the respondent, the opportunity to be interviewed; record or transcribe each interview; provide the recording or transcript to the interviewee for correction; and include the recording or transcript in the record of the investigation; and

- Pursue diligently all significant issues and leads discovered that are determined relevant to the investigation, including any evidence of any additional instances of possible research misconduct, and continue the investigation to completion.

F. The Investigation Report

The investigation committee and the RIO are responsible for preparing a written draft report of the investigation that:

- Describes the nature of the allegation of research misconduct, including identification of the respondent.

- Describes and documents financial support for the research subject to the allegations, including without limitation the numbers of any grants that are involved, grant applications, contracts, and publications listing support;

- Describes the specific allegations of research misconduct considered in the investigation;

- Includes the institutional policies and procedures under which the investigation was conducted;

- Identifies and summarizes the research records and evidence reviewed and identifies any evidence taken into custody but not reviewed; and

- Includes a statement of findings for each allegation of research misconduct identified during the investigation. Each statement of findings must: (1) identify whether the research misconduct was falsification, fabrication, or plagiarism, and whether it was committed intentionally, knowingly, or recklessly; (2) summarize the facts and the analysis that support the conclusion and consider the merits of any reasonable explanation by the respondent, including any effort by respondent to establish by a preponderance of the evidence that they did not engage in research misconduct because of honest error or a difference of opinion; (3) identify the specific funding support (if any); (4) identify whether any publications need correction or retraction; (5) identify the person(s) responsible for the misconduct; and (6) list any current support or known applications or proposals for support that the respondent has pending with federal agencies or external funders.

- Includes recommended institutional actions.

The Office of General Counsel shall be available to advise the investigation committee and the RIO with respect to the report. Modifications should be made as appropriate in consultation with the RIO and the investigation committee.

G. Comments on the Draft Report and Access to Evidence

1. Respondent – The RIO will give the respondent a copy of the draft investigation report and exhibits for comment and, concurrently, a copy of or supervised access to the evidence on which the report is based. The respondent will be allowed 30 days from receipt of the draft report to submit comments to the RIO. The respondent's comments must be included and considered in the final report.

2. Confidentiality – In distributing the draft report to the respondent for comment, the RIO will remind the respondent of the confidentiality under which the draft report is made available and may establish reasonable conditions to ensure such confidentiality.

H. Decision by Deciding Official

The final investigation report will be submitted to the Dean, who will make a written determination as to: (1) whether the institution accepts the investigation report, its findings, and the recommended institutional actions; and (2) the appropriate institutional actions in response to the accepted findings of research misconduct. If this determination varies from the findings of the investigation committee, the Dean will explain in detail the basis for rendering a decision different from the findings of the investigation committee. Alternatively, the Dean may return the report to the investigation committee with a request for further fact-finding or analysis.

When a final decision on the case has been reached, the respondent will be notified in writing. The Dean, in consultation with institutional officials as needed, also will determine whether relevant parties should be notified of the outcome of the case, including professional societies, editors of journals in which falsified reports may have been published, collaborators of the respondent in the work, professional licensing boards, or law enforcement agencies, .

I. Institutional Actions

After a determination of research misconduct is made, the Dean may decide on appropriate actions to be taken, in consultation with others at the University as appropriate. Sanctions for research misconduct shall be based on the seriousness of the misconduct, including but not limited to, the degree to which the misconduct: a) was intentional, knowing, or reckless; b) was an isolated event or part of a pattern; and c) had significant impact on the research record, research subjects, other researchers, institutions, or the public welfare. The range of administrative actions includes, but is not limited to, the correction of the public record including the withdrawal or correction of all pending or published abstracts and papers emanating from the research where misconduct was found; removal of the responsible person from the particular project, special monitoring of future work, probation, suspension, leave without pay, salary reduction, or initiation of steps leading to rank reduction or termination of employment; restitution of funds as appropriate; suspension or termination of an active award; and other action appropriate to the research misconduct. For cases involving research misconduct by students, sanctions shall be determined by the appropriate student disciplinary board.

J. Time for Completion

The investigation ordinarily shall be completed within 120 days of beginning it, including conducting the investigation, preparing the draft report of findings, providing it for comment, finalizing the report, and making necessary notifications. However, if the RIO determines that the investigation will not be completed within this 120-day period, the rationale for the delay will be documented.

IX. Interim Institutional Actions

Throughout the research misconduct proceeding, the RIO will review the situation to determine if there is any threat of harm to the integrity of the research process. In the event of such a threat, the RIO will,

in consultation with institutional and other officials, as necessary, take appropriate interim actions to protect against any such threat.

Interim action might include: additional monitoring of the research process; reassignment of personnel; additional review of research data and results; or delaying publication.

X. Completion of Cases

Generally, all inquiries and investigations will be carried through to completion and all significant issues will be pursued diligently.

XI. Other Considerations

A. Termination or Resignation Prior to Completing Inquiry or Investigation

The termination of the respondent's HBS employment, by resignation or otherwise, before or after an allegation of possible research misconduct has been reported, will not preclude or terminate the research misconduct proceeding or otherwise limit any of HBS's responsibilities to pursue allegations.

If the respondent, without admitting to the misconduct, elects to resign the respondent's position after HBS receives an allegation of research misconduct, the assessment of the allegation will proceed, as well as the inquiry and investigation, as appropriate based on the outcome of the preceding steps. If the respondent refuses to participate in the process after resignation, the RIO and any inquiry or investigation committee will use their best efforts to reach a conclusion concerning the allegations, noting in the report the respondent's failure to cooperate and its effect on the evidence.

B. Restoration of the Respondent's Reputation

Following a final finding of no research misconduct, the RIO must, at the request of the respondent, undertake all reasonable and practical efforts to restore the respondent's reputation.

C. Allegations Not Made in Good Faith

If relevant, the Dean or their designee will determine whether the complainant's allegations of research misconduct were made in good faith, or whether a witness or committee member acted in good faith. If the Dean or their designee determines that there was an absence of good faith, the Dean or their designee will determine whether any administrative action should be taken against the person who failed to act in good faith.

D. Maintaining Records

HBS shall maintain the records of a research misconduct proceeding in a secure manner during its pendency and for seven (7) years after completion of the proceeding or completion of any agency oversight proceeding, or as required by any applicable record retention provision, whichever is later.

Appendix 1: Glossary of Terms and Definitions

Allegation: a disclosure of possible research misconduct through any means of communication.

Committee member: a member of any ad hoc committee appointed to conduct all or a portion of the research misconduct process under this Policy.

Complainant: a person who in good faith makes an allegation of research misconduct.

Conflict of interest: financial, personal, or professional relationships that may compromise, or appear to compromise a person's decisions.

Deciding Official (DO): the institutional official who makes final determinations about allegations of research misconduct and any institutional actions, ordinarily the Dean of HBS. The Deciding Official does not serve as the Research Integrity Officer and is not directly involved in the institution's preliminary assessment, inquiry, or investigation. The Deciding Official's involvement in the appointment of individuals to assess allegations of research misconduct, or to serve on an inquiry or investigation committee, is not considered to be direct involvement.

Evidence: any document or other record, tangible item, or testimony offered or obtained during a research misconduct proceeding that tends to prove or disprove the existence of an alleged fact.

Fabrication: making up data or results and recording or reporting them.

Falsification: manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

Good faith

As applied to a complainant or witness: having a belief in the truth of one's allegation or testimony that a reasonable person in the same position could have, based on the information known to the person at the time. An allegation or cooperation with a research misconduct proceeding is not in good faith if made with knowing or reckless disregard for information that would negate the allegation or testimony.

As applied to a committee member: cooperating with the research misconduct proceeding by carrying out the duties assigned impartially for the purpose of helping the institution meet its responsibilities under the Policy. A committee member does not act in good faith if the committee member's acts or omissions on the committee are dishonest or influenced by personal, professional, or financial conflicts of interest with those involved in the research misconduct proceeding.

Inquiry: preliminary information-gathering and preliminary fact-finding in accordance with the Policy to determine whether an allegation of research misconduct warrants investigation.

Investigation: the formal development of a factual record and the examination of that record leading to a decision about whether to recommend a finding of research misconduct, which may include a recommendation for other appropriate actions, including institutional actions.

Plagiarism: the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

Preponderance of the evidence: proof by information that, compared with that opposing it, leads to the conclusion that the fact at issue is more probably true than not.

Research: a systematic experiment, study, evaluation, demonstration, or survey designed to develop or contribute to general knowledge or specific knowledge by establishing, discovering, developing, elucidating, or confirming information about, or the underlying mechanism relating to, the matters to be studied.

Research Integrity Officer (RIO): the institutional official responsible for: (1) reviewing allegations of research misconduct to determine if they fall within the definition of research misconduct and warrant an inquiry; and (2) overseeing inquiries and investigations.

Research misconduct: fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. Research misconduct does not include honest error or differences of opinion.

Research record: the record of data or results that embody the facts resulting from scientific inquiry or other scholarly endeavors, including but not limited to research proposals, laboratory records (physical and electronic), progress reports, abstracts, theses, oral presentations, internal reports, journal articles, correspondence, and any documents and materials provided to an institutional official in the course of a research misconduct proceeding.

Respondent: the person against whom an allegation of research misconduct is directed or who is the subject of a research misconduct proceeding.

Retaliation: an adverse action taken against a complainant, witness, or committee member by an institution or one of its members in response to a good faith allegation of research misconduct or good faith cooperation with a research misconduct proceeding.

Appendix 2: Additional Procedures for Allegations Involving Federal Funding

Scope

This Policy is intended to comply with institutional responsibilities under the Public Health Service (PHS) Policies on Research Misconduct, 42 CFR Part 93. Other federal agencies have published their own research misconduct regulations; to the extent those regulations apply to an allegation of research misconduct and are inconsistent with this Policy, HBS shall comply with the applicable regulatory requirements.

This Policy does not apply to authorship or collaboration disputes and applies only to allegations of research misconduct that occurred within six years of the date HBS received the allegation, subject to the subsequent use, health or safety of the public, and grandfather exceptions articulated in 42 C.F.R. § 93.105(b).

With respect to students involved in allegations of research misconduct that involve federal funding, the appropriate student disciplinary board will be notified of the initiation of any inquiries and/or investigations and will be informed of the findings of any such inquiries and/or investigations, including receiving copies of all inquiry and/or investigation reports. For allegations of research misconduct against students that do not involve federal funding, HBS may, at its discretion, either refer them to the appropriate student disciplinary board, or review them under this Policy and notify the appropriate student disciplinary board as described above.

Inquiry Process

If a legally sufficient admission of research misconduct is made by the respondent, misconduct may be determined at the inquiry stage if all relevant issues are resolved. In that case, HBS should promptly consult with the relevant federal agency to determine next steps. Acceptance of the admission and any proposed settlement must be approved by the relevant federal agency.

Notification to Respondent of the Results of the Inquiry

The RIO will provide the respondent with a link to or copy of 42 C.F.R. Part 93 (or other applicable federal regulations).

Notification to Federal Agencies of the Results of the Inquiry

Within 30 calendar days of the decision whether an investigation is warranted, the RIO will provide the Office of Research Integrity ("ORI")[9] (or the relevant federal agency) with the written decision and a copy of the final inquiry report (or comply with any other notice obligation to a government agency or other funder).

Time for Completion

If an investigation cannot be completed within 120 days of beginning it, the RIO will document the

[9] The Office of Research Integrity (ORI) in the U.S. Department of Health and Human Services (DHHS) is responsible for the scientific misconduct and research integrity activities of the U.S. Public Health Service (PHS).

rationale for the delay and notify federal agencies as required and in accordance with federal regulations. The RIO will ensure that periodic progress reports are filed with federal agencies and in accordance with federal regulations.

Notice of Institutional Findings and Actions

When the Dean reaches a final decision on the case, the investigation is complete, and the RIO will transmit to the applicable funding agency: (1) a copy of the final investigation report with all attachments; (2) a statement of whether the institution accepts the findings of the investigation report; (3) a statement of whether the institution found misconduct and, if so, who committed the misconduct; and (4) a description of any pending or completed institutional actions against the respondent.

Interim Institutional Actions and Notifying Federal Agencies of Special Circumstances

Throughout the research misconduct proceeding, the RIO will review the situation to determine if there is any threat of harm to public health or to federal funds and equipment. In the event of such a threat, the RIO will, in consultation with other institutional officials, and ORI, as necessary, take appropriate interim actions to protect against any such threat. Interim action might include: additional monitoring of the handling of federal funds and equipment and/or reassignment of personnel or of the responsibility for the handling of federal funds and equipment.

HBS shall, at any time during a research misconduct proceeding, notify ORI (or the relevant federal agency) immediately if there is reason to believe that any of the following conditions exist:

- Health or safety of the public is at risk, including an immediate need to protect human or animal subjects;
- Federal resources or interests are threatened;
- Research activities should be suspended;
- There is a reasonable indication of possible violations of civil or criminal law;
- Federal action is required to protect the interests of those involved in the research misconduct proceeding;
- The research misconduct proceeding may be made public prematurely and federal action may be necessary to safeguard evidence and protect the rights of those involved; or
- The research community or public should be informed.

Completion of Cases

For allegations that include PHS funded research, HBS must notify ORI in advance if there are plans to close a case at the inquiry or investigation stage on the basis that respondent has admitted guilt, a settlement with the respondent has been reached, or for any other reason, except: (1) closing of a case at the inquiry stage on the basis that an investigation is not warranted; or (2) a finding of no misconduct at the investigation stage, which must be reported to ORI, as prescribed in this Policy and 42 CFR § 93.315. For allegations that include non-PHS funded research, HBS must comply with any other notice obligation to a government agency or other funder.

Restoration of the Respondent's Reputation

Following a final finding of no research misconduct, including ORI concurrence where required by 42 CFR Part 93 (or, for non-PHS funded research, other applicable federal agency requirements), the RIO must,

at the request of the respondent, undertake all reasonable and practical efforts to restore the respondent's reputation.

Maintaining Records for Review by ORI

Unless HBS has transferred custody of the records of research misconduct proceedings (as defined by 42 C.F.R. § 93.317) to the funding agency in accordance with applicable law, HBS shall maintain the records of a research misconduct proceeding in a secure manner during its pendency and for seven (7) years after completion of the proceeding or completion of any agency oversight proceeding, or as required by any applicable record retention provision, whichever is later.

Exhibit 2

Notice of Inquiry Sent to Respondent on October 27, 2021

HARVARD | BUSINESS | SCHOOL

ALAIN BONACOSSA
RESEARCH INTEGRITY OFFICER

Confidential

October 27, 2021

RE: Notice of Inquiry Related to Allegations of Research Misconduct

Dear Professor Gino,

As the Research Integrity Officer for the Harvard Business School (HBS), I am writing to inform you that HBS will conduct an inquiry (Inquiry) into concerns that have been raised as to whether you falsified and/or fabricated data in the following publications (Appendix B):

> Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 ("*2020 JPSP Paper*")
>
> Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 ("*2015 Psychological Science Paper*")
>
> Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 ("*2014 Psychological Science Paper*")
>
> Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*")

The specific allegations can be found in Appendix A to this letter. The Inquiry will be conducted in accordance with the HBS Interim Policy and Procedures for Responding to Allegations of Research Misconduct ("HBS Policy;" see Appendix C), which defines research misconduct as "fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results." Fabrication is defined as "making up data or results and recording or reporting them," and falsification is defined as "manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record." (HBS Policy, Appendix C).

SOLDIERS FIELD | BOSTON, MA 02163 | Ph 617.496.6348 | abonacossa@hbs.edu | GEORGE F. BAKER FOUNDATION

The Inquiry will be carried out by a faculty committee, appointed by Dean Datar, which shall be charged with assessing whether an investigation is warranted.[1] Dean Datar has proposed to appoint the following faculty members to serve on the Inquiry Committee: Teresa Amabile (Chair) and Robert (Bob) Kaplan. Per the HBS Policy, you are afforded five (5) calendar days to lodge objections based upon a proposed committee member's alleged personal, professional, or financial conflict of interest. If you wish to lodge an objection, please do so in writing to me by Monday, November 1, 2021. The Dean or their designee will make the final determination as to whether a conflict exists.

The Inquiry Committee will want to interview you and others who may have relevant information, and I will reach out to you to set up a date and time. Any interviews will be audio recorded and transcribed and you will be given the opportunity to review and correct the transcript of your interview. Per HBS policy, you may choose up to two personal advisors for support during the process. Personal advisors may be attorneys but may not be principals or witnesses in the research misconduct matter. Personal advisors may be present at any proceedings or interviews that the respondent attends but may not question witnesses or otherwise take part in the research misconduct proceedings. In lieu of or in addition to an interview, you also may wish to submit a written statement to the Committee.

At the conclusion of the Inquiry, the Committee will prepare a draft report with its conclusions and recommendations. You will be provided with a copy of the draft report and given the opportunity to review and make comments for the Committee to consider before the report is finalized. The Inquiry Committee's final report, along with all exhibits and any comments you provided to the draft report, will be reviewed by the Dean or their designee, who will make a written determination as to whether an investigation is warranted. For further information regarding the Inquiry process, and research misconduct proceedings more generally, please refer to the HBS Policy (Appendix C).

It is essential that all materials, including documents, other physical things, and electronically-stored information, that relate in any way to the issues under review be produced at this time. If such information is located on the HBS campus, or on its computers and data and information systems, I ask that you promptly direct me to the location(s) of such information to facilitate sequestration as required by the HBS Policy. If you have in your possession any materials that relate to the issues under review, I ask that you contact me immediately to make arrangements to deliver them to me. Please note that no materials relevant to the Inquiry should be altered or destroyed, even in the course, for example, of routine disposal of old papers or electronic files, extra copies, or drafts of documents. Under the HBS Policy, the destruction of research records, absence of research records, or failure to provide research records adequately documenting the questioned research may be evidence of research misconduct.

We already have sequestered certain research records and other materials relating to your research in a secure manner. As part of the sequestration process, we also need to access and copy your HBS-issued devices and any other devices you may have used to conduct your research so as to complete the sequestration process. If you have not already done so, please bring the following devices to the HBS campus as soon as possible but no later than 5pm on Wednesday, October 27, 2021:

---

[1] An Inquiry's purpose is to decide if the allegations warrant an investigation. An investigation is warranted if there is: (i) a reasonable basis for concluding that the allegation falls within the definition of research misconduct and (ii) preliminary information-gathering and preliminary fact-finding by the faculty panel at Inquiry indicates that the allegation may have substance. If this matter proceeds to investigation, an investigation panel will charged with conducting the investigation; this panel may include members of the inquiry panel at the Dean's discretion.

- Apple MacBook Pro – Serial# C02T2CB6GTF1
- Apple Mac Pro – Serial# F5NG0HAF694
- Dell Latitude E4310 – Serial# C98V0P1
- Apple Mac Pro – Serial# C02MR2DMFD59
- Apple MacBook Air – Serial# C02XQ15WJK7M

You should contact Christopher Pringle, HBS Information Security Officer, to coordinate this access [redacted] or [redacted]. If there are extenuating circumstances that make it impossible for you to meet this deadline, please let me know as soon as possible. HBS will take a copy of these devices for the purposes of this review process and then will return them to you so that your work may continue with as little disruption as possible.

In addition to what is located at HBS, or on its computers and data and information systems, you also may have information relevant to the matters under review in third-party email services, on personal computers at home or elsewhere, in paper files in your personal possession, or otherwise located outside of HBS. As stated above, no materials relevant to the Inquiry should be altered or destroyed, even in the course, for example, of routine disposal of old papers or electronic files, extra copies, or drafts of documents. All such information must be preserved until HBS informs you that the review of the allegations has concluded and must be provided to the Inquiry Committee if requested.

Please understand that you are to take no steps to retaliate against anyone who came forward with the allegations or against anyone who may participate in the Inquiry process.

We consider this to be a confidential matter and will make every effort to ensure that confidentiality is maintained. Under the HBS Policy, you also are responsible for maintaining confidentiality and cooperating with the conduct of an inquiry. Please be assured that we are committed to a fair, thorough and objective process.

To ensure confidentiality, I will be your main point of contact throughout these proceedings and will be available to answer any questions you may have—about the policy and the process, as well as other issues that might arise—at any time. I can be reached at [redacted].

Sincerely,

Alain Bonacossa

APPENDIX A
ALLEGATIONS

Relevant Publications:

Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 ("*2020 JPSP Paper*")

Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 ("*2015 Psychological Science Paper*")

Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 ("*2014 Psychological Science Paper*")

Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*")

Allegation 1:

Dr. Gino falsified and/or fabricated the dataset for Study 3a in the *2020 JPSP Paper* by altering observations to affect the significance of findings of the study in the hypothesized direction. In particular:

(a) in the promotion-focus condition, by changing extreme values of "7" to "1" to drive the expected effect. Specifically, for 9 observations there seems to be a mismatch between participants' impurity ratings and the words participants chose to describe how they felt;

(b) in the prevention-focus condition, by changing some values of "1" to either "2" or "3" to drive the expected effect. A number of observations also show a mismatch between participants' impurity ratings and the words participants chose to describe how they felt.

Allegation 2:

Dr. Gino falsified and/or fabricated the datasets for Study 4 in the *2015 Psychological Science Paper* by altering a number of observations. Notably, 20 observations substantially contribute to the significance of the hypothesized effects, and these same 20 observations presented an anomalous response pattern,

in which study participants seemingly entered "Harvard" as their response to a question asking them to indicate "Year in School," in contrast to the vast majority of research participants who correctly answered this question.

Allegation 3:

Dr. Gino falsified and/or fabricated the datasets for Study 4 in the *2014 Psychological Science Paper* by altering a number of observations. In particular, when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found, it appears there are 13 observations out of sort within the cheating condition. These observations substantially contribute to the significance of the hypothesized effects. When these observations are corrected with the values implied by the sort, the effect in the expected direction is no longer significant (from $p=.0003$ to $p>.17$)

Allegation 4:

With respect to Study 1 in the *2012 PNAS Paper:*

(a) Dr. Gino falsified and/or fabricated the results by removing part of the description of study instructions to research participants from a draft of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. Such instructions pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.

(b) Dr. Gino falsified and/or fabricated the datasets by altering a number of observations. In particular, when sorted by "experimental condition" and by "participant ID number," the dataset for Study 1 appears to include 1 duplicate observation and 8 observations where the "participant ID number" is out of sort. The out of sort observations substantially contribute to the significance of the hypothesized effects.

Appendix B

Articles Referenced in Appendix A

American Psychological Association

Journal of Personality and Social Psychology:
Attitudes and Social Cognition

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ISSN: 0022-3514

2020, Vol. 119, No. 6, 1221–1238
http://dx.doi.org/10.1037/pspa0000226

ATTITUDES AND SOCIAL COGNITION

Why Connect? Moral Consequences of Networking With a Promotion or Prevention Focus

Francesca Gino
Harvard University

Maryam Kouchaki
Northwestern University

Tiziana Casciaro
University of Toronto

Networks are a key source of social capital for achieving goals in professional and personal settings. Yet, despite the clear benefits of having an extensive network, individuals often shy away from the opportunity to create new connections because engaging in instrumental networking can make them feel morally impure. In this article, we explore how the motives people have when engaging in networking impact these feelings and, as result, change how frequently they engage in networking and their job performance. Across a correlational survey study, a laboratory experiment (with samples from the United States and Italy), two online studies, an organizational network survey study, and a field experiment with professionals (total $N = 2,551$), we examine how self-regulatory focus, whether promotion or prevention, affects people's experience of and outcomes from networking. We find that a promotion focus, as compared to a prevention focus or a control condition, is beneficial to professional networking, as it lowers feelings of moral impurity from instrumental networking. As such, networking with a promotion focus increases the frequency of instrumental networking as compared to a control condition, whereas networking with a prevention focus decreases frequency of instrumental networking as compared to a control condition.

Keywords: networking, impurity, morality, motivation, regulatory focus

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The importance of professional networks for work performance and career advancement has been well-established in hundreds of empirical studies (for reviews, see Borgatti & Foster, 2003; Brass, Galaskiewicz, Greve, & Tsai, 2004; Borgatti, Mehra, Brass, & Labianca, 2009; Fang et al., 2015). More recently, a growing literature has documented that networking behaviors—commonly defined as individuals' efforts to develop and maintain relationships with others who can potentially provide assistance to them in their career or work (Forret & Dougherty, 2004)—are critical to developing such professional networks (Adler & Kwon, 2002).

This article was published Online First June 18, 2020.

Francesca Gino, Harvard Business School, Harvard University; Maryam Kouchaki, Kellogg School of Management, Northwestern University; Tiziana Casciaro, Rotman School of Management, University of Toronto.

All three authors contributed equally and are listed in alphabetical order by first name. All studies' materials can be found on OSF at https://osf.io/kf2ut/?view_only=26073af04f9046cd9e0a62159a5755d4, together with the data from Studies 1, 3A, and 3B.

Correspondence concerning this article should be addressed to Maryam Kouchaki, Kellogg School of Management, Northwestern University, 2211 Campus Drive, Evanston, IL 60208. E-mail: m-kouchaki@kellogg.northwestern.edu

Despite the benefits people derive from having an extensive and diverse network, they often shy away from playing an active role in cultivating professional connections (Belmi & Laurin, 2016; Bensaou, Galunic, & Jonczyk-Sédès, 2013; Wanberg, Kanfer, & Banas, 2000). In exploring this phenomenon, Casciaro, Gino, and Kouchaki (2014) showed that when networking is the result of individuals' intentional (instrumental) effort to form connections that will help them attain a professional goal (as opposed to social and spontaneous forms of networking), they tend to feel inauthentic and dirty because they have difficulty justifying the selfish intent behind instrumental professional networking morally. This research also showed that people deem instrumental professional networking to be more morally acceptable when they have power and therefore have more to give, because they can more readily self-justify networking as potentially beneficial to others (Casciaro et al., 2014). Yet power is largely an objective experience based on the asymmetric distribution of valued resources in social relations (Magee & Galinsky, 2008); because power is driven by structural and contextual forces, people with lower power may therefore have limited psychological agency to make instrumental professional networking morally palatable to them.

In this article, we wish to identify more universal ways in which people can transform their moral experience of intentional networking as they engage in it to pursue professional goals. We propose that

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people's motives when engaging in instrumental professional networking predict the extent to which they feel inauthentic and morally impure in the process. Specifically, we argue that self-regulatory focus, in the form of prevention and promotion, provides an essential motivational basis for networking behavior which shapes the emotional and psychological experience of networking. Building on earlier self-regulation models (Bowlby, 1969; Higgins, 1987), regulatory focus theory (RFT; Higgins, 1997) identifies two motivational systems that regulate two different basic needs. The promotion-focus system serves nurturance needs. People in a promotion focus care about growth, advancement, and accomplishment, and strive toward ideals, wishes, and aspirations. The prevention-focus system, instead, regulates security needs. People in a prevention focus care about safety, maintaining the status quo, and meeting their responsibilities and duties (Friedman & Förster, 2001; Sacramento, Fay, & West, 2013).

With this research, we aim to advance scholarly understanding of the moral psychology of networking in four ways. First, we theorize that people's motivational approach—promotion versus prevention—predicts how morally impure they feel from instrumental networking for professional goals. Casciaro et al. (2014) demonstrated how moral impurity is heightened by certain types of networking behaviors and not others, and found evidence that impurity reduces the frequency of networking, and thus performance. Though insightful, their research is silent on what people could do to change their perspective toward instrumental networking to avoid the costs of withdrawing from it, nor do Casciaro and her colleagues shed light on the role that motives play in developing and nurturing professional ties. Here, we extend this work by arguing and showing that promotion and prevention focus are independent predictors of how people experience instrumental networking and how much, as a result, they engage in it.

Second, we further develop the theoretical link between regulatory foci and morality advanced by Cornwell and Higgins (2015) and establish it empirically. Third, we elaborate on the theoretical path between people's motives to engage in instrumental professional networking, their experience of moral impurity, and how frequently they network. Fourth, we aim to establish that this path persists across three forms of regulatory focus: (a) the chronic disposition (Higgins, 1997, 1998), (b) the temporarily activated psychological state (Liberman, Idson, Camacho, & Higgins, 1999), and (c) a domain-specific form of promotion and prevention focus (Browman, Destin, & Molden, 2017), which we introduce to allow for the possibility that general trait and state regulatory foci may differ systematically from how a promotion and a prevention focus regulate a specific behavior, such as networking.

How Motives Influence Moral Purity and Networking

Self-Regulatory Foci and Moral Impurity

RFT states that promotion and prevention are mutually inhibitory modes of self-regulation: When one mode is unavailable or blocked, the other mode kicks in to compensate (Higgins, 1998). So, while a person may approach the same goal with both promotion and prevention, only one of the two systems is actively engaged in achieving the goal at any point in time. When pursuing goals, people commonly use either a promotion or a prevention mode, and they can switch modes (Shah, Higgins, & Friedman, 1998). Which system is engaged at any given time depends on the characteristics of the situation and the person's regulatory orientation (Higgins, 1997; Strauman, 1996).

Regulatory focus is studied as either a chronic disposition people have (Higgins, 1997, 1998) or a psychological state that is temporarily activated, such that a person's emphasis on one over the other is primed by cues in the external environment (Friedman & Förster, 2001; Liberman et al., 1999). In addition to chronic and state forms of regulatory foci, we echo developments in regulatory-focus theory (Browman et al., 2017) by exploring a domain-specific form of regulatory foci, networking-specific promotion and prevention focus, to introduce the possibility that generalized trait and state regulatory foci may differ systematically from how a promotion and a prevention focus regulate a specific behavior.

Regulating behavior via promotion and prevention foci influences goal attainment in various performance domains. This is because a person's regulatory focus affects the strategies the person uses to get to their goals (e.g., surpassing a high score) and to overcome challenges that impede attainment of those goals (e.g., getting over an error limit; Higgins, 1998). Because regulatory focus influences people's performance, its role has been studied in organizations too (Brockner & Higgins, 2001; Johnson, Chang, & Yang, 2010; Wallace, Johnson, & Frazier, 2009). This research shows that whether people approach work with a promotion or prevention focus is related to distinct behaviors that are organizationally relevant, including productivity, innovation, and safety compliance (e.g., De Cremer, Mayer, van Dijke, Bardes, & Schouten, 2009; Wallace et al., 2009). For instance, Wallace and Chen (2006) found that prevention focus is positively and strongly related to safety behavior, while promotion focus is negatively and weakly related to it.

Similarly, regulatory focus can influence how people experience their social networks and how intensely they engage in professional networking. A promotion focus leads people to notice and remember information and emotions that result from positive outcomes, thus further directing their behavior toward achieving them (Higgins, Roney, Crowe, & Hymes, 1994; Higgins, Shah, & Friedman, 1997; Higgins & Tykocinski, 1992). Promotion-focused people invest their energy in activities that allow them to grow or fulfill their aspirations, and away from those that translate into sticking to the status quo (Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008). By contrast, a prevention focus leads people to pay attention to and remember information and emotions they experienced at some point in their past as a result of losses, failures, or punishments (Higgins & Tykocinski, 1992). As a result, prevention-focused individuals are vigilant and concerned with accuracy when approaching tasks (Förster, Higgins, & Bianco, 2003), as they seek to meet their obligations and others' expectations (Higgins, 1997, 1998). Therefore, a prevention focus leads people to engage in actions that will likely avoid negative outcomes and comply with expectations or policies set by others (Higgins et al., 1994). These motivational orientations lead individuals with a high prevention focus to derive greater life satisfaction when they are part of a highly dense network that allows them to meet obligations and responsibilities. People with a high promotion focus, instead, derive greater life satisfaction from a low-density network that supports creative inspiration and personal development (Zou, Ingram, & Higgins, 2015). Likewise, a promotion focus increases the frequency of professional network-

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 81 of 1282

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ing, whereas a prevention focus decreases it (Pollack, Forster, Johnson, Coy, & Molden, 2015).

We inform and deepen these insights by theorizing that the relationship between self-regulatory focus and networking behavior hinges on morality. We posit, in particular, that promotion and prevention regulatory foci have distinct consequences for an individual's sense of moral purity and authenticity when engaging in instrumental professional networking. Our arguments hinge on a moral psychology of motivation that reflects advances in contemporary moral philosophy. A building block for such theorizing stems from Cornwell and Higgins (2015), who underscored the existence of two ethical systems that motivate human behavior, mirroring the dual-process approach to motivation of RFT (Higgins, 1998). Specifically, Cornwell and Higgins (2015) posited that both promotion and prevention regulatory foci have ethical implications: prevention focus refers to "a system of ethical *oughts* that is concerned with maintaining obligations," while promotion focus refers to "a system of ethical *ideals* that is concerned with attaining virtues" (Cornwell & Higgins, 2015, p. 312). When motivated by the pursuit of ethical oughts, the individual responds to duties and obligations imposed externally. By contrast, ethical ideals are internally held aspirations that the individual pursues freely.

Contemporary philosophy in turn sheds lights on the diametrically different implications that ethical oughts and ethical ideals have for authenticity. A fundamental premise of moral philosophy, from Hegel's phenomenology to Nietzsche and Sartre's existentialist analyses, is that conducting one's life by conforming to prevailing morality—that is, in pursuit of the "ought" self—compromises authenticity as an ethical ideal (Varga, 2012). Hegel contrasts the "authentic self" that is incessantly committed to self-creation from the "honest individual" who submits to prevailing duties and thus nullifies the urge of the human spirit to live in complete freedom. In doing so, the "honest individual" in Hegel's analysis is a hypocrite who lacks real freedom and suffers from self-alienation (Golomb, 1995). Hegel's premise paved the way for the existentialist revolution in modern moral philosophy, in which "the concept of authenticity is a protest against the blind, mechanical acceptance of an externally imposed code of values" (Golomb, 1995, p. 11). Rejecting premodern views of morality as justified by recourse to some higher authority, an ethic of authenticity is guided instead by motives and reasons that express a subject's core individuality (Taylor, 1991), the ideal self (Cornwell & Higgins, 2015). An ethic of authenticity does not object to the normative content of motives but focuses instead on how a motive "fits with the wholeness of a person's life, and whether and how it expresses who the person is" (Varga, 2012, p. 12).

Consistent with these arguments, Kim and colleagues (Kim, Chen, Davis, Hicks, & Schlegel, 2019) theorized a link between prevention and promotion self-regulatory focus—defined as the pursuit of externally imposed oughts versus personally held ideals, respectively (Cornwell & Higgins, 2015)—and subjective authenticity. According to their argument, "certain behaviors feel more natural and less constrained by external influences. When individuals engage in these actions, their subsequent psychological mindsets contribute to the expression of core values and thus enhance subjective authenticity"; it follows that "promotion focus, relative to prevention focus, functions similarly in fostering authentic experiences" (Kim et al., 2019, p. 166). Evidence from both correlational studies and controlled experiments consistently supported a link between promotion focus and subjective authenticity, in the context of both goal pursuit and interpersonal interaction (Kim et al., 2019).

The moral psychological foundations of this association between regulatory focus and subjective authenticity are further corroborated by theory and evidence that people experience feelings of authenticity as moral and pure; conversely, feelings of inauthenticity are experienced as immoral and impure (Gino, Kouchaki, & Galinsky, 2015). These different streams of work in moral philosophy and moral psychology, then, consistently provide arguments suggesting that prevention self-regulatory focus increases feelings of moral impurity because fulfilling the ought-self compromises authenticity; by contrast, promotion self-regulatory focus is negatively linked to moral impurity because fulfilling the ideal-self does not compromise authenticity.

These arguments can be readily applied to the context of instrumental networking. Namely, making professional connections with a prevention focus stems from an ethic consisting of a sense of professional duty and adherence to behavioral norms in one's field of activity. Prevention-focused instrumental networking is therefore likely to induce feelings of inauthenticity and moral impurity because the motivation to network instrumentally stems from oughts that a professional context imposes on the individual. By contrast, people who engage in instrumental networking with a promotion focus do so to achieve the aspirations of their ideal self. They are motivated by the pursuit of advances and virtues that express their core individuality (Taylor, 1991), instead of mechanically accepting an externally imposed code of values (Golomb, 1995). They are thus likely to experience instrumental networking as more authentic and morally pure than prevention-focused networkers are.

According to moral psychology research, morality can be thought in terms of purity and cleanliness (Zhong & Liljenquist, 2006). When people experience moral threats by acting in ways that are not consistent with their moral values (e.g., by cheating when caring about honesty), they feel a greater need to cleanse physically, and cleansing-related concepts become more accessible in their minds (Zhong & Liljenquist, 2006). Thus, moral threats lead people to engage in cleansing so that they can reaffirm their values and clean their tainted consciences (Tetlock, Kristel, Elson, Green, & Lerner, 2000). Regulatory focus may therefore predict how inauthentic and dirty people feel in engaging in instrumental networking. Specifically, a promotion focus may yield networking concerned with authentic virtues and meeting one's ethical ideal, and a prevention focus may yield networking motivated by the "shoulds" prevailing in one's professional environment and thus triggers feelings of inauthenticity and impurity (Gino et al., 2015). Thus, we hypothesize, engaging in instrumental networking with a prevention focus increases feelings of inauthenticity and dirtiness, whereas a promotion focus decreases them. As a result, people who engage in instrumental networking with a prevention focus will experience higher levels of moral impurity as compared to those with a promotion focus.

Moral Impurity and the Frequency of Instrumental Networking

People vary in terms of both how likely they are to network and how frequently they engage in networking behavior (Forret & Dougherty, 2001; Wanberg et al., 2000), in part because they

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 82 of 1282

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have different attitudes toward networking (Azrin & Besalel, 1982). Those with low "networking comfort" (i.e., embarrassment and discomfort when asking others for job leads or advice; Wanberg et al., 2000) or even stronger feelings of moral impurity (which underlies networking discomfort; Casciaro et al., 2014) tend to engage in networking less often than others (Casciaro et al., 2014; Wanberg et al., 2000). Given that a promotion focus versus a prevention focus results in lower levels of feelings of impurity and authenticity when engaging in instrumental networking, we expect people in a promotion focus to engage in instrumental networking more frequently than those in a prevention focus because the former approach lowers feelings of moral impurity.

Instrumental Networking Frequency and Job Performance

Finally, we wish to further corroborate existing theory and evidence on the consequences of disengaging from instrumental networking on a professional's job performance (Casciaro et al., 2014; Forret & Dougherty, 2001, 2004; Pollack et al., 2015; Wolff & Moser, 2009). Consistent with that prior work, we expect that more frequent instrumental networking will give people greater access to valuable information, opportunities and resources, and thus will lead them to perform better in their jobs.

Given that a promotion focus results in greater frequency of instrumental networking, we expect people with a promotion focus to also experience higher levels of performance. We also expect prevention focus to result in lower frequency of networking and thus lower levels of performance. Figure 1 summarizes the predicted associations between regulatory focus, moral impurity, frequency of instrumental professional networking, and job performance.

Overview of the Studies

We tested our main hypotheses in six complementary studies of the consequences of regulatory focus for the moral experience of professional instrumental networking, relying on both correlational and causal evidence and using measures capturing either trait regulatory focus (general and domain-specific) or state regulatory focus (see Figure 2 for an overview).

In Study 1, we tested our predictions using a correlational design in which we measured individuals' chronic regulatory focus and assessed their feelings of moral impurity. In Study 2, a laboratory experiment conducted both in the United States (Sample A) and in Italy (Sample B), we manipulated regulatory focus and provided causal evidence for a relationship between people's state regulatory focus and their feelings of moral impurity from instrumental networking for professional goals. In Studies 3A and 3B, we use online samples to provide further evidence for these relationships using designs that also include a control condition in addition to a prevention-focus and a promotion-focus condition. In Study 4, we conducted a cross-sectional survey of lawyers in a law firm to test our predictions in a field context, where we measured trait promotion and prevention foci both as a general orientation and one specific to networking. We tested for a serial mediation from a lawyer's trait promotion and prevention focus, to feelings of moral impurity they experience when they network instrumentally, to the frequency with which they network, and to their job performance. Finally, in Study 5, we used a field experiment with working professionals to test the causal link between state networking-specific regulatory focus, moral purity, and frequency of instrumental professional networking.

We report all participants recruited, all experimental conditions, and all measures in each of our studies. The sample size for each study was determined before data collection began. We calculated our sample size based on an estimate of medium effect size ($f = 0.25$), requiring a sample size of approximately 50 participants per condition for a study powered at 80%. These numbers are also consistent with the recommendations of Simmons, Nelson, and Simonsohn (2013). For the laboratory and field studies, the final number was dictated by the availability of participants, we targeted more participants hoping to recruit at least about 50 of them for each condition. For our correlational studies, an a priori power analysis with 80% power and assuming modest correlations among variables ($r = .25$) requires about 99 participants, however, we targeted larger samples at the outset, which would provide higher power to detect a small to medium effect size.

All studies' materials can be found on OSF at https://osf.io/kf2ut/?view_only=26073af04f9046cd9e0a62159a5755d4, together with the data from Studies 1, 3A and 3B. The consent form used in Studies 2 and 5 stated that we would not be sharing any data outside of the research team, even if the data were deidentified. We collected data for these studies before the institutional review board changed the recommended language on consent forms, to allow for data sharing and posting. For Study 4, we are prohibited from sharing the data by a nondisclosure agreement with the law firm where the data was collected.

Study 1

Study 1 used a correlational design to examine how chronic promotion and prevention regulatory focus affect people's feelings of moral impurity from instrumental networking.

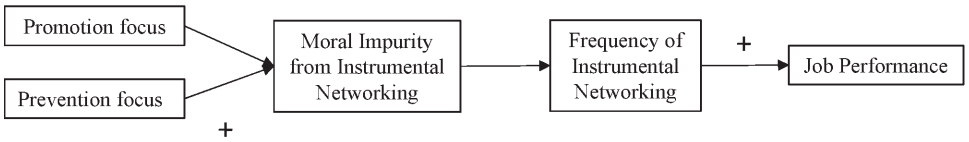

Figure 1. Summary of predicted associations.

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 83 of 1282

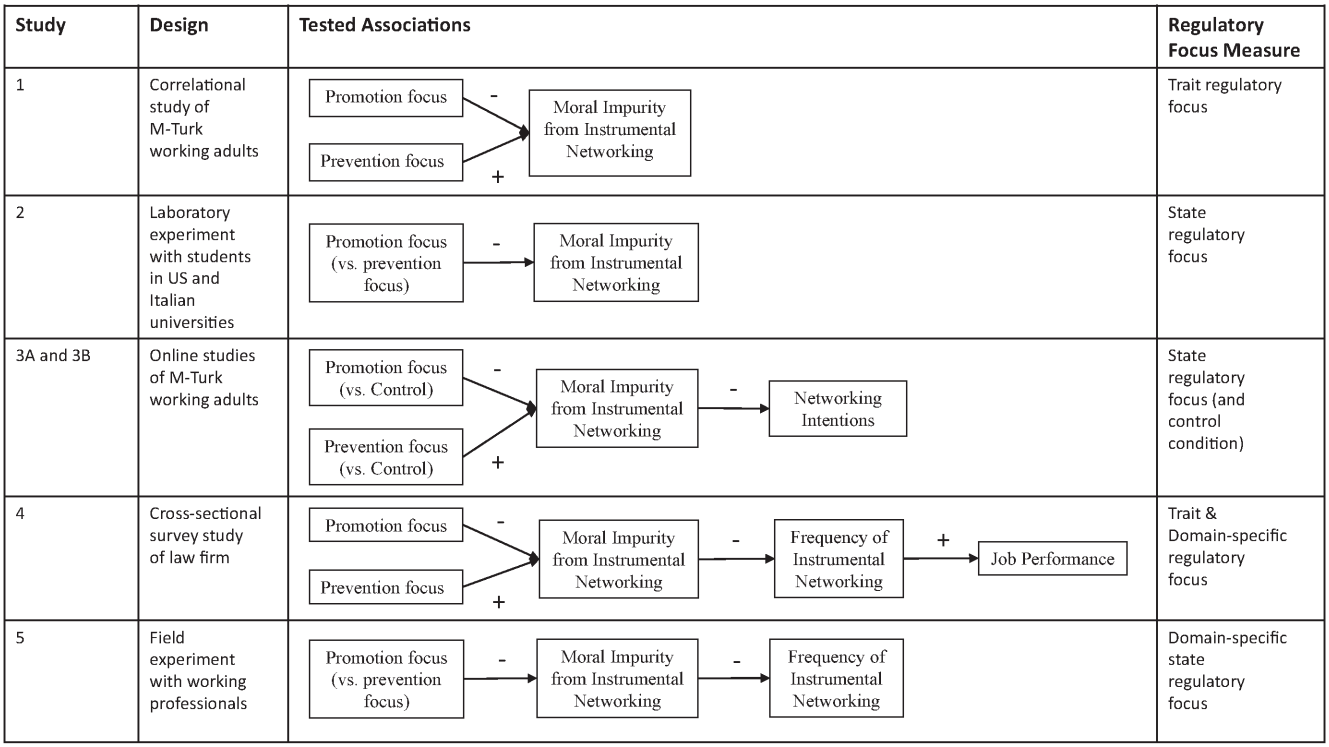

Figure 2. Overview of studies.

Method

Participants. A total of 412 people (M_{age} = 36.28, *SD* = 9.05, 56% male) from Amazon Mechanical Turk (MTurk; all located in the United States) participated in a two-part study for $2. They received $0.50 for completing Part 1 and $1.50 for completing Part 2. We initially recruited 500 people, but only 412 completed both Parts 1 and 2; thus, we used this smaller sample in our analyses.

Procedure. The initial instructions that welcomed participants to the study included three attention checks. Those who failed one or more received a message letting them know that they did not qualify for the study given their answer. Their data was not recorded.

In Part 1, participants first indicated their age and gender. Next, they completed the Composite Regulatory Focus Scale (Haws, Dholakia, & Bearden, 2010), which measures a person's trait promotion and prevention regulatory focus on a 7-point scale (ranging from 1 = *strongly disagree* to 7 = *strongly agree*). A sample item for promotion focus is "I see myself as someone who is primarily striving to reach my 'ideal self'—to fulfill my hopes, wishes, and aspirations." A sample item for prevention focus is "I see myself as someone who is primarily striving to become the self I 'ought' to be—to fulfill my duties, responsibilities, and obligations."

We contacted participants four days later for the second part of the study. In Part 2, participants received the following instructions:

> You will now be asked to recall a certain event and then write about it for about five minutes. We are interested in how people remember and reflect on events from their past. You will then be asked to answer a few questions.

We asked all participants to recall a situation in which they engaged in professional instrumental networking. The instructions (adapted from Casciaro et al., 2014) read,

> Please recall a time in your professional life where you did something with the intention of strategically making a professional connection. We are interested in a situation where you tried to create or maintain relationships that would aid the execution of work tasks and your professional success.
>
> Other people engaging in this type of introspective task frequently write about instances where they attended receptions or networking events because they wanted to meet potential clients or higher status colleagues.
>
> Please describe the details about this situation. What was it like to be in this situation? What thoughts and feelings did you experience?
>
> Please provide as many details as possible so that a person reading your entry would understand the situation and how you felt.

Next, to test the relationship between participants' self-regulatory focus and the feeling of moral impurity they experience when engaging in instrumental networking, we measured participants' feelings of impurity.

Moral impurity. Using a 7-point scale (ranging from 1 = *not at all* to 7 = *very much*), participants indicated the extent to which the situation they described made them feel dirty, tainted, inauthentic, and ashamed (α = .90; adapted from Casciaro et al., 2014). Though drawing on prior research, these items may evoke prevention rather than promotion focus. Thus, we also

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 84 of 1282

included items that are more regulatory-focus neutral: wrong, unnatural and impure ($\alpha = .84$; from the moral foundation questionnaire, Graham et al., 2011). When conducting a factor analysis, we found that the seven items loaded onto the same factor, so we also created a composite measure by averaging all items ($\alpha = .94$).

Comprehension check. We asked participants to indicate whether they wrote about a professional or personal situation in the initial writing task they had completed.

Results

All answers to the comprehension check question were correct. Table 1 reports the descriptive statistics and bivariate correlations among the main variables we measured in this study. As expected, on all three ways we constructed a measure of moral impurity (the four-item measure, the three-item measure with regulatory-focus neutral words, and the composite seven-item measure), we found a negative and significant correlation between the promotion orientation index and feelings of impurity, and a positive and significant correlation between the prevention orientation index and feelings of impurity.

We also conducted partial correlations analyses to test for the independent effects of a promotion focus and a prevention focus on felt moral impurity. When controlling for prevention, the promotion orientation index was negatively correlated with feelings of impurity ($r = -.10$, $p = .04$ for the four-item measure, $r = -.10$, $p = .055$ for the three-item measure with regulatory-focus neutral words, and $r = -.10$, $p = .04$ for the seven-item measure). When controlling for promotion, the prevention orientation index was positively correlated with feelings of impurity ($r = .18$, $p < .001$ for the four-item measure, and $r = .19$, $p < .001$ for the three-item measure with regulatory-focus neutral words, and $r = .19$, $p < .001$ for the seven-item measure).

Discussion

The results of Study 1 provide initial evidence for the relationship between regulatory focus and feelings of moral impurity that people commonly experience when engaging in instrumental professional networking.

Study 2

In Study 2, we moved to the controlled environment of the laboratory to examine how promotion and prevention regulatory focus influence how people feel when engaging in instrumental professional networking. In this study, we included two manipulations: one for regulatory focus (promotion vs. prevention) and another for the type of professional networking (instrumental vs. spontaneous). Previous work by Casciaro and colleagues (2014) distinguished between instrumental networking, where a person initiates a social relationship proactively and with the goal of obtaining benefits (e.g., advancement or an advantage), and spontaneous networking, where the social tie emerges naturally, with no premeditated purpose, and is initiated by someone else. The authors found that the former leads to greater feelings of dirtiness and inauthenticity than the latter. We build on this work by examining the effect of regulatory focus for each type of professional networking. We also extend our findings from Study 1 by examining regulatory focus triggered in the moment rather than measured as an individual difference. To examine the contextual robustness of our findings, we collected data on two culturally different samples of students, one from the United States and one from Italy. This allowed us to test our main proposition in two different cultures.

Across our main dependent measures of interest (i.e., feelings of moral impurity and desire to physically cleanse), we expect to find a significant interaction between the two manipulations, such that a promotion focus leads to lower feelings of moral impurity and a lower desire to cleanse oneself than a prevention focus in the case of instrumental networking, but regulatory focus leads to no differences on these measures in the case of spontaneous networking.

Method

Participants and design. Participants were randomly assigned to one of four conditions in a 2 (Type of Networking: instrumental vs. spontaneous) × 2 (Motive: promotion vs. prevention focus) between-subjects design.

Sample A. A total of 367 students ($M_{age} = 21.93$, $SD = 2.91$; 43% male) recruited through a U.S. university-affiliated research pool participated in the study. Participants received $20 for completing the experiment.

Sample B. A total of 254 students ($M_{age} = 20.80$, $SD = 1.76$; 54% male) recruited through an Italian university-affiliated research pool participated in the study. Participants received €15 for completing the experiment. All the materials (including the word completion task) were translated into Italian.

Procedure. We used the same procedure in each sample but used materials translated into Italian for the Italian sample.[1] Participants read initial instructions that welcomed them to the study. Next, we asked them to complete a writing task, which was intended to manipulate regulatory focus (as in Freitas & Higgins, 2002). The instructions specified that we were "interested in detailed writing skills, and in the way people naturally express themselves." In the promotion condition, the instructions (as in Zhang, Higgins, & Chen, 2011) read, "Please think about something you ideally would like to do. In other words, think about a hope or aspiration that you currently have. Please list the hope or aspiration below." In the prevention condition, the instructions read, "Please think about something you think you ought to do. In other words, think about a duty or obligation that you currently have. Please list the duty or obligation below."

Next, participants engaged in a task designed to manipulate the type of professional networking. Using the manipulation of instrumental versus spontaneous professional networking in Casciaro et al. (2014), we asked participants to put themselves in the shoes of the protagonist in the story they were about to read. Each story asked participants to imagine being invited to attend an event during which they socialized with other people. In the story used in the instrumental condition, the main character was described as "actively and intentionally pursuing professional connections with

[1] To ensure we had a proper translation of the materials, we first translated them from English to Italian (with the help of two Italian native speakers who are fluent in English) and then translated them back into English to resolve any inconsistency.

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 85 of 1282

Table 1
Descriptive Statistics and Correlations Among the Variables Collected in Study 1

Variable	*M* (*SD*)	Bivariate correlations				
		1	2	3	4	5
1. Moral impurity (MI; 4 items)	1.73 (1.27)					
2. MI, regulatory-focus neutral (3 items)	1.68 (1.26)	.89***				
3. MI (7 items)	1.71 (1.23)	.98***	.96***			
4. Promotion orientation index	5.18 (1.08)	−.13**	−.12*	−.13**		
5. Prevention orientation index	4.57 (1.05)	.20***	.21***	.21***	−.16**	

* $p < .05$. ** $p < .01$. *** $p < .001$.

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the belief that connections are important for future professional success" (from Casciaro et al., 2014). In the story used in the spontaneous condition, instead, the main character found herself or himself making connections rather than pursuing them intentionally.

Next, participants saw a list of behaviors and had to indicate the extent to which they found each of them to be desirable (1 = *completely undesirable* to 7 = *completely desirable*). We listed both cleansing behaviors (i.e., taking a shower, washing hands, and brushing teeth) and neutral behaviors (e.g., talking a walk, having something to eat, going to the movies, listening to music, reading a book, and watching TV), as in Zhong and Liljenquist (2006).

We then asked participants to report how they felt at that moment, by indicating the extent to which they felt various positive and negative emotions from the Positive and Negative Affectivity Schedule (Watson, Clark, & Tellegen, 1988), using a 5-point scale (1 = *very slightly or not at all*, 5 = *extremely*). Using the same scale, they also indicated how much they felt dirty, inauthentic, and impure (as in Gino et al., 2015) to assess feelings of moral impurity ($\alpha_{U.S._sample} = .64$; $\alpha_{Italy_sample} = .70$). The order in which the Positive and Negative Affectivity Schedule items (negative affect, $\alpha_{U.S._sample} = .88$, $\alpha_{Italy_sample} = .85$; positive affect, $\alpha_{U.S._sample} = .92$, $\alpha_{Italy_sample} = .87$) and those used to measure feelings of impurity were presented to participants was random. Though we did not have predictions about positive and negative affect, we included these measures to show that our hypotheses are specific to moral emotions rather than general affect more broadly.

Next, we reminded participants of the writing task they had completed earlier. The instructions for the promotion (prevention) condition (adapted from Lalot, Quiamzade, & Falomir-Pichastor, 2018) read,

> Now please take a minute and think about what you wrote earlier about something *you ideally would like to do [you ought to do]*; in other words, think about *a hope or aspiration [a duty or obligation]* that you currently have. Please reflect on your experience for 1–2 min and then proceed to the next task.

We also reminded participants of the story they read and asked them to reflect on it for a minute or two and write a few words that came to mind regarding the story before proceeding to the next task.

Next, participants moved onto a word-completion task we used to measure how accessible cleansing was in their mind at that moment (adapted from Zhong & Liljenquist, 2006). In this task, participants need to turn word fragments into meaningful words by relying on the first word they could think of. The task consisted of six word fragments. Three of them (W _ _ H, S H _ _ E R, and S _ _ P) could be turned into cleansing-related words (wash, shower, and soap) or into unrelated, neutral words (e.g., wish, shaker, and step), and the other three word fragments (F _ O _, B _ _ K, and P A _ _ R) could be turned only into unrelated, neutral words (e.g., food, book, and paper). Finally, participants indicated their age and gender.

Results

We report the results of our analyses separately for each sample. Importantly, the nature and significance of the results did not vary based on the location where the data was collected.

Sample A: Data collected in the United States.

Moral impurity. A 2 (Regulatory Focus) × 2 (Type of Networking) between-subjects analysis of variance (ANOVA) using feelings of moral impurity as the dependent measure revealed a significant main effect of regulatory focus, $F(1, 363) = 4.41$, $p = .036$, $\eta_p^2 = .012$, such that participants who approached networking with a promotion focus reported feeling less impure ($M = 1.58$, $SD = 0.69$) than those who approached networking with a prevention focus ($M = 1.74$, $SD = 0.77$). The main effect of type of networking was also significant, $F(1, 363) = 5.63$, $p = .018$, $\eta_p^2 = .015$: Participants who imagined engaging in instrumental networking felt more impure ($M = 1.75$, $SD = 0.81$) than did those who imagined engaging in spontaneous networking ($M = 1.57$, $SD = 0.64$). Importantly, consistent with our predictions, the interaction of regulatory focus and type of networking was also significant, $F(1, 363) = 12.66$, $p < .001$, $\eta_p^2 = .034$. When participants imagined engaging in instrumental networking, they reported feeling less dirty when they had a promotion focus ($M = 1.53$, $SD = 0.66$) than when they had a prevention focus ($M = 1.96$, $SD = 0.88$), $F(1, 363) = 16.03$, $p < .001$. However, when they imagined engaging in spontaneous networking, they felt about equally impure, independent of their regulatory focus ($M_{promotion} = 1.62$, $SD = 0.71$ vs. $M_{prevention} = 1.51$, $SD = 0.56$), $F(1, 363) = 1.07$, $p = .30$.

Negative and positive affect. A similar 2 × 2 ANOVA using negative affect as the main dependent measure revealed no significant effects (all $ps > .18$). As for positive affect, we only found a marginally significant effect of type of networking, $F(1, 363) = 3.60$, $p = .059$, $\eta_p^2 = .01$: Participants who imagined engaging in instrumental networking reported lower positive affect ($M = 2.64$, $SD = 0.92$) than did those who imagined engaging in spontaneous

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 86 of 1282

networking ($M = 2.82$, $SD = 0.89$). No other effects were significant ($ps > .24$).

Cleansing behaviors. As predicted, a 2 (regulatory Focus) × 2 (Type of Networking) between-subjects ANOVA using desirability of cleansing behaviors as the dependent variable revealed a significant interaction, $F(1, 363) = 4.15$, $p = .042$, $\eta_p^2 = .011$. When participants imagined engaging in instrumental networking, they reported a lower desire for cleansing behaviors when they had a promotion focus ($M = 4.37$, $SD = 1.16$) than when they had a prevention focus ($M = 5.02$, $SD = 1.13$), $F(1, 363) = 15.48$, $p < .001$. However, when they imagined engaging in spontaneous networking, they reported about the same degree of desire, independent of their regulatory focus ($M_{promotion} = 4.46$, $SD = 1.06$ vs. $M_{prevention} = 4.64$, $SD = 1.12$), $F(1, 363) = 1.11$, $p = .29$. When considering neutral behaviors, however, we did not find any significant effects (all $ps > .34$).

Accessibility of cleansing-related words. A similar 2 × 2 between-subjects ANOVA revealed a significant interaction between regulatory focus and type of networking, $F(1, 363) = 6.28$, $p = .013$, $\eta_p^2 = .017$, as predicted. When participants imagined engaging in instrumental networking, they generated fewer cleansing-related words when they had a promotion focus ($M = 1.08$, $SD = 0.97$) than when they had a prevention focus ($M = 1.40$, $SD = 0.88$), $F(1, 363) = 5.88$, $p = .016$. However, when they imagined engaging in spontaneous networking, they generated about the same number of cleansing-related words independent of their regulatory focus ($M_{promotion} = 0.99$, $SD = 0.87$ vs. $M_{prevention} = 0.84$, $SD = 0.93$), $F(1, 363) = 1.28$, $p = .26$.

Sample B: Data collected in Italy.

Moral impurity. A 2 (Regulatory Focus) × 2 (Type of Networking) between-subjects ANOVA using feelings of moral impurity as the dependent measure revealed the predicted significant interaction of regulatory focus and type of networking, $F(1, 250) = 9.57$, $p < .001$, $\eta_p^2 = .037$. When participants imagined engaging in instrumental networking, they reported feeling less impure when they had a promotion focus ($M = 1.70$, $SD = 0.62$) than when they had a prevention focus ($M = 2.27$, $SD = 0.82$), $F(1, 250) = 19.78$, $p < .001$. However, when they imagined engaging in spontaneous networking, they felt about equally impure, independent of their regulatory focus ($M_{promotion} = 1.66$, $SD = 0.62$ vs. $M_{prevention} = 1.67$, $SD = 0.74$), $F(1, 250) < 1$, $p = .89$.

Negative and positive affect. A similar 2 × 2 ANOVA using negative affect as the main dependent measure revealed no significant effects (all $ps > .44$). As for positive affect, we found a significant effect of regulatory focus, $F(1, 250) = 6.28$, $p = .013$, $\eta_p^2 = .024$: Participants in the prevention-focus condition reported lower positive affect ($M = 3.31$, $SD = 0.63$) than those in the promotion-focus condition ($M = 3.51$, $SD = 0.64$). No other effects were significant ($ps > .20$).

Cleansing behaviors. As predicted, a 2 (Regulatory Focus) × 2 (Type of Networking) between-subjects ANOVA using desirability of cleansing behaviors as the dependent measure revealed a significant interaction, $F(1, 250) = 11.18$, $p = .001$, $\eta_p^2 = .043$. When participants imagined engaging in instrumental networking, they reported a lower desire for cleansing behaviors when they had a promotion focus ($M = 4.27$, $SD = 1.21$) than when they had a prevention focus ($M = 5.09$, $SD = 1.22$), $F(1, 250) = 11.64$, $p = .001$. However, when they imagined engaging in spontaneous networking, they reported about the same degree of desire, independent of their regulatory focus ($M_{promotion} = 4.46$, $SD = 1.31$ vs. $M_{prevention} = 4.15$, $SD = 1.58$), $F(1, 250) = 1.66$, $p = .20$. When considering neutral behaviors, however, we did not find any significant effects (all $ps > .14$).

Accessibility of cleansing-related words. A similar 2 × 2 between-subjects ANOVA revealed the predicted interaction between regulatory focus and type of networking, $F(1, 250) = 14.80$, $p < .001$, $\eta_p^2 = .056$. When participants imagined engaging in instrumental networking, they generated fewer cleansing-related words when they had a promotion focus ($M = 1.05$, $SD = 0.78$) than when they had a prevention focus ($M = 1.77$, $SD = 1.08$), $F(1, 250) = 20.45$, $p < .001$. However, when they imagined engaging in spontaneous networking, they generated about the same number of cleansing-related words independent of their regulatory focus ($M_{promotion} = 1.02$, $SD = 0.89$ vs. $M_{prevention} = 0.88$, $SD = 0.80$), $F(1, 250) < 1$, $p = .39$.

Discussion

The results of our second study are consistent with our expectations and provide evidence that the motives people have when they approach networking influence how morally impure they feel after engaging in instrumental networking as well as their resulting desire to physically cleanse themselves. Specifically, a focus on promotion rather than prevention in approaching instrumental networking reduces both feelings of moral impurity and the desire to physically cleanse oneself. We found support for these relationships in two different samples, in the United States and in Italy, suggesting that our observed effects may hold across cultures.

Study 3

In Studies 3A and B, both conducted online, we further examine the independent effects of promotion and prevention regulatory focus on feelings of impurity and intentions to engage in networking by also including a control condition in the experimental design.

Study 3A

Method.

Participants and design. A total of 599 working adults recruited through MTurk ($M_{age} = 36.94$, $SD = 9.15$; 46% male), all located in the United States, participated in a 15-min online study, and received $2 for their participation. We recruited 600 participants but only 599 completed the study in the time allotted. We randomly assigned participants to one of three conditions: control versus promotion focus versus prevention focus.

Procedure. Participants read initial instructions that welcomed them to the study. Next, we asked them to complete a writing task, which was intended to manipulate regulatory focus (as in Freitas & Higgins, 2002). The instructions specified that we were "interested in detailed writing skills, and in the way people naturally express themselves." In the promotion condition, the instructions (as in Zhang et al., 2011) read, "Please think about something you ideally would like to do. In other words, think about a hope or aspiration that you currently have. Please list the hope or aspiration below." In the prevention condition, the instruc-

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 87 of 1282

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tions read, "Please think about something you think you ought to do. In other words, think about a duty or obligation that you currently have. Please list the duty or obligation below." In the control condition, the instructions read, "Please think about something you usually do in the evening. Please list the activities you engage in during the evening on a typical day below."

Next, participants engaged in a task simulating instrumental networking. Similar to Casciaro et al. (2014), we asked participants to put themselves in the shoes of the protagonist in the story they were about to read. The story asked participants to imagine being invited to attend an event during which they socialized with other people. In the story, the main character was described as "actively and intentionally making professional connections with the belief that connections are important for future professional effectiveness" (from Casciaro et al., 2014).

Next, we asked participants to report how they felt at that moment, by indicating the extent to which they felt using the comprehensive list of 7 items from Study 1: dirty, inauthentic, and impure, ashamed, wrong, unnatural, and tainted ($\alpha = .95$). We then reminded participants of the writing task they had completed earlier. The instructions for the promotion (prevention) condition read,

> Now please take a minute and think about what you wrote earlier about something *you ideally would like to do [you ought to do]*; in other words, think about *a hope or aspiration [a duty or obligation]* that you currently have. Please reflect on your experience for 1–2 min and then proceed to the next task.

We also reminded participants of the story they read and asked them to reflect on it for a minute or two and write a few words that came to mind regarding the story before proceeding to the next task.

Next, all participants were asked to answer questions about their networking intentions, our main dependent measure. We relied on a measure used in prior work (Raj, Fast, & Fisher, 2017): a self-reported measure of the extent to which participants intended to engage in professional networking in the near future. Participants indicated the extent to which they believed they would seek to expand their professional network in the next month. We used the following four items: "To what degree will you try to strategically work on your professional network in the next month?"; "In the next month, how likely are you to voluntarily engage in behaviors that expand your professional network?"; "To what degree do you plan to establish new professional connections in the next month?"; and "In the next month, to what degree is having a strong professional network a goal that you plan to pursue?" Participants indicated their intention to network in the next month using a 7-point Likert-type scale (1 = *not at all*, 7 = *very much*). These items were averaged to create a composite measure of networking intentions ($\alpha = .96$). Finally, participants indicated their age and gender.

Results.

Moral impurity. Given that all items loaded onto one factor, we averaged them all into a composite measure of moral impurity ($\alpha = .95$).[2] We found that this seven-item measure varied by condition, $F(2, 596) = 17.69$, $p < .001$, $\eta_p^2 = .056$. Participants felt more morally impure in the prevention-focus condition ($M = 2.39$, $SD = 1.36$) as compared to the promotion-focus condition ($M = 1.64$, $SD = 1.07$; $p < .001$) or the control condition ($M = 1.93$, $SD = 1.34$; $p < .001$). Moral impurity was also lower in the promotion-focus condition than in the control condition ($p = .024$).

Networking intentions. Networking intentions also varied by condition, $F(2, 596) = 19.84$, $p < .001$, $\eta_p^2 = .062$. Participants indicated they would network less frequently in the future in the prevention-focus condition ($M = 4.07$, $SD = 1.70$) as compared to the promotion-focus condition ($M = 5.12$, $SD = 1.68$; $p < .001$) or the control condition ($M = 4.74$, $SD = 1.71$; $p < .001$). Network intentions were higher in the promotion-focus condition than they were in the control condition ($p = .024$).

Mediation. We tested for moral impurity as the mediator of the relationship between our regulatory focus manipulation and networking intentions. We first conducted analyses using the dummy for the prevention-focus condition as the independent variable, and the dummy for the control condition as covariate. Using bootstrapping with 10,000 iterations, we estimated the direct and indirect effects of prevention focus through moral impurity on our dependent variable, networking intentions. The 95% bias-corrected confidence interval (CI) for the size of the indirect effect (-0.36, $SE = .06$) excluded zero (95% CI [-0.496, -0.243]), suggesting that feelings of moral impurity mediated the link between prevention focus and lower networking intentions.

Next, we conducted analyses using the dummy for the promotion-focus condition as the independent variable, and the dummy for the control condition as covariate. Using bootstrapping with 10,000 iterations, we found that the 95% bias-corrected CI for the size of the indirect effect (0.36, $SE = .06$) excluded zero (95% CI [0.242, 0.496]), suggesting that feelings of moral impurity mediated the link between promotion focus and higher networking intentions.

Study 3B

Method.

Participants and design. A total of 572 working adults ($M_{age} = 35.37$, $SD = 8.81$; 52% male), all located in the United States and recruited through MTurk, participated in a 15-min online study. They received $2 for their participation. Only participants who had a LinkedIn account could participate. We recruited 600 participants, but only 572 completed the study in the time allotted. We randomly assigned participants to one of three conditions: control versus promotion focus versus prevention focus.

Procedure. In Study 3B, we used the same procedure and design as in Study 3A with one difference: Instead of reading the story as explained above, we asked participants to actually engage in instrumental networking. We did so to add richness to the paradigm as we wanted participants to experience what it feels like to engage in instrumental networking. Specifically, as in Casciaro et al. (2014, Study 4), we asked participants to select a person in their network (someone they were already connected with or someone they would like to connect with), draft a message, and send the message to that individual through their personal

[2] Similar to Study 1, feeling of impurity varied by condition, independent of whether moral impurity was measured with four items: dirty, tainted, inauthentic, and ashamed, $\alpha = .91$, $F(2, 596) = 18.10$, $p < .001$, $\eta_p^2 = .057$, or the three regulatory-focus neutral items: wrong, unnatural and impure, $\alpha = .89$, $F(2, 596) = 16.15$, $p < .001$, $\eta_p^2 = .051$.

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 88 of 1282

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LinkedIn account. Participants were told, "Your intention in sending the message should be to strategically make a professional connection. With this message, you are trying to create a connection that would aid the execution of work tasks and your professional effectiveness." We did not have a way of tracking whether participants actually sent the message they wrote through LinkedIn.

Afterward, all participants answered questions about their networking intentions, as in Study 3A. Specifically, they completed the four-item self-reported measure of the extent to which they believed they would seek to expand their professional network in the next month ($\alpha = .95$, adapted from Raj et al., 2017). Finally, participants indicated their age and gender.

Results.

Moral impurity. Given that all seven items loaded onto one factor, we averaged them all into a composite measure of moral impurity ($\alpha = .93$).[3] We found that this seven-item measure varied by condition, $F(2, 570) = 20.66$, $p < .001$, $\eta_p^2 = .068$. Participants felt more morally impure in the prevention-focus condition ($M = 2.30$, $SD = 1.33$) as compared to the promotion-focus condition ($M = 1.53$, $SD = 0.96$; $p < .001$) or the control condition ($M = 2.01$, $SD = 1.17$; $p = .016$). However, moral impurity was lower in the promotion-focus condition than it was in the control condition ($p < .001$).

Networking intentions. Networking intentions also varied by condition, $F(2, 570) = 19.56$, $p < .001$, $\eta_p^2 = .064$. Participants indicated they would network less frequently in the future in the prevention-focus condition ($M = 4.17$, $SD = 1.53$) as compared to the promotion-focus condition ($M = 5.19$, $SD = 1.51$; $p < .001$) or the control condition ($M = 4.53$, $SD = 1.73$; $p = .025$). Network intentions were higher in the promotion-focus condition than they were in the control condition ($p < .001$).

Mediation. As in Study 3A, we tested for the mediating role of moral impurity in the relationship between our regulatory focus manipulation and networking intentions. We first conducted analyses using the dummy for prevention-focus condition as the independent variable, and the dummy for the control condition as covariate. Using bootstrapping with 10,000 iterations, we estimated the direct and indirect effects of prevention focus through moral impurity on our dependent variable, networking intentions. The 95% bias-corrected CI for the size of the indirect effect (-0.29, $SE = .06$) excluded zero (95% CI [-0.422, -0.193]), suggesting that feelings of moral impurity mediated the link between prevention focus and lower networking intentions.

Next, we conducted analyses using the dummy for the promotion-focus condition as the independent variable, and the dummy for the control condition as covariate. Using bootstrapping with 10,000 iterations, we found that the 95% bias-corrected CI for the size of the indirect effect (0.29, $SE = .06$) excluded zero (95% CI [0.193, 0.426]), suggesting that feelings of moral impurity mediated the link between promotion focus and higher networking intentions.

Coding. We asked a research assistant blind to our hypotheses and study conditions to code the messages participants wrote. We coded the messages on three dimensions. First, we coded whether the message was a new connection attempt: We used 0 if participants wrote the message to someone they already had a connection with (existing connection) and 1 if they wrote the message to someone who would be a new connection (new connection). Second, we coded whether the message was aimed at forming a connection to meet a professional goal (value of 1), as we had defined instrumental networking in the instructions, or whether they were using the assigned task to just make a social connection (e.g., saying hello to a friend; value of 0 in our coding). Given the instructions we used we expected no differences across conditions on this dimension. Finally, we coded for language indicating promotion or prevention focus. We used a value of 1 when messages related to growth, advancement, and accomplishment, and striving toward wishes and aspirations (for promotion). We used a value of 0 when the messages related to missing opportunities and meeting their responsibilities and duties (for prevention). When messages did not include either, we left the cell in the data blank.

We found no differences across conditions on the first and second dimension ($p = .20$ and $p = .51$, respectively). As for the third dimension, we found differences across conditions, $\chi^2(461) = 6.38$, $p = .041$: A higher percentage of participants used promotion language in the promotion condition (73% of them) as compared to the prevention condition or the control condition (67.7% and 59.5%, respectively).

Discussion

The results of Studies 3A and 3B provide further support for the independent effects of promotion and prevention focus on feelings of impurity and instrumental networking, by showing differences as compared to a control condition.

Study 4

In Study 4, a field setting, we explored the implications of networking-related promotion and prevention regulatory focus for the frequency of instrumental professional networking by professionals and the feelings of impurity they associate with it. To that end, we surveyed lawyers employed at a large North American law firm. Business lawyers work either as counsel when hired by client or as experts on a client's file when asked by a colleague. In either case, acquiring the work requires having relationships with colleagues and clients. Thus, law professionals at both junior and senior levels can benefit from and care deeply about instrumental networking, making this a particularly appropriate empirical context.

Method

Sample and procedure. When we conducted our study, 425 lawyers were employed at the law firm where we collected survey data. Hierarchically, the law firm was structured according to levels of legal experience, as is common for the industry: junior associate, midlevel associate, senior associate, junior partner (i.e., nonequity partner), and senior partner (i.e., equity partner). The firm had five offices across North America and 13 law practices.

[3] Similar to Studies 1 and 3A, feeling of impurity varied by condition, independent of whether moral impurity was measured with four items: dirty, tainted, inauthentic, and ashamed, $\alpha = .87$; $F(2, 570) = 19.54$, $p < .001$, $\eta_p^2 = .064$, or the three regulatory-focus neutral items: wrong, unnatural and impure, $\alpha = .85$; $F(2, 570) = 19.34$, $p < .001$, $\eta_p^2 = .064$.

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The lawyers employed at the firm served business clients working across practices and locations, as the needs of the clients required. We sent to all the lawyers employed at the firm an invitation to complete a survey about their approach to professional networking. In the invitation, we made clear that participation in the survey was voluntary, and withdrawal from the study was available at any time with no penalty. We also reassured participants that all their responses would be entirely confidential, such that the firm's management would never get access to any individual responses, and would only receive aggregated findings with the goal of aiding the firm in supporting its lawyers' development and effectiveness as legal professionals. For their efforts, we offered to participants a confidential and personalized report on how their own professional networking compared to that of their peers at the firm.

In total, 164 lawyers completed the survey in its entirety, for a 39% response rate. We compared participants to nonparticipant s, and we found no statistically significant differences between the two groups regarding office location, legal specialty, sex, or formal rank.

Dependent and independent variables.

Job performance. We assess performance by using yearly revenue generated by a lawyer, which is the standard metric for evaluating performance in law firms. Firm management shared with us the revenue data they had collected and on record for each of the lawyers working there. We corrected for skewness in revenue distribution using the *lnskew0* function in STATA (STATA 13).

Frequency of instrumental professional networking. In the survey, we defined professional networking as "the purposeful building and nurturing of relationships to create a system of information and support for professional and career success" (as in Casciaro et al., 2014). We then asked respondents, "How often do you engage in professional networking?" The respondents indicated their answers using one of the following options on a 5-point scale: *not at all*, *rarely*, *sometimes*, *frequently*, and *a great deal*.

Feelings of moral impurity from networking. We measured the experience of impurity from instrumental professional networking by using the average and logged (to correct for skewness) response to three survey items on the 5-point scale (adapted from Casciaro et al., 2014), each starting with the sentence, "When I engage in professional networking, I usually feel. . ." followed by the following adjectives: dirty, inauthentic, and ashamed (α = .78). To reduce demand effects, the list interspersed these adjectives with markers of various emotions (Feldman Barrett & Russell, 1998), such as happy, excited, stressed, and satisfied.

Trait promotion and prevention regulatory focus. As in Study 1, we measured chronic regulatory focus with the Composite Regulatory Focus Scale (Haws et al., 2010).

Networking-specific trait promotion and prevention focus. To measure the extent to which instrumental networking resulted from a promotion or a prevention focus, we developed eight survey items intended to capture a concern with growth, advancement, and aspirations of promotion focus on the one hand, and a concern with meeting one's duties and the threat of lost opportunity of prevention focus on the other hand. These items were adapted from the Composite Regulatory Focus Scale (Haws et al., 2010) to fit the domain of instrumental networking. We thus measured promotion focus with the average response to four survey items (each assessed on a 5-point scale): "I am excited about the opportunities that networking can open up for me," "Networking allows me to achieve my professional aspirations," "I engage in professional networking because I want to be successful," and "I engage in professional networking because connections help me do well" (α = .81). The four items measuring prevention focus were "Networking is a necessary part of my job that I just have to do," "It is my professional duty and responsibility to network," "I engage in professional networking because I am concerned that I'll miss opportunities if I don't," and "I engage in professional networking because I don't want to fall behind in my profession" (α = .69).

Control variables.

Law practice and office location. To control for the law practice a lawyer belonged to, we used indicator variables for each of the 13 departments of the firm (insolvency and restructuring, corporate law, intellectual property, etc.). Likewise, we used indicator variables to control for each of the firm's five offices in which each lawyer was located. None of these dummy variables affected the study's findings, and therefore we excluded them from the analyses reported below because their inclusion reduced the models' goodness of fit.

Extraversion. In light of research documenting a positive association between extraversion and networking frequency (Casciaro et al., 2014; Wanberg et al., 2000), as well as a negative association between extraversion and feelings of dirtiness experienced from engaging in instrumental networking (Casciaro et al., 2014), we controlled for a lawyer's extraversion, measured with the two extraversion items of the Big Five Inventory (Rammstedt & John, 2007).

Power. Previous research has also documented the effects of power on feelings of dirtiness that result from instrumental networking (Casciaro et al., 2014). To account for these effects, we operationalized power in terms of a lawyer's formal rank (seniority), which defines power differentials clearly in law firms (Nelson, 2004). This variable ranged from senior partner at the top of the hierarchy (denoted with a numerical value equal to 5), followed by junior partner (4), senior associate (3), midlevel associate (2), and junior associate at the bottom of the hierarchy (1).

Modeling approach. To test simultaneously the paths that our predictions entail, and also control for all relevant covariates, we estimated direct and indirect effects using the corresponding structural equation model (Kline, 2011) of a path analysis (Wright, 1934). This approach allows us to simultaneously account for effects of promotion focus and prevention focus, so that we can examine the unique effects of each orientation.

Results

Descriptive statistics and correlation coefficients for all variables are in Table 2, while the results of the path analysis are in Table 3. The estimated models use two measures of promotion and prevention focus: general trait regulatory foci (right-hand side of Table 3) and networking-specific trait regulatory foci (left-hand side of Table 3). The path analysis provides estimate for both direct effects and indirect effects. Directs effects occur when a predictor affects a dependent variable directly. Indirect effects occur when the effect of a predictor on dependent variable is mediated by another variable. Our theory predicted four direct effects in the path analysis: (a) a positive effect of prevention focus on moral impurity from instrumental networking, (b) a negative

Table 2
Study 4 Mean, Standard Deviations, and Correlation of Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Job performance	1,603,193	3,063,196										
2. Job performance (log)	10.568	3.886	.667									
3. Networking frequency	3.579	0.904	.362	.458								
4. Moral impurity	1.562	0.633	−.176	−.208	−.431							
5. Moral impurity (log)	−0.664	0.847	−.173	−.231	−.494	.893						
6. Extraversion	3.102	1.491	.541	.860	.401	−.147	−.188					
7. Seniority	3.549	0.923	−.032	−.036	.342	−.418	−.463	−.089				
8. Chronic prevention focus	3.322	0.825	−.217	−.218	−.236	.330	.308	−.171	−.263			
9. Chronic promotion focus	3.533	0.741	−.081	−.039	.199	−.164	−.170	−.065	.231	.396		
10. Networking prevention focus	3.624	0.810	−.109	−.023	.266	.028	−.013	.046	−.051	.158	.173	
11. Networking promotion focus	3.935	0.723	.007	.037	.545	−.302	−.333	.035	.459	−.058	.310	.496

Note. Correlation coefficients >.14 are significant at $p < .05$.

effect of promotion focus on moral impurity from instrumental networking, (c) a negative effect of moral impurity on the frequency of instrumental networking, and (d) a positive effect of networking frequency on job performance.

When measuring regulatory focus as generalized trait promotion and prevention focus (right-hand side of Table 3), all predictions were supported. Namely, networking frequency had a positive and statistically significant direct effect on job performance ($\beta = .550$; $p < .01$). In turn, moral impurity had a negative direct effect on networking frequency ($\beta = -.364$; $p < .001$). Generalized promotion focus had the predicted negative effect on moral impurity ($\beta = -.282$; $p < .01$), and generalized prevention focus had the predicted positive effect on moral impurity ($\beta = .294$; $p < .001$).

When measuring regulatory focus as networking-specific trait promotion and prevention focus (left-hand side of Table 3), all predictions were supported, except the positive effect of prevention focus on moral impurity. Namely, in addition to the predicted direct effects of networking frequency on job performance and of moral impurity on networking frequency, promotion focus had the predicted negative effect on moral impurity ($\beta = -.250$; $p < .05$), while the negative effect of prevention focus on moral impurity was not statistically significant, contrary to our prediction.

Thus, our predictions were strongly supported when regulatory foci were measured as a general trait, indicating that people with a promotion focus experience lessened feelings of impurity from instrumental professional networking, while those with a prevention focus tend to feel more morally impure when networking instrumentally. When regulatory foci were measured as networking-specific promotion and prevention focus, however, these predictions were supported only for promotion focus, which was negatively associated with moral impurity. Figure 3 summarizes how the findings from Study 4 supported our theoretical model.

In addition to the direct effects we predicted, the path analysis revealed effects of interest, both direct and indirect. Seniority (our operationalization of power in the context of law firms) had positive direct and indirect effects on networking frequency, and negative effects on moral impurity, replicating the findings of Casciaro et al. (2014). Likewise, positive direct and indirect effects of extraversion on networking frequency, and its indirect effect on job performance mediated by networking frequency is consistent with previous work (Casciaro et al., 2014). More relevant to our theory, promotion focus and prevention focus also had significant indirect effects on network frequency, mediated by moral impurity, consistent with the theoretical model we advanced (see Table 3).

Discussion

Taken together, the findings of Study 4 show that the effects of trait promotion and prevention focus on moral impurity and instrumental professional networking generalize to professionals in field settings. People who are motivated to pursue ideals, growth, and aspirations feel more authentic and morally pure when networking than do people who are motivated by the fulfilment of duties and obligations. These feelings of moral impurity in turn relate to how frequently professionals engage in networking, with consequences for their job performance. The results of Study 4 also indicate that domain-specific regulatory foci are not as strongly predictive of either moral purity from instrumental networking or of the frequency with which people network professionally. While we did find evidence that networking-specific promotion focus reduces moral impurity and networking frequency, we did not find such evidence for a networking-specific prevention focus.

Study 5

Method

Although in Study 4, networking-specific trait measures of regulatory focus exhibited weaker effects on moral purity and networking frequency than did general trait regulatory focus, we wished to explore the possibility that such domain-specific motives might be amenable to manipulation in the field. In organizations, domain-specific situational cues can be particularly important in evoking either promotion or prevention focus, as employees look for and pay attention to information about what behaviors are expected of them and their consequences (James, James, & Ashe, 1990; Scott & Bruce, 1994). For instance, situational cues that highlight potential gains and attainment of ideals are likely to trigger a promotion mindset. Instead, those that highlight potential losses and fulfillment of obligations are likely trigger a prevention mindset (Higgins, 1997, 1998).

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 91 of 1282

Table 3
Study 4 Results of Path Analysis of Regulatory Focus

	Networking-specific trait regulatory focus[a]				General trait regulatory focus[b]			
	Direct effects		Indirect effects		Direct effects		Indirect effects	
Dependent variable	Standardized coefficient	OIM *SE*	Standardized coefficient	OIM *SE*	Standardized coefficient	OIM *SE*	Standardized coefficient	OIM *SE*
Job performance								
Networking frequency	**.550**	**.172****	.000	(no path)	**.550**	**.172****	.000	(no path)
Moral impurity	.000	(no path)	−.200	.075**	.000	(no path)	−.200	.075**
Seniority	2.263	.110***	.149	.052**	2.263	.110***	.145	.051**
Extraversion	.000	(no path)	.175	.065**	.000	(no path)	.170	.064**
Prevention focus	.000	(no path)	−.015	.018	.000	(no path)	−.059	.027
Promotion focus	.000	(no path)	.050	.028†	.000	(no path)	.056	.027*
Networking frequency								
Moral impurity	**−.364**	**.075*****	.000	(no path)	**−.364**	**.075*****	.000	(no path)
Seniority	.217	.041***	.054	.018**	.217	.041***	.047	.018**
Extraversion	.188	.068**	.130	.038**	.188	.068**	.121	.034***
Prevention focus	.000	(no path)	−.027	.031	.000	(no path)	−.107	.036**
Promotion focus	.000	(no path)	.091	.043*	.000	(no path)	.103	.038**
Moral impurity								
Seniority	−.149	.041***	.000	(no path)	−.129	.040**	.000	(no path)
Extraversion	−.356	.073***	.000	(no path)	−.331	.066***	.000	(no path)
Prevention focus	**.074**	**.084**	.000	(no path)	**.294**	**.080*****	.000	(no path)
Promotion focus	**−.250**	**.106***	.000	(no path)	**−.282**	**.087****	.000	(no path)

Note. OIM = observed information matrix. Coefficients and standard errors in bold are for predicted effects.
[a] $N = 164$; absolute fit: standardized root mean square residual = .063; incremental fit: comparative fit index = .927. [b] $N = 164$; absolute fit: standardized root mean square residual = .018; incremental fit: comparative fit index = .993.
† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$. Two-tailed tests.

To that end, with the help of SurveySignal (a survey distribution and survey management platform; Hofmann & Patel, 2015), we recruited professionals to complete a 6-week study. After determining eligibility (participants needed to have a smartphone and work for a professional services firm in law, accounting, consulting, sales, insurance, or realty), participants received informed consent and were asked to register and verify their smartphone in the system. A total of 444 participants consented to participate and successfully registered and verified their smartphones. These participants were then randomly assigned to one of the two conditions (either promotion or prevention focus). The system randomly assigned 207 participants to a promotion focus and 237 to a prevention focus right after verification of registration. For the next 6 weeks, each of these professionals received a text message once a week on Mondays at 9 a.m. as part of our manipulation.

In addition, we invited all participants to complete a survey days before the intervention study started. The survey included some demographic questions, a measure of promotion and prevention focus for networking (similar to law survey), and the Big 5 personality traits (Gosling, Rentfrow, & Swann, 2003). The survey included a definition of professional networking (from Casciaro et al., 2014) as "the purposeful building and nurturing of relationships to create a system of information and support for professional and career success" and asked them to indicate how frequently they currently engage in professional networking using a 5-point scale ranging from 1 (*never*) to 5 (*daily*). At the end, participants indicated their age and gender.

From the original 444 participants in our sample (who would receive the text messages containing the manipulation), 256 completed the initial survey (58% response rate). To assure there were

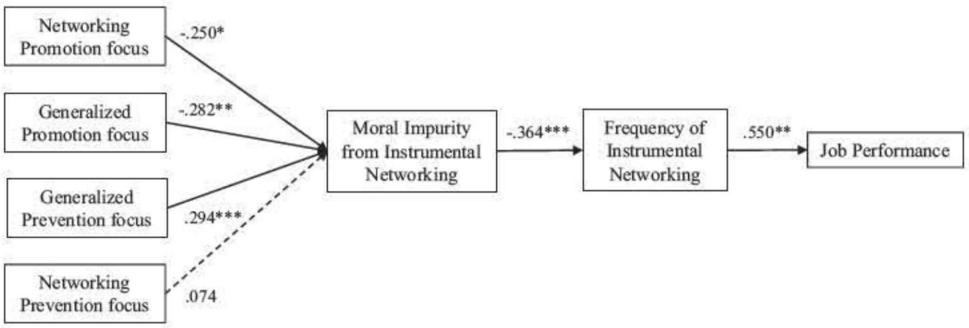

Figure 3. Overview of Study 4 results. All arrows represent predicted effects. The dotted arrow represents a statistically insignificant effect.

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 92 of 1282

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no differences between the two conditions, even though participants were randomly assigned to the intervention conditions and had not yet started receiving their text messages, we checked and found there was no condition effect on responses rate ($p > .10$). We also checked the baseline frequency of networking, networking promotion ($\alpha = .90$) and prevention ($\alpha = .79$) focus, and Big 5 personality traits and found no significant differences on any of the measured variables between two conditions ($ps > .10$). Thus, as expected, preintervention, there were no significant differences between the two groups. All participants ($n = 444$) who consented to participate in our study received text messages once a week on Mondays at 9 a.m. for 6 weeks.

In the promotion-focus group, participants received a text that read,

> We are interested in how people create and nurture relationships at work. Many people focus on the opportunities that networking can open up for them. They also consider how networking can help them achieve their professional aspirations. Please set aside a few minutes to identify how you will approach your next opportunity to network with these potential benefits in mind.

In the prevention-focus group, participants read,

> We are interested in how people create and nurture relationships at work. Many people consider networking a necessary part of their job that they just have to do, a professional obligation. They also focus on opportunities they will miss if they do not network. Please set aside a few minutes to identify how you will approach your next opportunity to network with these potential costs in mind.

At the conclusion of the 6 weeks, we asked all 444 participants who received the weekly text messages (whether they completed the initial survey or not) to fill out a final survey, which contained our dependent variables. A total of 183 participants responded to this final survey (41% response rate), and 116 participants completed both surveys. There were no significant differences between conditions (promotion vs. prevention) on whether participants returned to complete the last survey ($p > .10$). This confirms that our manipulation had no effect on participants' likelihood of returning to the final survey. In addition, among those who provided responses to the initial survey, there was no significant difference on baseline networking or Big 5 personality traits between those who responded to the final survey or not ($ps > .10$).

In the final survey, we asked participants to first report their frequency of professional networking over the last month on a 5-point scale ranging from 1 (*not at all*) to 5 (*a great deal*). Next, they were asked to identify how many new people they added to their professional network over the last month (new connections) and how many existing professional relationships they nurtured or rekindled over the last month (nurturing). Afterward, they reported their feelings about the professional networking they engaged in over the last month using 1 (*strongly disagree*) to 5 (*strongly agree*) scales, beginning with the stem, "When I engaged in professional networking over the last month, I usually felt . . . "

Moral impurity. We assessed moral impurity with four items (dirty, tainted, inauthentic, and ashamed; $\alpha = .80$) from Casciaro et al. (2014).

Affect. To minimize demand effects, we also included positive and negative affect adjectives. Positive affect was measured with five items (enthusiastic, satisfied, happy, relaxed, excited; $\alpha = .88$) and negative with three items (stressed, tired, and bored; $\alpha = .81$).

Results

Moral impurity. Consistent with our predictions, participants who received the promotion-focus intervention reported feeling less morally impure ($M = 1.71$, $SD = 0.76$) than those who received the prevention-focus intervention ($M = 2.06$, $SD = 0.91$), $t(181) = 2.84$, $p = .005$.

Positive and negative affect. Participants' positive and negative affect did not differ depending on whether they were in a promotion focus or a prevention focus, $t(181) = -.98$, $p = .33$ and $t(181) = .98$, $p = .33$, respectively.

Networking frequency. Consistent with our hypothesis, participants in a promotion focus reported engaging in networking more frequently over the last month ($M = 3.39$, $SD = 1.16$) as compared to those in a prevention focus ($M = 2.78$, $SD = 1.05$), $t(181) = -3.71$, $p < .001$. Given that we have data on some of our participants' baseline networking frequency, we also ran analyses controlling for the frequency of networking before the start of the study and found a significant effect of regulatory focus manipulation on network frequency on this more restricted sample, $F(1, 113) = 9.33$, $p = .003$, $\eta_p^2 = .076$.

New connections. When asked how many new connections they added to their professional network over the last month, 14 participants did not respond. Examining the responses from the remaining 169 respondents, we found a significant effect of regulatory focus manipulation on creating new connections ($M_{promotion} = 7.80$, $SD = 8.05$ vs. $M_{prevention} = 5.52$, $SD = 5.05$), $t(167) = -2.21$, $p = .030$.

Nurturing existing ties. Eight participants did not respond to this question. Examining the responses from the remaining 175 respondents, we found a significant effect of regulatory focus manipulation on nurturing existing ties ($M_{promotion} = 8.01$, $SD = 7.01$ vs. $M_{prevention} = 4.64$, $SD = 4.21$), $t(173) = -3.90$, $p < .001$.

Mediation. We tested for moral impurity as the mediator of the relationship between our regulatory focus manipulation and networking frequency over the last month. Using bootstrapping with 10,000 iterations, we estimated the direct and indirect effects of regulatory focus condition through moral impurity on our dependent variable, networking frequency. The 95% bias-corrected CI for the size of the indirect effect (0.20, $SE = .07$) excluded zero (95% CI [0.071, 0.368]), suggesting that feelings of moral impurity mediated the link between promotion focus (vs. prevention focus) and higher network frequency.

We also ran the mediation analysis with number of new connections as a dependent variable. The 95% bias-corrected CI for the size of the indirect effect (0.65, $SE = .33$) excluded zero (95% CI [0.134, 1.410]). The mediation analysis with nurturing existing ties yielded similar findings and the 95% bias-corrected CI for the size of the indirect effect (0.99, $SE = .34$) excluded zero (95% CI [0.404, 1.746]). In sum, the three analyses suggest that feelings of moral impurity mediated the link between promotion focus (vs. prevention focus) and higher networking (frequency as well nurturing existing ties and creating new ones).

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 93 of 1282

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Discussion

Together, the results of Study 5 provide further evidence that regulatory focus influences how people react to instrumental professional networking. As compared to participants encouraged to take a prevention focus, participants encouraged to take a promotion focus felt less inauthentic and morally impure, and engaged in networking more often.

General Discussion

Despite the well-demonstrated and well-known benefits that creating and maintaining professional connections can have on the diversity and size of one's network, people often shy away from engaging in instrumental networking to pursue professional goals. This is because they feel inauthentic, impure, and even dirty (Casciaro et al., 2014) when attempting to create and maintain relationships with other people with the clear purpose of finding or strengthening support for their professional goals and work tasks. Such feelings, unfortunately, are often detrimental to their development and job performance because they do not allow people to access valuable information, resources, and opportunities that are important to their careers. In the current research, we proposed that the motives people have when engaging in networking can impact these feelings by affecting their moral experience of networking, and lead them to network with different frequency.

Using two laboratory studies, two online studies, one field experiment with working professionals, and field data from lawyers from a large North American business law firm, we examined how self-regulatory focus, in the form of promotion and prevention, affects people's experiences and outcomes when networking. Consistent with our propositions, we find that a promotion regulatory focus, as compared to a prevention focus or a control condition, is beneficial to instrumental professional networking. People who are motivated to network professionally for the growth, advancement, and accomplishments they can achieve through their connections network more frequently and experience decreased feelings of moral impurity. In contrast, networking with the prevention focus of meeting one's professional responsibilities reduces the frequency of instrumental networking because it worsens the feelings of impurity people experience from it.

Theoretical Implications

Our research contributes to the literature on networking, regulatory focus, and morality in various ways. First, building on the work of Casciaro et al. (2014), the current article contributes to the network literature by focusing on the primary motives people have when approaching networking. Despite its many insights, existing work on networks has focused primarily on their structural properties and paid less attention to the important role of individual psychology in network dynamics. Although certain basic psychological phenomena—such as affect, cognition, and personality—have been integrated to varying degrees with the network perspective on organizations, psychological theory on motivation is still largely absent from network research (Casciaro et al., 2015). Our work complements this body of research by suggesting and providing evidence that people's psychological experience when networking has powerful effects on their likelihood of engaging in instrumental networking and that interventions that specifically change the motives people have when approaching networking can potently impact their psychological experience and subsequent behaviors. A psychological account of motivation in networking behavior can inform network theories of human agency by examining people's motivational approach to goals and by conceptualizing agency itself as a variable that can be measured or manipulated.

Second, our work contributes to research on regulatory focus by extending it to a new context—professional networking—and introducing a domain-specific form of promotion and prevention focus to complement trait and state forms of regulatory foci typically studied in the literature. By doing so, we echo and strengthen new developments in research on regulatory focus (Browman et al., 2017). RFT (Higgins, 1997) concerns how people pursue goals. In a promotion focus, people's goals are represented as hopes and aspirations; in a prevention focus, they are represented as duties and obligations. Given its wide applicability and the importance of goal pursuit in organizations, several scholars have explored the role of regulatory focus in work settings (e.g., Brockner & Higgins, 2001; Wallace et al., 2009) and found that promotion and prevention foci are uniquely associated with a variety of work behaviors (De Cremer et al., 2009; Neubert et al., 2008; Wallace et al., 2009). Our research advances this body of work by examining how regulatory focus affects the way people experience networking and how often they engage in it, with important consequences for performance. We also demonstrate that manipulations of state promotion and prevention foci specific to the domain of networking are sufficient to change the networking behavior of professionals in the field. Manipulating the generalized regulatory foci typically studied in the literature may therefore not be necessary to affect specific behaviors at work. By showing that people's psychological reactions to networking vary depending on their promotion versus prevention focus, our work opens up new investigations of primary human motives, networking, and the structure of networks.

Finally, our work also contributes to research on morality and behavioral ethics—research that has received increased attention in the last decade from both psychology and management scholars. Prior work has shown that authenticity is experienced as a moral state (Gino et al., 2015) and that instrumental networking leads people to feel dirty and impure (Casciaro et al., 2014). Here, we proposed and found that regulatory focus profoundly affects such feelings, as the motives people have to engage in instrumental networking give them room to justify (or discourage) approaching others to accomplish their professional goals. In so doing, we built on Cornwell and Higgins' (2015) view of both promotion and prevention regulatory foci as ethical systems of ideals concerned with attaining virtues (promotion) and of oughts concerned with maintaining obligations (prevention). By connecting ought and ideal selves to the moral philosophy of authenticity and moral purity, we identified an important motivational factor that can change the perceived morality of instrumental professional networking and be directly triggered or manipulated.

Our research both assessed regulatory focus as an individual difference and manipulated it with simple interventions in lab and, importantly, in the field. Short writing tasks that focused participants' attention on their hopes and aspirations or on their duties and obligations influenced the primary motivations they used when approaching instrumental networking. In addition, short text

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 94 of 1282

messages that reinforced promotion versus prevention foci affected real networking behaviors. The effectiveness of regulatory focus manipulations narrowly directed at networking behavior shows that interventions to change people's motivational orientations need not generalize to all domains of their lives, but rather can effectively target a specific domain of action. Our manipulations and, in particular, our simple intervention study provide insights into how organizations or managers could similarly focus organizational members' attention on specific aspects of networking, thus influencing their willingness to engage in it and frequency of doing so. Simply helping people focus on specific motives before approaching networking could prove to be an effective means of making networking morally palatable and influence their development and job performance for the better.

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Limitations and Directions for Future Research

Our findings, as well as the limitations of our studies, point to several potential areas of future inquiry. First, our research focused heavily on individuals' psychological states and their reported frequency of networking rather than on objective measures of networking. It is important to examine more objective variables, such as frequency of networking—an outcome we considered in two of our studies—and to measure them in more objective ways. More importantly, potential differences in the psychological and behavioral patterns people display while networking deserve further inquiry. It is possible that promotion-focused or prevention-focused individuals use different emotional and nonemotional expressions consciously or unconsciously. For example, during a networking event, promotion-focused individuals might display more positive emotions and approach their targets with a firm handshake. Additionally, while our studies focused on the person networking, it would be fascinating to examine whether others can recognize the motivation behind individuals' instrumental networking.

In our studies, we both measured and manipulated self-regulatory focus. Future research could extend our work by investigating framing effects. An individual's regulatory focus can be shaped by her environment (e.g., the school she attends, the organization she works in), such that certain environments make one regulatory focus predominant over the other. Future work could examine the active role organizations can play in inducing a promotion focus, because companies can shape members' regulatory focus through their cultures, policies, and incentive schemes. Additionally, in our studies we examined the general self-regulatory focus and networking-specific regulatory focus (measured or manipulated) at one time. It is likely that individuals' past experiences with networking influence the extent to which they adopt a promotion or prevention focus toward networking. For example, negative past experiences could lead people to view networking with dread and thus approach networking with a prevention focus.

Future studies could examine the role of felt authenticity and selfishness in various types of networking. Casciaro and colleagues (2014) argued that networking behaviors create negative self-attributions when the actions are difficult to justify to oneself. People perceive instrumental professional networking specifically as less justifiable to themselves and as morally tainted because it has a selfish intent, as the person initiating the relationship is pursuing certain benefits. Regulatory focus can influence how people experience networking, because regulatory focus influences creativity (Crowe & Higgins, 1997; Friedman & Förster, 2001), an important factor when individuals are justifying their actions, particularly those that may be morally problematic (Gino & Ariely, 2012). Future research examining how regulatory focus influences one's ability to justify selfish intentions during instrumental networking (through the greater creativity that regulatory focus triggers) would further our understanding of the impact of people's motives on their psychological state and actions when networking.

We note that these insights on the complex interrelationships between selfishness, authenticity, moral purity and regulatory focus could well apply to behaviors beyond instrumental networking. Any form of instrumental relational behavior—be it advice seeking and giving, leadership, social influence, or intergroup relations—undertaken with selfish or altruistic motives, and invoking either promotion or prevention motivational orientations, may have significant consequences for an individual's morality, which may in turn affect the likelihood of engaging in such behavior. Further work is needed to further understand the interplay motivation, and the moral psychology of instrumental behavior and its outcomes.

Future research could also examine whether promotion and prevention focus lead people to use different strategies when networking, and approach new professional connections with a different mindset. For instance, it is possible that people with a promotion focus create or nurture professional relationships to learn something new, more so than people with a prevention focus, and this attention to the potential for learning may contribute to their lower feelings of moral impurity as the connection feels less instrumental.

Finally, in our studies, we tested our predications with different samples, such as Americans recruited through online platforms (Mturk) and panels, as well as U.S. college students and lawyers in a professional services firm. Additionally, we assessed the cultural generalizability of our main prediction with a sample from Italy. Nonetheless, it is possible that some non-Western cultures differ in their views of instrumental networking and as such our effects might not hold in such cultures. Future research could further examine the cultural generalizability of the current findings.

Conclusion

Why is it that many people do not take on opportunities to network or do so with dread, even when networking would benefit them professionally? How could they be encouraged to do so, and with enthusiasm? Our research addresses both of these questions. Building on recent work showing that engaging in professional instrumental networking makes people feel morally impure and physically dirty, we explored how the motives people have when engaging in networking can reduce these feelings and lead people to network more often, with potentially beneficial effects on their performance. By adopting a promotion focus rather than a prevention one, individuals can orient their motivation to network toward the growth, advancement, and accomplishment they can receive from it and thus network more frequently and experience greater authenticity and moral purity. That is, a promotion focus can help people wash away their dirty feelings and draw their attention to the aspirations they can pursue by creating new professional ties or strengthening existing ones.

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 95 of 1282

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The Moral Virtue of Authenticity: How Inauthenticity Produces Feelings of Immorality and Impurity

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Abstract

The five experiments reported here demonstrate that authenticity is directly linked to morality. We found that experiencing inauthenticity, compared with authenticity, consistently led participants to feel more immoral and impure. This link from inauthenticity to feeling immoral produced an increased desire among participants to cleanse themselves and to engage in moral compensation by behaving prosocially. We established the role that impurity played in these effects through mediation and moderation. We found that inauthenticity-induced cleansing and compensatory helping were driven by heightened feelings of impurity rather than by the psychological discomfort of dissonance. Similarly, physically cleansing oneself eliminated the relationship between inauthenticity and prosocial compensation. Finally, we obtained additional evidence for discriminant validity: The observed effects on desire for cleansing were not driven by general negative experiences (i.e., failing a test) but were unique to experiences of inauthenticity. Our results establish that authenticity is a moral state—that being true to thine own self is experienced as a form of virtue.

Keywords

authenticity, morality, compensatory ethics, helping, prosocial behavior, open data, open materials

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In a notable passage of *Hamlet*, Polonius exhorted his departing son, Laertes, to live to the full extent of his humanity: "This above all: to thine own self be true, . . . Thou canst not then be false to any man" (Shakespeare, 1603/1885, Act 1, Scene iii). Not just the province of a Shakespearean turn of phrase, the desire to be authentic—to act in accordance with one's own sense of self, emotions, and values—seems to be a driving force of human nature (Gecas, 1986, 1991). Scholars, writers, and philosophers have argued that authenticity is a fundamental aspect of individuals' well-being (Harter, 2002). A disconnect between one's expressions and internal states can be psychologically costly, producing palpable discomfort, dissonance, and exhaustion (Ashforth & Tomiuk, 2000; Festinger, 1957; Grandey, 2000). Indeed, some schools of psychotherapy ascribe to Polonius's belief that psychological health can be achieved only by expressing one's true inner thoughts and feelings (Rogers, 1961).

Yet it is also the case that people often profess opinions, modulate their emotional expressions, and act in the service of interpersonal relationships and goal-directed behavior (Ekman & Friesen, 1975; Schlenker, 2002). In fact, the more successful a person is at portraying inauthentic experiences or expressions, the more interpersonally competent he or she is judged to be (Snyder, 1987). Indeed, some scholars have argued that the ability to express thoughts and feelings that contradict one's mental states is an important developmental adaptation (Harter, Marold, Whitesell, & Cobbs, 1996).

In the current research, we attempted to resolve these contradictory claims by exploring whether there is a link

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 98 of 1282

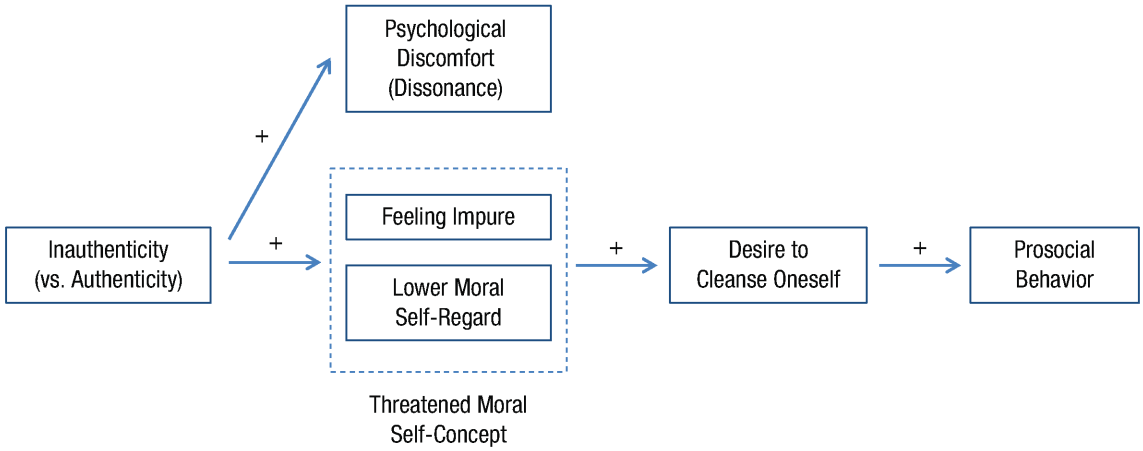

Fig. 1. Theoretical model for the link between inauthenticity and moral cleansing. Inauthenticity leads to two main consequences of a threatened moral self-concept—feelings of impurity and lower self-regard—as well as dissonance. However, only a threatened moral self-concept explains the link between experiencing inauthenticity and a heightened desire to cleanse oneself and behave prosocially.

between feeling inauthentic and feeling immoral and impure. We suggest that inauthenticity poses a challenge to a person's sense of self. Authenticity involves both owning one's personal experiences (thoughts, emotions, needs, and wants) and acting in accordance with those experiences. A commitment to one's identity and values (Erickson, 1995) is important for effective self-regulation. When this commitment is violated, people feel inauthentic.

Though being untrue to oneself is psychologically costly, by definition it does not constitute immoral behavior. Yet, we argue, people do experience inauthenticity as immoral, feeling that it taints their moral self-concept. Our arguments build on the writings of the numerous philosophers—such as Kierkegaard, Nietzsche, Rand, and Sartre—who have discussed authenticity in relation to morality. For instance, Nietzsche and Sartre believed that individuals need to create their own moral code and act in ways consistent with that code (i.e., they should act authentically).

By contrast, morality is commonly defined in social and interpersonal terms (Haidt & Kesebir, 2010). For example, Turiel (1983) defined morality as "prescriptive judgments of justice, rights, and welfare pertaining to how people ought to relate to each other" (p. 3). Philosophers and psychologists alike have treated being untrue to oneself (inauthenticity) differently from being untrue to others (dishonesty), and have suggested that society tolerates or promotes inauthenticity but universally prohibits dishonesty (Harter et al., 1996).

We, however, suggest that inauthenticity and dishonesty share a similar root: They are both a violation of being true, whether to others or oneself. As a result, they elicit similar psychological and behavioral responses. For instance, expressing excitement for an activity or person one does not like or trying to fit in with a group that does not share one's values is not defined as immoral behavior per se, but we argue that individuals experience those behaviors as immoral. Feeling as if one is an imposter to oneself produces moral distress and feelings of being morally tainted and impure that are similar to those that accompany dishonesty.

Previous studies have shown that moral threats activate the need to cleanse oneself (Lee & Schwarz, 2010a; Zhong & Liljenquist, 2006). Similarly, the sacred-value-protection model (see Tetlock, Kristel, Elson, Green, & Lerner, 2000) suggests that when people violate their own values, they engage in symbolic or literal moral cleansing to purify their contaminated conscience and reaffirm their core values. Building on this research, we suggest that experiencing inauthenticity results in lower moral self-regard and feelings of impurity, which trigger a desire for physical cleansing and acting prosocially to compensate for violating the true self (Fig. 1). We also argue that cleansing breaks the link between inauthenticity and prosocial compensation.

Our hypotheses differ from cognitive dissonance theory and its variants in two ways. First, building on the sacred-value-protection model, we suggest that the mere contemplation of acting inauthentically is sufficient to produce feelings of moral contamination. It is the inauthenticity and impurity experienced in these situations, and not the inconsistency itself, that lead to the desire to cleanse and morally compensate. Second, dissonance processes are often triggered not by mere inconsistency but rather by aversive consequences (Cooper & Fazio, 1984); what provokes dissonance is the knowledge that one's actions have produced material consequences that violate one's attitudes.

Finally, the research we report here is related to the work by Lee and Schwarz (2010b) showing that the physical act of washing reduces cognitive dissonance by creating a clean slate. However, their research did not examine whether experiencing dissonance increases the desire for physical cleansing, whereas we theorized about and empirically tested the link between inauthenticity and cleansing. Specifically, we directly examined the need for cleansing as a result of feeling morally tainted by experiencing inauthenticity.

Overview of the Present Research

We tested our predictions in five studies in which people recalled and wrote about a time when they felt authentic or inauthentic. We measured whether inauthenticity influenced people's moral self-regard and feelings of impurity (Experiments 1 and 3) and their desire to cleanse themselves (Experiments 2, 4, and 5). We also linked inauthenticity to prosocial behavior in the form of helping (Experiment 3) and donating money (Experiment 5). To establish discriminant validity, we compared the effects of inauthenticity with the effects of recalling a morally irrelevant, negative experience (i.e., failing a test) in Experiment 3 and with the effects of cognitive dissonance in Experiment 4.

Experiment 1: The Impurity of Inauthenticity

Experiment 1 examined whether inauthenticity produces feelings of immorality and impurity, independently of whether it involves being untrue to others or untrue only to oneself.

Method

Participants and design. Two hundred sixty-nine individuals (mean age = 30.73 years, *SD* = 8.07; 143 male) from Amazon Mechanical Turk participated in this study for $1. We calculated our target sample size using an estimated effect size, *f*, of 0.2, which would require a sample size of approximately 270 participants for the study to be powered at 90%.[1] We randomly assigned participants to a 2 (type of behavior: authentic vs. inauthentic) × 2 (type of event: general vs. unrelated to lying) between-subjects design. Two participants did not write an essay and were excluded from the analyses, according to a decision made prior to conducting the study.

Procedure. Participants first read initial instructions welcoming them to the study and answered an attention check. Those who failed the attention check were automatically informed that, on the basis of their answers, they did not qualify for the study. Thus, their data were not recorded. Participants were then asked to recall an event and write about it for 5 to 10 min. In the authentic-behavior, general-event condition, the instructions read as follows (word changes in the inauthentic-behavior, general-event condition are shown in brackets):

> Please recall a time in your personal or professional life when you behaved in a way that made you feel true [untrue] to yourself, that made you feel authentic [inauthentic]. It should just be a situation in which you felt authentic [inauthentic] with your core self. Please describe the details about this situation that made you feel authentic [inauthentic]. What was it like to be in this situation? What thoughts and feelings did you experience?

In the authentic-behavior, event-unrelated-to-lying condition, the instructions read as follows (word changes in the inauthentic-behavior, event-unrelated-to-lying condition are shown in brackets; boldface is used here for emphasis but was not used in the original instructions):

> Please recall a time in your personal or professional life when you behaved in a way that made you feel true [untrue] to yourself, that made you feel authentic [inauthentic]. **It is important that you choose a situation that is unrelated to telling the truth to others [unrelated to lying or deceiving others].** It should just be a situation in which you felt authentic [inauthentic] with your core self. Please describe the details about this situation that made you feel authentic [inauthentic]. What was it like to be in this situation? What thoughts and feelings did you experience?

Next, participants completed measures assessing their moral self-regard and feelings of impurity. The order in which these two sets of questions were presented was randomly determined for each participant. Participants then completed manipulation checks and reported their age and gender.

Moral self-regard. Participants indicated the extent to which the event they described made them feel moral, generous, cooperative, helpful, loyal to others, dependable, trustworthy, reliable, caring, and respectful (α = .965; adapted from Walker & Hennig, 2004). Responses were on a 7-point scale (ranging from 1, *not at all*, to 7, *to a great extent*).

Feelings of impurity. Using the same 7-point scale, participants indicated the extent to which the event they described made them feel impure, dirty, and tainted (α = .94).

Table 1. Distribution of Event Descriptions in Experiment 1 by Content Category

Category	Event unrelated to lying or telling the truth	General event	Average across event types
Inauthentic-behavior condition			
1. Expressing emotions, attitudes, or opinions that do not match one's internal state	39.1%	46.7%	42.9%
2. Attempting to fit in by conforming to norms or shared attitudes and behaviors, or in the face of social pressure	53.6%	30.0%	41.8%
3. Lying to obtain a material self-interested advantage	0.0%	13.3%	6.7%
4. Theft, stealing	0.0%	5.0%	2.5%
5. Cheating in a relationship	0.0%	0.0%	0.0%
6. Not being able to create something for oneself	0.0%	1.7%	0.8%
7. General[a]	7.2%	3.3%	5.3%
Authentic-behavior condition			
1. Expressing emotions, attitudes, or opinions that match one's internal state	35.8%	31.0%	33.4%
2. Not conforming to norms or shared attitudes and behaviors in the face of social pressure	32.8%	36.6%	34.7%
3. Avoiding lying to obtain a material self-interested advantage	0.0%	1.4%	0.7%
4. Helping (e.g., giving somebody assurance, advice, or support)	17.9%	21.1%	19.5%
5. Being honest in a relationship	0.0%	1.4%	0.7%
6. Creating something for oneself	6.0%	4.2%	5.1%
7. General[a]	7.5%	4.2%	5.9%

[a]Essays in this category were mainly descriptions of general feelings resulting from the experience.

Manipulation check: self-alienation. As a manipulation check, we measured feelings of self-alienation with four items (e.g., "After experiencing the situation I described I felt out of touch with the 'real me,'" "After experiencing the situation I described I felt as if I did not know myself very well"; $\alpha = .88$) that have been used in prior work to measure inauthenticity (Gino, Norton, & Ariely, 2010). We asked participants to indicate their agreement with each of the four items using a 7-point scale (from 1, *strongly disagree*, to 7, *strongly agree*).

Manipulation check: content of the essay. As an additional manipulation check, we asked participants to think back to the initial writing task and indicate whether they had written about an event that made them feel authentic, inauthentic, or neutral.

Results

Coding of the essays. Two coders, who were blind to conditions and hypotheses, categorized the situations participants described in their essays. The two coders agreed on the categorization 94% of the time, and disagreements were resolved with a third coder. As Table 1 shows, about 90% of the essays described situations unrelated to ethics. Most were situations in which people expressed emotions, attitudes, or opinions that did not match their internal state or attempted to fit in by conforming to social norms or peer attitudes.

Manipulation check: content of the essay. All participants correctly answered the manipulation-check question asking them to indicate how the event they wrote about had made them feel.

Manipulation check: self-alienation. A 2 (type of behavior: authentic vs. inauthentic) × 2 (type of event: general vs. unrelated to lying) between-subjects analysis of variance (ANOVA) using self-alienation as the dependent measure revealed only a main effect of type of behavior. Participants in the inauthentic-behavior condition reported greater self-alienation ($M = 4.04$, $SD = 1.37$, 95% confidence interval, CI = [3.82, 4.26]) compared with participants in the authentic-behavior condition ($M = 1.90$, $SD = 1.19$, 95% CI = [1.70, 2.12]), $F(1, 263) = 186.16$, $p < .001$, $\eta_p^2 = .41$.

Impurity and moral self-regard. Similar 2 × 2 ANOVAs using impurity and moral self-regard as dependent measures also revealed only a significant main effect of type of behavior. Participants in the inauthentic-behavior condition reported greater feelings of impurity ($M = 3.56$, $SD = 1.86$, 95% CI = [3.30, 3.85]) and lower moral self-regard ($M = 2.90$, $SD = 1.50$, 95% CI = [2.61, 3.16]) than did participants in the authentic-behavior condition (impurity: $M = 1.51$, $SD = 1.29$, 95% CI = [1.25, 1.78]; moral self-regard: $M = 4.99$, $SD = 1.68$, 95% CI = [4.72, 5.26]), $F(1, 263) = 111.06$, $p < .001$, $\eta_p^2 = .30$, and $F(1, 263) = 115.25$, $p < .001$, $\eta_p^2 = .31$, respectively.

Word count. We also examined whether participants' essays varied in length across conditions and found that they did not (all *p*s > .30).

Discussion

Inauthentic experiences made participants feel more impure and less moral than authentic ones, independently of whether those experiences involved lying to themselves or lying to others. Thus, people experience inauthenticity as a moral state.

Experiment 2: From Inauthenticity to Cleansing

Experiment 2 examined whether feelings of impurity that result from experiencing inauthenticity lead to a desire to physically cleanse oneself. We measured participants' desire to physically cleanse themselves using both an implicit measure and an explicit measure (Zhong & Liljenquist, 2006).

Method

Participants and design. Nine hundred six responses were collected from individuals (mean age = 31.88 years, *SD* = 9.05; 439 male) recruited on Amazon Mechanical Turk, who participated in exchange for $1. We calculated our target sample size using an estimated effect size, *f*, of 0.1, which would require a sample size of 900 participants for the study to be powered at 85%. As in Experiment 1, we randomly assigned participants to a 2 (type of behavior: authentic vs. inauthentic) × 2 (type of event: general vs. unrelated to lying) between-subjects design.

Sixty-eight responses did not meet our inclusion criteria: Some participants completed the study two or more times (22 participants, 49 responses), did not write the requested essay (3 participants), or failed the manipulation check asking them to indicate what type of essay they wrote (16 participants). We excluded the responses of these participants from the analyses, according to a decision made prior to conducting the study. We conducted analyses on the remaining 838 observations.

Procedure. Participants first read some welcoming instructions and then answered two attention checks. Those who failed either attention check were automatically informed that, on the basis of their answers, they could not take part in the study. Participants who passed both attention checks were asked to recall an event and write about it for 5 to 10 min. In each of the four conditions, we used the same instructions for the writing task as in Experiment 1.

Next, participants completed measures assessing accessibility of cleansing-related words, desire to use cleansing-related products (e.g., Tide detergent), and desire to cleanse through behaviors such as taking a shower. The order in which these three sets of measures were presented was randomly determined. Participants then completed manipulation checks and reported their age and gender.

Accessibility of cleansing-related words. Participants completed a word-completion task using the first word that came to mind (Zhong & Liljenquist, 2006). The instructions read,

> You will now be presented with a word completion task. You will be given a list of words with letters missing. Your task is to fill in the blanks to make complete words. Please use the first word that comes to mind.

Three of the word segments (W_ _H, SH_ _ER, and S_ _P) could be completed as cleansing-related words (*wash, shower*, and *soap*) or as unrelated, neutral words (e.g., *wish, shaker*, and *step*). The remaining three word segments (F_ O _, B_ _ K, and PA_ _ R) could be completed with neutral words only.

Cleansing products. Participants indicated how desirable they found a list of products to be (using a 7-point scale, ranging from 1, *completely undesirable*, to 7, *completely desirable*). The list included five cleansing products (i.e., Dove shower soap, Crest toothpaste, Windex cleaner, Tide detergent, and Lysol disinfectant) and five neutral products (i.e., Post-it Notes, Nantucket Nectars juice, Energizer batteries, Sony CD cases, and Snickers bars). We averaged responses to the five cleansing products to create one aggregate measure (α = .86).

Cleansing behaviors. Participants indicated the desirability of various behaviors on a 7-point scale (ranging from 1, *completely undesirable*, to 7, *completely desirable*). Some of the behaviors were related to cleansing (taking a shower, washing hands, brushing teeth, and taking a bath), and others were not (taking a walk, having something to eat, watching TV, and listening to music). We averaged responses to the four cleansing behaviors to create one aggregate measure (α = .75).

Manipulation checks. As a manipulation check, we measured self-alienation using the same four-item measure as in Experiment 1 (α = .87). We also asked participants to think back to the initial writing task and indicate the type of essay they wrote, that is, whether they wrote

about an event that made them feel authentic, inauthentic, or neutral.

Results

Manipulation check: self-alienation. A 2 (type of behavior: authentic vs. inauthentic) × 2 (type of event: general vs. unrelated to lying) between-subjects ANOVA using self-alienation as the dependent measure revealed only a main effect of type of behavior. Participants in the inauthentic-behavior condition reported greater self-alienation (M = 4.07, SD = 1.41, 95% CI = [3.95, 4.19]) than did participants in the authentic-behavior condition (M = 1.87, SD = 1.07, 95% CI = [1.75, 1.99]), $F(1, 834)$ = 655.80, $p < .001$, $\eta_p^2 = .44$.

Accessibility of cleansing-related words. A similar 2 × 2 ANOVA using the sum of cleansing-related words participants generated as the dependent measure revealed only a main effect of type of behavior (authentic vs. inauthentic). Participants who recalled and wrote about an inauthentic behavior (M = 1.32, SD = 0.99, 95% CI = [1.23, 1.42]) generated more cleansing-related words than did those who recalled and wrote about an authentic behavior (M = 1.11, SD = 0.93, 95% CI = [1.02, 1.20]), $F(1, 834)$ = 10.02, p = .002, η_p^2 = .012.

Desirability of cleansing products. Similarly, a 2 × 2 ANOVA using participants' desirability ratings of cleansing products as the dependent measure revealed only a main effect of type of behavior (authentic vs. inauthentic). Recalling an inauthentic rather than an authentic behavior led to greater desirability of cleansing products (M = 3.47, SD = 1.48, 95% CI = [3.33, 3.61], vs. M = 3.11, SD = 1.39, 95% CI = [2.97, 3.24]), $F(1, 834)$ = 13.03, $p < .001$, $\eta_p^2 = .015$, but the desirability of noncleansing products did not differ between the inauthentic-behavior condition (M = 3.08, SD = 1.21, 95% CI = [2.96, 3.20]) and the authentic-behavior condition (M = 3.09, SD = 1.18, 95% CI = [2.98, 3.21]), $F < 1$. The effect of inauthenticity on the desirability of cleansing products but not noncleansing ones was confirmed by a significant interaction between type of behavior and type of product (i.e., cleansing related or neutral), $F(1, 834)$ = 23.94, $p < .001$, $\eta_p^2 = .028$.

Desirability of cleansing behaviors. Similarly, recalling an inauthentic experience increased the desirability of cleansing behaviors (M = 4.36, SD = 1.37, 95% CI = [4.22, 4.50], vs. M = 4.04, SD = 1.46, 95% CI = [3.91, 4.18]), $F(1, 834)$ = 10.19, p = .001, η_p^2 = .012, but the desirability of noncleansing behaviors did not differ between the inauthentic-behavior condition (M = 4.77, SD = 1.26, 95% CI = [4.65, 4.89]) and the authentic-behavior condition (M = 4.70, SD = 1.19, 95% CI = [4.58, 4.82]), $F < 1$. The effect of inauthenticity on the desirability of cleansing behaviors but not noncleansing ones was confirmed by a significant interaction between type of behavior in the writing task (authentic vs. inauthentic) and type of behavior in the rating task (i.e., cleansing related vs. neutral), $F(1, 834)$ = 7.92, p = .005, η_p^2 = .009.

Discussion

Recalling and writing about an inauthentic experience enhanced a desire for physical cleanliness as measured both implicitly and explicitly. Thus, experiencing inauthenticity heightens the desire to cleanse oneself.

Experiment 3: Prosocial Compensation and Discriminant Validity

One concern with the previous experiments is the possibility that the results were driven by recalling a negative, or uncomfortable, event. In Experiment 3, we compared effects of inauthenticity and effects of a morally irrelevant negative experience—failing a test—to test whether the observed link between inauthentic behavior and moral cleansing generalizes to any negative experience. By so doing, we tested for discriminant validity and furthered our understanding of the triggers of moral cleansing. We also tested whether inauthenticity produces moral compensation, leading people to act prosocially, and whether feelings of impurity but not dissonance mediate this effect.

Method

Participants and design. Two hundred ninety-one individuals (mean age = 30.06 years, SD = 7.87; 47% male) from local universities in the northeastern United States participated in this study for pay. We calculated our target sample size using an estimated effect size, f, of 0.2, which would require a sample size of approximately 280 participants for the study to be powered at 85%. At some of the experimental sessions, however, participants showed up at a higher rate than expected. Experiment 3 was the first in an hour-long series of experiments for which participants received $20 as compensation. Participants were randomly assigned to one of three conditions: inauthenticity, failure, or control. Three participants failed the manipulation check asking them to indicate the type of essay they wrote and were thus excluded from the analyses, according to a decision made prior to conducting the study. We conducted analyses on the remaining 288 participants.

Procedure. Participants first read some general instructions welcoming them to the study, answered one

attention-check question, and then, if they successfully responded to it, moved on to the writing task. In the inauthenticity condition, the instructions read (as in the inauthentic-behavior, general-event condition of Experiments 1 and 2):

> Please recall a time in your personal or professional life when you behaved in a way that made you feel *untrue* to yourself, that made you feel *inauthentic*. It should just be a situation in which you felt inauthentic with your core self.
>
> Please describe the details about this situation that made you feel *inauthentic*. What was it like to be in this situation? What thoughts and feelings did you experience?

In the failure condition, we asked participants to describe a time when they failed in an activity, test, or project. The instructions read:

> Please recall a time in your personal or professional life when you *failed* in an activity, test, or project in a way that made you feel disappointed.
>
> Please describe the details about this situation in which you *did not succeed* on a task. What was it like to be in this situation? What thoughts and feelings did you experience?

Finally, in the control condition, we asked participants to describe their activities from the previous day. The instructions read:

> Please recall what happened yesterday, throughout the day.
>
> Please describe the details about this situation. What was it like to be in this situation? What thoughts and feelings did you experience?

After the writing task, participants completed a questionnaire with a few measures of interest (i.e., feelings of impurity, psychological discomfort, negative and positive affect, and embarrassment), two manipulation-check questions, and demographic questions (age and gender). They then indicated their willingness to help the experimenter with another survey that would take 15 min of their time.

Feelings of impurity. As in Experiment 1, participants used a 7-point scale to indicate the extent to which the event they described made them feel impure, dirty, and tainted (α = .94).

Cognitive dissonance. To assess cognitive dissonance, we used a measure developed by Elliot and Devine (1994) that includes psychological discomfort, negative and positive affect, and also embarrassment. In their work, Elliot and Devine found that psychological discomfort was the distinct affective consequence of engaging in counterattitudinal behavior. For completeness, however, we included all the original items. All items were rated on 7-point scales. Psychological discomfort was assessed through three items: Participants rated how uncomfortable, uneasy, and bothered they felt (α = .94). Negative affect was assessed with three items: "angry toward myself," "disgusted with myself," and "annoyed with myself" (α = .93). Three items measured positive affect ("happy," "good," and "energetic"; α = .95), and two items measured embarrassment ("embarrassed" and "ashamed"; α = .90).

Manipulation Check 1: self-alienation. As a manipulation check, we measured feelings of self-alienation as in Experiments 1 and 2 (α = .90).

Manipulation Check 2: content of the essay. As an additional manipulation check, we asked participants to think back to the initial writing task and indicate whether they wrote about an event that made them feel inauthentic, what they did the day before, or a time when they did not succeed.

Helping. At the conclusion of the experiment, participants were told that the "research team is interested in understanding how people make choices across various domains (health care, work, food purchases). We have prepared a 15-minute survey. We would love your help. If you can help us out, please click yes below and you will be redirected to the survey. Otherwise, please press No. Note that you will receive no extra payment for completing it." If participants decided to help, they received a message thanking them for choosing to help the research team and then were asked to answer a short questionnaire with general bogus questions.

Results

Table 2 reports the means and confidence intervals for the variables in this study, separately for each condition.

Manipulation check: self-alienation. A one-way ANOVA using self-alienation as the dependent measure revealed a main effect of condition, $F(2, 285) = 43.23$, $p < .001$, $\eta_p^2 = .23$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported greater self-alienation when they recalled and wrote about an inauthentic experience ($M = 3.83$, $SD = 1.51$) than when

Table 2. Means and 95% Confidence Intervals (in Brackets) for the Variables Assessed in Experiment 3

	Condition		
Variable	Inauthenticity	Failure	Control
Self-alienation	3.83_a [3.53, 4.13]	3.21_b [2.92, 3.50]	1.92_c [1.64, 2.21]
Feelings of impurity	3.66_a [3.37, 3.95]	2.09_b [1.81, 2.37]	1.21_c [0.93, 1.49]
Discomfort	5.11_a [4.78, 5.45]	4.90_a [4.57, 5.23]	2.41_b [2.09, 2.73]
Negative affect	4.62_a [4.30, 4.95]	4.61_a [4.30, 4.93]	1.88_b [1.56, 2.19]
Positive affect	1.99_a [1.72, 2.27]	1.84_a [1.57, 2.11]	4.46_b [4.29, 4.73]
Embarrassment	4.40_a [4.07, 4.74]	4.69_a [4.36, 5.01]	1.97_b [1.64, 2.29]
Helping	$33.7\%_a$ [25.3, 42.1]	$17.5\%_b$ [9.4, 25.7]	$16.2\%_b$ [8.1, 24.3]

Note: Within a row, means with different subscripts are significantly different, $p < .05$.

they recalled and wrote about either a failure ($M = 3.21$, $SD = 1.62$; $p = .012$) or what they had done the previous day ($M = 1.92$, $SD = 1.19$; $p < .001$). Participants also reported greater self-alienation in the failure than in the control condition ($p < .001$).

Feelings of impurity. Feelings of impurity also differed by condition, $F(2, 285) = 72.29$, $p < .001$, $\eta_p^2 = .34$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported feeling more impure in the inauthenticity condition ($M = 3.66$, $SD = 1.82$) than in either the failure condition ($M = 2.09$, $SD = 1.57$; $p < .001$) or the control condition ($M = 1.21$, $SD = 0.61$; $p < .001$). Participants also reported greater feelings of impurity in the failure than in the control condition ($p < .001$).

Psychological discomfort. Psychological discomfort, which has been tied to cognitive dissonance, varied across conditions, $F(2, 285) = 82.67$, $p < .001$, $\eta_p^2 = .37$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported less psychological discomfort in the control condition ($M = 2.41$, $SD = 1.71$) than in either the inauthenticity condition ($M = 5.11$, $SD = 1.53$; $p < .001$) or the failure condition ($M = 4.90$, $SD = 1.64$; $p < .001$). Participants felt the same amount of psychological discomfort in the failure and inauthenticity conditions ($p = 1.00$).

Negative and positive affect, and embarrassment. Our manipulation also led to differences across conditions in negative affect, $F(2, 285) = 98.28$, $p < .001$, $\eta_p^2 = .41$; positive affect, $F(2, 285) = 116.76$, $p < .001$, $\eta_p^2 = .45$; and embarrassment, $F(2, 285) = 80.77$, $p < .001$, $\eta_p^2 = .36$. As shown in Table 2, participants in the control condition reported lower negative affect, higher positive affect, and lower embarrassment compared with participants in both the failure and the inauthenticity condition (all ps $< .001$), whereas participants in the latter two conditions did not differ on these measures (all ps $> .71$).

Moral compensation through helping. The percentage of participants who decided to help the experimenter varied by condition, $\chi^2(2, N = 288) = 10.35$, $p = .006$, Cramér's $V = .19$. Participants who recalled and wrote about an inauthentic experience were more likely to help the experimenter (33.7%, 31 of 92 participants) than were those in the failure condition (17.5%, 17 of 97 participants), $\chi^2(1, N = 189) = 6.48$, $p = .011$, and those in the control condition (16.2%, 16 of 99 participants), $\chi^2(1, N = 191) = 6.88$, $p = .009$.

Mediation analysis. Next, we examined whether feelings of impurity or psychological discomfort due to cognitive dissonance explained the link between inauthenticity and greater helping. In the logistic regressions, we included a dummy variable for both the inauthenticity condition and the failure condition, using the control condition as the condition of reference. When feelings of impurity and psychological discomfort were included in the equation (in addition to the dummies for the failure condition and the inauthenticity condition), the effect of inauthenticity on helping was reduced (from $b = -0.97$, $SE = 0.35$, Wald = 7.63, $p = .006$, to $b = 0.37$, $SE = 0.49$, Wald = 0.57, $p = .45$). Feelings of impurity predicted helping ($b = 0.38$, $SE = 0.11$, Wald = 12.25, $p < .001$), but psychological discomfort did not ($b = 0.14$, $SE = 0.11$, Wald = 1.67, $p = .20$). We conducted bootstrap analyses with 10,000 iterations using a macro provided by Preacher and Hayes (2008) for situations involving multiple mediators. The bootstrapped 95% bias-corrected CI around the indirect effect for impurity, [0.38, 1.56], did not contain zero, but the 95% bias-corrected CI around the indirect effect for psychological discomfort did, [−0.20, 1.01].

Discussion

Inauthenticity produced greater feelings of impurity and greater moral compensation compared with failing a test. This study demonstrates that the effect of inauthenticity

on moral compensation cannot be attributed to general negative experiences. It also shows that feeling impure, not cognitive dissonance, explains the relationship between inauthenticity and moral compensation through helping.

Experiment 4: Inauthenticity Is Not Dissonance

Experiment 3 provided preliminary evidence that inauthenticity is distinct from cognitive dissonance. In Experiment 4, we explored this issue further using a cognitive dissonance paradigm. In a typical dissonance study, participants are asked to write a counterattitudinal essay on a personally relevant topic, and perceived choice is manipulated. In the high-choice condition, participants are persuaded to write a counterattitudinal essay, but the request provides a feeling of choice. In the low-choice condition, participants are instructed to write the counterattitudinal essay, which gives them little choice. Dissonance studies show a positive correlation between perceived choice and attitudes toward the counterattitudinal topic (Cooper & Fazio, 1984).

Whereas choice is critical in producing cognitive dissonance, we suggest that choice does not play a role in increasing the desire for cleanliness that is associated with feeling inauthentic. We tested our hypothesis in Experiment 4 by including three conditions: high-choice, counterattitudinal; low-choice, counterattitudinal; and high-choice, proattitudinal. We predicted that participants would experience a greater sense of choice in the high-choice conditions than in the low-choice condition. But we also predicted that participants would express a greater desire for cleanliness whenever they wrote essays that were not consistent with their internal beliefs, regardless of their perceived level of choice. We expected to observe a greater desire for cleanliness in both the high-choice, counterattitudinal condition and the low-choice, counterattitudinal condition compared with the high-choice, proattitudinal condition.

Method

Participants and design. Four hundred ninety-one college students (mean age = 20.42 years, *SD* = 1.90; 43% male) from Harvard University participated in the study in return for a $10 Amazon gift card. Fifty-four additional students started the study, but dropped out after reading the initial instructions and before the manipulation took place; their data were thus not recorded. We calculated our target sample size using an estimated effect size, *f*, of 0.15, which would require a sample size of approximately 490 participants for the study to be powered at 85%. We recruited 550 participants, knowing—from prior experience running online studies with this population—that about 10% to 15% of them likely would not complete the study after reading the initial instructions. We randomly assigned participants to one of three conditions: high-choice, counterattitudinal; low-choice, counterattitudinal; or high-choice, proattitudinal.

Procedure. Participants first read initial instructions welcoming them to the study. They were then asked to confirm that they were college students at Harvard. Next, as part of the cognitive dissonance manipulation, we asked participants for their opinion whether or not difficulty ratings should be a part of the Q guide (in which all Harvard courses are rated and reviewed by students who have taken them in the past). This issue was topical and familiar because it was a common topic of debate at the college at the time of the study; most students supported the inclusion of difficulty ratings, and most faculty were against it. Participants indicated whether they were for or against the inclusion of difficulty ratings in the Q guide and reported how strongly they held their opinion (from 1, *not at all*, to 7, *very much so*).

Next, participants were asked for their age, gender, and year in school. They were then told that their first task was to write an essay on a current topic, a task that would take about 5 to 10 min to complete. We manipulated dissonance by giving some participants a choice and other participants no choice regarding whether to write a counterattitudinal essay. All participants were told, "We are interested in the effectiveness of writing on current topics of interest to students." The rest of the instructions varied by condition.

Instructions in the low-choice, counterattitudinal condition indicated,

> We are randomly assigning people to write either a short essay that indicates they are in favor of including difficulty ratings in the Q guide or a short essay that indicates that they are against it. You have been assigned to write a list of arguments in favor of/against [depending on their initial opinion] including difficulty ratings in the Q guide. Therefore, you must argue in support of/against [depending on their initial opinion] including difficulty ratings in the Q guide.

In contrast, the instructions in the high-choice, counterattitudinal condition indicated,

> We are asking people to write a short essay about including difficulty ratings in the Q guide. While we would like to stress the voluntary nature of your decision regarding which side of the issue to write on, we would like you to list arguments in favor of/

Table 3. Means and 95% Confidence Intervals (in Brackets) for the Variables Assessed in Experiment 4

	Condition		
Variable	Low-choice, counterattitudinal	High-choice, counterattitudinal	High-choice, proattitudinal
Perceived choice	2.85_a [2.54, 3.15]	3.63_b [3.29, 3.96]	5.24_c [4.97, 5.52]
Self-alienation	2.70_a [2.49, 2.91]	2.56_a [2.36, 2.77]	1.88_b [1.75, 2.02]
Desirability of neutral products	3.84_a [3.65, 4.03]	3.81_a [3.61, 4.01]	3.64_a [3.46, 3.83]
Desirability of cleansing-related products	4.34_a [4.12, 4.56]	4.18_a [3.95, 4.42]	3.72_b [3.51, 3.93]

Note: Within a row, means with different subscripts are significantly different, $p < .05$.

> against [depending on their initial opinion] including difficulty ratings in the Q guide. Although you are under no obligation to write this, it would be very helpful for us.

Participants in this condition had to check a box to confirm their willingness to write the counterattitudinal essay.

Finally, the instructions in the high-choice, proattitudinal condition were the same as the instructions in the high-choice, counterattitudinal condition except that participants were asked to write about the perspective they supported.

In all three conditions, the last part of the instructions read,

> We will be using the essay you write to describe this issue to current undergraduates at Harvard. So it is important that you be as persuasive and convincing as possible to convey the message that difficulty ratings should be included in the Q guide.

Participants in all conditions were instructed to start their essay with the same statement, which appeared at the top of the open box where they wrote their essay: "I believe that Harvard College should [should not] include difficulty ratings in the Q guide because. . . ."

After the writing task, participants received a list of products and indicated how desirable they found them to be, as in Experiment 2. We averaged ratings of the five cleansing products to create one aggregate measure ($\alpha = .84$).

Next, participants indicated the extent to which the writing task they had completed earlier made them feel inauthentic. We measured inauthenticity using the measure of self-alienation we employed in Experiments 1, 2, and 3 ($\alpha = .91$).

Finally, we asked participants, "How much choice did you have in writing the essay you wrote?" (1 = *none at all*, 7 = *a lot*).

Results

Table 3 reports the means and confidence intervals for the variables measured in this study, separately for each condition.

Manipulation check: self-alienation. A one-way ANOVA using self-alienation as the dependent measure revealed a main effect of condition, $F(2, 487) = 21.14$, $p < .001$, $\eta_p^2 = .08$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported lower self-alienation in the proattitudinal condition ($M = 1.88$, $SD = 0.87$) than in both the high-choice, counterattitudinal condition ($M = 2.56$, $SD = 1.31$; $p < .001$) and the low-choice, counterattitudinal condition ($M = 2.70$, $SD = 1.40$; $p < .001$). Participants reported the same perceived self-alienation in the two counterattitudinal conditions ($p = .94$).

Perceived choice. A one-way ANOVA using perceived amount of choice as the dependent measure revealed a main effect of condition, $F(2, 487) = 62.35$, $p < .001$, $\eta_p^2 = .20$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported lower perceived choice in the low-choice, counterattitudinal condition ($M = 2.85$, $SD = 1.98$) than in the high-choice, counterattitudinal condition ($M = 3.63$, $SD = 2.16$; $p = .001$) and in the proattitudinal condition ($M = 5.24$, $SD = 1.78$; $p < .001$). Perceived choice was higher in the proattitudinal condition than it was in the high-choice, counterattitudinal condition ($p < .001$).

Desirability of cleansing products. A one-way ANOVA using participants' desirability ratings of cleansing products as the dependent measure revealed a main effect of condition, $F(2, 487) = 8.24$, $p < .001$, $\eta_p^2 = .033$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported less desire for cleansing products in the proattitudinal condition ($M = 3.72$, $SD = 1.33$) than in both the high-choice, counterattitudinal condition ($M = 4.18$, $SD = 1.51$; $p = .012$) and the low-choice, counterattitudinal condition ($M = 4.34$, $SD = 1.44$; $p < .001$).

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 107 of 1282

Desirability ratings of cleansing products did not differ between the latter two conditions ($p = .94$). There were no differences across conditions in desirability ratings of the noncleansing products, $F(2, 487) = 1.21$, $p = .30$, $\eta_p^2 = .005$.

Discussion

Whereas choice is a critical ingredient in producing cognitive dissonance, it played no role in increasing the desire for cleanliness. When participants wrote essays that were not consistent with their internal beliefs, regardless of choice, they showed a greater desire for cleanliness.

Experiment 5: Reducing Prosocial Compensation Through Cleansing

We have demonstrated that inauthenticity makes people feel morally tainted and leads to a greater desire for cleanliness. In Experiment 5, we used moderation to test whether the relationship between inauthenticity and prosocial compensation is explained through a greater desire for cleansing. We manipulated the opportunity to cleanse to examine whether having this opportunity eliminated the link between inauthenticity and helping.

Method

Participants and design. Two hundred ninety-one individuals (mean age = 22.38 years, $SD = 2.99$; 45% male) from local universities in the northeastern United States participated in this study for pay ($20). We calculated our target sample size using an estimated effect size, f, of 0.2, which would require a sample size of approximately 310 participants for the study to be powered at 85%, but the rate at which participants showed up for some of our experimental sessions was lower than expected. We randomly assigned participants to a 2 (behavior recalled: authentic vs. inauthentic) × 2 (opportunity for cleansing: cleansing vs. control) between-subjects design.

Procedure. We manipulated authenticity using the same instructions as in the authentic-behavior general-event conditions of Experiments 1 and 2. After completing the writing task, participants were told that the second part of the study consisted of evaluating a product that had been randomly chosen for them. In the cleansing condition, participants were asked to clean their hands carefully with a hand sanitizer placed next to their computer. In the control condition, they were instead asked to place a pen in their hands for a few seconds and examine it carefully. In both conditions, participants were told that they would answer questions about the product later on—which they did, as a filler task.

Following this task, we informed participants that they could donate money to a charity of their choosing. We used willingness to donate money and the amount participants actually donated (from their pay for participating in the experiment) as our main dependent measures.

Next, we asked participants to indicate the extent to which the writing task they had completed earlier made them feel inauthentic. We measured inauthenticity using the measure of self-alienation we employed in our other studies ($\alpha = .88$). Finally, participants reported their age and gender.

Results

Manipulation check: self-alienation. As expected, participants reported feeling more self-alienated in the inauthentic-behavior condition ($M = 3.12$, $SD = 1.42$, 95% CI = [2.89, 3.35]) than in the authentic-behavior condition ($M = 2.36$, $SD = 1.25$, 95% CI = [2.15, 2.57]), $F(1, 287) = 22.82$, $p < .001$, $\eta_p^2 = .074$.

Likelihood of donating. We examined whether having the opportunity to cleanse would moderate the effect of inauthenticity on donations. There was a marginally significant interaction between the type of behavior recalled and opportunity for cleansing in predicting the likelihood of donating, $b = 1.65$, $SE = 0.93$, Wald(1) = 3.16, $p = .076$. As depicted in Figure 2, participants in the inauthentic-behavior condition were more likely to donate when they did not clean their hands (25.3%, 95% CI = [16, 35]) than when they did (4.5%, 95% CI = [–0.1, 10]), $\chi^2(1, N = 149) = 11.72$, $p = .001$, Cramér's $V = .28$.

Participants who recalled and wrote about an authentic behavior decided to donate about as often whether they cleaned their hands (6.0%, 95% CI = [0, 12]) or did not (8.0%, 95% CI = [2, 14]; see Fig. 2), $\chi^2(1, N = 142) = 0.22$, $p = .64$, Cramér's $V = .04$. Thus, increased helping was observed in the inauthentic-behavior condition only among those participants who were not given an opportunity to cleanse themselves. Our results suggest that the act of cleaning their hands assuaged participants' feelings of impurity from acting inauthentically and reduced their motivation to compensate for these feelings by acting prosocially.

Amount donated. The results for the amount of money participants actually donated mirrored the results for the likelihood of donating. There was a significant interaction between the type of behavior recalled and opportunity for cleansing in predicting the amount donated, $F(1, 287) = 6.17$, $p = .014$, $\eta_p^2 = .021$. Participants in the inauthentic-behavior condition donated a larger amount of money when they did not clean their hands than when

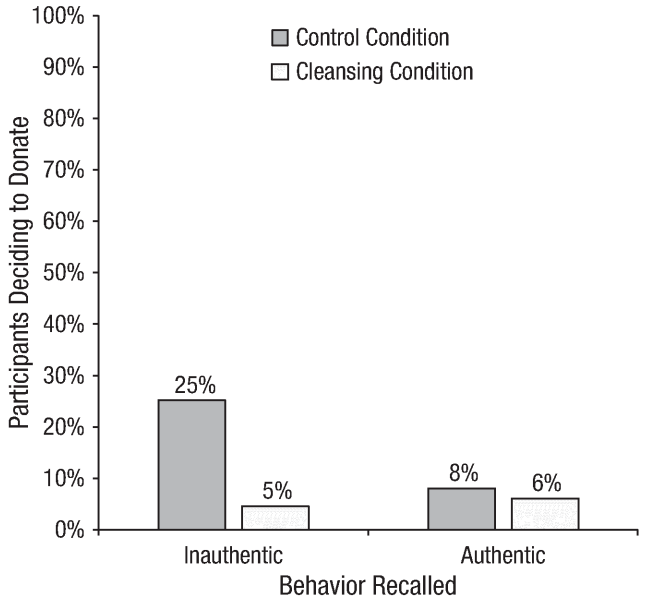

Fig. 2. Results from Experiment 5: percentage of people who decided to donate by condition.

they did (M = \$1.33, SD = \$2.76, 95% CI = [\$0.72, \$1.93], vs. M = \$0.24, SD = \$1.37, 95% CI = [−\$0.09, \$0.58]), $F(1, 287) = 12.09$, $p = .001$. But when participants recalled and wrote about an authentic behavior, they tended to donate the same amount of money whether they cleaned their hands with the hand sanitizer (M = \$0.42, SD = \$1.84, 95% CI = [−\$0.03, \$0.87]) or they did not (M = \$0.35, SD = \$1.42, 95% CI = [\$0.02, \$0.67]), $F(1, 287) < 1$, $p = .77$.

Discussion

Experiment 5 further established that the relationship between inauthenticity and moral compensation is explained through cleansing behavior. When participants had the opportunity to cleanse themselves, the relationship between inauthenticity and prosocial behavior was eliminated.

General Discussion

People often act inauthentically, in various ways, from arguing for a cause they do not believe in to expressing affection toward someone they truly dislike. Our five experiments establish that authenticity is linked to a moral state. When participants recalled a time that they behaved inauthentically, rather than authentically, they felt more impure and less moral, and experienced a greater desire for physical cleanliness. This heightened desire, in turn, made them more likely to behave prosocially to compensate for their feelings of impurity. We established the role of cleanliness as the link between inauthenticity and moral compensation through both mediation and moderation. Our results for feelings of impurity, the desire to cleanse, and prosocial behavior cannot be attributed to negative experiences more generally (e.g., failing a test), but rather must be attributed to inauthenticity. Our findings provide the first empirical evidence of discriminant validity in the literature on moral cleansing and moral compensation. We also found that the effects of inauthenticity were not reducible to cognitive dissonance or driven by psychological distress.

Our research contributes to the literature on moral psychology and behavioral ethics. Past research has found that morality is malleable and dynamic, that situational and social pressure can lead moral people to act dishonestly (Monin & Jordan, 2009). It is commonly assumed that unethical behavior involves people violating a norm shared by others and that this violation produces negative feelings. We have shown that violating internal norms can lead to very similar consequences. When people behave in ways that are inconsistent with their own sense of self, they feel morally tainted and engage in behaviors to compensate for these feelings.

Our results also contribute to the literature examining compensatory behaviors that follow threats, and aversive states that accompany threats. Proulx and Inzlicht's (2012; see also Proulx, Inzlicht, & Harmon-Jones, 2012) meaning-maintenance model integrates various social-psychological theories about compensatory behaviors following threats and expectancy violations. Our results are consistent with this model: Inauthenticity serves as a threat and leads people to experience a greater desire for cleanliness, to compensate for the aversive experience that made them feel immoral and impure.

Although we have demonstrated that inauthenticity is not reducible to dissonance, we have not established that inauthenticity is distinct from other inconsistency-related threats (e.g., ambivalence, self-uncertainty). It is possible that the dissonance participants experienced in the low-choice condition of Experiment 4 resulted from a more general sense of ambivalence, inconsistency, or self-uncertainty (e.g., van Harreveld, Schneider, Nohlen, & van der Pligt, 2012). Future research should establish the unique characteristics that differentiate inauthenticity from these other inconsistency-related threats. We expect that ambivalence or self-uncertainty would not increase feelings of impurity or desire for cleanliness but would lead to compensation through other pathways.

From Shakespeare to Sartre to Rand, writers and philosophers alike have suggested that authenticity is a moral state. Our research provides the first empirical demonstration that there is indeed a link between authenticity and morality. Our results suggest why laughing at the jokes of detested colleagues or dancing when one feels blue makes one run for the showers and behave more prosocially.

Author Contributions

All authors developed the study concept and contributed to the study design. Testing and data collection were performed by F. Gino and M. Kouchaki. F. Gino and M. Kouchaki drafted the manuscript, and A. D. Galinsky provided critical revisions. All authors approved the final version of the manuscript for submission.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Open Practices

All data and materials have been made publicly available via the Harvard Dataverse Network and can be accessed at https://osf.io/sd76g/. The complete Open Practices Disclosure for this article can be found at http://pss.sagepub.com/content/by/supplemental-data. This article has received badges for Open Data and Open Materials. More information about the Open Practices badges can be found at https://osf.io/tvyxz/wiki/view/ and http://pss.sagepub.com/content/25/1/3.full.

Note

1. We used a high level of power for the first study we conducted and then adjusted power levels as we conducted more studies.

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Evil Genius? How Dishonesty Can Lead to Greater Creativity

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Abstract

We propose that dishonest and creative behavior have something in common: They both involve breaking rules. Because of this shared feature, creativity may lead to dishonesty (as shown in prior work), and dishonesty may lead to creativity (the hypothesis we tested in this research). In five experiments, participants had the opportunity to behave dishonestly by overreporting their performance on various tasks. They then completed one or more tasks designed to measure creativity. Those who cheated were subsequently more creative than noncheaters, even when we accounted for individual differences in their creative ability (Experiment 1). Using random assignment, we confirmed that acting dishonestly leads to greater creativity in subsequent tasks (Experiments 2 and 3). The link between dishonesty and creativity is explained by a heightened feeling of being unconstrained by rules, as indicated by both mediation (Experiment 4) and moderation (Experiment 5).

Keywords

creativity, dishonesty, ethics, moral flexibility, rule breaking, morality, decision making

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Researchers across disciplines have become increasingly interested in understanding why even people who care about morality predictably cross ethical boundaries. This heightened interest in unethical behavior, defined as acts that violate widely held moral rules or norms of appropriate conduct (Treviño, Weaver, & Reynolds, 2006), is easily understood. Unethical behavior creates trillions of dollars in financial losses every year and is becoming increasingly commonplace (PricewaterhouseCoopers, 2011).

One form of unethical behavior, dishonesty, seems especially pervasive (Bazerman & Gino, 2012). Like other forms of unethical behavior, dishonesty involves breaking a rule—the social principle that people should tell the truth. Much of the scholarly attention devoted to understanding why individuals behave unethically has therefore focused on the factors that lead people to break rules.

Although rule breaking carries a negative connotation in the domain of ethics, it carries a positive connotation in another well-researched domain: creativity. To be creative, it is often said, one must "think outside the box" and use divergent thinking (Guilford, 1967; Runco, 2010; Simonton, 1999). Divergent thinking requires that people break some (but not all) rules within a domain to construct associations between previously unassociated cognitive elements (Bailin, 1987; Guilford, 1950). The resulting unusual mental associations serve as the basis for novel ideas (Langley & Jones, 1988; Sternberg, 1988). The creative process therefore involves rule breaking, as one must break rules to take advantage of existing opportunities or to create new ones (Brenkert, 2009). Thus, scholars have asserted that organizations may foster creativity by hiring people slow to learn the organizational code (Sutton, 2001, 2002) and by encouraging people to break from accepted practices (Winslow & Solomon, 1993) or to break rules (Baucus, Norton, Baucus, & Human, 2008; Kelley & Littman, 2001).

Given that both dishonesty and creativity involve rule breaking, the individuals most likely to behave dishonestly and the individuals most likely to be creative may be one and the same. Indeed, highly creative people are

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more likely than less creative people to bend rules or break laws (Cropley, Kaufman, & Cropley, 2003; Sternberg & Lubart, 1995; Sulloway, 1996). Popular tales are replete with images of "evil geniuses," such as Rotwang in *Metropolis* and "Lex" Luthor in *Superman*, who are both creative and nefarious in their attempts to ruin humanity. Similarly, news articles have applied the "evil genius" moniker to Bernard Madoff, who made $20 billion disappear using a creative Ponzi scheme.

The causal relationship between creativity and unethical behavior may take two possible forms: The creative process may trigger dishonesty; alternatively, acting unethically may enhance creativity. Research has demonstrated that enhancing the motivation to think outside the box can drive people toward more dishonest decisions (Beaussart, Andrews, & Kaufman, 2013; Gino & Ariely, 2012). But could acting dishonestly enhance creativity in subsequent tasks?

In five experiments, we obtained the first empirical evidence that behaving dishonestly can spur creativity and examined the psychological mechanism explaining this link. We suggest that after behaving dishonestly, people feel less constrained by rules, and are thus more likely to act creatively by constructing associations between previously unassociated cognitive elements.

Experiment 1: Cheaters Are Creative

In our first study, we examined whether individuals who behave unethically are more creative than others on a subsequent task, even after controlling for differences in baseline creative skills.

Method

Participants. One hundred fifty-three individuals recruited on Amazon Mechanical Turk (MTurk; 59% male, 41% female; mean age = 30.08, *SD* = 7.12) participated in the study for a $1 show-up fee and the opportunity to earn a $10 performance-based bonus. We told participants that 10% of the study participants would be randomly selected to receive this bonus.

Procedure. The study included four supposedly unrelated tasks: an initial creativity task (the Duncker candle problem), a 2-min filler task, a problem-solving task, and the Remote Association Task (RAT; Mednick, 1962).

Participants first completed the Duncker candle problem (Fig. 1). They saw a picture containing several objects on a table and next to a cardboard wall: a candle, a pack of matches, and a box of tacks. Participants had 3 min "to figure out, using only the objects on the table, how to attach the candle to the wall so that the candle burns properly and does not drip wax on the table or the floor."

Fig. 1. The Duncker candle problem presented to participants in Experiment 1.

The correct solution involves using the box of tacks as a candleholder: One should empty the box of tacks, tack it to the wall, and then place the candle inside. Finding the correct solution is considered a measure of insight creativity because it requires people to see objects as capable of performing atypical functions (Maddux & Galinsky, 2009). Thus, the hidden solution to the problem is inconsistent with the preexisting associations and expectations individuals bring to the task (Duncker, 1945; Glucksberg & Weisberg, 1966).

Next, participants performed a filler task. They then completed a problem-solving task under time pressure. Each of 10 matrices presented a set of 12 three-digit numbers (e.g., 4.18; see Mazar, Amir, & Ariely, 2008), and the task was to find two numbers in the matrix that added up to 10. Participants were shown one matrix at a time and had 20 s to solve each one. If participants did not find the solution within the allotted time, the computer program moved to the next matrix. After participants attempted to solve the 10 matrices, they self-reported their performance. For each correct solution, participants could receive $1 if they were among those randomly selected to receive the bonus. The program recorded participants' answer for each matrix, but the instructions did not explicitly state this. Thus, participants could cheat by inflating their performance on this task.

Finally, participants completed the RAT, which measures creativity by assessing people's ability to identify associations between words that are normally associated. Each item consists of a set of three words (e.g., *sore, shoulder, sweat*), and participants must find a word that

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 113 of 1282

is logically linked to them (*cold*). Participants had 5 min to solve 17 RAT items. Success on the RAT requires people to think of uncommon associations that stimulus words may have instead of focusing on the most common and familiar associations of those words.

Results and discussion

Forty-eight percent of the participants correctly solved the Duncker candle problem. Almost 59% of the participants cheated on the problem-solving task by reporting that they had solved more matrices than they had actually solved. Cheaters performed better on the RAT (M = 9.00 items correct, SD = 3.38) than did noncheaters (M = 5.76, SD = 3.38), even when we controlled for creative performance on the Duncker candle problem, $F(1, 150) = 22.03$, $p < .001$, $\eta_p^2 = .13$.

Cheating on the matrix task mediated the effect of participants' initial creativity on their RAT performance (Baron & Kenny, 1986). The effect of baseline creativity weakened (from $\beta = 0.30$, $p < .001$, to $\beta = 0.15$, $p = .056$) when cheating was included in the regression, and cheating significantly predicted RAT performance ($\beta = 0.37$, $p < .001$). A bootstrap analysis showed that the 95% bias-corrected confidence interval (CI) for the size of the indirect effect excluded zero (0.57, 1.80), suggesting a significant indirect effect (MacKinnon, Fairchild, & Fritz, 2007).

These results provided initial evidence that behaving dishonestly enhances creativity. Individual differences in creative ability between cheaters and noncheaters did not explain this finding.

Experiment 2: The Act of Cheating Enhances Creativity

One limitation of Experiment 1 is that people decided for themselves whether or not to cheat. In Experiment 2, we used random assignment to test whether acting dishonestly increases creativity in subsequent tasks. To induce cheating, we used a manipulation in which cheating occurs by omission rather than commission and in which people are tempted to cheat in multiple rounds. Because of these features, most people tend to cheat on this task (Shu & Gino, 2012).

Method

Participants. One hundred one students from universities in the southeastern United States (39% male, 61% female; mean age = 21.48, SD = 7.23) participated in the study for a $5 show-up fee and the opportunity to earn an additional $10 performance-based bonus. We randomly assigned participants to either the likely-cheating or the control condition.

Procedure. The study included two supposedly unrelated tasks: a computer-based math-and-logic game and the RAT. The cheating manipulation was implemented in the computer-based game (Vohs & Schooler, 2008; von Hippel, Lakin, & Shakarchi, 2005), which involved answering 20 different math and logic multiple-choice problems presented individually. Participants had 40 s to answer each question and could earn 50¢ for each correct answer.

In the control condition, participants completed the task with no further instructions. In the likely-cheating condition, the experimenter informed participants that the computer had a programming glitch: While they worked on each problem, the correct answer would appear on the screen unless they stopped it from being displayed by pressing the space bar right after the problem appeared. The experimenter also informed participants that although no one would be able to tell whether they had pressed the space bar, they should try to solve the problems on their own (thus being honest). In actuality, the presentation of the answers was a feature of the program and not a glitch, and the number of space-bar presses was recorded. We used the number of times participants did not press the space bar to prevent the correct answer from appearing as our measure of cheating.

After the math-and-logic game, participants completed 12 RAT problems, which constituted our creativity measure.

Results and discussion

Most participants (51 out of 53) cheated in the likely-cheating condition of the math-and-logic game. An analysis including only these 51 cheaters in the likely-cheating condition revealed that RAT performance was higher in the likely-cheating condition (M = 6.20 items correct, SD = 2.72) than in the control condition (M = 4.65, SD = 2.98), $t(97) = 2.71$, $p = .008$. Similarly, we found a significant difference in RAT performance between the two conditions when all 53 participants in the likely-cheating condition were included in the analysis (likely-cheating condition: M = 6.25, SD = 2.70), $t(99) = 2.83$, $p = .006$. These results indicate that cheating increased creativity on a subsequent task and provide further support for our main hypothesis.

Experiment 3: Breaking Rules With and Without Ethical Implications

One may argue that people often deviate from rules when they can and that this makes them more creative—even when the rule they break does not have ethical implications. In Experiment 3, we addressed this alternative explanation by using two conditions that did not differ in how likely participants were to disobey the rules

on how to solve the task at hand but did differ in whether they enabled participants to lie. Because of this feature, participants who lied would break an additional rule, a rule with ethical implications. We reasoned that breaking rules with ethical implications (i.e., people should not lie) promotes greater creativity than does violating rules without ethical implications because the former constitutes a stronger rejection of rules. As a result, we predicted that only the condition that enabled lying would enhance creativity, which would provide evidence that cheating specifically increases creativity. Another difference from the prior experiments is that we used two different tasks to measure creativity in Experiment 3.

Method

Participants. One hundred twenty-nine individuals recruited on MTurk (58% male, 42% female; mean age = 27.72, *SD* = 7.86) participated in this study for $2.

Procedure. We described the study as including various tasks, the first of which was a standard anagram task that tested verbal abilities. To motivate successful performance on this task, we told participants that performance on an anagram task predicts verbal ability, which is correlated with career potential. In this task (adapted from Irwin, Xu, & Zhang, 2014), participants had to complete as many anagrams as they could in 3 min. The instructions specified several rules participants had to follow (see the Supplemental Material available online). For each anagram, participants had to rearrange a set of letters to form a meaningful word (e.g., *tiarst* can make *artist*). In addition, participants were supposed to provide only one answer per anagram, even if the anagram had more than one solution. Because each anagram had multiple answers, the instructions stated, the computer program could not validate their answers automatically. Thus, participants had to keep track of how many anagrams they had solved and self-report the number at the end of the task.

After participants completed the task, they were randomly assigned to either the likely-cheating or the control condition. These two conditions differed in the choice options people were given to report their performance. In a pretest, we found that, on average, participants recruited on MTurk (age range: 18–50) solved 5 to 8 anagrams in the allotted time. Thus, to induce participants to inflate their performance, in the likely-cheating condition, we used the following options: "0–8: lower verbal learners"; "9–14: average for students in good colleges"; "15–20: typical for students in Ivy League colleges"; and "21–higher: common for English professors and novelists." Because most participants would likely fall into the "lower verbal learners" category, their intelligence would be threatened, and they would therefore be tempted to cheat by inflating their performance (as in Gino & Mogilner, 2014). In the control condition, we used the following options: "0–5: average for students in good colleges"; "6–10: typical for students in Ivy League colleges"; and "11–higher: common for English professors and novelists." In this case, most participants would likely fall into an acceptable bracket and would therefore not feel tempted to lie. Thus, participants in both conditions had the opportunity to break the numerous rules listed in the instructions, but those in the likely-cheating condition were more tempted to lie.

Following the anagram task, participants completed two tasks assessing their creativity: the uses task and 17 RAT problems (as in Experiment 1). For the uses task, they had to generate as many creative uses for a newspaper as possible within 1 min (Guilford, 1967). To assess creativity on this task, we coded responses for fluency (i.e., the total number of uses), flexibility (i.e., the number of uses that were different from one another), and originality (averaged across the different suggested ideas).

Results and discussion

Table 1 reports the means for the key variables assessed in this study, separately for the two conditions.

Forty percent of participants (26 out of 65) in the likely-cheating condition cheated, and only 4.7% (3 out of 64) in the control group did, $\chi^2(1, N = 129) = 23.08$, $p < .001$. Actual performance on the anagram task did not differ between conditions, $t(127) = 0.23$, $p = .82$.

All measures of creativity were higher in the likely-cheating condition than in the control condition—RAT performance: $t(127) = 2.17$, $p = .032$; fluency on the uses task: $t(127) = 2.47$, $p = .015$; flexibility on the uses task: $t(127) = 1.82$, $p = .072$; and originality on the uses task: $t(127) = 3.24$, $p = .002$. Thus, cheating enhanced creativity.[1]

Experiment 4: Feeling Unconstrained by Rules

In Experiment 4, we examined why cheating enhances creativity by measuring the extent to which participants felt that they were not constrained by rules. We also used a different task to assess cheating. In our previous studies, we used tasks in which performance was partially due to ability and effort. Such tasks may be cognitively depleting, and behaving honestly may have required greater cognitive effort than behaving dishonestly. In Experiment 4, we used a coin-toss task in which cheating and acting honestly likely involve the same cognitive effort. Finally, we also measured affect to rule out the possibility that emotions partially explain the effects of dishonesty on creativity.

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 115 of 1282

Table 1. Means for the Key Variables in Experiment 3

Condition	Number of anagrams solved	Uses task			Number of RAT items solved
		Fluency	Flexibility	Originality	
Likely-cheating	4.17 (3.26)	6.02 (2.02)	5.18 (2.01)	3.69 (1.21)	6.85 (3.82)
Control	4.05 (2.89)	5.20 (1.70)	4.58 (1.78)	3.06 (0.97)	5.47 (3.38)

Note: The values in parentheses are standard deviations. RAT = Remote Association Task (Mednick, 1962).

Method

Participants. One hundred seventy-eight individuals recruited on MTurk (47% male, 53% female; mean age = 28.59, *SD* = 7.72) participated in the study for $1 and the opportunity to earn a $1 bonus.

Procedure. The instructions explained that the goal of the study was to investigate the relationships among people's different abilities, such as attention, performance under pressure, and luck. Participants also learned that they would receive monetary bonuses based on their performance on different tasks.

We first asked participants to guess whether the outcome of a virtual coin toss would be heads or tails. After indicating their prediction, participants had to press a button to toss the coin virtually. They were asked to press the button only once. To give participants room for justifying their own cheating, we included a note at the bottom of the screen that stated, "Before moving to the next screen, please press the 'Flip!' button a few more times just to make sure the coin is legitimate" (a procedure adapted from Shalvi, Dana, Handgraaf, & De Dreu, 2011). Participants then reported whether they had guessed correctly and received a $1 bonus if they had. The program recorded the outcomes of the initial virtual coin tosses so that we could tell whether participants cheated.

Afterward, for each of three pictures (see Fig. 2), participants used a 7-point scale (1 = *not at all*, 7 = *very much*) to respond to the question, "If you were in the situation depicted in the picture, to what extent would you care about following the rules?" We averaged each participant's answers across the three items to create a measure for caring about rules (α = .81).

Participants then completed the same two creativity tasks as in Experiment 3. Finally, participants indicated how they felt right after finishing the coin-toss task, using the 20-item Positive and Negative Affectivity Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS captured both positive affect (α = .90) and negative affect (α = .90) on a 5-point scale (1 = *very slightly or not at all*, 5 = *extremely*).

Results and discussion

Twenty-four percent of participants (43 out of 178) cheated on the coin-toss task. Table 2 reports the means for the key variables assessed in this study, separately for cheaters and noncheaters.

Participants who cheated on the coin-toss task reported caring less about rules than did those who did not cheat, $t(176) = -6.48$, $p < .001$. All four measures of creativity were higher for cheaters than they were for noncheaters—fluency on the uses task: $t(176) = 4.24$, $p < .001$; flexibility on the uses task: $t(176) = 4.02$, $p < .001$; originality on the uses task: $t(176) = 6.85$, $p < .001$; and RAT performance: $t(176) = 2.54$, $p = .012$. Cheaters and noncheaters reported similar levels of positive and negative affect after the coin-toss task (ps > .36).

We tested whether participants' feelings about rules explained the link between cheating and creativity. For this analysis, we standardized the four measures of creative performance and then averaged them into one composite measure. The effect of cheating on subsequent creativity was significantly reduced (from $\beta = 0.43$, $p < .001$, to $\beta = 0.35$, $p < .001$) when participants' caring about rules was included in the equation, and such feeling predicted creative performance ($\beta = -0.18$, $p = .017$; 95% bias-corrected CI = [0.02, 0.29]). These results provide evidence that feeling unconstrained by rules underlies the link between dishonesty and creativity.

Experiment 5: Evidence for Mediation Through Moderation

In Experiment 4, we tested whether caring about rules explained the relationship between dishonesty and creativity using a traditional mediation approach. In Experiment 5, we obtained further evidence for this mediating mechanism using a moderation approach (as recommended by Spencer, Zanna, & Fong, 2005).

Method

Participants. Two hundred eight individuals from the northeastern United States (56% male, 44% female; mean

Fig. 2. Images used to assess the extent to which participants in Experiment 4 felt unconstrained by rules.

age = 21.66, *SD* = 2.64; 88% students) participated in the study for $10 and the opportunity to earn additional money.

Procedure. Participants were randomly assigned to one of four experimental conditions in a 2 (cheating condition: opaque vs. transparent) × 2 (prime condition: rule-breaking prime vs. neutral prime) between-subjects design. They read that they would be completing a series of short tasks involving luck and skill, and that some of these tasks involved a bonus payment.

The first task was a die-throwing game (Jiang, 2013). In this game, participants could throw a virtual six-sided die 20 times to earn points (which would be translated to real dollars and added to participants' final payment). Participants were reminded that each pair of numbers on opposite sides of the die added up to 7: 1 vs. 6, 2 vs. 5, and 3 vs. 4. We called the visible side that was facing up "U" and the opposite, invisible side that was facing down "D." Participants received the following instructions:

> In each round, the number of points that you score depends on the throw of the die as well as on the side that you have chosen in that round. Each round consists of one throw. Before throwing, you have to choose the relevant side for that round. Note that the die outcomes are random and the outcome you see on the screen corresponds to the upside. . . . For instance, if you have chosen "D" in your mind and the die outcome turns up to be "4," you earn 3 points for that throw, whereas if you have chosen "U" in your mind, you earn 4 points. Across the 20

Table 2. Means for the Key Variables in Experiment 4

Participant group	Uses task			Number of RAT items solved	Caring about rules	Positive affect	Negative affect
	Fluency	Flexibility	Originality				
Cheaters	8.33 (2.80)	6.81 (2.85)	3.60 (1.26)	9.47 (4.38)	3.66 (1.76)	2.52 (0.80)	1.56 (0.62)
Noncheaters	6.52 (2.31)	5.25 (1.98)	2.33 (1.00)	7.84 (3.38)	5.28 (1.31)	2.42 (0.89)	1.46 (0.63)

Note: The values in parentheses are standard deviations. RAT = Remote Association Task (Mednick, 1962).

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 117 of 1282

rounds you can earn a maximum of 100 points. Each point is worth 20 cents, so you can make a maximum of $20.

In the opaque condition, participants had to choose between U and D in their mind before every throw, and after each throw, they had to indicate the side they had chosen before the throw. In the transparent condition, participants were also asked to choose between U and D in their mind before every throw, but in this case, they had to report their choice before throwing the virtual die. Thus, the opaque condition tempted participants to cheat (by indicating after each throw that they had chosen the side of the die that corresponded to the higher number of points), whereas the transparent condition did not allow for cheating.

After the die-throwing task, participants performed an ostensibly unrelated task called "Memory Game." Their task was to find matching graphics in a 4 × 4 grid that contained eight different pairs of hidden images; participants could click on two cells in the grid at a time to reveal the images. Participants were reminded that we were interested not in how quickly they completed the task, but rather in how many clicks they needed to complete it successfully. We used this task to introduce our second manipulation. Half of the participants (rule-breaking prime condition) were presented with a grid in which five of the pairs were pictures of people breaking rules (as in Fig. 2), and the remaining three pairs were neutral pictures (e.g., mountains). The other half of the participants (neutral prime condition) saw eight pairs of neutral pictures.[2]

Finally, participants completed the measure of creativity, the same RAT problems used in Experiment 1.

Prediction. We expected the rule-breaking prime to promote creative behavior only in the transparent condition. We expected participants in the opaque condition to feel already sufficiently unconstrained by rules after behaving dishonestly in the die-throwing game. We therefore did not expect the rule-breaking prime to influence creativity among these participants.

Results and discussion

A 2 × 2 analysis of variance using RAT performance as the dependent measure revealed a significant main effect of cheating condition, $F(1, 204) = 10.23$, $p = .002$, $\eta_p^2 = .048$, and a nonsignificant effect of prime condition, $F(1, 204) = 1.63$, $p = .20$. The interaction was significant, $F(1, 204) = 4.08$, $p = .045$, $\eta_p^2 = .02$ (see Fig. 3). In the opaque condition, RAT performance did not vary with prime condition, $F < 1$. In the transparent condition, participants were more creative in the rule-breaking prime condition than in the neutral prime condition, $F(1, 204) = 5.29$, $p = .023$. These results provide further evidence that acting dishonestly makes people feel unconstrained by rules, and that this lack of constraint enhances creative behavior.

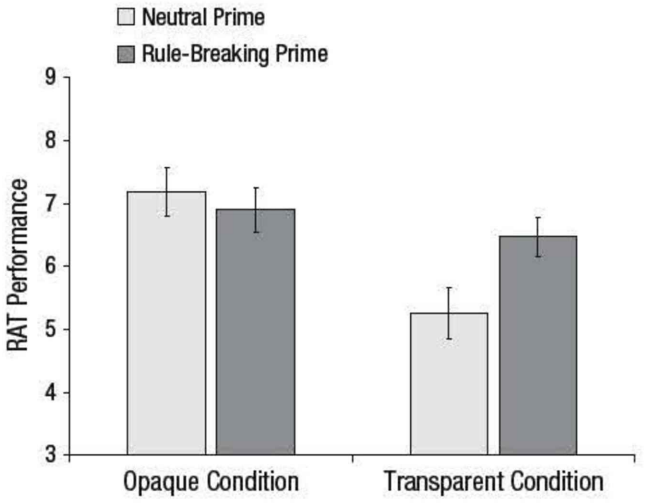

Fig. 3. Performance on the Remote Association Task (RAT) in Experiment 5 as a function of cheating and prime condition. Error bars indicate standard errors.

General Discussion

There is little doubt that dishonesty creates costs for society. It is less clear whether it produces any positive consequences. This research identified one such positive consequence, demonstrating that people may become more creative after behaving dishonestly because acting dishonestly leaves them feeling less constrained by rules.

By identifying potential consequences of acting dishonestly, these findings complement existing research on behavioral ethics and moral psychology, which has focused primarily on identifying the antecedents to unethical behavior (Bazerman & Gino, 2012). These findings also advance understanding of creative behavior by showing that feeling unconstrained by rules enhances creative sparks. More speculatively, our research raises the possibility that one of the reasons why dishonesty is so widespread in today's society is that by acting dishonestly, people become more creative, which allows them to come up with more creative justifications for their immoral behavior and therefore makes them more likely to behave dishonestly (Gino & Ariely, 2012), which may make them more creative, and so on.

In sum, this research shows that the sentiment expressed in the common saying "rules are meant to be broken" is at the root of both creative performance and

dishonest behavior. It also provides new evidence that dishonesty may therefore lead people to become more creative in their subsequent endeavors.

Author Contributions

Both authors developed the study concept, contributed to the study design, collected data, and performed the data analysis. Both authors worked on various drafts of the manuscript and approved the final version of the manuscript for submission.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Supplemental Material

Additional supporting information may be found at http://pss.sagepub.com/content/by/supplemental-data

Notes

1. We obtained the same results when we compared the creativity of cheaters and noncheaters (all *p*s < .01).
2. In a pilot study ($N = 103$), we tested the effect of our primes on participants' willingness to follow rules as indicated by their scores on a four-item scale adapted from Tyler and Blader (2005; e.g., "If I received a request from a supervisor or a person with authority right now, I would do as requested"). Participants in the rule-breaking prime condition demonstrated less willingness to follow rules ($M = 5.65$, $SD = 0.79$) than did participants in the neutral prime condition ($M = 6.03$, $SD = 0.91$), $t(101) = -2.27$, $p = .025$.

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Retraction

PSYCHOLOGICAL AND COGNITIVE SCIENCES

Retraction for "Signing at the beginning makes ethics salient and decreases dishonest self reports in comparison to signing at the end," by Lisa L. Shu, Nina Mazar, Francesca Gino, Dan Ariely, and Max H. Bazerman, which was first published August 27, 2012; 10.1073/pnas.1209746109 (*Proc. Natl. Acad. Sci. U.S.A.* **109**, 15197 15200).

The editors are retracting this article and note that Simonsohn, Simmons, and Nelson (http://datacolada.org/98) have provided evidence to question the validity of the data in the article.

May R. Berenbaum
Editor in Chief

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RETRACTION

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Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end

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Many written forms required by businesses and governments rely on honest reporting. Proof of honest intent is typically provided through signature at the end of, e.g., tax returns or insurance policy forms. Still, people sometimes cheat to advance their financial self-interests—at great costs to society. We test an easy-to-implement method to discourage dishonesty: signing at the beginning rather than at the end of a self-report, thereby reversing the order of the current practice. Using laboratory and field experiments, we find that signing before–rather than after–the opportunity to cheat makes ethics salient when they are needed most and significantly reduces dishonesty.

morality | nudge | policy making | fraud

The annual tax gap between actual and claimed taxes due in the United States amounts to roughly $345 billion. The Internal Revenue Service estimates more than half this amount is due to individuals misrepresenting their income and deductions (1). Insurance is another domain burdened by the staggering cost of individual dishonesty; the Coalition Against Insurance Fraud estimated that the overall magnitude of insurance fraud in the United States totaled $80 billion in 2006 (2). The problem with curbing dishonesty in behaviors such as filing tax returns, submitting insurance claims, claiming business expenses or reporting billable hours is that they primarily rely on self monitoring in lieu of external policing. The current paper proposes and tests an efficient and simple measure to reduce such dishonesty.

Whereas recent findings have successfully identified an intervention to curtail dishonesty through introducing a code of conduct in contexts where previously there was none (3, 4), many important transactions already require signatures to confirm compliance to an expected standard of honesty. Nevertheless, as significant economic losses demonstrate (1, 2), the current practice appears insufficient in countering self interested motivations to falsify numbers. We propose that a simple change of the signature location could lead to significant improvements in compliance.

Even subtle cues that direct attention toward oneself can lead to surprisingly powerful effects on subsequent moral behavior (5 7). Signing is one way to activate attention to the self (8). However, typically, a signature is requested at the end. Building on Duval and Wicklund's theory of objective self awareness (9), we propose and test that signing one's name before reporting information (rather than at the end) makes morality accessible right before it is most needed, which will consequently promote honest reporting. We propose that with the current practice of signing after reporting information, the "damage" has already been done: immediately after lying, individuals quickly engage in various mental justifications, reinterpretations, and other "tricks" such as suppressing thoughts about their moral standards that allow them to maintain a positive self image despite having lied (3, 10, 11). That is, once an individual has lied, it is too late to direct their focus toward ethics through requiring a signature.

In court cases, witnesses *verbally* declare their pledge to honesty *before* giving their testimonies not after, perhaps for a reason. To the extent that written reports feel more distant and make it easier to disengage internal moral control than verbal reports, written reports are likely to be more prone to dishonest conduct (3, 10, 11). However, for both types of reports (verbal or written) we hypothesize a pledge to honesty to be more effective before rather than after self reporting. Thus, in this work, we test an easy to implement method of curtailing fraud in *written* reports: signing a statement of honesty at the beginning rather than at the end of a self report that people know from the outset will require a signature.

Results and Discussion

Experiment 1 tested this intervention in the laboratory, using two different measures of cheating: self reported earnings (income) on a math puzzles task wherein participants could cheat for financial gain (3), and travel expenses to the laboratory (deductions) claimed on a tax return form on research earnings. On the one page form where participants reported their income and deductions, we varied whether participant signature was required at the top of the form or at the end. We also included a control condition wherein no signature was required on the form.

We measured the extent to which participants overstated their income from the math puzzles task and the amount of deductions they claimed. All materials were coded with unique identifiers that were imperceptible to participants, yet allowed us to track each participant's true performance on the math puzzles against the performance underlying their income reported on the tax forms. The percentage of participants who cheated by overclaiming income for math puzzles they purportedly solved differed significantly across conditions: fewer cheated in the signature at the top condition (37%) than in the signature at the bottom and no signature conditions (79 and 64%, respectively), $\chi^2(2, n = 101) = 12.58$, $P = 0.002$, with no differences between the latter two conditions ($P = 0.17$). The results also hold when analyzing the average magnitude of cheating by condition; Fig. 1 depicts the reported and actual performance, as measured by the number of math puzzles solved, for each condition, $F(2, 98) = 9.21$, $P < 0.001$. Finally, claims of travel expenses followed that same pattern and differed by condition, $F(2, 98) = 5.63$, $P < 0.01$, $\eta 2 = 0.10$. Participants claimed fewer expenses in the signature at the top condition (M = \$5.27, SD = 4.43) compared with signature at the bottom (M = \$9.62, SD = 6.20; $P < 0.01$) and the no signature condition (M = \$8.45, SD = 5.92; $P < 0.05$), with no differences between the latter two conditions ($P = 0.39$). Thus, signing before reporting

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PSYCHOLOGICAL AND COGNITIVE SCIENCES

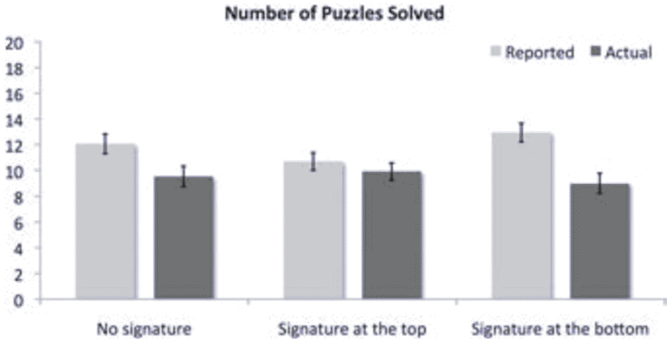

Fig. 1. Reported and actual number of math puzzles solved by condition, experiment 1 (n = 101). Error bars represent SEM.

promoted honesty, whereas signing afterward was the same as not signing at all.

Experiment 2 investigated the potential mechanism underlying the effect through a word completion task (12, 13) serving as an implicit measure of mental access to ethics related concepts (4). Sixty university participants were randomly assigned to one of two conditions: signature at the top or signature at the bottom. Experiment 2 used the same math puzzles and tax form procedure as in experiment 1, but varied the incentives for performance on the math puzzles task and the tax rate. Finally, the one page tax forms were modified to mimic the flow of actual tax reporting practices in the United States, and as in experiment 1, all materials were imperceptibly coded with unique identifiers.

After filling out the tax forms, all participants received a list of six word fragments with missing letters. They were instructed to complete them with meaningful words. Three fragments (_ _ R A L, _ I _ _ _ E, and E _ _ _ C _ _) could potentially be completed with words related to ethics (moral, virtue, and ethical) or neutral words. We used the number of times these fragments were completed with ethics related words as our measure of access to moral concepts.

Similar to experiment 1, the percentage of participants who cheated by overstating their performance on the math puzzles task was lower in the signature at the top condition (37%, 11 of 30) than in the signature at the bottom condition (63%, 19 of 30), $\chi^2(1, n = 60) = 4.27$, $P < 0.04$. The same pattern of results held when analyzing the magnitude of cheating (Fig. 2), $t(58) = -2.07$, $P < 0.05$, as well as the travel expenses that participants claimed on the tax return form, $F(1, 58) = 7.76$, $P < 0.01$, $\eta^2 = 0.12$: they were lower in the signature at the top condition ($M = 3.23$, SD = 2.73) than in the signature at the bottom condition ($M = 7.06$, SD = 7.02).

In the word completion task, participants who signed before filling out the form generated more ethics related words ($M = 1.40$, SD = 1.04) than those who signed after ($M = 0.87$, SD = 0.97), $F(1, 58) = 4.22$, $P < 0.05$, $\eta^2 = 0.07$; this greater access to ethics related concepts (our proxy for saliency of morality) significantly mediated the effect of assigned condition (signature at the top or signature at the bottom) on cheating on the tax forms [bootstrapping with 10,000 iterations (14): 95% confidence interval −1.85, −0.04].

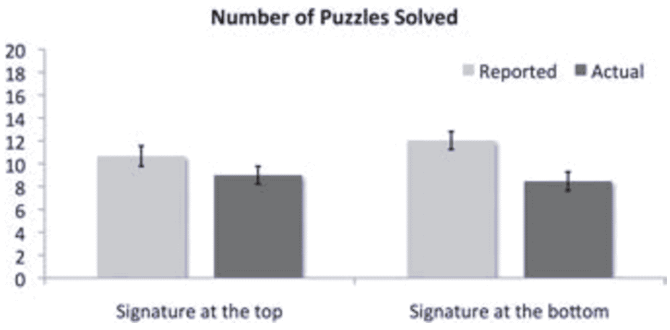

Fig. 2. Reported and actual number of math puzzles solved by condition, experiment 2 (n = 60). Error bars represent SEM.

Experiment 3 tested the effect of the signature location in a naturalistic setting. Partnering with an automobile insurance company in the southeastern United States, we manipulated the policy review form, which asked customers to report the current odometer mileage of all cars insured by the company. Customers were randomly assigned to one of two forms, both of which required their signature following the statement: "I promise that the information I am providing is true." Half the customers received the original forms used by the insurance company, where their signature was required at the end of the form; the other half received our treatment forms, where they were required to sign at the beginning. The forms were identical in every other respect. Reporting lower odometer mileage indicated less driving, lower risk of accident occurrence, and therefore lower insurance premiums. We expected customers who signed at the beginning of the form to be more truthful and reveal higher use than those who signed at the end.

We compared the reported current odometer mileage on 13,488 completed policy forms for 20,741 cars to the latest records of each car's odometer mileage to calculate its use (number of miles driven). Customers who signed at the beginning on average revealed higher use ($M = 26{,}098.4$, SD = 12,253.4) than those who signed at the end [$M = 23{,}670.6$, SD = 12,621.4; $F(1, 13{,}485) = 128.63$, $P < 0.001$]. The difference was 2,427.8 miles per car. That is, asking customers to sign at the beginning of the form led to a 10.25% increase in implied miles driven (based on reported odometer readings) over the current practice of asking for a signature at the end. Follow up analyses suggested that the higher use in the signature at the top condition was not due to more detailed reporting (down to the last digit) in comparison with customers who may have relied on simply rounding their odometer mileage in the signature at the bottom condition. Thus, the simple change in signature location likely reduced the extent to which customers falsified mileage information in their own financial self interest at cost to the insurance company who must pass this expense on to all its policyholders, including honest customers who bear the ultimate burden of paying for the dishonesty of others.

According to data from the US Department of Transportation Office of Highway Policy Information, the average annual amount of travel per vehicle in the United States was roughly 12,500 miles in 2005 (15). This suggests that the average driver in our field experiment had been a customer with the insurance company for 2 y. We estimated the annual per mile cost of automobile insurance in the United States to range from 4 to 10 cents, suggesting a minimum average difference of $48 in annual insurance premium per car between customers in the two conditions. The range of 4 10 cents was determined from comparing usage based insurance also known as PAYD, or pay as you drive and calculating the premiums for different scenarios of car brand, model, mileage, and buyer demographic on two automobile insurance policy sites.

The current practice of signing after reporting is insufficient. It is important to make morality salient, right before it is needed most, so that it can remain active during the most tempting moments. When signing comes after reporting, the morality train has already left the station. The power of our intervention is precisely due to the fact that it is such a gentle nudge (16): it does not impose on the freedom of individuals, it does not require the passage of new legislation, and it can profoundly influence behaviors of ethical and economic significance. In fact, because most self reports already require signing a pledge to honesty albeit not in the most effective location the cost of implementing our intervention is minimal. Given the immense financial resources devoted to prevention, detection, and punishment of fraudulent

behavior, a truly minimal intervention like the one used in our research seems costly not to implement even if its effectiveness might wane over time as signing before reporting becomes prevalent and individuals may find new "tricks" to disengage from morality.

Materials and Methods

Informed consent was obtained from all participants, and the Institutional Review Boards of Harvard University and University of North Carolina reviewed and approved all materials and procedures in Experiments 1 and 2.

Experiment 1: Participants and Procedure. A total of 101 students and employees at local universities in the southeastern United States (M_{age} = 22.10, SD = 4.98; 45% male; 82% students) completed the experiment for pay. They received a $2 show up fee and had the opportunity to earn additional money throughout the experiment.

Participants were randomly assigned to one of three conditions: (*i*) signature at the top of the tax return form (before filling it out); (*ii*) signature at the bottom (after filling it out); or (*iii*) no signature (control). The statement that participants had to sign asked them to declare that they carefully examined the return and that to the best of their knowledge and belief it was correct and complete.

At the beginning of each session, participants were given instructions in which they were informed that they would first complete a problem solving task under time pressure (i.e., they would have 5 min to complete the task). In addition, the instructions included the following information, "For the problem solving task, you will be paid a higher amount than what we usually pay participants because you will be taxed on your earnings. You will receive more details after the problem solving task."

Problem solving task. For this task (3), participants received a worksheet with 20 math puzzles, each consisting of 12 three digit numbers (e.g., 4.78) and a collection slip on which participants later reported their performance in this part of the experiment. Participants were told that they would have 5 min to find two numbers in each puzzle that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. Once the 5 min were over, the experimenter asked participants to count the number of correctly solved puzzles, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter. We assume respondents had no problems adding 2 numbers to 10, which means they should have been able to identify how many math puzzles they had solved correctly without requiring a solution sheet. Neither of the two forms (math puzzles test sheet and collection slip) had any information on it that could identify the participants. The sole purpose of the collection slip was for the participants themselves to learn how many puzzles in total they had solved correctly.

Tax return form. After the problem solving task, participants went to a second room to fill out a research study tax return form (based on IRS Form 1040). The one page form we used was based on a typical tax return form. We varied whether participants were asked to sign the form and if so, whether at the top or bottom of the page (Figs. S1 S3). Participants filled out the form by self reporting their income (i.e., their performance on the math puzzles task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their cost of commute. These expenses were "credited" to their posttax earnings from the problem solving task to compute their final payment. The instructions read: "We would like to compensate participants for extra expenses they have incurred to participate in this session." We reimbursed the time to travel to the laboratory at $0.10 per minute (up to 2 h or $12) and the cost of participants' commute (up to $12). All of the instructions and dependent measures appeared on one page to ensure that participants knew from the outset that a signature would be required. Thus, any differences in reporting could be attributed to the location of the signature.

Payment structure. Given the features of the experiment, participants could make a total of $42 an amount which breaks down as follows: $2 show up fee, $20 on math puzzles task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Opportunity to cheat on the tax return form. The experiment was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem solving task and by inflating the travel expenses they incurred to participate in the experiment. When participants completed the first part of the experiment (problem solving task), the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments. The tax return form included a one digit identifier (one digit in the top right of the form, in the code OMB no. 1555 0111) that was identical to the digit of one number of one math puzzle of each individual's worksheet (which was unique to each individual's work station). This difference was completely imperceptible to participants but allowed us to link the worksheet and the tax return form that belonged to the same participant. As a result, at the end of each session, we were able to compare actual performance on the problem solving task and reported performance on the tax return form. If those numbers differed for any individual, this difference represented one measure of the individual's level of cheating.

First, we examined the percentage of participants who cheated by overstating their performance on the problem solving task when asked to report it on the tax return form. This percentage varied across conditions, $\chi^2(2, n = 101) = 12.58$, $P = 0.002$: The number of cheaters was lowest in the signature at the top condition (37%, 13 of 35), higher in the signature at the bottom condition (79%, 26 of 33), and somewhat in between those two but closer to the latter for the no signature condition (64%, 21 of 33).

Both actual and reported mean performances on the math puzzles task are shown in Fig. 1. As depicted, the number of math puzzles overreported in the tax return forms varied by condition, $F(2, 98) = 9.21$, $P < 0.001$, $\eta^2 = 0.16$: It was lowest in the signature at the top condition ($M = 0.77$, SD = 1.44) and higher in the signature at the bottom condition ($M = 3.94$, SD = 4.07; $P < 0.001$) and in the no signature condition ($M = 2.52$, SD = 3.12; $P < 0.05$). The difference between these two latter conditions was only marginally significant ($P < 0.07$).

The credits for travel expenses (travel time and costs of commute) that participants claimed in the tax return forms also varied by condition, $F(2, 98) = 5.63$, $P < 0.01$, $\eta^2 = 0.10$ and followed the same pattern: Participants claimed fewer expenses in the signature at the top condition ($M = 5.27$, SD = 4.43) than in the signature at the bottom ($M = 9.62$, SD = 6.20; $P < 0.01$) and the no signature (control) conditions ($M = 8.45$, SD = 5.92; $P < 0.05$). The difference between these two latter conditions was not significant ($P = 0.39$). These results suggest that the effect of the signature location is driven by the signing at the top condition: Signing before a self reporting task promoted honest reporting. Signing afterward did not promote cheating. In effect, signing afterward was the same as having no signature at all.

Experiment 2: Participants and Procedure. Sixty students and employees at local universities in the southeastern United States (M_{age} = 21.50, SD = 2.27; 48% male; 90% students) completed the experiment for pay. They received a $2 show up fee and had the opportunity to earn additional money throughout the experiment.

Experiment 2 used one between subjects factor with two levels: signature at the top and signature at the bottom. The experiment used the same task and procedure of experiment 1 but varied the incentives for the problem solving task, the tax rate, and the tax return forms participants completed. Namely, participants in this experiment were paid $2 (rather than $1) for each math puzzle successfully solved and were taxed at a higher rate of 50%. Finally, the tax forms were modified such that they mimicked the flow of actual tax reporting practices in the United States: deductions (commuting time and costs) were first subtracted from gross income (earnings from math puzzles task) to compute taxable income, and then taxes were paid on this total adjusted amount (Fig. S4 shows an example of the forms used).

After filling out the tax return forms, participants were asked to complete a word completion task. Participants received a list of six word fragments with letters missing and were asked to fill in the blanks to make complete words by using the first word that came to mind. Following prior research measuring implicit cognitive processes (12, 13), we used this word completion task to measure accessibility of moral concepts. Three of the word fragments (R A L, I E, and E C) could potentially be completed by words related to ethics (moral, virtue, and ethical); these were our measures of access to moral concepts.

Level of cheating. We first examined the percentage of participants who cheated by overstating their performance on the math puzzles task when filling out the tax return form. This percentage was lower in the signature at the top condition (37%, 11 of 30) than in the signature at the bottom condition (63%, 19 of 30), $\chi^2(1, n = 60) = 4.27$, $P < 0.04$.

Fig. 2 depicts actual performance on the math puzzles task and reported performance on the tax return form, by condition. This difference (a measure for cheating) was lower in the signature at the top condition ($M = 1.67$, SD = 2.78) than in the signature at the bottom condition ($M = 3.57$, SD = 4.19), $t(58) = 2.07$, $P < 0.05$.

The deductions participants reported on the tax return form followed the same pattern and varied significantly by condition, $F(1, 58) = 7.76$, $P < 0.01$, $\eta^2 = 0.12$: they were lower in the signature at the top condition ($M = 3.23$, SD = 2.73) than in the signature at the bottom condition ($M = 7.06$, SD = 7.02).

Word fragment task. Participants who signed before filling out the tax form generated more ethics related words ($M = 1.40$, SD = 1.04) than those who

signed after filling out the form ($M = 0.87$, SD = 0.97), $F(1, 58) = 4.22$, $P < 0.05$, $\eta^2 = 0.07$, suggesting that ethics are more salient when participants signed before rather than after the temptation to cheat.

Mediation analyses. We also tested whether ethics related concepts (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating. Both condition and the number of ethics related concepts were entered into a linear regression model predicting extent of cheating measured by the level of overreporting of income. The mediation analysis revealed that the effect of condition was significantly reduced (from $\beta =$ 0.262, $P < 0.05$ to $\beta =$ 0.143, $P = 0.23$), and that the number of ethics related concepts was a significant predictor of cheating ($\beta =$ 0.456, $P <$ 0.001). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (4), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics related concepts. The 95% confidence interval for the indirect effect did not include zero (1.85, 0.04), suggesting significant mediation.

Additionally, we computed the *z* score measure for both the deductions claimed and the magnitude of cheating on the math puzzles for each participant. We averaged the two measures to form an index for each individual's extent of cheating. Both condition and the number of ethics related concepts were entered into a linear regression model predicting extent of cheating measured by this composite index. The mediation analysis revealed that the effect of treatment condition was significantly reduced (from $\beta =$ 0.424, $P = 0.001$ to $\beta =$ 0.344, $P = 0.005$), and that the number of ethics related concepts was a significant predictor of cheating ($\beta =$ 0.308, $P = 0.011$). Using the bootstrapping method with 10,000 iterations (4), we found that the 95% confidence interval for the indirect effect did not include zero (0.29, 0.01), suggesting significant mediation.

Using an implicit measure of ethical saliency, this experiment shows that signing before the opportunity to cheat increases the saliency of moral standards compared with signing after having had the opportunity to cheat; subsequently, this discourages cheating.

Experiment 3: Participants and Procedure. We conducted a field experiment with an insurance company in the southeastern United States asking some of their existing customers to report their odometer reading.

When a new policy is issued, each customer submits information about the exact current odometer mileage of all cars insured under their policy, along with other information. For our audit experiment, we sent out automobile policy review forms to policyholders, randomly assigning them to either the original form used by the insurance company or to our redesigned form. The original form asked customers to sign the statement: "I promise that the information I am providing is true," which appeared at the bottom of the form (i.e., after having completed it; control condition), whereas our redesigned form asked customers to sign that same statement but at the top of the form (i.e., before filling it out; treatment condition). Otherwise, the forms were identical.

The data file that we received from the insurance company included a random identifier for each policy, an indication of the experimental condition, and two odometer readings for each car covered (a maximum of four per policy). The first odometer reading was based on the mileage information the insurance company previously had on file, whereas the second was the current odometer reading that customers reported. The data file did not have the date of the first odometer reading (it also did not have any of the other information requested on the policy review forms). Consequently, our measure of use was somewhat noisy, as the miles driven per car have been accumulated over varying unknown time periods. However, because we randomly assigned customers to one of our two conditions, such noise should be evenly represented in both conditions. To calculate each car's use or number of miles driven (our main dependent variable), we subtracted the odometer reading that was in the insurance company's database from the self reported current odometer reading we received from our audit forms.

Although there was no explicit statement on the policy review forms linking car use to insurance premiums, policyholders had an incentive to report lower use: the fewer miles driven, the lower the accident risk, and the lower their insurance premium. Thus, when filling out the automobile policy review form, customers likely faced a dilemma between honestly indicating the current odometer mileage, and dishonestly indicating lower odometer mileage to reduce their insurance premium. We hypothesized that signing before self reporting makes ethics salient right when it is needed most. Therefore, we expected that customers who signed the policy review form first, before filling it out, would more likely be truthful, and reveal higher use, compared with those who signed at the end, after filling it out.

Completed forms were received from 13,488 policies for a total of 20,741 cars. A single policy could cover up to four cars; 52% of policies had one car, 42% had two cars, 5% had three cars, and less than 0.3% had four cars. If a customer's policy had more than one car, we averaged the reported odometer mileages for all cars on the same policy. As hypothesized, controlling for the number of cars per policy [$F(1, 13,485) = 2.184$, $P = 0.14$], the calculated use (based on reported odometer readings) was significantly higher among customers who signed at the beginning of the form ($M =$ 26,098.4, SD = 12,253.4) than among those who signed at the end of the form [$M = 23,670.6$, SD = 12,621.4; $F(1, 13,485) = 128.631$, $P < 0.001$]. The average difference between the two conditions was 2,427.8 miles. The results also hold for the use of the first car only [signature at the top: $M = 26,204.8$ miles, SD = 14,226.3 miles and signature at the bottom: $M = 23,622.5$ miles, SD = 14,505.8 miles; $t(13,486) = 10.438$, $P < 0.001$].

Asking customers to sign at the beginning of the form led to a 10.25% increase in the calculated miles driven over the current practice of asking for a signature at the end. An alternative explanation for our findings could be that this difference is due to extra diligence of customers in the treatment condition relative to customers in the control condition, rather than higher rates of deliberate falsification of information among customers in the control condition. That is, perhaps those who signed at the top of the form were actually checking their odometers, whereas those who signed at the bottom of the form simply estimated their mileage without actually checking their cars. To address this possibility, we compared the last digits of the odometer mileage that customers in the two conditions reported. Specifically, we ran analyses examining whether the two conditions differed in the number of instances wherein reported odometer mileages ended with 0, 5, 00, 50, 000, or 500. Numbers that end with these digits indicate a higher likelihood that customers simply estimated their mileage. We detected no statistically significant differences between our two conditions in the instances in which these endings appeared (pooled measure: treatment, 19.9% vs. control, 20.8%; $\chi^2 = 2.5$, $P = 0.12$).

An important consequence of false reporting of this type is that the costs extend beyond the insurer to its entire customer base including the honest policyholders who bear the ultimate burden of paying for others' dishonesty. Using a field experiment, we demonstrate that a simple change in the location of a signature request can significantly influence the extent to which people on average will misreport information to advance their own self interest.

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Appendix C

HBS Interim Policy and Procedures for Responding to Allegations of Research Misconduct

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Interim Policy and Procedures for Responding to Allegations of Research Misconduct

August 2021

I. Basis for Policy

Integrity in scholarship and research is one of Harvard University's—and Harvard Business School's—fundamental values. Allegations of misconduct in scholarship and research must be treated with the utmost seriousness, and examined carefully and responsibly in a timely and effective manner.

Toward that end, HBS has established this **Policy and Procedures for Responding to Allegations of Research Misconduct**[1] to guide its efforts in reviewing, investigating, and reporting allegations of research misconduct.[2]

II. Scope

This Policy applies to allegations of research misconduct—including fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results—involving any person who, at the time of the alleged research misconduct, was employed by, was an agent of, or was affiliated by contract or agreement with HBS, including without limitation tenured and non-tenured faculty, teaching and support staff, researchers and research associates, research coordinators, post-doctoral and other fellows, students, volunteers, officials, technicians. The Policy may be applied to any individual no longer affiliated with HBS if the alleged misconduct occurred while the person was employed by, an agent of, or affiliated with the School. This Policy does not apply to authorship or collaboration disputes. It applies only to allegations of research misconduct that occurred within six years of the date HBS received the allegation, unless: the respondent has continued or renewed an incident of alleged research misconduct through the citation, republication, or other use for the potential benefit of the respondent of the research record in question; or HBS determines that the alleged misconduct would possibly have a substantial adverse effect on the health or safety of the public.

III. General Policies and Principles

A. Research Misconduct Prohibited, Standard of Proof

HBS prohibits research misconduct and investigates and responds to allegations of research misconduct in accordance with this Policy. Throughout the research misconduct process, which begins at the time an allegation is made, all participants shall bear in mind the importance, both in fact and in appearance, of thoroughness, fairness, and objectivity.

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[1] See Appendix 1 for a glossary of terms and definitions.

[2] See Appendix, here and throughout, for additional specifications and requirements when researchers have received federal or other external funding for their research.

A finding of research misconduct requires that:

- There be a significant departure from accepted practices of the relevant research community;
- The respondent committed the research misconduct intentionally, knowingly, or recklessly; and
- The allegation be proven by preponderance of the evidence.

The destruction of research records, absence of research records, or respondent's failure to provide research records adequately documenting the questioned research is evidence of research misconduct where the institution establishes by a preponderance of the evidence that the respondent intentionally, knowingly, or recklessly had research records and destroyed them, had the opportunity to maintain the records but did not do so, or maintained the records and failed to produce them in a timely manner and that the respondent's conduct constitutes a significant departure from accepted practices of the relevant research community.

HBS bears the burden of proof for making a finding of research misconduct. A respondent has the burden of proving, by a preponderance of the evidence, any and all affirmative defenses raised (such as honest error).

Individuals subject to this policy found to have committed research misconduct may be subject to sanctions up to and including termination.

B. Responsibility to Report Misconduct

All individuals subject to this Policy will report observed, suspected, or apparent research misconduct to the Research Integrity Officer (RIO).[3] If an individual is unsure whether a suspected incident falls within the definition of research misconduct, that individual may meet with or contact the RIO to discuss the suspected research misconduct informally, which may include discussing it anonymously and/or hypothetically. If the circumstances described by the individual do not meet the definition of research misconduct, then the RIO may refer the individual or allegation to other offices or officials, where appropriate.

C. Cooperation with Research Misconduct Proceedings

All individuals subject to this Policy shall cooperate with the RIO and other institutional officials in the review of allegations and the conduct of inquiries and investigations. All individuals subject to this Policy, including respondents, have an obligation to provide evidence relevant to research misconduct allegations to the RIO or other institutional officials.

D. Duty to Maintain Confidentiality

Because of the potential jeopardy to the reputation and rights of a respondent, the RIO and all Committee members (as defined in this Policy) as well as all others at HBS who may be involved in the research misconduct proceeding shall to the extent possible: (1) limit disclosure of the identity of respondents and complainants to those who need to know in order to carry out a thorough, competent, objective, and fair research misconduct proceeding; and (2) except as otherwise prescribed by law, limit

[3] For the 2021-2022 academic year, the Research Integrity Officer is Alain Bonacossa ([redacted]).

the disclosure of any records or evidence from which research subjects might be identified to those who need to know in order to carry out a research misconduct proceeding. Where communications about research misconduct proceedings may be considered necessary or advisable, University officials should be guided by the Guiding Principles for Communication in Research Misconduct Proceedings.[4] Inappropriate dissemination of information may result in sanctions up to and including termination.

E. Rights and Responsibilities of Complainant

The complainant is responsible for making allegations in good faith, maintaining confidentiality, and cooperating with the inquiry and investigation. If the inquiry committee deems it necessary, the complainant may be interviewed at the inquiry stage and, if so, will be given the transcript or recording of the interview for correction. The complainant ordinarily will be interviewed during the investigation phase, and given the transcript or recording of the interview for correction. After making an allegation of research misconduct, the complainant is responsible for providing evidence and information in connection with the research misconduct process but is not entitled to receive information about the status or outcome of that process.

F. Rights and Responsibilities of Respondent

The respondent is responsible for maintaining confidentiality and cooperating with the conduct of an inquiry and investigation. The respondent is entitled to the procedural rights and protections set forth in this Policy. Respondents may choose up to two personal advisors for support during the process. Personal advisors may be attorneys; they may not be principals or witnesses in the research misconduct matter. Personal advisors may be present at any proceedings or interviews that the respondent attends but may not question witnesses or otherwise take part in the research misconduct proceedings.

The respondent should be given the opportunity to admit that research misconduct occurred and that they committed the research misconduct. With the advice of the RIO and/or other institutional officials, the Dean or their designee may end HBS's review of an allegation that has been admitted.

G. Protecting Complainants, Witnesses, the RIO, and Committee Members

HBS community members may not retaliate in any way against complainants, witnesses, the RIO, or committee members. Any alleged or apparent retaliation against complainants, witnesses, the RIO, or committee members should be reported immediately to the
RIO (or to the Dean's Office, as applicable), who shall review the matter and, as necessary, make all reasonable and practical efforts to counter any potential or actual retaliation and protect and restore the position and reputation of the person against whom the retaliation is directed.

IV. Preliminary Assessment of Allegations

Upon receiving an allegation of research misconduct, the RIO immediately will assess the allegation to determine whether the allegation:

[4] https://files.vpr.harvard.edu/files/vpr-documents/files/guiding_principles_for_communication_in_research_misconduct_proceedings.pdf

- Falls within the definition of research misconduct, and
- Is sufficiently credible and specific so that potential evidence of research misconduct may be identified.

An inquiry must be conducted if these criteria are met.

If, upon receipt on the allegation, it appears that the RIO has any unresolved personal, professional, or financial conflicts of interest with those involved in the allegations, then another qualified individual shall be appointed by the Dean or their designee to serve as Interim RIO with respect to reviewing the allegation and conducting any research misconduct proceeding.

The assessment period should be brief, preferably concluded within a week. Where it is not feasible to conclude the assessment within a week, the process should proceed expeditiously. In conducting the assessment, it is not necessary to interview the complainant, respondent, or other witnesses, or to gather data beyond any that may have been submitted with the allegation, except as necessary to determine whether the allegation is sufficiently credible and specific so that potential evidence of research misconduct may be identified. The preliminary assessment shall be documented and all records pertaining to the review of allegations will be retained by the RIO for a period of seven (7) years following the completion of the proceeding.

V. Sequestration of Research Records and Notice to Respondent

A. Sequestration of Research Records

This Policy governs access to research records, including without limitation email records, for purposes of conducting research misconduct proceedings.[5] Those engaged in administering this Policy have all rights necessary to access research records created or maintained by individuals subject to this Policy.[6]

As to timing, on or before the date on which the respondent is notified, or the inquiry begins, whichever is earlier, the RIO must take all reasonable and practical steps to obtain custody of all the research records and evidence needed to conduct the research misconduct proceeding. The RIO also shall sequester any additional research records that become pertinent to an inquiry or investigation after the initial sequestration.

The RIO is responsible for inventorying the records and evidence and sequestering them in a secure manner.[7] Where appropriate, HBS shall give the respondent copies of, or reasonable supervised access to, the research records.

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[5] For clarification, Harvard's Policy on Access to Electronic Information specifically states that it does not apply to reviews of research misconduct allegations. Section I, Internal Investigations of Misconduct, p. 4.

[6] Harvard's Research Data Ownership Policy makes clear that "the University asserts ownership over research data for all projects conducted at the University, under the auspices of the University, or with University resources," and further states that "[w]hen it is necessary to secure access (e.g. during a research misconduct proceeding) the University may take custody of research data." Policy and Procedures, Section 1.B, p. 2.

[7] However, where the research records or evidence encompass scientific instruments shared by a number of users, custody may be limited to copies of the data or evidence on such instruments, so long as those copies are

B. Notice to Respondent

At the time of or before beginning an inquiry, the RIO must make a good faith effort to notify the respondent in writing, if the respondent is known. If the inquiry subsequently identifies additional respondents, they must be notified in writing.

VI. The Inquiry

A. Initiation and Purpose of the Inquiry

The purpose of the inquiry is to conduct an initial review of the available evidence to determine whether to conduct an investigation. An inquiry does not require a full review of all the evidence related to the allegation.

B. Appointment of the Inquiry Committee

The inquiry committee will be appointed by the Dean or their designee, in consultation with other institutional officials as appropriate, and will consist of one or more individuals who do not have unresolved personal, professional, or financial conflicts of interest with those involved with the research misconduct proceeding. The inquiry committee should include individuals with the appropriate subject-matter expertise to: evaluate the evidence and issues related to the allegation; interview the principals and key witnesses; and conduct the inquiry. When necessary to secure the necessary expertise or to avoid conflicts of interest, the Dean or their designee may select committee members from outside the institution.

Prior to the initiation of the Inquiry, the respondent will be notified in writing of the inquiry committee's membership and shall be afforded five (5) calendar days to lodge objections based upon a committee member's alleged personal, professional, or financial conflict of interest. The Dean or their designee will make the final determination of whether a conflict exists.

C. Charge to the Committee and First Meeting

The RIO will prepare a charge for the inquiry committee that sets forth the purpose of the inquiry and the expected timeframe, the committee's responsibilities, the allegations, and any related issues identified during the preliminary assessment. The charge also shall inform the committee that an investigation is warranted if the committee determines, based on its review during the inquiry, that: (1) there is a reasonable basis for concluding that the allegation falls within the definition of research misconduct; and (2) the preliminary information-gathering and preliminary fact-finding from the inquiry indicates that the allegation may have substance.

At the committee's first meeting, the RIO will review the charge with the committee, discuss the allegations, any related issues, and the appropriate procedures for conducting the inquiry, assist the committee with organizing plans for the inquiry, and answer any questions raised by the committee. The RIO will be present or available throughout the inquiry to advise the committee as needed.

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substantially equivalent to the evidentiary value of the instruments.

D. Inquiry Process

The inquiry committee ordinarily will interview the complainant, if any, the respondent, and key witnesses as well as examine relevant research records and materials. Any interviews will be recorded or transcribed, with recordings or transcripts provided to the interviewee for correction. Then the inquiry committee will evaluate the evidence, including the testimony obtained during the inquiry. In consultation with the RIO, the committee members will decide whether an investigation is warranted based on the criteria in this Policy.

The scope of the inquiry is not required to and does not normally include deciding whether misconduct definitely occurred, determining definitely who committed the research misconduct, or conducting exhaustive interviews and analyses.[8] However, if a legally sufficient admission of research misconduct is made by the respondent, misconduct may be determined at the inquiry stage if all relevant issues are resolved.

E. The Inquiry Report

A written inquiry report must be prepared that includes the following information: (1) the name and position of the respondent; (2) a description of the allegations of research misconduct; (3) the funding support, including without limitation any grant numbers, grant applications, contracts and publications listing all support; (4) the basis for recommending or not recommending that the allegations warrant an investigation; (5) any comments on the draft report by the respondent.

The Office of General Counsel shall be available to advise the inquiry committee and the RIO with respect to the report. Modifications should be made as appropriate in consultation with the RIO and the inquiry committee.

F. Notification of the Results of the Inquiry; Opportunity to Comment

The RIO shall notify the respondent as to whether the inquiry found an investigation to be warranted, include a copy of the draft inquiry report for comment within 10 business days, and include a copy of or link to this Policy.

Based on the comments, the inquiry committee may revise the draft report as appropriate and prepare it in final form. Any comments that are submitted by the respondent will be attached to the final inquiry report. The committee will deliver the final report to the RIO.

G. Institutional Decision and Notification

1. *Decision by Deciding Official* – The RIO will transmit the final inquiry report and any comments to the Dean or their designee, who will make a written determination as to whether an investigation is warranted. The inquiry is completed when this determination is made. The RIO will notify institutional officials who have a need to know of the decision.

[8] As noted above, an investigation is warranted if the committee determines, based on its review during the inquiry,that: (1) there is a reasonable basis for concluding that the allegation falls within the definition of research misconduct; and (2) the preliminary information-gathering and preliminary fact-finding from the inquiry indicates that the allegation may have substance.

2. *Documentation of Decision Not to Investigate* – If an investigation is not warranted, the RIO shall secure and maintain for 7 years after the termination of the inquiry sufficiently detailed documentation of the inquiry to permit a later assessment of the reasons why an investigation was not conducted.

H. Time for Completion

The inquiry, including preparation of the final inquiry report and the decision on whether an investigation is warranted, must be completed within 60 calendar days of initiation of the inquiry, unless the RIO determines that circumstances clearly warrant a longer period. If an extension is approved, the inquiry record must include documentation of the reasons for exceeding the 60-day period.

VII. Conducting the Investigation

A. Initiation and Purpose

The investigation ordinarily should begin shortly after completion of the inquiry and no later than 30 calendar days after the determination that an investigation is warranted. On or before the date on which the investigation begins, the RIO must notify the respondent in writing of the allegations to be investigated.

The purpose of the investigation is to develop a factual record by exploring the allegations in detail and examining the evidence in depth, leading to recommended findings on whether research misconduct has been committed, by whom, and to what extent. The investigation committee shall pursue diligently all significant issues and leads discovered that are determined relevant to the investigation, including any evidence of additional instances of possible research misconduct, and continue the investigation to completion. If new allegations are identified, the RIO must also give the respondent written notice of such allegations within a reasonable amount of time of deciding to pursue allegations not addressed during the inquiry or in the initial notice of the investigation.

B. Sequestration of Research Records

On or before the date on which the respondent is notified, or the investigation begins, whichever is earlier, the RIO must take all reasonable and practical steps to obtain custody of and sequester in a secure manner all the research records and evidence needed to conduct the research misconduct proceeding that were not previously sequestered during the inquiry. The need for additional sequestration of records may occur for any number of reasons, including the institution's decision to investigate additional allegations not considered during the inquiry stage or identification of records during the inquiry process that had not been previously secured. The procedures to be followed for sequestration during the investigation are the same procedures that apply during the inquiry.

C. Appointment of the Investigation Committee

The Dean or their designee, in consultation with other institutional officials as appropriate, will appoint an ad hoc investigation committee and committee chair. The investigation committee must consist of individuals who do not have unresolved personal, professional, or financial conflicts of interest with those involved with the investigation and should include individuals with the appropriate subject-matter

expertise to: evaluate the evidence and issues related to the allegation; interview the respondent and complainant; and conduct the investigation. Individuals appointed to the investigation committee also may have served on the inquiry committee. When necessary to secure the necessary expertise or to avoid conflicts of interest, the Dean or their designee may select investigation committee members from outside the institution.

Prior to the initiation of the Investigation, the respondent will be notified of the investigation committee's membership and shall be afforded five (5) calendar days to lodge objections based upon a committee member's alleged personal, professional, or financial conflict of interest. The Dean or their designee will make the final determination of whether a conflict exists.

D. Charge to the Committee and the First Meeting

1. Charge to the Committee – The RIO will define the subject matter of the investigation in a written charge to the committee that describes the allegations and related issues identified during the inquiry; identifies the respondent; informs the committee that it must conduct the investigation as prescribed by this Policy; defines research misconduct; and instructs the investigation committee on the burden of proof. The charge shall state that the committee is to evaluate the evidence and testimony of the respondent, complainant, and key witnesses to determine whether, based on a preponderance of the evidence, research misconduct occurred and, if so, to what extent, who was responsible, and its seriousness. Finally, the charge shall inform the committee that it must prepare a written investigation report that meets the requirements of this Policy.

2. First Meeting – At the committee's first meeting, the RIO will review the charge, the inquiry report, and the prescribed procedures and standards for the conduct of the investigation, including the necessity for confidentiality and for developing a specific investigation plan. The investigation committee will be provided with a copy of this Policy and, if applicable, federal regulations. The RIO will be present and available throughout the investigation to advise the committee as needed.

E. Investigation Process

The investigation committee and the RIO must:

- Use diligent efforts to ensure that the investigation is thorough and sufficiently documented and includes examination of all research records and evidence relevant to reaching a decision on the merits of each allegation;

- Take reasonable steps to ensure an impartial and unbiased investigation to the maximum extent practical;

- Offer each respondent, complainant, and any other available person who has been reasonably identified as having information regarding any relevant aspects of the investigation, including witnesses identified by the respondent, the opportunity to be interviewed; record or transcribe each interview; provide the recording or transcript to the interviewee for correction; and include the recording or transcript in the record of the investigation; and

- Pursue diligently all significant issues and leads discovered that are determined relevant to the investigation, including any evidence of any additional instances of possible research misconduct, and continue the investigation to completion.

F. The Investigation Report

The investigation committee and the RIO are responsible for preparing a written draft report of the investigation that:

- Describes the nature of the allegation of research misconduct, including identification of the respondent.

- Describes and documents financial support for the research subject to the allegations, including without limitation the numbers of any grants that are involved, grant applications, contracts, and publications listing support;

- Describes the specific allegations of research misconduct considered in the investigation;

- Includes the institutional policies and procedures under which the investigation was conducted;

- Identifies and summarizes the research records and evidence reviewed and identifies any evidence taken into custody but not reviewed; and

- Includes a statement of findings for each allegation of research misconduct identified during the investigation. Each statement of findings must: (1) identify whether the research misconduct was falsification, fabrication, or plagiarism, and whether it was committed intentionally, knowingly, or recklessly; (2) summarize the facts and the analysis that support the conclusion and consider the merits of any reasonable explanation by the respondent, including any effort by respondent to establish by a preponderance of the evidence that they did not engage in research misconduct because of honest error or a difference of opinion; (3) identify the specific funding support (if any); (4) identify whether any publications need correction or retraction; (5) identify the person(s) responsible for the misconduct; and (6) list any current support or known applications or proposals for support that the respondent has pending with federal agencies or external funders.

- Includes recommended institutional actions.

The Office of General Counsel shall be available to advise the investigation committee and the RIO with respect to the report. Modifications should be made as appropriate in consultation with the RIO and the investigation committee.

G. Comments on the Draft Report and Access to Evidence

1. Respondent – The RIO will give the respondent a copy of the draft investigation report and exhibits for comment and, concurrently, a copy of or supervised access to the evidence on which the report is based. The respondent will be allowed 30 days from receipt of the draft report to submit comments to the RIO. The respondent's comments must be included and considered in the final report.

2. Confidentiality – In distributing the draft report to the respondent for comment, the RIO will remind the respondent of the confidentiality under which the draft report is made available and may establish reasonable conditions to ensure such confidentiality.

H. Decision by Deciding Official

The final investigation report will be submitted to the Dean, who will make a written determination as to: (1) whether the institution accepts the investigation report, its findings, and the recommended institutional actions; and (2) the appropriate institutional actions in response to the accepted findings of research misconduct. If this determination varies from the findings of the investigation committee, the Dean will explain in detail the basis for rendering a decision different from the findings of the investigation committee. Alternatively, the Dean may return the report to the investigation committee with a request for further fact-finding or analysis.

When a final decision on the case has been reached, the respondent will be notified in writing. The Dean, in consultation with institutional officials as needed, also will determine whether relevant parties should be notified of the outcome of the case, including professional societies, editors of journals in which falsified reports may have been published, collaborators of the respondent in the work, professional licensing boards, or law enforcement agencies, .

I. Institutional Actions

After a determination of research misconduct is made, the Dean may decide on appropriate actions to be taken, in consultation with others at the University as appropriate. Sanctions for research misconduct shall be based on the seriousness of the misconduct, including but not limited to, the degree to which the misconduct: a) was intentional, knowing, or reckless; b) was an isolated event or part of a pattern; and c) had significant impact on the research record, research subjects, other researchers, institutions, or the public welfare. The range of administrative actions includes, but is not limited to, the correction of the public record including the withdrawal or correction of all pending or published abstracts and papers emanating from the research where misconduct was found; removal of the responsible person from the particular project, special monitoring of future work, probation, suspension, leave without pay, salary reduction, or initiation of steps leading to rank reduction or termination of employment; restitution of funds as appropriate; suspension or termination of an active award; and other action appropriate to the research misconduct. For cases involving research misconduct by students, sanctions shall be determined by the appropriate student disciplinary board.

J. Time for Completion

The investigation ordinarily shall be completed within 120 days of beginning it, including conducting the investigation, preparing the draft report of findings, providing it for comment, finalizing the report, and making necessary notifications. However, if the RIO determines that the investigation will not be completed within this 120-day period, the rationale for the delay will be documented.

IX. Interim Institutional Actions

Throughout the research misconduct proceeding, the RIO will review the situation to determine if there is any threat of harm to the integrity of the research process. In the event of such a threat, the RIO will,

in consultation with institutional and other officials, as necessary, take appropriate interim actions to protect against any such threat.

Interim action might include: additional monitoring of the research process; reassignment of personnel; additional review of research data and results; or delaying publication.

X. Completion of Cases

Generally, all inquiries and investigations will be carried through to completion and all significant issues will be pursued diligently.

XI. Other Considerations

A. Termination or Resignation Prior to Completing Inquiry or Investigation

The termination of the respondent's HBS employment, by resignation or otherwise, before or after an allegation of possible research misconduct has been reported, will not preclude or terminate the research misconduct proceeding or otherwise limit any of HBS's responsibilities to pursue allegations.

If the respondent, without admitting to the misconduct, elects to resign the respondent's position after HBS receives an allegation of research misconduct, the assessment of the allegation will proceed, as well as the inquiry and investigation, as appropriate based on the outcome of the preceding steps. If the respondent refuses to participate in the process after resignation, the RIO and any inquiry or investigation committee will use their best efforts to reach a conclusion concerning the allegations, noting in the report the respondent's failure to cooperate and its effect on the evidence.

B. Restoration of the Respondent's Reputation

Following a final finding of no research misconduct, the RIO must, at the request of the respondent, undertake all reasonable and practical efforts to restore the respondent's reputation.

C. Allegations Not Made in Good Faith

If relevant, the Dean or their designee will determine whether the complainant's allegations of research misconduct were made in good faith, or whether a witness or committee member acted in good faith. If the Dean or their designee determines that there was an absence of good faith, the Dean or their designee will determine whether any administrative action should be taken against the person who failed to act in good faith.

D. Maintaining Records

HBS shall maintain the records of a research misconduct proceeding in a secure manner during its pendency and for seven (7) years after completion of the proceeding or completion of any agency oversight proceeding, or as required by any applicable record retention provision, whichever is later.

Appendix 1: Glossary of Terms and Definitions

Allegation: a disclosure of possible research misconduct through any means of communication.

Committee member: a member of any ad hoc committee appointed to conduct all or a portion of the research misconduct process under this Policy.

Complainant: a person who in good faith makes an allegation of research misconduct.

Conflict of interest: financial, personal, or professional relationships that may compromise, or appear to compromise a person's decisions.

Deciding Official (DO): the institutional official who makes final determinations about allegations of research misconduct and any institutional actions, ordinarily the Dean of HBS. The Deciding Official does not serve as the Research Integrity Officer and is not directly involved in the institution's preliminary assessment, inquiry, or investigation. The Deciding Official's involvement in the appointment of individuals to assess allegations of research misconduct, or to serve on an inquiry or investigation committee, is not considered to be direct involvement.

Evidence: any document or other record, tangible item, or testimony offered or obtained during a research misconduct proceeding that tends to prove or disprove the existence of an alleged fact.

Fabrication: making up data or results and recording or reporting them.

Falsification: manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

Good faith

As applied to a complainant or witness: having a belief in the truth of one's allegation or testimony that a reasonable person in the same position could have, based on the information known to the person at the time. An allegation or cooperation with a research misconduct proceeding is not in good faith if made with knowing or reckless disregard for information that would negate the allegation or testimony.

As applied to a committee member: cooperating with the research misconduct proceeding by carrying out the duties assigned impartially for the purpose of helping the institution meet its responsibilities under the Policy. A committee member does not act in good faith if the committee member's acts or omissions on the committee are dishonest or influenced by personal, professional, or financial conflicts of interest with those involved in the research misconduct proceeding.

Inquiry: preliminary information-gathering and preliminary fact-finding in accordance with the Policy to determine whether an allegation of research misconduct warrants investigation.

Investigation: the formal development of a factual record and the examination of that record leading to a decision about whether to recommend a finding of research misconduct, which may include a recommendation for other appropriate actions, including institutional actions.

Plagiarism: the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

Preponderance of the evidence: proof by information that, compared with that opposing it, leads to the conclusion that the fact at issue is more probably true than not.

Research: a systematic experiment, study, evaluation, demonstration, or survey designed to develop or contribute to general knowledge or specific knowledge by establishing, discovering, developing, elucidating, or confirming information about, or the underlying mechanism relating to, the matters to be studied.

Research Integrity Officer (RIO): the institutional official responsible for: (1) reviewing allegations of research misconduct to determine if they fall within the definition of research misconduct and warrant an inquiry; and (2) overseeing inquiries and investigations.

Research misconduct: fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. Research misconduct does not include honest error or differences of opinion.

Research record: the record of data or results that embody the facts resulting from scientific inquiry or other scholarly endeavors, including but not limited to research proposals, laboratory records (physical and electronic), progress reports, abstracts, theses, oral presentations, internal reports, journal articles, correspondence, and any documents and materials provided to an institutional official in the course of a research misconduct proceeding.

Respondent: the person against whom an allegation of research misconduct is directed or who is the subject of a research misconduct proceeding.

Retaliation: an adverse action taken against a complainant, witness, or committee member by an institution or one of its members in response to a good faith allegation of research misconduct or good faith cooperation with a research misconduct proceeding.

Appendix 2: Additional Procedures for Allegations Involving Federal Funding

Scope

This Policy is intended to comply with institutional responsibilities under the Public Health Service (PHS) Policies on Research Misconduct, 42 CFR Part 93. Other federal agencies have published their own research misconduct regulations; to the extent those regulations apply to an allegation of research misconduct and are inconsistent with this Policy, HBS shall comply with the applicable regulatory requirements.

This Policy does not apply to authorship or collaboration disputes and applies only to allegations of research misconduct that occurred within six years of the date HBS received the allegation, subject to the subsequent use, health or safety of the public, and grandfather exceptions articulated in 42 C.F.R. § 93.105(b).

With respect to students involved in allegations of research misconduct that involve federal funding, the appropriate student disciplinary board will be notified of the initiation of any inquiries and/or investigations and will be informed of the findings of any such inquiries and/or investigations, including receiving copies of all inquiry and/or investigation reports. For allegations of research misconduct against students that do not involve federal funding, HBS may, at its discretion, either refer them to the appropriate student disciplinary board, or review them under this Policy and notify the appropriate student disciplinary board as described above.

Inquiry Process

If a legally sufficient admission of research misconduct is made by the respondent, misconduct may be determined at the inquiry stage if all relevant issues are resolved. In that case, HBS should promptly consult with the relevant federal agency to determine next steps. Acceptance of the admission and any proposed settlement must be approved by the relevant federal agency.

Notification to Respondent of the Results of the Inquiry

The RIO will provide the respondent with a link to or copy of 42 C.F.R. Part 93 (or other applicable federal regulations).

Notification to Federal Agencies of the Results of the Inquiry

Within 30 calendar days of the decision whether an investigation is warranted, the RIO will provide the Office of Research Integrity ("ORI")[9] (or the relevant federal agency) with the written decision and a copy of the final inquiry report (or comply with any other notice obligation to a government agency or other funder).

Time for Completion

If an investigation cannot be completed within 120 days of beginning it, the RIO will document the

[9] The Office of Research Integrity (ORI) in the U.S. Department of Health and Human Services (DHHS) is responsible for the scientific misconduct and research integrity activities of the U.S. Public Health Service (PHS).

rationale for the delay and notify federal agencies as required and in accordance with federal regulations. The RIO will ensure that periodic progress reports are filed with federal agencies and in accordance with federal regulations.

Notice of Institutional Findings and Actions

When the Dean reaches a final decision on the case, the investigation is complete, and the RIO will transmit to the applicable funding agency: (1) a copy of the final investigation report with all attachments; (2) a statement of whether the institution accepts the findings of the investigation report; (3) a statement of whether the institution found misconduct and, if so, who committed the misconduct; and (4) a description of any pending or completed institutional actions against the respondent.

Interim Institutional Actions and Notifying Federal Agencies of Special Circumstances

Throughout the research misconduct proceeding, the RIO will review the situation to determine if there is any threat of harm to public health or to federal funds and equipment. In the event of such a threat, the RIO will, in consultation with other institutional officials, and ORI, as necessary, take appropriate interim actions to protect against any such threat. Interim action might include: additional monitoring of the handling of federal funds and equipment and/or reassignment of personnel or of the responsibility for the handling of federal funds and equipment.

HBS shall, at any time during a research misconduct proceeding, notify ORI (or the relevant federal agency) immediately if there is reason to believe that any of the following conditions exist:

- Health or safety of the public is at risk, including an immediate need to protect human or animal subjects;
- Federal resources or interests are threatened;
- Research activities should be suspended;
- There is a reasonable indication of possible violations of civil or criminal law;
- Federal action is required to protect the interests of those involved in the research misconduct proceeding;
- The research misconduct proceeding may be made public prematurely and federal action may be necessary to safeguard evidence and protect the rights of those involved; or
- The research community or public should be informed.

Completion of Cases

For allegations that include PHS funded research, HBS must notify ORI in advance if there are plans to close a case at the inquiry or investigation stage on the basis that respondent has admitted guilt, a settlement with the respondent has been reached, or for any other reason, except: (1) closing of a case at the inquiry stage on the basis that an investigation is not warranted; or (2) a finding of no misconduct at the investigation stage, which must be reported to ORI, as prescribed in this Policy and 42 CFR § 93.315. For allegations that include non-PHS funded research, HBS must comply with any other notice obligation to a government agency or other funder.

Restoration of the Respondent's Reputation

Following a final finding of no research misconduct, including ORI concurrence where required by 42 CFR Part 93 (or, for non-PHS funded research, other applicable federal agency requirements), the RIO must,

at the request of the respondent, undertake all reasonable and practical efforts to restore the respondent's reputation.

Maintaining Records for Review by ORI

Unless HBS has transferred custody of the records of research misconduct proceedings (as defined by 42 C.F.R. § 93.317) to the funding agency in accordance with applicable law, HBS shall maintain the records of a research misconduct proceeding in a secure manner during its pendency and for seven (7) years after completion of the proceeding or completion of any agency oversight proceeding, or as required by any applicable record retention provision, whichever is later.

Exhibit 3

Complainant's written response received on December 3, 2021

Evidence of Fraud in Academic Articles Authored By Francesca Gino

1. Introduction

This report reflects a collaboration among a group of anonymous researchers. A small number of individuals raised concerns to us and asked for our involvement in trying to reconcile those concerns. In collaboration, we have collectively tried to identify some of the biggest issues. Rather than each individual making public their concerns, we have elected to present this evidence to Harvard University so that its investigators can consider the case while giving full opportunity for Professor Gino to explain apparent anomalies.

We report direct evidence of data tampering in four different datasets from four different published articles. We focus on those because they appear the most unambiguous. We have strong suspicions about some her published data going as far back as 2008 (when she was a post-doc at Carnegie Mellon University), but the most direct evidence is included it in this report.

Indeed, we should be clear that neither this report, nor our investigation, are exhaustive. We have not analyzed, or even read, the majority of Professor Gino's published articles. If the Harvard University investigators determine that there is sufficient evidence in these four studies, it would certainly be worth considering others as well.

Finally, although the evidence can, in most of these cases, rule out malfeasance by co-authors, it cannot definitively rule in malfeasance by Professor Gino. It may be that some research assistant or otherwise unnamed person/people was/were responsible for producing these anomalies.

2. Overview

While the substantive research questions, manipulations, and dependent variables across the four papers are quite different, the anomalies we uncovered share a few commonalities worth keeping in mind as one examines the evidence. The commonalities suggest *imperfect* data tampering; that is to say, the datasets have features consistent only with tampering, but also features that could have been potentially detected and eliminated by the person doing the tampering.

One common anomaly consists of datasets that are sorted, but sorted imperfectly. Imperfect sorting left a trace of rows that were moved and/or values that were changed. For example, imagine a dataset sorted by participant ID, but in which some observations are out of sequence, say IDs being 1, 2, 3, 4, 81, 82, 5, 6, 7. If the out-of-order rows of data (e.g., those with IDs **81** and **82**) exhibit extraordinarily large effect sizes – at the extreme, effect sizes that produce the overall effect in its entirety – then that would represent fairly strong evidence of data tampering. We find that in two of these cases.

Another common anomaly consists of answers provided by participants that are inconsistent with the question being asked (e.g., participants answering "Harvard" to the question of how many years they have spent at school), or with other values in the dataset (e.g., participants indicating they felt maximally disgusted with a networking event and then describing that same networking event with words such as "exciting" and "great"). Those anomalous observations, again, show extraordinarily large effects consistent with the researcher's hypothesis.

3. Case #1: Study 1 of Shu, Mazar, Gino, Ariely, and Bazerman (2012)

In this paper, the authors present three studies suggesting that "signing before—rather than after—the opportunity to cheat makes ethics salient when they are needed most and significantly reduces dishonesty" (page 15197).

Here we focus on Experiment 1, which was run at the University of North Carolina (UNC). Our understanding is that Gino supervised the execution of this experiment, and analyzed the data, but perhaps it is worth checking with co-authors to make sure. It is possible that an RA assisted Gino (e.g., [redacted] is thanked in the acknowledgements; she has an online presence as a life coach, making it easy to contact her if deemed appropriate by those investigating these matters).

3.1 Procedure

In Experiment 1, 101 participants first completed a math puzzles task. "Participants were told that they would have 5 min to find two numbers in each puzzle that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. Once the 5 min were over, the experimenter asked participants to count the number of correctly solved puzzles, note that number on the [anonymized] collection slip, and then submit both the test sheet and the collection slip to the experimenter." Note that participants had the ability and incentive to cheat on this task, by simply overreporting the number of puzzles that they solved on that collection slip.

After this task, participants filled out a one-page "tax return form." On that form, participants reported both how much money they had earned from the math puzzles task, as well as "how many minutes it took them to travel to the laboratory, and the cost of their commute. These expenses were 'credited' to their posttax earnings from the [math puzzles] task to compute their final payment." Thus, participants were motivated not only to overreport their math puzzle task performance, but also to overreport the cost of their commute.

The critical intervention in this study involved the format of the "tax return form." Participants were randomly assigned to one of three conditions. In the *sign-at-the-top* condition, participants had to sign at the top of the page, under a statement that read, "I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete." In the *sign-at-the-bottom* condition, participants instead signed at the bottom of the page. And in the *control* condition, participants did not sign the form at all.

In sum, this experiment featured one independent variable – the placement of the signature on the tax return form – and two dependent variables – (1) how much participants cheated on the math puzzles task[1] and (2) how many expenses they claimed for their commute on the tax-return form.

3.2 Reported Results

Participants in the *sign-at-the-bottom* condition overclaimed fewer correct solutions (M=.77) than those in the *sign-at-the-bottom* condition (M=3.94), $p < .001$. Similarly, they claimed lower commuting expenses (M=$5.27, vs M=$9.62, $p < .01$). These are very big effects: Signing at the bottom vs. top quadrupled cheating on the math task, and doubled cheating on claimed commuting expense.

3.3 Anomaly: Out-of-Order Observations In The Dataset

[1] Because of a clever design feature of the math puzzles task, the researchers could link participants' reported math puzzle performance to their actual math puzzle performance. Thus, the researchers could compare how many math puzzles participants reported solving to how many puzzles they actually solved.

We retrieved the dataset for Experiment 1 from the OSF, where, since 2020, it has been publicly posted (https://osf.io/4b7mu/).

The posted dataset seems to be sorted by two columns, first by a column called "Cond", indicating participants' condition assignment (0 = control; 1 = sign-at-the-top; 2 = sign-at-the-bottom), and then by a column called "P#", indicating a Participant ID number assigned by the experimenter.

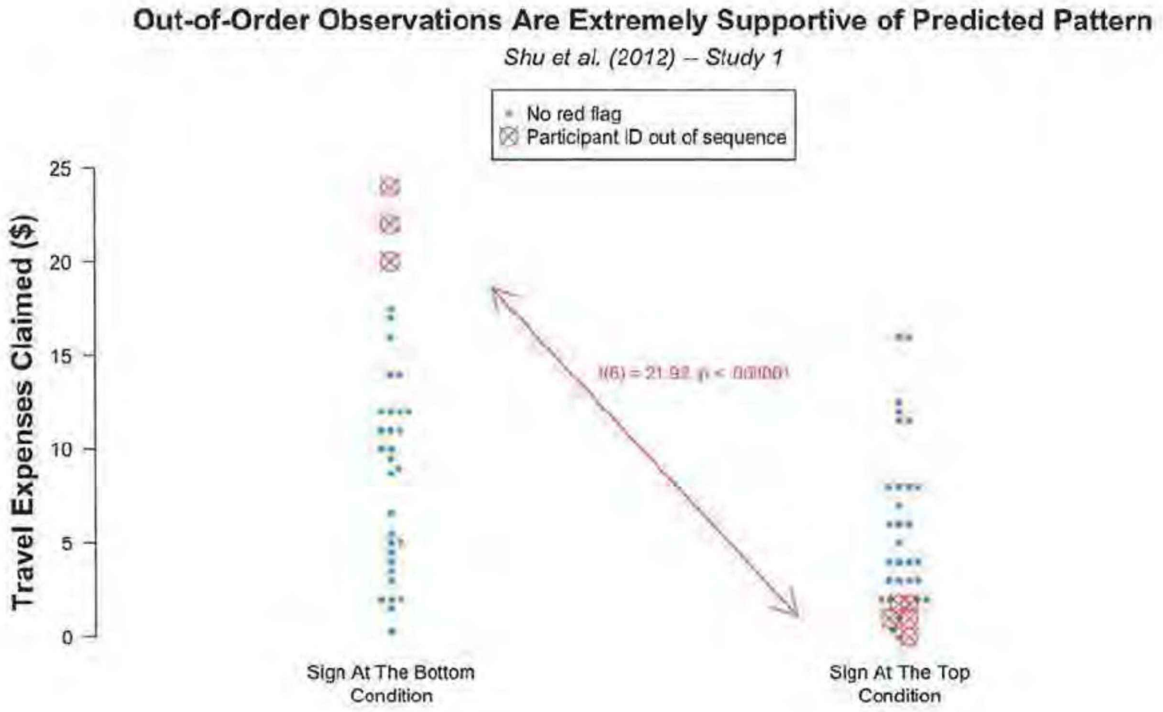
For example, this is a screenshot of a few dozen observations from the sign-at-the-top and sign-at-the-bottom condition. You can see that within each condition the data are *almost* perfectly sorted by Participant ID (the first column on the left). However, we have highlighted eight observations that are out of order:[2]

	A	B	C	D	E	F	G	H	I
1	P#	Cond	Stude	Major	C53	Male	Age	#B	$B
47	35	1	1	Journalism	3	1	19	12	12
48	37	1	1	Economics	4	0	21	9	9
49	40	1	1	Political Science	5	1	20	15	15
50	42	1	1	Political Science	3	0	20	7	7
51	46	1	1	Political Science	4	0	21	12	12
52	49	1	1	English	4	1	21	9	9
53	49	1	1	English	4	1	21	7	7
54	55	1	1	Biology	4	1	21	12	12
55	58	1	1	Environmental Sciences	3	0	20	10	10
56	61	1	1	Nursing	3	0	20	15	15
57	63	1	0	NA		0	22	12	12
58	68	1	1	Business	3	1	20	16	16
59	70	1	1	Chemistry	4	0	21	11	11
60	73	1	1	Chemistry	5	0	20	16	16
61	76	1	1	Chemistry	2	1	19	15	15
62	80	1	1	Nursing	4	0	21	15	15
63	82	1	1	Economics	4	1	21	9	9
64	85	1	1	Psychology	4	0	20	5	5
65	89	1	1	Chemistry	3	0	20	13	13
66	95	1	1	Math Education	3	1	22	13	13
67	51	1	0	NA	0	0	52	4	4
68	12	1	1	Psychology	3	0	20	13	13
69	101	1	0	Business	3	1	20	6	6
70	7	2	0	Political Science	5	1	22	17	17
71	91	2	1	Japanese	2	1	20	17	17
72	52	2	0	NA	5	0	22	8	8
73	5	2	1	Biology/Psychology	2	0	19	16	16
74	8	2	1	Communication Studies	4	0	22	15	15
75	13	2	1	Chemistry	4	0	20	18	18
76	17	2	1	Communications	4	0	21	14	14
77	18	2	1	Communications	4	1	22	13	13
78	22	2	0			0	23	13	13
79	26	2	0			0	47	6	6
80	27	2	1	Mathematics - Sociology	3	1	19	18	18

Participant ID 49 appears twice in the dataset, with identical demographic variables. In addition, Participants 51, 12, 101 are out of order in Condition 1, and Participants 7, 91, and 52 are out of order in Condition 2. We see this as a red flag because, to our knowledge, there is no way to sort the data in a way that achieves this ordering. It suggests that observations must have been moved around (or duplicated), manually, perhaps to alter a participant's condition assignment in a way that achieves the desired result.

A deeper dive into the data of these eight participants provides support for this form of data tampering. The figure below shows a "Bee Swarm" plot, which depicts each observation in the dataset, separately for each experimental condition. The plot depicts one of the cheating measures, the amount of money participants claimed in travel expenses. Every "normal", in-sequence observation is represented as a blue dot, whereas the eight out-of-sequence observations are represented as red X's.

[2] There is one additional out-of-order observation in the control condition (not shown). But for simplicity we focus our analyses on the comparison between the sign-at-the-bottom and sign-at-the-top conditions. That one out-of-order control condition observation scored highly on overreporting math puzzles, with a score of 4 (the median is 1), and low on travel expenses claimed ($1).



In the sign-at-the-bottom condition, the authors predicted expenses to be high, and indeed the three out-of-sequence observations in this condition are the very highest. In the sign-at-the-top condition, the authors predicted expenses to be low, and indeed the five out-of-sequence observations in this condition were all among the very lowest. As shown in the plot, the condition difference between just these eight observations on this dependent variable is very highly significant; it would occur by chance less than 1 in a million times.[3] We have been unable to generate a benign explanation for this pattern.

A similar effect emerges when analyzing the other dependent variable, the overreporting of the number of math puzzles solved. The five out-of-sequence observations in the sign-at-the-top condition, predicted to be low, are all equal to zero, the lowest value observed in the dataset. The three out-of-sequence observations in the sign-at-the-bottom condition, predicted to be high, were all greater than zero: 2, 6, and 7. The condition difference between these eight observations on this dependent variable was again highly significant, even with so few observations: $t(6) = 4.48$, $p = .004$.[4]

In sum, there are eight observations that are out of order in this dataset, and to our knowledge no sorting function can account for their placement. This suggests to us that these eight observations may have been altered to produce the desired effect. Supporting that contention, those eight observations play a sizable

[3] This p-value (probably correctly) assumes that there are truly no differences between conditions. We ran 1 million simulations that examined what this p-value would be if we instead very conservatively assumed that the condition differences are exactly as large as what was observed in the data. In each simulation, we drew five observations at random from the sign-at-the-top condition and three observations at random from the sign-at-the-bottom conditions (without replacement), mirroring the number of flagged observations we observed in each condition in the data. We then conducted a t-test to analyze the condition difference between those observations. We observed a t-value as large as what we observed for the flagged observations (21.92) only 10 times in those 1 million simulations, suggesting a p-value of 1 in 100,000. Thus, even when we assume that the true condition differences are exactly as large as they are in the observed dataset, there is only an extremely small chance of finding such a large condition difference among a *randomly* selected subset of eight observations.

[4] Using the same conservative approach described in the previous footnote, the p-value is .065.

role in producing the published effect in Study 1, as all eight observations have values on the dependent variables that are extremely consistent with the authors' hypothesis.

Before moving on, we should be clear that we do not believe that these eight observations are necessarily the *only* ones that may have been tampered with. Rather, they may be a mere subset, identifiable only because the person tampering with the data neglected to re-sort the dataset. We cannot identify every instance of fraud. We can only identify it when those doing the tampering leave observable traces of what they have done.

4. Case #2: Study 4 of Gino, Kouchaki, and Galinsky (2015)

In this paper, the authors present five studies indicating that "experiencing inauthenticity, compared with authenticity, consistently led participants to feel more immoral and impure. The link from inauthenticity to feeling immoral produced an increased desire among participants to cleanse themselves and to engage in moral compensation by behaving prosocially" (p. 983).

Here we focus on Experiment 4, which was run at Harvard University. Participants' responses to a question about their "class year" in the dataset indicate that the study was run no earlier than Fall of 2014, as seniors reported being in the Class of 2015, juniors in the Class of 2016, and so on. Although the second author of this paper, [redacted], was a postdoctoral researcher at Harvard for two years, her cv indicates that she began her job as an Assistant Professor at Northwestern in 2014, making it very unlikely that she was still at Harvard when this study was conducted and analyzed. In addition, the data file and methods write-up posted on the OSF website were uploaded by Gino, and the properties of those files indicate that she created them. Thus, it is most likely that this study was run/supervised and analyzed by Gino. With all of that said, that can only be verified by Harvard University.

4.1 Procedure [5]

Harvard students (N = 491) came into a lab and were first "asked to confirm that they were college students at Harvard." They were then "asked for their opinion [on] whether or not difficulty ratings should be a part of the Q guide (in which all Harvard courses are rated and reviewed by students who have taken them in the past)." Participants were then "asked for their age, gender, and year in school. They were then told that their first task was to write an essay on a current topic."

During the essay task, participants were randomly assigned to one of three conditions. One-third were asked to write an essay in support of their opinion about including difficulty ratings in the Q guide (the pro-attitudinal condition), and two-thirds were asked to write an essay *against* their opinion that that issue (the counter-attitudinal conditions). The two-thirds asked to write a counter-attitudinal essay were randomly assigned to one of two conditions, involving how much choice they had as to whether to write such an essay: low-choice vs. high-choice. Thus, the three essay conditions were (1) pro-attitudinal, (2) counter-attitudinal (low-choice), and (3) counter-attitudinal (high-choice).

After writing the essay, "participants received a list of products and indicated how desirable they found them to be . . . We averaged ratings of the five cleansing products to create one aggregate measure."

The authors hypothesized that "participants would express a greater desire for cleanliness whenever they wrote essays that were not consistent with their internal beliefs, regardless of their perceived level of choice." That is, they predicted that participants' preference for cleaning products would increase after

[5] This section frequently quotes directly from the introduction and methods of this study, as written up in Gino et al. (2015, p. 991-992).

writing a counter-attitudinal essay, regardless of whether they did so under conditions of low choice or high choice.

4.2 Results

Consistent with the authors' hypotheses, participants were less desirous of cleaning products in the pro-attitudinal condition (M=3.72, SD=1.33), compared to both the counter-attitudinal (high choice) condition, (M=4.18, SD=1.51), p=.012, and the counter-attitudinal (low choice) condition (M=4.34, SD=1.44), $p < .001$.

4.3 The Anomaly: Strange Demographic Responses

As mentioned above, students in this study were asked to report their demographics. Here is a screenshot of the posted original materials, indicating exactly what they were asked and how:

4. Your age: _____

5. Your gender
- Male
- Female
- Other (please indicate)

6. Year in School: _____

We retrieved the data from the OSF (https://osf.io/sd76g), where it has been posted since 2015. The anomaly in this dataset involves how some students answered Question #6: "Year in School."

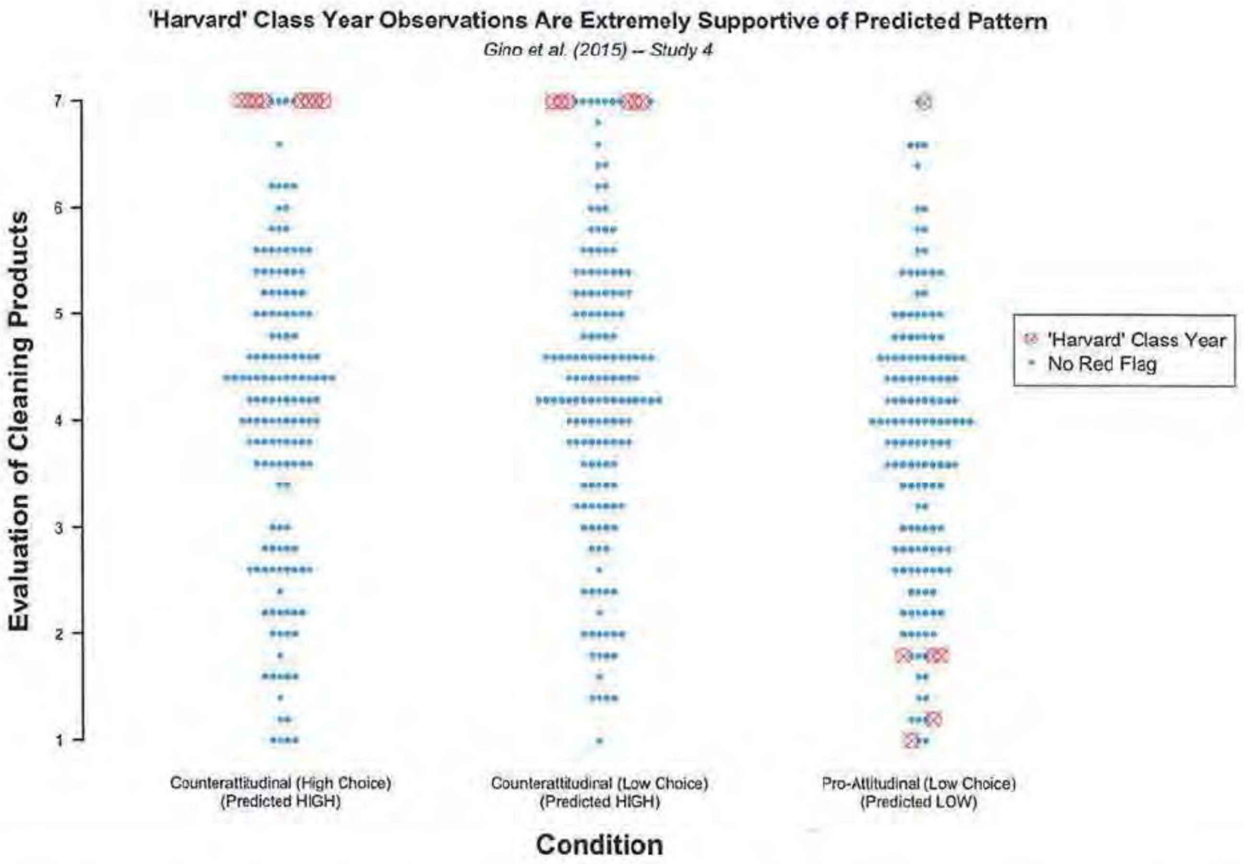
The screenshot below shows a portion of the dataset. In the "yearSchool" column, you can see that students approach this "Year in School" question in a number of different ways. For example, a junior might write "junior", or "2016" or "class of 2016" or "3" (to signify that they are in their third year). All of these responses are reasonable.

A less reasonable response is "Harvard", an incorrect answer to the question. It is difficult to imagine many students independently making this highly idiosyncratic mistake. Nevertheless, the data file indicates that 20 students did so. Moreover, and making things even more peculiar, those students' responses are very close to one another, all within 35 rows (450 through 484) in the posted dataset:

1	instr	college_st	inFavor_it	strongOp	age	male	gender_T	yearSchool	condition
443	1	1	1	7	19	1		Sophomore	ProAttitudinal
444	1	1	1	7	20	1		Junior	No_Choice
445	1	1	1	6	19	0		sophomore	High_Choice
446	1	1	1	6	20	1		Junior	ProAttitudinal
447	1	1	1	7	21	1		Senior (Class of 201	No_Choice
448	1	1	1	5	22	1		Senior	High_Choice
449	1	1	1	5	21	1		Senior	ProAttitudinal
450	1	1	1	7	23	0		harvard	No_Choice
451	1	1	1	4	21	0		2015	High_Choice
452	1	1	1	7	20	1		Junior	No_Choice
453	1	1	1	7	18	0		Sophomore	ProAttitudinal
454	1	1	0	7	25	0		Harvard	High_Choice
455	1	1	0	7	25	0		Harvard	ProAttitudinal
456	1	1	1	7	22	1		Harvard	ProAttitudinal
457	1	1	0	7	24	0		Harvard	High_Choice
458	1	1	1	7	22	0		Harvard	High_Choice
459	1	1	0	7	25	0		Harvard	No_Choice
460	1	1	1	7	23	1		Harvard	ProAttitudinal
461	1	1	0	7	25	0		Harvard	High_Choice
462	1	1	0	6	25	1		4	No_Choice
463	1	1	0	7	24	0		Harvard	No_Choice
464	1	1	1	5	23	0		1	High_Choice
465	1	1	1	4	19	0		Sophomore	No_Choice
466	1	1	1	6	28	1		5	High_Choice
467	1	1	1	6	22	1		Senior	ProAttitudinal
468	1	1	1	6	20	0		Junior	High_Choice
469	1	1	1	5	23	1		2015	High_Choice
470	1	1	1	6	22	1		Senior	No_Choice
471	1	1	1	6	22	0		2015/Senior	ProAttitudinal
472	1	1	1	6	36	1		2010	High_Choice
473	1	1	1	7	25	0		Harvard	ProAttitudinal
474	1	1	0	5	25	0		Harvard	High_Choice
475	1	1	1	7	22	1		Harvard	No_Choice
476	1	1	1	7	23	1		Harvard	High_Choice
477	1	1	0	7	25	0		Harvard	ProAttitudinal
478	1	1	0	7	26	1		Harvard	No_Choice
479	1	1	1	6	20	0		2013	No_Choice
480	1	1	0	6	21	0		2012	ProAttitudinal
481	1	1	1	7	24	1		Harvard	High_Choice
482	1	1	1	7	27	0		Harvard	ProAttitudinal
483	1	1	1	7	25	1		Harvard	High_Choice
484	1	1	1	7	27	0		Harvard	No_Choice
485	1	1	1	7	26	1		4	High_Choice
486	1	1	0	6	22	0		2012	High_Choice
487	1	1	1	6	20	1		2013	No Choice

This is a red flag, for it could indicate that someone had copy-pasted rows of data, without noticing that it resulted in an implausible number of students providing the same strange and erroneous answer to a straightforward question.

If these peculiar observations were indeed tampered with, then we should see that students who answered "Harvard" were especially likely to confirm the authors' hypothesis. To see this, we again present a Bee Swarm plot, which depicts each observation in the dataset, separately for each experimental condition. The plot depicts the key dependent variable, participants' average ratings of how much they desired five cleaning products. Every "normal", in-sequence observation is again represented as a blue dot, whereas the 20 "Harvard" observations are represented as red X's:



Here you can see that in the two counter-attitudinal conditions, which were predicted to induce a desire for cleaning products and thus higher values on y-axis, every "Harvard" observation has the highest possible average value (i.e., a 7.0). Conversely, in the pro-attitudinal condition, which was predicted to induce a lower desire for cleaning products, every "Harvard" observation is associated with a low value, except for one (which itself happens to be the only one associated with a lowercase "harvard").

The difference between the Pro-Attitudinal and Counter-attitudinal conditions for just these 20 observations is highly significant, with a p-value indicating that it would occur by chance less than one in a million times: $t(18) = 7.84$, $p < .000001$.[6]

As in Case #1, this is very much consistent with the possibility that these "Harvard" observations were altered to produce the desired effect.

5. Case #3: Study 3a of Gino, Kouchaki, and Casciaro (2020)

In this paper, the authors present six studies examining "how self-regulatory focus, whether promotion or prevention, affects people's experience of and outcomes from networking. [They] find that a promotion

[6] We also took the same conservative approach described in Footnote 3. In 1 million simulations, we observed a t-value as large as 7.84 only six times. Thus, under the assumption that the between condition difference between the counter-attitudinal vs. pro-attitudinal condition was identical to what was observed in the data, we would expect a "Harvard" class year pattern that is so highly predictive of the authors' result to emerge by chance only about 1 in 167,000 times.

focus, as compared to a prevention focus or a control condition, is beneficial to professional networking, as it lowers feelings of moral impurity from instrumental networking" (p. 1221).

Here we focus on Experiment 3a, which was run online (using mTurk participants). We believe it was conducted and analyzed by Gino because the materials posted on the OSF list "Qualtrics" as the creator of the file and "Francesca Gino" as the last person to save it. Thus, it is very likely that this was run through her Qualtrics account, which it turn makes it very likely that she analyzed the data. Only Harvard University can verify that fact.

5.1 Procedure. [7]

In Study 3a, 599 working adults recruited through MTurk first completed a writing task, during which they were randomly assigned to one of three conditions. Participants in the promotion-focus condition wrote about a current hope or aspiration, participants in the prevention-focus condition wrote about a current duty or obligation, and participants in the control condition wrote about what they do on a typical evening.

Participants then read a story in which they imagined "being invited to attend an event during which they socialized with other people. In the story the main character was described as 'actively and intentionally making professional connections with the belief that connections are important for future professional effectiveness.'"

Participants were then asked "to report how they felt at that moment, by indicating the extent to which they felt . . . dirty, inauthentic, and impure, ashamed, wrong, unnatural, and tainted." They did this using a scale ranging from 1 = not at all to 7 = very much. Participants then were asked to reflect on their previous writing task for 1-2 minutes, and to then "write a few words that came to mind regarding the story before proceeding to the next task." Participants completed other measures after that, but our focus is going to be on (1) the 7-item measure of moral impurity and (2) the words that participants wrote about the networking task, and so we won't describe those details here.

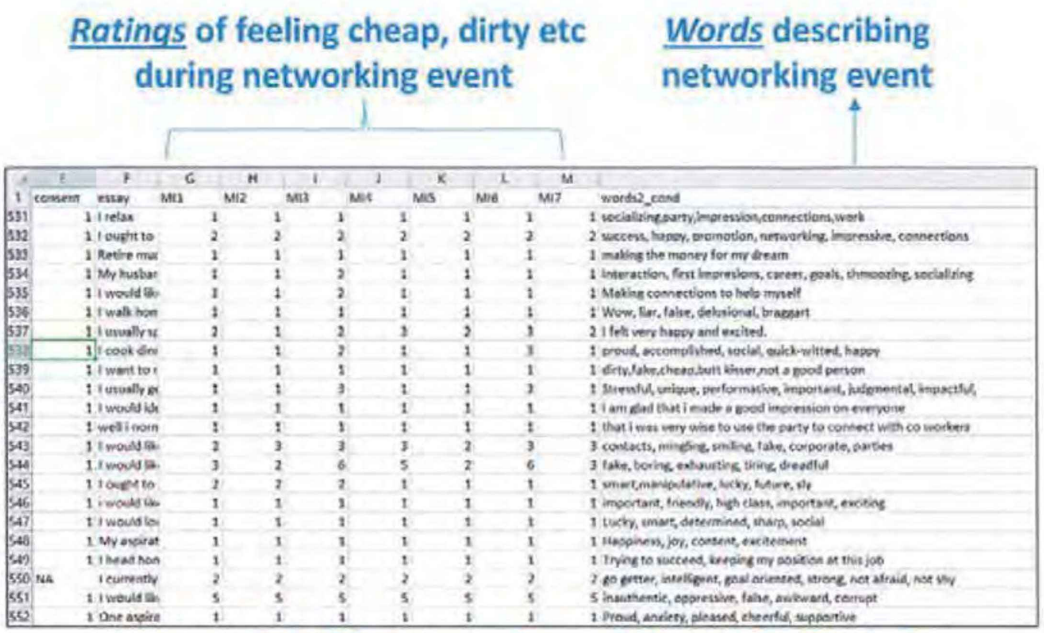
5.2 Results

As predicted, average scores on the 7-item moral impurity measure differed significantly across conditions, $F(2, 596) = 17.69$, $p < .0000001$. Ratings of moral impurity were significantly higher in the prevention-focus condition than in the control condition, which was in turn significantly higher than in the promotion-focus condition.

5.3 Direct Evidence of Tampering

It is useful to begin by looking at the Study 3a dataset. The screenshot below shows data for 22 participants (1 per row) for the key variables in this dataset:

[7] This section frequently quotes directly from the methods of this study, as written up in Gino et al. (2020, p. 1229-1230).



	E	F	G	H	I	J	K	L	M	
1	consent	essay	MI1	MI2	MI3	MI4	MI5	MI6	MI7	words2_cond
531		1 I relax	1	1	1	1	1	1	1	socializing,party,impression,connections,work
532		1 I ought to	2	2	2	2	2	2	2	success, happy, promotion, networking, impressive, connections
533		1 Retire mul	1	1	1	1	1	1	1	making the money for my dream
534		1 My husbar	1	1	2	1	1	1	1	interaction, first impressions, career, goals, schmoozing, socializing
535		1 I would like	1	1	2	1	1	1	1	Making connections to help myself
536		1 I walk hon	1	1	1	1	1	1	1	Wow, liar, false, delusional, braggart
537		1 I usually sp	2	1	2	3	2	3	2	I felt very happy and excited.
538		1 I cook dinn	1	1	2	1	1	3	1	proud, accomplished, social, quick-witted, happy
539		1 I want to c	1	1	1	1	1	1	1	dirty,fake,cheap,butt kisser,not a good person
540		1 I usually go	1	1	3	1	1	3	1	Stressful, unique, performative, important, judgmental, impactful,
541		1 I would lik	1	1	1	1	1	1	1	I am glad that I made a good impression on everyone
542		1 well I norn	1	1	1	1	1	1	1	that I was very wise to use the party to connect with co workers
543		1 I would like	2	3	3	3	2	3	3	contacts, mingling, smiling, fake, corporate, parties
544		1 I would like	3	2	6	5	2	6	3	fake, boring, exhausting, tiring, dreadful
545		1 I ought to	2	2	2	1	1	1	1	smart,manipulative, lucky, future, sly
546		1 I would like	1	1	1	1	1	1	1	important, friendly, high class, important, exciting
547		1 I would lov	1	1	1	1	1	1	1	Lucky, smart, determined, sharp, social
548		1 My aspirat	1	1	1	1	1	1	1	Happiness, joy, content, excitement
549		1 I head hon	1	1	1	1	1	1	1	Trying to succeed, keeping my position at this job
550	NA	I currently	2	2	2	2	2	2	2	go getter, intelligent, goal oriented, strong, not afraid, not shy
551		1 I would like	5	5	5	5	5	5	5	Inauthentic, oppressive, false, awkward, corrupt
552		1 One aspire	1	1	1	1	1	1	1	Proud, anxiety, pleased, cheerful, supportive

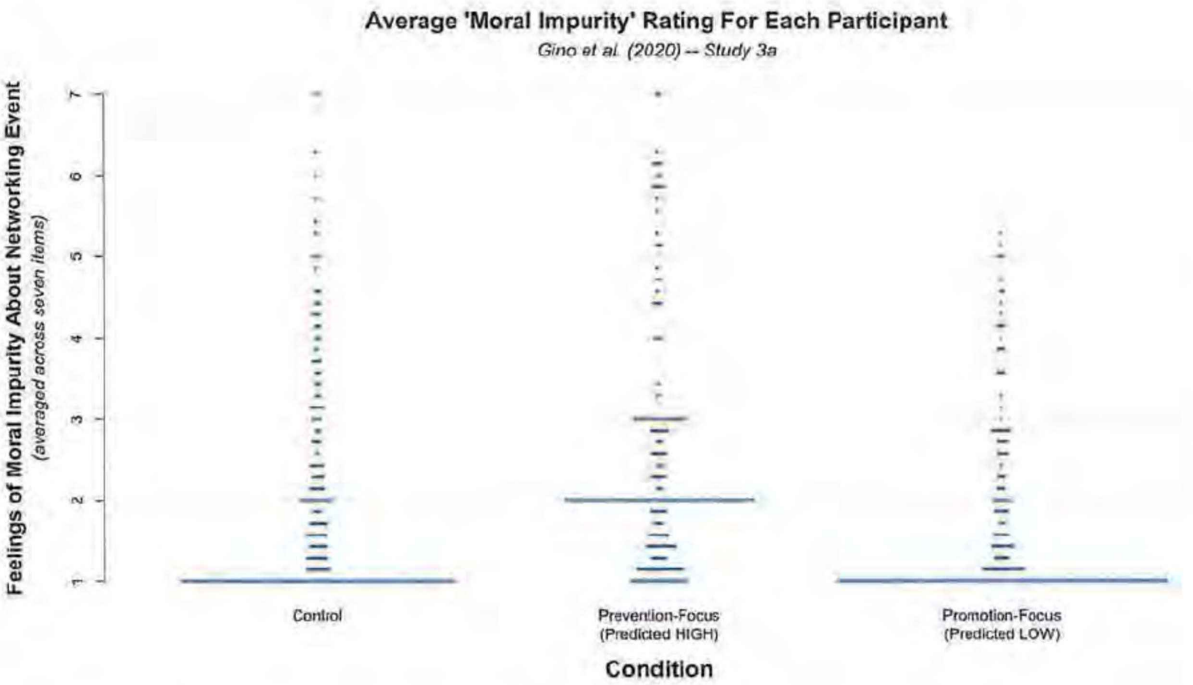
Screenshot of few rows of actual dataset for Study 3a

Let's walk through a few of the observations. The first row of data in the screenshot, corresponding to row 531 in the dataset, shows a participant who provided a '1' to all seven of the moral impurity items. This participant didn't feel *at all* dirty, inauthentic, impure, ashamed, wrong, unnatural, or tainted by imagining herself at the networking event. And indeed, if you look at the "words2_cond" column on the far right, you can see that what this participant wrote about the networking event - "socializing, party, impression, connections, work" – is perfectly consistent with those ratings. Her *ratings* were positive, and her *words* were positive. This makes sense.

The anomalies we discuss below pertain to rows in which participants' ratings and words are *inconsistent*, when either the ratings are negative and the words are positive, or the ratings are positive and the words are negative.

5.3.1 Many 2s and 3s

Keeping that in mind, let's look at all of the raw data from Study 3a, using the same kind of plot presented in the previous two sections. Each dot in the figure below represents the average moral impurity rating for a single participant.



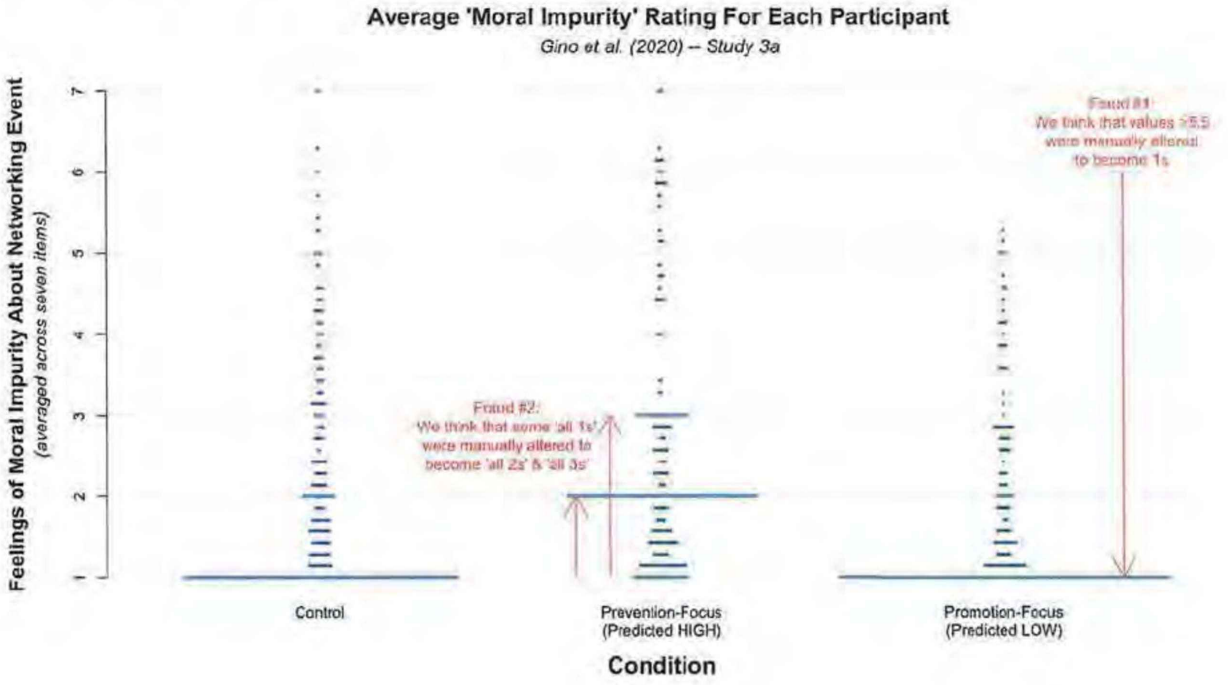
To start, consider the control condition, on the left. You can see that there are many participants with scores of 1.0, indicating that they did not feel *at all* dirty, inauthentic, impure, ashamed, wrong, unnatural, or tainted by imagining themselves at the networking event. We don't know how many 1.0s to expect, but it seems reasonable that many participants would wind up with this score. There is nothing intrinsically dirty about networking.

Now let's take a look at the dots in the middle, the prevention-focus condition. The authors hypothesized that writing a prevention-focused essay would *increase* participants' feelings of moral impurity when imagining the networking event. There is indeed a startling difference between the control condition and the prevention-focused condition: instead of '1.0' being the most common score on this dependent variable, now '2.0' is the most common score on this dependent variable. There is also a noticeable increase in the number of '3.0s.'

This is much more peculiar than it may seem at first. Remember that this dependent variable is an *average* of 7 items. There are obviously multiple ways for seven ratings to yield an average of 2.0 or 3.0, but the simplest and most common is for participants to give all '2s' or all '3s'. It is unusual for so many people to decide that they are across-the-board exactly a '2' on dirty, inauthentic, ashamed, etc. Indeed, ratings of 'all 2s' and 'all 3s' are quite rare in the other two conditions. In combination, the absence of '1.0s' and the presence of '2.0s' and '3.0s' led us to suspect that the researcher simply replaced many prevention-focused observations that were 'all 1s' with 'all 2s' or 'all 3s'. It is an easy way to tamper with the data. And it would of course yield the desired effect: higher moral impurity ratings among prevention-focused participants.

Keeping that in mind, let us turn to the promotion-focused condition on the right side of the figure. The authors hypothesized that writing a promotion-focused essay would *decrease* participants' feelings of moral impurity. And so here what we see is that there are *lots* of '1.0s', even more than in the control condition, accompanied by a complete absence of values greater than 5.5. That led us to suspect that the researchers replaced those high values with all 1s. Again, this would make the data tamperer' s job easy, and it would yield the desired effect, low moral impurity ratings among promotion-focused participants.

This annotated figure summarizes these two forms of hypothesized fraud:[8]



5.3.2 Participants with positive ratings and negative words (N=9)

Of critical importance here is the fact that participants both rated how morally impure they felt *and* wrote text describing how they felt, whereas the researchers cared *only* about the ratings (which they analyzed) and not about the text (which, therefore, they did not need to analyze). This means that a researcher who tampered with this data might have manually altered some participants' ratings *without also* feeling compelled to manually alter the text that accompanied those ratings. This would leave a trace. For those tampered observations, the valence implied by the ratings and the valence implied by the text would be *inconsistent*.

Let's walk through these two hypotheses. First, let's focus on the promotion-focus condition, for which we hypothesize that a researcher manually changed some very high values – values associated with extreme levels of moral impurity – into maximally low values – values associated with no moral impurity at all. If that is true, then we should see some participants in the dataset who (1) provided an average rating of 1.0 on the moral impurity scale *and* (2) wrote text suggesting that they felt extremely morally *im*pure. Moreover, those participants should be over-represented in the promotion-focus condition.

And, indeed, in this dataset we found nine participants who both averaged a 1.0 on the moral impurity scale *and* wrote text implying that they felt high levels of moral impurity. Of the nine, seven of them were in the promotion-focus condition:

[8] As emphasized in the previous section, we are not purporting to explain *entirely* what happened here, as it is possible that data tampering also took other forms in this study. We are merely suggesting that at least some of the data tampering was carried out in the way hypothesized here.

CumID_all	MI1	MI2	MI3	MI4	MI5	MI6	MI7	words2_cond	conditions
207	1	1	1	1	1	1	1	aggressive, pushy, calculating, egotistic, pushy	control
535	1	1	1	1	1	1	1	Wow, liar, false, delusional, braggart	control
118	1	1	1	1	1	1	1	I felt uncomfortable and inauthentic. The last thing I want to talk abo	promotion
248	1	1	1	1	1	1	1	Gross, phony, supercilious, unpleasant, disingenuous	promotion
335	1	1	1	1	1	1	1	Scummy; dishonest; disgusting; disingenuous; weak; unoriginal	promotion
359	1	1	1	1	1	1	1	All that corporate stuff is awful.	promotion
498	1	1	1	1	1	1	1	schmoozing, suck-up, ambition, networking, career, connections	promotion
538	1	1	1	1	1	1	1	dirty,fake,cheap,butt kisser,not a good person	promotion
589	1	1	1	1	1	1	1	gross slimy player suck up wrong	promotion

This is consistent with the notion that all or some of these apparent '1.0s' were not actually '1.0s'. The words they wrote suggest that they may have instead provided very high ratings on the moral impurity scale, ratings that were altered by the researcher performing the analysis.[9]

Though we find this evidence to be fairly convincing, it is not conclusive, as it suffers from the limitations of being somewhat subjective and also reliant on a small number of observations. The next analysis – which focuses on the hypothesis that some prevention-focused '1.0s' were manually altered to become '2.0s' and '3.0s' – does not suffer from either limitation.

5.3.2 Participants with negative ratings and positive words (N=79)

To perform *this* analysis, we relied on a technique known as "sentiment analysis," which uses an algorithm to score a passage of text on the dimension of valence. Using the VADER package in R, we used an algorithm that took in participants' textual description of the networking event, and gave it a score from 1 (maximum positivity) to -1 (maximum negativity). Essentially, the score reflects the net percentage of positive minus negative words in a text sample. If a string of text contains only unambiguously positive words, it will have a score of 100%, or 1.000; if it contains only unambiguously negative words, it will have a score of -100%, or -1.000. The screenshot below shows some participants whose VADER score was maximally positive (i.e., 1.000):

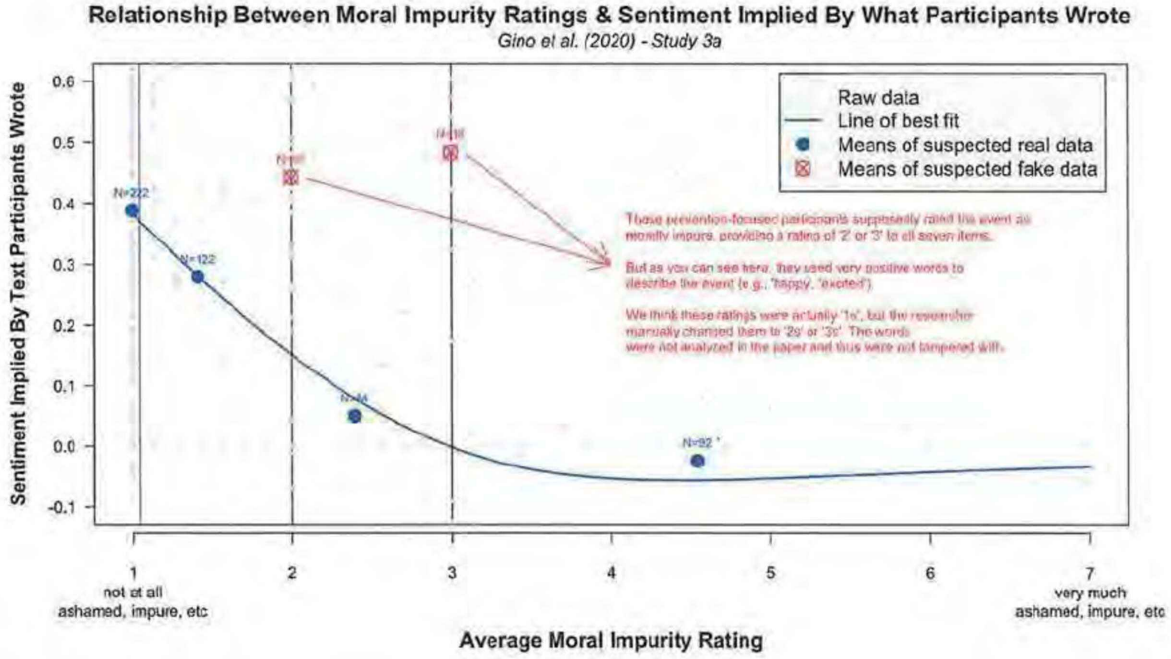
	s3a.net	s3a.words2_cond
18	1.000	Fun, confidence, honor, luck, privilege
30	1.000	excited, fun, hopeful, inspirational, strong, motivated
36	1.000	entertaining, exciting, fun, privileged, encouraging
44	1.000	excited, pleased, interested, smart, excited
115	1.000	Active, novel, proactive, ambitious, satisfied
160	1.000	Excited, focused, accomplished
192	1.000	Fun, excited, important
218	1.000	Happy; Smart; Euphoric; Intelligent; Joy; Celebrate
292	1.000	optimistic, happy
296	1.000	ambitious, determined, engaged, sociable, kind, smart
317	1.000	proud, worth, motivating, lucky, powerful
328	1.000	anticipation, excitement, happy, joy, pleasure
349	1.000	confident thrilled accomplished proud smart

And here are the participants with the most negative VADER scores:

[9] These are not the only '1.0s' who wrote somewhat negative things, but they were the only ones who wrote things implying moral impurity. For example, a few other '1.0s' mentioned feelings of anxiety or boredom.

	s3a.net	s3a.words2_cond
389	-0.810	gross, exhausting, tired, networking, yucj
371	-0.815	Sleazy, fake, disgusting, boring, pointless
284	-0.846	concerned, worried, angered
207	-0.891	aggressive, pushy, calculating, egotistic, pushy
351	-0.894	worried, stressed, trying, tough, confused
90	-0.903	fake, schmoozing, painful, awkward, weird
543	-0.915	fake, boring, exhausting, tiring, dreadful
399	-0.917	stressful, embarrassing, anxious, talking, fake
576	-0.928	cheating, disgusting, wrong, annoying, slimy
22	-1.000	Stressful, bad, anxiety, dislike, avoidance
68	-1.000	Repulsed, disgusted, tired, annoyed, irritated
305	-1.000	Uncomfortable
392	-1.000	bored, confused, unsure, uncertain, wtf

As indicated above, we believe that many of the 'all 2s' and 'all 3s' in the prevention-focus condition may actually have entered 'all 1s', and thus may have felt very positively toward the networking event. If this is true, and if, as we suspect, the researcher altered the moral impurity ratings without also altering the words those participants wrote about the networking event, then the words written by those 'all 2s' and 'all 3s' should look a lot like the words written by 'all 1s'. They should be much too positive. The figure below is consistent with this prediction.



The blue line in this chart represents the observed relationship between the moral impurity ratings and the sentiment scores across all conditions, excluding the prevention-focused observations that we hypothesized to have been tampered with. The relationship is sensibly negative: More morally impure ratings are associated with lower sentiment scores and thus more negative text descriptions.

The two red dots with X's depict the average sentiment scores of those in the prevention-focus condition who gave ratings of 'all 2s' and 'all 3s'. If they were *really* 'all 1s' to begin with, then the text they wrote should be very positive, and thus their sentiment scores should be high. And that is exactly what we see

here. The 'all 2s' and 'all 3s' in the prevention-focused condition wrote text that was just as positive as what the 'all 1s' wrote across the entire sample. This very strongly suggests that a great many of these 'all 2s' and 'all 3s' were really 'all 1s' that had been altered.

6. Case #4: Study 4 of Gino & Wiltermuth (2014)

In this paper, the authors present five studies demonstrating that "dishonesty may lead to creativity".

Here we focus on Experiment 4, which was run online (using mTurk participants). We received this dataset from a researcher who had years ago obtained it from Professor Gino.

6.1 Procedure

In Experiment 4, 178 mTurk participants were first asked to guess whether the outcome of a virtual coin toss would be heads or tails. After indicating their prediction, participants had to press a button to toss the coin virtually. They were asked to press the button only once, but after that they were invited to press the button many times to make sure the coin was legitimate. This was designed to give participants room for justifying their own cheating. Participants reported whether they had guessed the coin toss outcome correctly, and they received a $1 bonus if they had. Because the computer recorded their predictions as well as the outcome of the coin toss, the experimenters could tell whether participants had cheated.

After completing a scale measuring rule-following (not discussed further in this report), participants completed two creativity tasks, a "uses" task and the Remote Associates Task.

Our analysis will focus exclusively on the results of the "uses" task, which involved asking participants "to generate as many creative uses for a newspaper as possible within 1 min" (p. 976).

6.2 Results

In line with the authors' hypothesis, participants who cheated on the coin toss task came up with more uses for a newspaper ($M = 8.3$) than did participants who did not cheat ($M = 6.5$), $p < .0001$.

6.3 Direct Evidence of Tampering

The dataset seems to be sorted by two columns, first by a column called "cheated", indicating whether participants cheated on the coin toss task (0 = did not cheat; 1 = cheated), and then by a column called "Numberofresponses", indicating how many uses for a newspaper the participant generated.

For example, the screenshot below depicts the first 40 observations in the dataset.[10] Because the data are sorted first by the "cheated" column, all of these observations represent non-cheaters (i.e., scores of 0 in that "cheated" column). The shown rows are perfectly sorted by the "Numberofresponses" column. Indeed, the 135 non-cheaters in the dataset are all sorted by the "Numberofresponses" column.

[10] To create this screenshot, we had to move the "cheated" and "Numberofresponses" columns. In the dataset that Gino shared, those variables were in the 78th and 14th columns, respectively.

1	StartDate	EndDate	MTurkID	Cum_ID	cheated	Numberofresponses
2	11/17/12 23:54	11/18/12 0:07	AD8VVYGP4LRKG	144	0	2
3	11/17/12 23:17	11/17/12 23:41	A2KJZAMH6G8LWC	91	0	2
4	11/17/12 23:44	11/17/12 23:57	A21TECY6SM7BNV	127	0	3
5	11/17/12 22:57	11/17/12 23:11	A2GR5JHXTR7JQR	24	0	3
6	11/18/12 0:00	11/18/12 0:20	A1FAQI6Q4WCS	168	0	3
7	11/17/12 23:41	11/17/12 23:52	A1YZJ7OO7Q2D89	113	0	3
8	11/17/12 23:37	11/17/12 23:47	AVA93G56VQLZA	101	0	3
9	11/17/12 23:20	11/17/12 23:32	A20863XUQJT5T1	76	0	3
10	11/18/12 0:11	11/18/12 0:24	A27I79P03I0ZPO	173	0	3
11	11/17/12 23:11	11/17/12 23:28	A12WY0ZDGVOZQS	69	0	3
12	11/17/12 23:41	11/17/12 23:56	A20552JTR91G67	124	0	3
13	11/17/12 23:17	11/17/12 23:33	A3Q9UUF8RPV4LQ	79	0	3
14	11/17/12 22:49	11/17/12 22:58	A2BH9W7Y1TL3X8	1	0	3
15	11/17/12 23:59	11/18/12 0:10	A034420738QHAX9TNO9BA	152	0	4
16	11/17/12 23:38	11/17/12 23:51	a32k7qy8nwzx43	110	0	4
17	11/17/12 23:05	11/17/12 23:23	A2DAT0DBUXU8FF	55	0	4
18	11/17/12 23:39	11/17/12 23:49	A20A0EM29IJLSK	103	0	4
19	11/17/12 23:31	11/17/12 23:51	APJEYYRENCAC6	109	0	4
20	11/17/12 23:02	11/17/12 23:27	A1L6EDKEUG69XB	66	0	4
21	11/18/12 0:00	11/18/12 0:10	AYZ00GXI5D15Y	150	0	4
22	11/17/12 23:22	11/17/12 23:35	APHNYDGTCRN3O	82	0	4
23	11/17/12 23:19	11/17/12 23:32	A1MM8TSLCHVMNK	75	0	4
24	11/17/12 23:12	11/17/12 23:24	A3AZJGI9D7C0PD	57	0	4
25	11/17/12 22:52	11/17/12 23:17	A3DQUF5TM9VTS7	37	0	4
26	11/17/12 23:50	11/18/12 0:03	A77M840AXJ16B	137	0	4
27	11/18/12 0:02	11/18/12 0:10	A3GSCVUHX7DM8T	151	0	4
28	11/17/12 23:05	11/17/12 23:24	A26L91YL0GDGD8	58	0	4
29	11/17/12 23:27	11/17/12 23:53	AJY9CIX7FW9W1	115	0	4
30	11/17/12 23:48	11/18/12 0:02	ALSE4C4Q3R6G	133	0	5
31	11/17/12 22:54	11/17/12 23:08	A2R8SVW42IYFYX	17	0	5
32	11/17/12 22:59	11/17/12 23:17	A07109741WN0LPDUN9GL9	34	0	5
33	11/17/12 23:25	11/17/12 23:37	A1GFD4B3NOMWIY	86	0	5
34	11/17/12 23:37	11/17/12 23:54	ADQML8ECWYME5	119	0	5
35	11/17/12 23:04	11/17/12 23:32	A3FAAKASDY5HE6	183	0	5
36	11/17/12 22:55	11/17/12 23:14	A5SUR5C68YYN8	30	0	5
37	11/17/12 22:56	11/17/12 23:08	A2MBAN2GDK1P1J	16	0	5
38	11/17/12 23:48	11/18/12 0:00	A34N9G0IEI28IG	131	0	5
39	11/17/12 23:46	11/18/12 0:06	A3AHNUDEOZ33JE	143	0	5
40	11/17/12 23:25	11/17/12 23:38	A1QK6O24KDVLJ1	88	0	5
41	11/17/12 22:58	11/17/12 23:19	A7NLUN5YH4S9L	43	0	5

The next screenshot, in contrast, shows that while 43 cheaters are also sorted by this variable, there are 13 observations that are not in the order they should be.

1	StartDate	EndDate	MTurkID	Cum_ID	cheated	Numberofresponses
132	11/18/12 0:04	11/18/12 0:13	A1X82CGYFM586F	155	0	11
133	11/17/12 23:08	11/17/12 23:22	A1F14BB4PV053A	53	0	11
134	11/17/12 23:22	11/17/12 23:37	A356ZZWYC8GRVY	85	0	11
135	11/17/12 23:44	11/18/12 1:05	A34DG3IZ88WWBT	192	0	12
136	11/17/12 22:58	11/17/12 23:14	A3P7XKTEBOKNSR	29	0	13
137	11/18/12 0:01	11/18/12 0:20	ADTNOFJHTTB1L	167	1	3
138	11/17/12 23:34	11/17/12 23:53	A1UNAJF3E5HH17	114	1	3
139	11/17/12 23:44	11/17/12 23:57	A0377367199XXE56OT9GZ	126	1	4
140	11/17/12 23:36	11/17/12 23:46	A2DUKWR9I6FFZV	99	1	4
141	11/17/12 23:02	11/17/12 23:17	AE3D6SE2D8UPQ	36	1	13
142	11/17/12 23:32	11/17/12 23:43	A21MCWTDIKATV5	97	1	9
143	11/17/12 23:59	11/18/12 0:10	A28XLOE0FMG1ZX	153	1	5
144	11/17/12 22:55	11/17/12 23:04	A126XP3VIWJKD6	8	1	5
145	11/18/12 0:07	11/18/12 0:21	A3E1EPRY1OYE34	171	1	9
146	11/17/12 23:30	11/18/12 0:03	A27AEIRFEFR4US	136	1	5
147	11/17/12 23:30	11/18/12 0:44	A07854333QXCSICF01THG	191	1	9
148	11/17/12 23:38	11/17/12 23:50	A311BZDLCK6HQQ	105	1	8
149	11/17/12 22:59	11/17/12 23:15	A1ILA0RGD89JJ6	32	1	9
150	11/17/12 23:11	11/17/12 23:22	A22LZ62E0UC4VL	51	1	5
151	11/17/12 23:49	11/18/12 0:03	A1SHH0U3JH5CSV	187	1	6
152	11/18/12 0:03	11/18/12 0:22	A37JD0XUZHQYRC	172	1	6
153	11/17/12 22:52	11/17/12 23:04	ALML8V38FDV0	9	1	9
154	11/17/12 23:58	11/18/12 0:14	A3W4736CCV8TT4	157	1	11
155	11/18/12 0:07	11/18/12 0:15	AUN8AE8UCO3MD	159	1	14
156	11/17/12 23:13	11/17/12 23:29	Jazzy67033	180	1	6
157	11/17/12 22:58	11/17/12 23:08	A208MTGA7V29TP	14	1	8
158	11/17/12 23:51	11/18/12 0:08	A2UL07RCD2RO8R	146	1	10
159	11/17/12 22:51	11/17/12 23:10	AP37A6DG5TTEM	20	1	7
160	11/18/12 0:03	11/18/12 0:14	A2H18EYM79ZRCW	156	1	7
161	11/17/12 23:59	11/18/12 0:09	A1BCCFEEN32OWP	149	1	8
162	11/17/12 23:03	11/17/12 23:15	A3TN3GQAO61BVB	31	1	7
163	11/18/12 0:03	11/18/12 0:21	hhendric@hotmail.com	169	1	7
164	11/17/12 23:13	11/17/12 23:26	A62RZY5BWOZZM	63	1	14
165	11/17/12 23:25	11/17/12 23:47	AVUAN8WKJ443M	102	1	8
166	11/17/12 23:48	11/17/12 23:59	A25KU26Y8FTJPV	129	1	8
167	11/17/12 22:55	11/17/12 23:06	A3OF0DCN3KU8HT	11	1	8
168	11/17/12 23:11	11/17/12 23:18	A47QHTQNUTOVL	42	1	8
169	11/17/12 23:52	11/18/12 0:03	A1ASPIEIOZXL3U	138	1	8
170	11/17/12 23:27	11/17/12 23:32	A3E0AY1XXP8IBQ	77	1	9
171	11/17/12 23:57	11/18/12 0:21	A1R7CJMWXC79UO	170	1	10
172	11/17/12 23:03	11/17/12 23:10	ASVWAZZ49D5WU	22	1	10
173	11/17/12 23:21	11/17/12 23:31	AGX6FRHVVU2WS	74	1	10
174	11/17/12 23:25	11/17/12 23:37	A24JC2CF7MMG41	84	1	10
175	11/17/12 23:46	11/17/12 23:58	A1REWUVT3N8SN7	128	1	11
176	11/17/12 23:37	11/17/12 23:50	A27MJOV91GA8R3	106	1	11
177	11/17/12 23:06	11/17/12 23:17	A17M7G8SOEI83U	35	1	11
178	11/17/12 23:06	11/17/12 23:21	A2IF1VIC7GZUN	50	1	12
179	11/17/12 23:07	11/17/12 23:17	A2GPIQQ2PJ87Q0	38	1	13

As was the case with previous datasets, we believe that these observations were manually altered to produce the desired effect.

There are three things worthy of note here.

First, as before, it is not possible to sort the dataset to generate the order in which the data were saved. They were either originally entered this way (which is implausible, since the data originate in a Qualtrics file, which by default sorts by time), or they were manually altered.

Second, because rows are sorted by the variable of interest, "numberOfUses", if the values that are out of order were changed, it is straightforward to impute what they were changed from. For example, row #141 is "13", the number right before it is "4", and the first non-suspicious value after it is "5". Therefore, if the data were changed, then we can assume that that "13" used to be either a "4" or a "5".

One can do this for each of the 13 highlighted values in the dataset. We can thus reconstruct what the data looked like before they were tampered with. The screenshot below shows the imputed values for all relevant cells. The first new column ("Imputed1") imputes the lowest value that is consistent with the neighboring observations, and the second new column ("Imputed2") shows the highest value. So we see, for example, that that first "13" could have been either a "4" or a "5".

1	StartDate	EndDate	MTurkID	Cum_ID	cheated	Numberofresponses	Imputed1	Imputed2
137	11/18/12 0:01	11/18/12 0:20	ADTNOFJHTTB1L	167	1	3	3	3
138	11/17/12 23:34	11/17/12 23:53	A1UNAJF3E5HH17	114	1	3	3	3
139	11/17/12 23:44	11/17/12 23:57	A0377367199XXE56OT9GZ	126	1	4	4	4
140	11/17/12 23:36	11/17/12 23:46	A2DUKWR9I6FFZV	99	1	4	4	4
141	11/17/12 23:02	11/17/12 23:17	AE3D6SE2D8UPQ	36	1	13	4	5
142	11/17/12 23:32	11/17/12 23:43	A21MCWTDIKATV5	97	1	9	4	5
143	11/17/12 23:59	11/18/12 0:10	A28XLOE0FMG1ZX	153	1	5	5	5
144	11/17/12 22:55	11/17/12 23:04	A126XP3VIWJKD6	8	1	5	5	5
145	11/18/12 0:07	11/18/12 0:21	A3E1EPRY1OYE34	171	1	9	5	5
146	11/17/12 23:30	11/18/12 0:03	A27AEIRFEFR4US	136	1	5	5	5
147	11/17/12 23:30	11/18/12 0:44	A07854333QXCSICF01THG	191	1	9	5	5
148	11/17/12 23:38	11/17/12 23:50	A311BZDLCK6HQQ	105	1	8	5	5
149	11/17/12 22:59	11/17/12 23:15	A1ILA0RGDB9JJ6	32	1	9	5	5
150	11/17/12 23:11	11/17/12 23:22	A22LZ62E0UC4VL	51	1	5	5	5
151	11/17/12 23:49	11/18/12 0:03	A1SHH0U3JH5CSV	187	1	6	6	6
152	11/18/12 0:03	11/18/12 0:22	A37JD0XUZHQYRC	172	1	6	6	6
153	11/17/12 22:52	11/17/12 23:04	ALML8V38FDV0	9	1	9	6	6
154	11/17/12 23:58	11/18/12 0:14	A3W4736CCV8TT4	157	1	11	6	6
155	11/18/12 0:07	11/18/12 0:15	AUN8AE8UCO3MD	159	1	14	6	6
156	11/17/12 23:13	11/17/12 23:29	Jazzy67033	180	1	6	6	6
157	11/17/12 22:58	11/17/12 23:08	A208MTGA7V29TP	14	1	8	6	7
158	11/17/12 23:51	11/18/12 0:08	A2UL07RCD2RO8R	146	1	10	6	7
159	11/17/12 22:51	11/17/12 23:10	AP37A6DG5TTEM	20	1	7	7	7
160	11/18/12 0:03	11/18/12 0:14	A2H18EYM79ZRCW	156	1	7	7	7
161	11/17/12 23:59	11/18/12 0:09	A1BCCFEEN32OWP	149	1	8	7	7
162	11/17/12 23:03	11/17/12 23:15	A3TN3GQAO61BVB	31	1	7	7	7
163	11/18/12 0:03	11/18/12 0:21	hhendric@hotmail.com	169	1	7	7	7
164	11/17/12 23:13	11/17/12 23:26	A62RZY5BWOZZM	63	1	14	7	8
165	11/17/12 23:25	11/17/12 23:47	AVUAN8WKJ443M	102	1	8	8	8
166	11/17/12 23:48	11/17/12 23:59	A25KU26Y8FTJPV	129	1	8	8	8
167	11/17/12 22:55	11/17/12 23:06	A3OF0DCN3KU8HT	11	1	8	8	8

Third, when one reconstructs the data in this way, by replacing the highlighted values with the values one would impute based on the order in which data are sorted, the significant relationship between cheating and creativity on the uses task entirely disappears. It's p-value goes from <.0001 to .292 ("Imputed1") or .180 ("Imputed2").

7. Reminder

This report includes a subset of the evidence of tampering we have collected, which was obtained by analyzing a small subset of the data that Gino has published.

Exhibit 4

Inquiry Committee Memo sent to Respondent on January 14, 2022

Confidential

Date: January 14, 2022

To: Francesca Gino – Respondent in Case RI21-001

From: Teresa Amabile, Chair - Inquiry Committee
Robert S. Kaplan, Inquiry Committee Member

Subject: Additional Information Related to Allegations 1, 2, 3, and 4b of Research Misconduct

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As part of its inquiry into the research misconduct allegations that were shared with you on October 27, 2021 (see Appendix A), the Inquiry Committee has been gathering preliminary data and information to begin assessing whether the allegations may have substance and thus warrant an investigation. At this time, we are sharing information pertaining to allegations 1, 2, 3, and 4b. The information in this memorandum is a combination of the information the Committee obtained from a written document submitted by the anonymous Complainant, and the Committee's own analyses of the raw datasets from your research records and the datasets posted on OSF.

The Committee is still gathering and analyzing information pertaining to allegation 4a. We wanted to send the information in this memorandum to you now so that you could begin to process the specific evidence in preparation for an interview. As the Committee further accesses and assesses any additional evidence for allegation 4a, it will share its findings with you in advance of your interview.

Below is specific information pertaining to each allegation, along with some questions the Committee will ask you to address in the interview.

Allegation 1 (*Study 3a in the 2020 JPSP Paper*)

From the Complainant's document:

> In this paper, the authors present six studies examining "how self-regulatory focus, whether promotion or prevention, affects people's experience of and outcomes from networking. [They] find that a promotion focus, as compared to a prevention focus or a control condition, is beneficial to professional networking, as it lowers feelings of moral impurity from instrumental networking" (p. 1221).
>
> Here we focus on Experiment 3a, which was run online (using mTurk participants). We believe it was conducted and analyzed by Gino because the materials posted on the OSF list "Qualtrics" as the creator of the file and "Francesca Gino" as the last person to save it. Thus, it is very likely that this was run through her Qualtrics account, which it turn makes it very likely that she analyzed the data. Only Harvard University can verify that fact.

Procedure.[1]

In Study 3a, 599 working adults recruited through MTurk first completed a writing task, during which they were randomly assigned to one of three conditions. Participants in the promotion-focus condition wrote about a current hope or aspiration, participants in the prevention-focus condition wrote about a current duty or obligation, and participants in the control condition wrote about what they do on a typical evening.

Participants then read a story in which they imagined "being invited to attend an event during which they socialized with other people. In the story the main character was described as 'actively and intentionally making professional connections with the belief that connections are important for future professional effectiveness.'"

Participants were then asked "to report how they felt at that moment, by indicating the extent to which they felt . . . dirty, inauthentic, and impure, ashamed, wrong, unnatural, and tainted." They did this using a scale ranging from 1 = not at all to 7 = very much. Participants then were asked to reflect on their previous writing task for 1-2 minutes, and to then "write a few words that came to mind regarding the story before proceeding to the next task." Participants completed other measures after that, but our focus is going to be on (1) the 7-item measure of moral impurity and (2) the words that participants wrote about the networking task, and so we won't describe those details here.

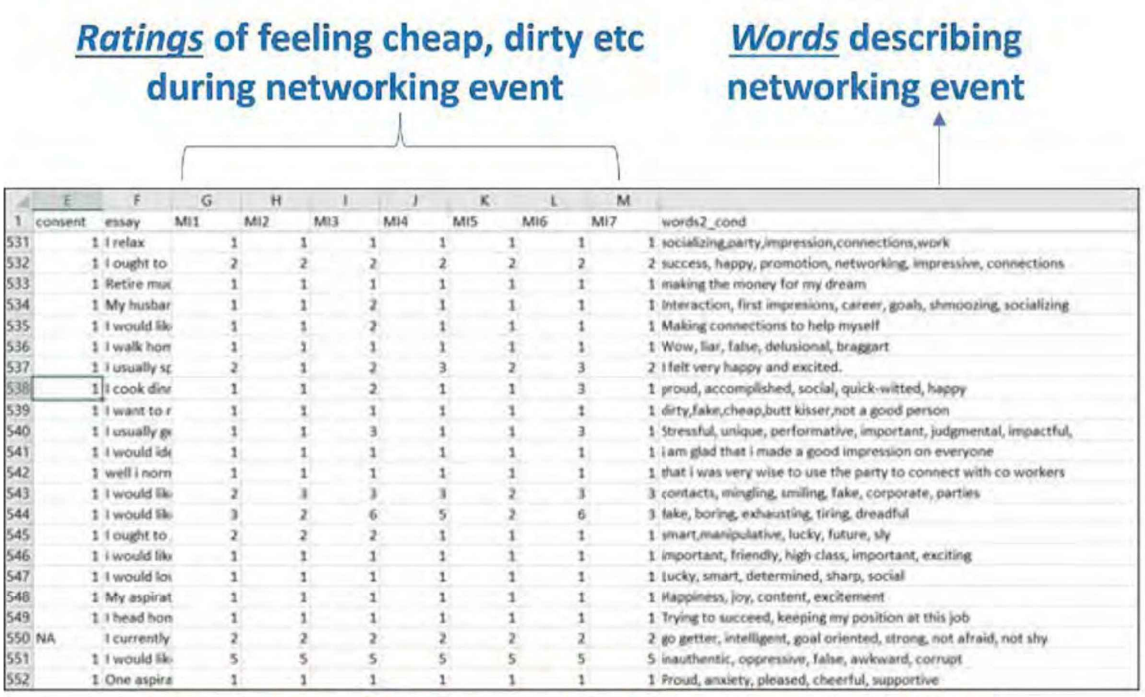
Results

As predicted, average scores on the 7-item moral impurity measure differed significantly across conditions, $F(2, 596) = 17.69$, $p < .0000001$. Ratings of moral impurity were significantly higher in the prevention- focus condition than in the control condition, which was in turn significantly higher than in the promotion-focus condition.

Direct Evidence of Tampering

It is useful to begin by looking at the Study 3a dataset. The screenshot below shows data for 22 participants (1 per row) for the key variables in this dataset:

[1] This section frequently quotes directly from the methods of this study, as written up in Gino et al. (2020, p. 1229- 1230).



	E	F	G	H	I	J	K	L	M	
1	consent	essay	MI1	MI2	MI3	MI4	MI5	MI6	MI7	words2_cond
531	1	I relax	1	1	1	1	1	1	1	socializing,party,impression,connections,work
532	1	I ought to	2	2	2	2	2	2	2	success, happy, promotion, networking, impressive, connections
533	1	Retire mu	1	1	1	1	1	1	1	making the money for my dream
534	1	My husbar	1	1	2	1	1	1	1	interaction, first impressions, career, goals, shmoozing, socializing
535	1	I would lik	1	1	2	1	1	1	1	Making connections to help myself
536	1	I walk hon	1	1	1	1	1	1	1	Wow, liar, false, delusional, braggart
537	1	I usually sp	2	1	2	3	2	3	2	I felt very happy and excited.
538	1	I cook dinr	1	1	2	1	1	3	1	proud, accomplished, social, quick-witted, happy
539	1	I want to r	1	1	1	1	1	1	1	dirty,fake,cheap,butt kisser,not a good person
540	1	I usually g	1	1	3	1	1	3	1	Stressful, unique, performative, important, judgmental, impactful,
541	1	I would ide	1	1	1	1	1	1	1	i am glad that i made a good impression on everyone
542	1	well i norm	1	1	1	1	1	1	1	that i was very wise to use the party to connect with co workers
543	1	I would lik	2	3	3	3	2	3	3	contacts, mingling, smiling, fake, corporate, parties
544	1	I would lik	3	2	6	5	2	6	3	fake, boring, exhausting, tiring, dreadful
545	1	I ought to	2	2	2	1	1	1	1	smart,manipulative, lucky, future, sly
546	1	i would like	1	1	1	1	1	1	1	important, friendly, high class, important, exciting
547	1	I would lo	1	1	1	1	1	1	1	Lucky, smart, determined, sharp, social
548	1	My aspirat	1	1	1	1	1	1	1	Happiness, joy, content, excitement
549	1	I head hon	1	1	1	1	1	1	1	Trying to succeed, keeping my position at this job
550	NA	I currently	2	2	2	2	2	2	2	go getter, intelligent, goal oriented, strong, not afraid, not shy
551	1	I would lik	5	5	5	5	5	5	5	inauthentic, oppressive, false, awkward, corrupt
552	1	One aspira	1	1	1	1	1	1	1	Proud, anxiety, pleased, cheerful, supportive

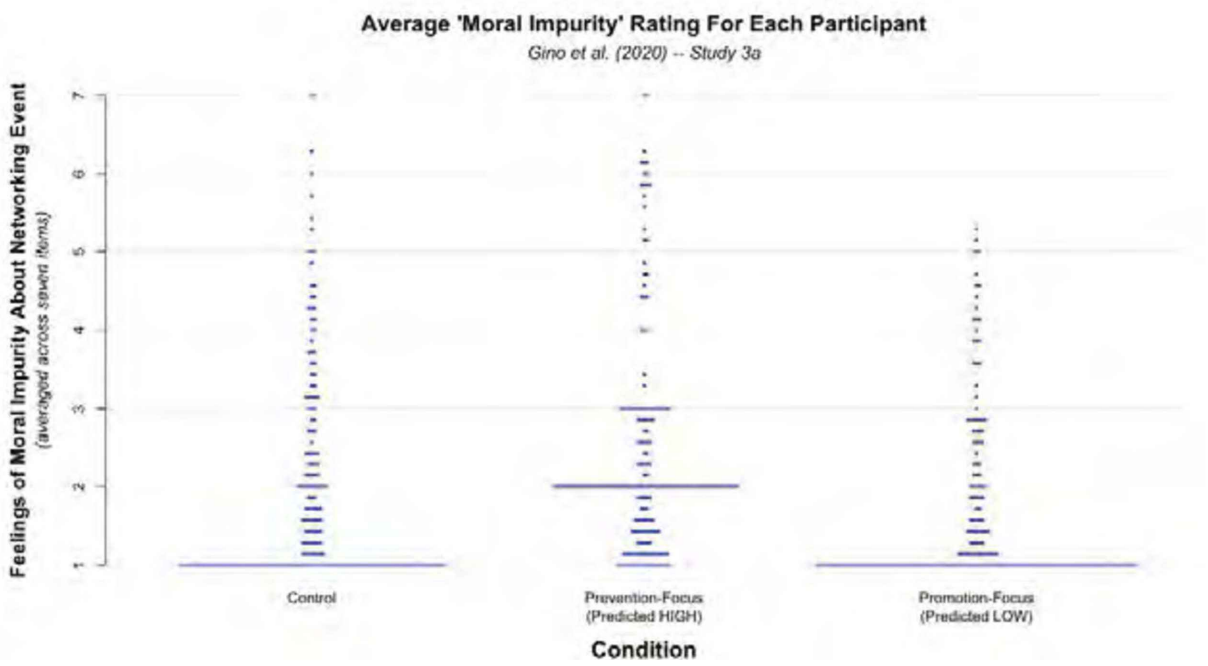
Screenshot of few rows of actual dataset for Study 3a

Let's walk through a few of the observations. The first row of data in the screenshot, corresponding to row 531 in the dataset, shows a participant who provided a '1' to all seven of the moral impurity items. This participant didn't feel at all dirty, inauthentic, impure, ashamed, wrong, unnatural, or tainted by imagining herself at the networking event. And indeed, if you look at the "words2_cond" column on the far right, you can see that what this participant wrote about the networking event - "socializing, party, impression, connections, work" – is perfectly consistent with those ratings. Her ratings were positive, and her words were positive. This makes sense.

The anomalies we discuss below pertain to rows in which participants' ratings and words are inconsistent, when either the ratings are negative and the words are positive, or the ratings are positive and the words are negative.

Many 2s and 3s

Keeping that in mind, let's look at all of the raw data from Study 3a, using the same kind of plot presented in the previous two sections. Each dot in the figure below represents the average moral impurity rating for a single participant.



To start, consider the control condition, on the left. You can see that there are many participants with scores of 1.0, indicating that they did not feel at all dirty, inauthentic, impure, ashamed, wrong, unnatural, or tainted by imagining themselves at the networking event. We don't know how many 1.0s to expect, but it seems reasonable that many participants would wind up with this score. There is nothing intrinsically dirty about networking.

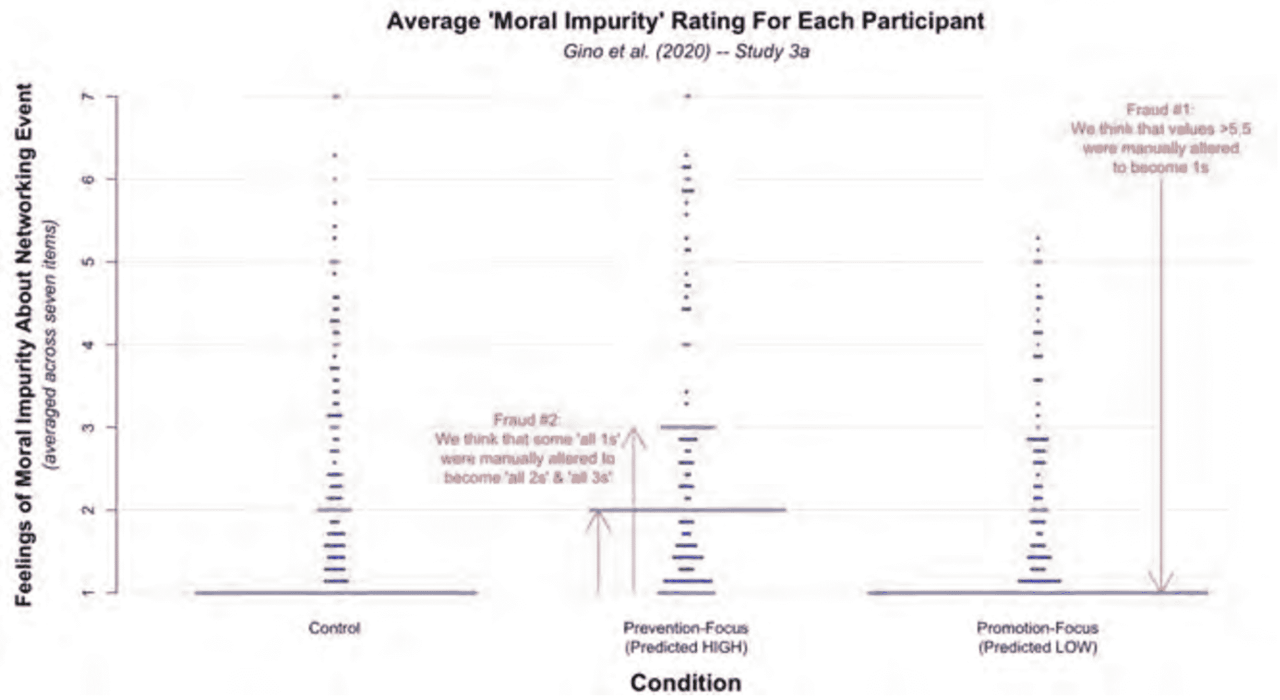
Now let's take a look at the dots in the middle, the prevention-focus condition. The authors hypothesized that writing a prevention-focused essay would increase participants' feelings of moral impurity when imagining the networking event. There is indeed a startling difference between the control condition and the prevention-focused condition: instead of '1.0' being the most common score on this dependent variable, now '2.0' is the most common score on this dependent variable. There is also a noticeable increase in the number of '3.0s.'

This is much more peculiar than it may seem at first. Remember that this dependent variable is an average of 7 items. There are obviously multiple ways for seven ratings to yield an average of 2.0 or 3.0, but the simplest and most common is for participants to give all '2s' or all '3s'. It is unusual for so many people to decide that they are across-the-board exactly a '2' on dirty, inauthentic, ashamed, etc. Indeed, ratings of 'all 2s' and 'all 3s' are quite rare in the other two conditions. In combination, the absence of '1.0s' and the presence of '2.0s' and '3.0s' led us to suspect that the researcher simply replaced many prevention-focused observations that were 'all 1s' with 'all 2s' or 'all 3s'. It is an easy way to tamper with the data. And it would of course yield the desired effect: higher moral impurity ratings among prevention-focused participants.

Keeping that in mind, let us turn to the promotion-focused condition on the right

side of the figure. The authors hypothesized that writing a promotion-focused essay would decrease participants' feelings of moral impurity. And so here what we see is that there are lots of '1.0s', even more than in the control condition, accompanied by a complete absence of values greater than 5.5. That led us to suspect that the researchers replaced those high values with all 1s. Again, this would make the data tamperer's job easy, and it would yield the desired effect, low moral impurity ratings among promotion-focused participants.

This annotated figure summarizes these two forms of hypothesized fraud:[2]



Participants with positive ratings and negative words (N=9)

Of critical importance here is the fact that participants both rated how morally impure they felt and wrote text describing how they felt, whereas the researchers cared only about the ratings (which they analyzed) and not about the text (which, therefore, they did not need to analyze). This means that a researcher who tampered with this data might have manually altered some participants' ratings without also feeling compelled to manually alter the text that accompanied those ratings. This would leave a trace. For those tampered observations, the valence implied by the ratings and the valence implied by the text would be inconsistent.

---

[2] As emphasized in the previous section, we are not purporting to explain entirely what happened here, as it is possible that data tampering also took other forms in this study. We are merely suggesting that at least some of the data tampering was carried out in the way hypothesized here.

Let's walk through these two hypotheses. First, let's focus on the promotion-focus condition, for which we hypothesize that a researcher manually changed some very high values – values associated with extreme levels of moral impurity – into maximally low values – values associated with no moral impurity at all. If that is true, then we should see some participants in the dataset who (1) provided an average rating of 1.0 on the moral impurity scale and (2) wrote text suggesting that they felt extremely morally impure. Moreover, those participants should be over-represented in the promotion-focus condition.

And, indeed, in this dataset we found nine participants who both averaged a 1.0 on the moral impurity scale and wrote text implying that they felt high levels of moral impurity. Of the nine, seven of them were in the promotion-focus condition:

CumID_all	MI1	MI2	MI3	MI4	MI5	MI6	MI7	words2_cond	conditions
207	1	1	1	1	1	1	1	aggressive, pushy, calculating, egotistic, pushy	control
535	1	1	1	1	1	1	1	Wow, liar, false, delusional, braggart	control
118	1	1	1	1	1	1	1	I felt uncomfortable and inauthentic. The last thing I want to talk abo	promotion
248	1	1	1	1	1	1	1	Gross, phony, supercilious, unpleasant, disingenuous	promotion
335	1	1	1	1	1	1	1	Scummy; dishonest; disgusting; disingenuous; weak; unoriginal	promotion
359	1	1	1	1	1	1	1	All that corporate stuff is awful.	promotion
498	1	1	1	1	1	1	1	schmoozing, suck-up, ambition, networking, career, connections	promotion
538	1	1	1	1	1	1	1	dirty,fake,cheap,butt kisser,not a good person	promotion
589	1	1	1	1	1	1	1	gross slimy player suck up wrong	promotion

This is consistent with the notion that all or some of these apparent '1.0s' were not actually '1.0s'. The words they wrote suggest that they may have instead provided very high ratings on the moral impurity scale, ratings that were altered by the researcher performing the analysis.[3]

Though we find this evidence to be fairly convincing, it is not conclusive, as it suffers from the limitations of being somewhat subjective and also reliant on a small number of observations. The next analysis – which focuses on the hypothesis that some prevention-focused '1.0s' were manually altered to become '2.0s' and '3.0s' – does not suffer from either limitation.

Participants with negative ratings and positive words (N=79)

To perform this analysis, we relied on a technique known as "sentiment analysis," which uses an algorithm to score a passage of text on the dimension of valence. Using the VADER package in R, we used an algorithm that took in participants' textual description of the networking event, and gave it a score from 1 (maximum positivity) to -1 (maximum negativity). Essentially, the score reflects the net percentage of positive minus negative words in a text sample. If a string of text contains only unambiguously positive words, it will have a score of 100%, or 1.000; if it contains only unambiguously negative words, it will have a score of -

[3] These are not the only '1.0s' who wrote somewhat negative things, but they were the only ones who wrote things implying moral impurity. For example, a few other '1.0s' mentioned feelings of anxiety or boredom.

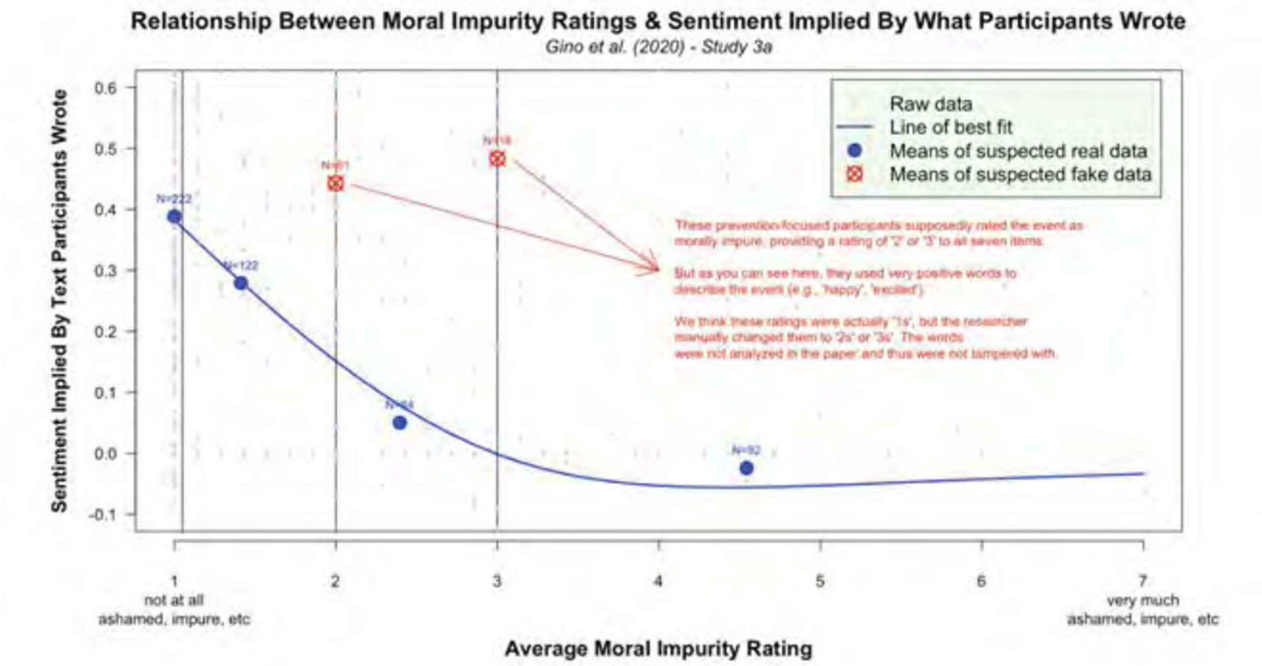
100%, or -1.000. The screenshot below shows some participants whose VADER score was maximally positive (i.e., 1.000):

	s3a.net	s3a.words2_cond
18	1.000	Fun, confidence, honor, luck, privilege
30	1.000	excited, fun, hopeful, inspirational, strong, motivated
36	1.000	entertaining, exciting, fun, privileged, encouraging
44	1.000	excited, pleased, interested, smart, excited
115	1.000	Active, novel, proactive, ambitious, satisfied
160	1.000	Excited, focused, accomplished
192	1.000	Fun, excited, important
218	1.000	Happy; Smart; Euphoric; Intelligent; Joy; Celebrate
292	1.000	optimistic, happy
296	1.000	ambitious, determined, engaged, sociable, kind, smart
317	1.000	proud, worth, motivating, lucky, powerful
328	1.000	anticipation, excitement, happy, joy, pleasure
349	1.000	confident thrilled accomplished proud smart

And here are the participants with the most negative VADER scores:

	s3a.net	s3a.words2_cond
389	-0.810	gross, exhausting, tired, networking, yucj
371	-0.815	Sleazy, fake, disgusting, boring, pointless
284	-0.846	concerned, worried, angered
207	-0.891	aggressive, pushy, calculating, egotistic, pushy
351	-0.894	worried, stressed, trying, tough, confused
90	-0.903	fake, schmoozing, painful, awkward, weird
543	-0.915	fake, boring, exhausting, tiring, dreadful
399	-0.917	stressful, embarrassing, anxious, talking, fake
576	-0.928	cheating, disgusting, wrong, annoying, slimy
22	-1.000	Stressful, bad, anxiety, dislike, avoidance
68	-1.000	Repulsed, disgusted, tired, annoyed, irritated
305	-1.000	Uncomfortable
392	-1.000	bored, confused, unsure, uncertain, wtf

As indicated above, we believe that many of the 'all 2s' and 'all 3s' in the prevention-focus condition may actually have entered 'all 1s', and thus may have felt very positively toward the networking event. If this is true, and if, as we suspect, the researcher altered the moral impurity ratings without also altering the words those participants wrote about the networking event, then the words written by those 'all 2s' and 'all 3s' should look a lot like the words written by 'all 1s'. They should be much too positive. The figure below is consistent with this prediction.



The blue line in this chart represents the observed relationship between the moral impurity ratings and the sentiment scores across all conditions, excluding the prevention-focused observations that we hypothesized to have been tampered with. The relationship is sensibly negative: More morally impure ratings are associated with lower sentiment scores and thus more negative text descriptions.

The two red dots with X's depict the average sentiment scores of those in the prevention-focus condition who gave ratings of 'all 2s' and 'all 3s'. If they were really 'all 1s' to begin with, then the text they wrote should be very positive, and thus their sentiment scores should be high. And that is exactly what we see here. The 'all 2s' and 'all 3s' in the prevention-focused condition wrote text that was just as positive as what the 'all 1s' wrote across the entire sample. This very strongly suggests that a great many of these 'all 2s' and 'all 3s' were really 'all 1s' that had been altered.

The Inquiry Committee conducted its own analysis of the dataset from your research records and the data set available on OSF. In addition to identifying a small discrepancy in the N's between the two datasets (600 on OSF vs. 610 in your research records vs. 599 in the published paper), the Committee found that the dataset on your computer generated results in the opposite direction to the results reported (and hypothesized) in the published paper. The Committee's comparison of the two datasets in the table below shows that, in the dataset on your computer, the average Moral Impurity score in the Prevention condition was lower than in the two other conditions (Promotion and Control). Using the OSF dataset, the Committee's calculation of respondents' mean scores in the three conditions reversed the ranking of the Promotion and Prevention conditions, replicating the means and the directionality of the results reported in the published paper.

	Author's dataset	OSF dataset
Promotion	1.98	1.64
Prevention	1.66	2.39
Control	1.97	1.93

This finding prompted the Committee to match individual observations between both datasets by sorting them, first by condition, and then by the mean score across the 7 dimensions of Moral Impurity.

For Condition 1, the first table below shows three observations[4] with high average Moral Impurity ratings in your dataset that did not have an exact match in the OSF dataset. In all three, the high Moral Impurity ratings in your dataset (almost all 5, 6, or 7) are almost all 1's (the exception is two 2's) in the OSF data set. The Committee noted that changing the numeric ratings but not the statements in the Reflect on the Party column would, in most of these observations, generate the mismatch of words and scores documented by the Complainant.

Similarly, three anomalous observations, as reported in the second table below, were identified for Condition 2, showing a mismatch between your dataset and the OSF dataset. In all three, the low Moral Impurity ratings in your dataset (all 1's) are high ratings (almost all 5, 6, or 7) in the OSF data set.

Reducing the scores of Condition 1 (Promotion) respondents, and raising the scores of Condition 2 (Prevention) respondents, could explain the reversal of rankings in the mean scores of Promotion and Prevention respondents in your data set and the OSF data set.

Among the questions we would like you to address about Allegation 1 during your interview with the Committee are the following:

1. Are there any descriptions of or assertions about this study or its data in either the Complainant's section or our Inquiry Committee section that, in your view, are incorrect? Please explain each of those in detail.
2. How do you explain the discrepancies, identified by the Inquiry Committee, between the Moral Impurity ratings in otherwise identical rows of data in your data file and the OSF data file?
3. How do you explain the apparent data tampering in the promotion-focus and, especially, the prevention-focus condition, described by the Complainant?

[4] The three observations in the table were meant to be illustrative of the noted discrepancies and not the result of an exhaustive search. They were the first three identified with discrepancies between the two data sets. We think it likely that a comprehensive search will reveal additional observations with similar discrepancies between the two data sets.

Comparison of 3 observations between the author's dataset and OSF dataset for condition 1.

Source	Essay	Cond-ition	Dirty	Tainted	Inauth-entic	As-hamed	Wrong	Un-natural	Impure	AVG	Hope/ Aspiration	Reflect on the Party
OSF Row 448	Speaking of career aspiration, your career aspiration is the path in which you want your career to follow. It helps define what you need from your work.	1 Promo	1	2	1	2	1	1	1	1.3	good	happy
Author Row 451	Speaking of career aspiration, your career aspiration is the path in which you want your career to follow. It helps define what you need from your work.	1 Promo	4	5	6	5	6	7	6	5.6	good	happy
OSF Row 590	I would like to retire! I would be out of this hell hole and would be free to travel with my husband. I …	1 Promo	1	1	1	1	1	1	1	1.0	Freedom being myself	Gross, slimy player suck up …
Author Row 675	I would like to retire! I would be out of this hell hole and would be free to travel with my husband. …	1 Promo	5	5	6	5	6	7	6	5.7	Freedom being myself …	Gross, slimy player, suck up wrong
OSF Row 249	I would like to plan a cycling trip around the Ring Road in Iceland. …	1 Promo	1	1	1	1	1	1	1	1.0	Fun, exploration, exercise, health, travel	Gross, phony, supercilious, unpleasant, disingenuous
Author Row 252	I would like to plan a cycling trip around the Ring Road in Iceland. I have taken several cycling holidays over the past few years and I believe a ride around Iceland would be an amazing experience.	1 Promo	6	6	7	5	6	7	5	6.0	Fun, exploration, exercise, health, travel	Gross, phony, supercilious, unpleasant, disingenuous

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 171 of 1282

Comparison of 3 observations between the author's dataset and OSF dataset for condition 2.

Source	Essay	Cond-ition	Dirty	Tainted	Inauth-entic	As-hamed	Wrong	Un-natural	Im-pure	AVG	Duty/ Obligation	Reflect on the Party
OSF Row 5	I have a gym membership that I am not using like I should.	2 Prevent	4	5	6	5	6	7	6	5.6	Future, exercise, fit, money, muscles	Talking, future, work, authentic, friendly
Author Row 7	I have a gym membership that I am not using like I should.	2 Prevent	1	1	1	1	1	1	1	1.0	Future, exercise, fit, money, muscles	Talking, future, work, authentic, friendly
OSF Row 259	Currently I am having to take care of a schizophrenic female. …	2 Prevent	7	7	7	7	7	7	7	7.0	it has been a very hectic day	finally the gears are turning
Author Row 262	Currently I am having to take care of a schizophrenic female. …	2 Prevent	1	1	1	1	1	1	1	1.0	it has been a very hectic day	finally the gears are turning
OSF Row 172	I have a duty and obligated to complete my job in my office everyday. …	2 Prevent	7	7	7	7	7	7	7	7.0	i was thinking of a new project taken up by the company and the need to …	I was very happy that i met all the top executives of the company. This was a rare opportunity and i had made full use of it.
Author Row 174	I have a duty and obligated to complete my job in my office everyday. …	2 Prevent	1	1	1	1	1	1	1	1.0	i was thinking of a new project taken up by the company and the need to …	I was very happy that i met all the top executives of the company. This was a rare opportunity and i had made full use of it.

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 172 of 1282

Allegation 2 (*Study 4 in the 2015 Psychological Science Paper*)

From the Complainant's document:

> In this paper, the authors present five studies indicating that "experiencing inauthenticity, compared with authenticity, consistently led participants to feel more immoral and impure. The link from inauthenticity to feeling immoral produced an increased desire among participants to cleanse themselves and to engage in moral compensation by behaving prosocially" (p. 983).
>
> Here we focus on Experiment 4, which was run at Harvard University. Participants' responses to a question about their "class year" in the dataset indicate that the study was run no earlier than Fall of 2014, as seniors reported being in the Class of 2015, juniors in the Class of 2016, and so on. Although the second author of this paper, [redacted], was a postdoctoral researcher at Harvard for two years, her cv indicates that she began her job as an Assistant Professor at Northwestern in 2014, making it very unlikely that she was still at Harvard when this study was conducted and analyzed. In addition, the data file and methods write- up posted on the OSF website were uploaded by Gino, and the properties of those files indicate that she created them. Thus, it is most likely that this study was run/supervised and analyzed by Gino. With all of that said, that can only be verified by Harvard University.
>
> *Procedure*[5]
>
> Harvard students (N = 491) came into a lab and were first "asked to confirm that they were college students at Harvard." They were then "asked for their opinion [on] whether or not difficulty ratings should be a part of the Q guide (in which all Harvard courses are rated and reviewed by students who have taken them in the past)." Participants were then "asked for their age, gender, and year in school. They were then told that their first task was to write an essay on a current topic."
>
> During the essay task, participants were randomly assigned to one of three conditions. One-third were asked to write an essay in support of their opinion about including difficulty ratings in the Q guide (the pro- attitudinal condition), and two-thirds were asked to write an essay *against* their opinion about that issue (the counter-attitudinal conditions). The two-thirds asked to write a counter-attitudinal essay were randomly assigned to one of two conditions, involving how much choice they had as to whether to write such an essay: low-choice vs. high-choice. Thus, the three essay conditions were (1) pro-attitudinal, (2) counter-attitudinal (low-choice), and (3) counter-attitudinal (high-choice).

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[5] This section frequently quotes directly from the introduction and methods of this study, as written up in Gino et al. (2015, p. 991-992).

After writing the essay, "participants received a list of products and indicated how desirable they found them to be . . . We averaged ratings of the five cleansing products to create one aggregate measure."

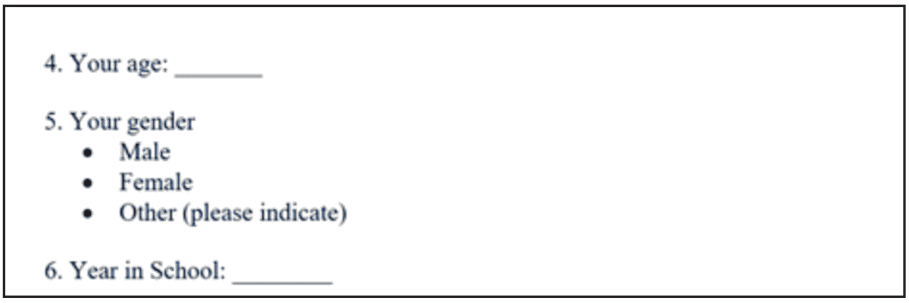
The authors hypothesized that "participants would express a greater desire for cleanliness whenever they wrote essays that were not consistent with their internal beliefs, regardless of their perceived level of choice." That is, they predicted that participants' preference for cleaning products would increase after writing a counter-attitudinal essay, regardless of whether they did so under conditions of low choice or high choice.

Results

Consistent with the authors' hypotheses, participants were less desirous of cleaning products in the pro- attitudinal condition (M=3.72, SD=1.33), compared to both the counter-attitudinal (high choice) condition, (M=4.18, SD=1.51), p=.012, and the counter-attitudinal (low choice) condition (M=4.34, SD=1.44), p < .001.

The Anomaly: Strange Demographic Responses

As mentioned above, students in this study were asked to report their demographics. Here is a screenshot of the posted original materials, indicating exactly what they were asked and how:



4. Your age: _____

5. Your gender
- Male
- Female
- Other (please indicate)

6. Year in School: _____

We retrieved the data from the OSF (https://osf.io/sd76g), where it has been posted since 2015. The anomaly in this dataset involves how some students answered Question #6: "Year in School."

The screenshot below shows a portion of the dataset. In the "yearSchool" column, you can see that students approach this "Year in School" question in a number of different ways. For example, a junior might write "junior", or "2016" or "class of 2016" or "3" (to signify that they are in their third year). All of these responses are reasonable.

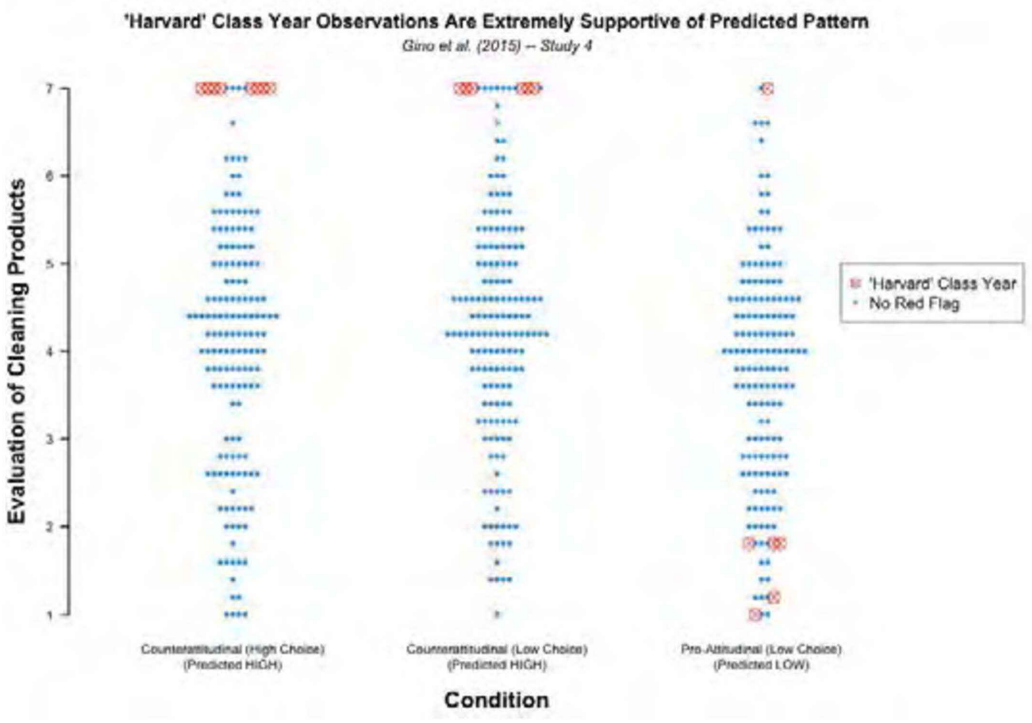
A less reasonable response is "Harvard", an incorrect answer to the question. It is

difficult to imagine many students independently making this highly idiosyncratic mistake. Nevertheless, the data file indicates that 20 students did so. Moreover, and making things even more peculiar, those students' responses are very close to one another, all within 35 rows (450 through 484) in the posted dataset:

1	instr	college_st	inFavor_in	strongOp	age	male	gender_T	yearSchool	condition	i
443	1	1	1	7	19	1		Sophomore	ProAttitudinal	
444	1	1	1	7	20	1		Junior	No_Choice	
445	1	1	1	6	19	0		sophomore	High_Choice	
446	1	1	1	6	20	1		Junior	ProAttitudinal	
447	1	1	1	7	21	1		Senior (Class of 201	No_Choice	
448	1	1	1	5	22	1		Senior	High_Choice	
449	1	1	1	5	21	1		Senior	ProAttitudinal	
450	1	1	1	7	23	0		harvard	No_Choice	
451	1	1	1	4	21	0		2015	High_Choice	
452	1	1	1	7	20	1		Junior	No_Choice	
453	1	1	1	7	18	0		Sophomore	ProAttitudinal	
454	1	1	0	7	25	0		Harvard	High_Choice	
455	1	1	0	7	25	0		Harvard	ProAttitudinal	
456	1	1	1	7	22	1		Harvard	ProAttitudinal	
457	1	1	0	7	24	0		Harvard	High_Choice	
458	1	1	1	7	22	0		Harvard	High_Choice	
459	1	1	0	7	25	0		Harvard	No_Choice	
460	1	1	1	7	23	1		Harvard	ProAttitudinal	
461	1	1	0	7	25	0		Harvard	High_Choice	
462	1	1	0	6	25	1		4	No_Choice	
463	1	1	0	7	24	0		Harvard	No_Choice	
464	1	1	1	5	23	0		1	High_Choice	
465	1	1	1	4	19	0		Sophomore	No_Choice	
466	1	1	1	6	28	1		5	High_Choice	
467	1	1	1	6	22	1		Senior	ProAttitudinal	
468	1	1	1	6	20	0		Junior	High_Choice	
469	1	1	1	5	23	1		2015	High_Choice	
470	1	1	1	6	22	1		Senior	No_Choice	
471	1	1	1	6	22	0		2015/Senior	ProAttitudinal	
472	1	1	1	6	36	1		2010	High_Choice	
473	1	1	1	7	25	0		Harvard	ProAttitudinal	
474	1	1	0	5	25	0		Harvard	High_Choice	
475	1	1	1	7	22	1		Harvard	No_Choice	
476	1	1	1	7	23	1		Harvard	High_Choice	
477	1	1	0	7	25	0		Harvard	ProAttitudinal	
478	1	1	0	7	26	1		Harvard	No_Choice	
479	1	1	1	6	20	0		2013	No_Choice	
480	1	1	0	6	21	0		2012	ProAttitudinal	
481	1	1	1	7	24	1		Harvard	High_Choice	
482	1	1	1	7	27	0		Harvard	ProAttitudinal	
483	1	1	1	7	25	1		Harvard	High_Choice	
484	1	1	1	7	27	0		Harvard	No_Choice	
485	1	1	1	7	26	1		4	High_Choice	
486	1	1	0	6	22	0		2012	High_Choice	
487	1	1	1	6	20	1		2013	No_Choice	

This is a red flag, for it could indicate that someone had copy-pasted rows of data, without noticing that it resulted in an implausible number of students providing the same strange and erroneous answer to a straightforward question.

If these peculiar observations were indeed tampered with, then we should see that students who answered "Harvard" were especially likely to confirm the authors' hypothesis. To see this, we present a Bee Swarm plot, which depicts each observation in the dataset, separately for each experimental condition. The plot depicts the key dependent variable, participants' average ratings of how much they desired five cleaning products. Every "normal", in-sequence observation is represented as a blue dot, whereas the 20 "Harvard" observations are represented as red X's:



Here you can see that in the two counter-attitudinal conditions, which were predicted to induce a desire for cleaning products and thus higher values on the y-axis, every "Harvard" observation has the highest possible average value (i.e., a 7.0). Conversely, in the pro-attitudinal condition, which was predicted to induce a lower desire for cleaning products, every "Harvard" observation is associated with a low value, except for one (which itself happens to be the only one associated with a lowercase "harvard").

The difference between the Pro-Attitudinal and Counter-attitudinal conditions for just these 20 observations is highly significant, with a p-value indicating that it would occur by chance less than one in a million times: $t(18) = 7.84$, $p < .000001$.[6]

As in other of the allegations, this is very much consistent with the possibility that these "Harvard" observations were altered to produce the desired effect.

The Inquiry Committee replicated the anomalies identified by the Complainant by conducting its own comparison and analysis of the larger dataset for this study from your research records. (When we inspected the smaller dataset that you identified as relevant to this study, we could not see a way

[6] We also took the same conservative approach described in Footnote 3. In 1 million simulations, we observed a t- value as large as 7.84 only six times. Thus, under the assumption that the between condition difference between the counter-attitudinal vs. pro-attitudinal condition was identical to what was observed in the data, we would expect a "Harvard" class year pattern that is so highly predictive of the authors' result to emerge by chance only about 1 in 167,000 times

that it could have been incorporated into the study's data analyses, nor did we see a way that it could account for any of the discrepancies we note here.) During this analysis, the Committee additionally found that among the observations that list "Harvard" as their answer to the "Year in School" question, none had a "college.harvard.edu" email address. In contrast, most of the observations that did not answer "Harvard" as the "Year in School" provided a Harvard email address (e.g., one ending in "college.harvard.edu"). The responses by the "Harvard group" on the key dependent variable — average ratings of desire for the five cleaning products — were, as pointed out by the Complainant, of highly similar magnitudes and influenced the overall experimental findings in the hypothesized direction.

Another issue that emerged during the Committee's review of the evidence related to this allegation was a discrepancy in the N for the dataset obtained from your research records and the N for the publicly posted dataset available on OSF, which was analyzed by the Complainant. (Note that, as mentioned earlier, in its work on Allegation 2, the Committee used only the larger of the two datasets from your records that you identified as relevant to this study. It did look at the smaller dataset, but could not see how the data there could reconcile the issues raised here.) Your file showed 455 responses to the information requests (e.g., age, gender, year in school) and the experiment's questions. The OSF dataset had 491 responses.

In a direct comparison of the two data sets (your research file and the OSF file), the Committee observed the following:

1. Some participants in your file were not in the OSF file. For example, your research dataset included 24 participants who responded with "Harvard" to the "Year in School" question (column W in the dataset) while the publicly available dataset on OSF included only 20 participants who responded with "Harvard" as their year in school. These were not the only instances of participants in the author's file that did not appear in the OSF file.
2. Some participants in the OSF file were not in your file. The Committee would like to understand how data that does not appear in the file from the original experiment was entered and used in the analysis for the paper.

In addition, the Inquiry Committee saw anomalous observations remaining in both data sets, such as those previously mentioned listing "Harvard" as "Year in School," but several others as well, especially from people that did not report a college.harvard.edu email address in the author's research file. For example, the Inquiry Committee detected several otherwise identical records in both data sets that differed only in the scores reported about a participant's preference for "clean products."

Among the questions we would like you to address about Allegation 2 during your interview with the Committee are the following:

1. Are there any descriptions of or assertions about this study or its data in either the Complainant's section or our Inquiry Committee section that, in your view, are incorrect? Please explain each of those in detail.

2. How do you explain the anomalous "Harvard" response to the "Year in School" question in 20 lines of data in the OSF dataset used by the Complainant, and the fact that the bee swarm plot reveals that those particular lines of data strongly support the hypothesized effect?
3. How do you explain the discrepancy that the Committee observed, between your data file and the OSF data file, in the number of participants who responded with "Harvard" as their Year in School? Further, how do you explain the Committee's observation that, among the participants that list "Harvard" as their answer to the "Year in School" question, none had a "college.harvard.edu" email address, while most other participants did?
4. How do you explain the anomaly that some participants in the OSF data file were not in your data file?
5. Can you explain the relevance of the smaller of the two data files from your computer that you identified as containing data for this study?

Allegation 3 (*Study 4 in the 2014 Psychological Science Paper*)

From the Complainant's document:

> In this paper, the authors present five studies demonstrating that "dishonesty may lead to creativity".
>
> Here we focus on Experiment 4, which was run online (using mTurk participants). We received this dataset from a researcher who had years ago obtained it from Professor Gino.
>
> *Procedure*
>
> In Experiment 4, 178 mTurk participants were first asked to guess whether the outcome of a virtual coin toss would be heads or tails. After indicating their prediction, participants had to press a button to toss the coin virtually. They were asked to press the button only once, but after that they were invited to press the button many times to make sure the coin was legitimate. This was designed to give participants room for justifying their own cheating. Participants reported whether they had guessed the coin toss outcome correctly, and they received a $1 bonus if they had. Because the computer recorded their predictions as well as the outcome of the coin toss, the experimenters could tell whether participants had cheated.
>
> After completing a scale measuring rule-following (not discussed further in this report), participants completed two creativity tasks, a "uses" task and the Remote Associates Task.
>
> Our analysis will focus exclusively on the results of the "uses" task, which involved asking participants "to generate as many creative uses for a newspaper as possible within 1 min" (p. 976).
>
> *Results*

In line with the authors' hypothesis, participants who cheated on the coin toss task came up with more uses for a newspaper (M = 8.3) than did participants who did not cheat (M = 6.5), $p < .0001$.

Direct Evidence of Tampering

The dataset seems to be sorted by two columns, first by a column called "cheated", indicating whether participants cheated on the coin toss task (0 = did not cheat; 1 = cheated), and then by a column called "Numberofresponses", indicating how many uses for a newspaper the participant generated.

For example, the screenshot below depicts the first 40 observations in the dataset.[7] Because the data are sorted first by the "cheated" column, all of these observations represent non-cheaters (i.e., scores of 0 in that "cheated" column). The shown rows are perfectly sorted by the "Numberofresponses" column. Indeed, the 135 non-cheaters in the dataset are all sorted by the "Numberofresponses" column.

[7] To create this screenshot, we had to move the "cheated" and "Numberofresponses" columns. In the dataset that Gino shared, those variables were in the 78th and 14th columns, respectively.

	StartDate	EndDate	MTurkID	Cum_ID	cheated	Numberofresponses
2	11/17/12 23:54	11/18/12 0:07	AD8VVYGP4LRKG	144	0	2
3	11/17/12 23:17	11/17/12 23:41	A2KJZAMH6G8LWC	91	0	2
4	11/17/12 23:44	11/17/12 23:57	A21TECY6SM7BNV	127	0	3
5	11/17/12 22:57	11/17/12 23:11	A2GRSJHXTR7JQR	24	0	3
6	11/18/12 0:00	11/18/12 0:20	A1FAQI6Q4WCS	168	0	3
7	11/17/12 23:41	11/17/12 23:52	A1YZJ7OO7Q2D89	113	0	3
8	11/17/12 23:37	11/17/12 23:47	AVA93G56VQLZA	101	0	3
9	11/17/12 23:20	11/17/12 23:32	A20863XUQJT5T1	76	0	3
10	11/18/12 0:11	11/18/12 0:24	A27I79P03I0ZPO	173	0	3
11	11/17/12 23:11	11/17/12 23:28	A12WY0ZDGVOZQ5	69	0	3
12	11/17/12 23:41	11/17/12 23:56	A20552JTR91G67	124	0	3
13	11/17/12 23:17	11/17/12 23:33	A3Q9UUF8RPV4LQ	79	0	3
14	11/17/12 22:49	11/17/12 22:58	A2BH9W7Y1TL3X8	1	0	3
15	11/17/12 23:59	11/18/12 0:10	A034420738QHAX9TNO9BA	152	0	4
16	11/17/12 23:38	11/17/12 23:51	a32k7qy8nwzx43	110	0	4
17	11/17/12 23:05	11/17/12 23:23	A2DAT0D8UXU8FF	55	0	4
18	11/17/12 23:39	11/17/12 23:49	A20A0EM29IJLSK	103	0	4
19	11/17/12 23:31	11/17/12 23:51	APJEYYRENCAC6	109	0	4
20	11/17/12 23:02	11/17/12 23:27	A1L6EDKEUG69XB	66	0	4
21	11/18/12 0:00	11/18/12 0:10	AYZ00GXI5D15Y	150	0	4
22	11/17/12 23:22	11/17/12 23:35	APHNYDGTCRN3O	82	0	4
23	11/17/12 23:19	11/17/12 23:32	A1MM8TSLCHVMNK	75	0	4
24	11/17/12 23:12	11/17/12 23:24	A3AZJGI9D7C0PD	57	0	4
25	11/17/12 22:52	11/17/12 23:17	A3DQUFSTM9VTS7	37	0	4
26	11/17/12 23:50	11/18/12 0:03	A77M840AXJ16B	137	0	4
27	11/18/12 0:02	11/18/12 0:10	A3GSCVUHX7DM8T	151	0	4
28	11/17/12 23:05	11/17/12 23:24	A26L91YL0GDGD8	58	0	4
29	11/17/12 23:27	11/17/12 23:53	AJY9CIX7FW9W1	115	0	4
30	11/17/12 23:48	11/18/12 0:02	AL5E4C4Q3R6G	133	0	5
31	11/17/12 22:54	11/17/12 23:08	A2R8SVW42IYFYX	17	0	5
32	11/17/12 22:59	11/17/12 23:17	A07109741WN0LPDUN9GL9	34	0	5
33	11/17/12 23:25	11/17/12 23:37	A1GFD4B3NOMWIY	86	0	5
34	11/17/12 23:37	11/17/12 23:54	ADQML8ECWYME5	119	0	5
35	11/17/12 23:04	11/17/12 23:32	A3FAAKASDYSHE6	183	0	5
36	11/17/12 22:55	11/17/12 23:14	A5SUR5C68YYN8	30	0	5
37	11/17/12 22:56	11/17/12 23:08	A2MBAN2GDK1P1J	16	0	5
38	11/17/12 23:48	11/18/12 0:00	A34N9G0IEI28IG	131	0	5
39	11/17/12 23:46	11/18/12 0:06	A3AHNUDEOZ33JE	143	0	5
40	11/17/12 23:25	11/17/12 23:38	A1QX6O24KDVLJ1	88	0	5
41	11/17/12 22:58	11/17/12 23:19	A7NLUN5YH4S9L	43	0	5

The next screenshot, in contrast, shows that while 43 cheaters are also sorted by this variable, there are 13 observations that are not in the order they should be.

	StartDate	EndDate	MTurkID	Cum_ID	cheated	Numberofresponses
132	11/18/12 0:04	11/18/12 0:13	A1X82CGYFM586F	155	0	11
133	11/17/12 23:08	11/17/12 23:22	A1F14BB4PV053A	53	0	11
134	11/17/12 23:22	11/17/12 23:37	A356ZZWYC8GRVY	85	0	11
135	11/17/12 23:44	11/18/12 1:05	A34DG3IZ88WWBT	192	0	12
136	11/17/12 22:58	11/17/12 23:14	A3P7XKTEBOKN5R	29	0	13
137	11/18/12 0:01	11/18/12 0:20	ADTNOFJHTTB1L	167	1	3
138	11/17/12 23:34	11/17/12 23:53	A1UNAJF3E5HH17	114	1	3
139	11/17/12 23:44	11/17/12 23:57	A03773671999XXE56OT9GZ	126	1	4
140	11/17/12 23:36	11/17/12 23:46	A2DUKWR9I6FFZV	99	1	4
141	11/17/12 23:02	11/17/12 23:17	AE3D6SEZD8UPQ	36	1	13
142	11/17/12 23:32	11/17/12 23:43	A21MCWTDIKATV5	97	1	9
143	11/17/12 23:59	11/18/12 0:10	A28XLOE0FMG1ZX	153	1	5
144	11/17/12 22:55	11/17/12 23:04	A126XP3VIWJKD6	8	1	5
145	11/18/12 0:07	11/18/12 0:21	A3E1EPRY1OYE34	171	1	9
146	11/17/12 23:30	11/18/12 0:03	A27AEIRFEFR4US	136	1	5
147	11/17/12 23:30	11/18/12 0:44	A07854333QXCSICF01THG	191	1	9
148	11/17/12 23:38	11/17/12 23:50	A311BZDLCK6HQQ	105	1	8
149	11/17/12 22:59	11/17/12 23:15	A1ILA0RGDB9II6	32	1	9
150	11/17/12 23:11	11/17/12 23:22	A22LZ62E0UC4VL	51	1	5
151	11/17/12 23:49	11/18/12 0:03	A1SHH0U3JH5CSV	187	1	6
152	11/18/12 0:03	11/18/12 0:22	A37JD0XUZHQYRC	172	1	6
153	11/17/12 22:52	11/17/12 23:04	ALML8V38FDV0	9	1	9
154	11/17/12 23:58	11/18/12 0:14	A3W4736CCV8TT4	157	1	11
155	11/18/12 0:07	11/18/12 0:15	AUN8AE8UCO3MD	159	1	14
156	11/17/12 23:13	11/17/12 23:29	Jazzy67033	180	1	6
157	11/17/12 22:58	11/17/12 23:08	A208MTGA7V29TP	14	1	8
158	11/17/12 23:51	11/18/12 0:08	A2UL07RCD2RO8R	146	1	10
159	11/17/12 22:51	11/17/12 23:10	AP37A6DG5TTEM	20	1	7
160	11/18/12 0:03	11/18/12 0:14	A2H18EYM79ZRCW	156	1	7
161	11/17/12 23:59	11/18/12 0:09	A1BCCFEEN32OWP	149	1	9
162	11/17/12 23:03	11/17/12 23:15	A3TN3GQAO61BVB	31	1	7
163	11/18/12 0:03	11/18/12 0:21	hhendric@hotmail.com	169	1	7
164	11/17/12 23:13	11/17/12 23:26	A62RZY5BWOZZM	63	1	14
165	11/17/12 23:25	11/17/12 23:47	AVUAN8WKJ443M	102	1	8
166	11/17/12 23:48	11/17/12 23:59	A25KU26Y8FTJPV	129	1	8
167	11/17/12 22:55	11/17/12 23:06	A3OF0DCN3KU8HT	11	1	8
168	11/17/12 23:11	11/17/12 23:18	A47QHTQNUTQVL	42	1	8
169	11/17/12 23:52	11/18/12 0:03	A1ASPIEIOZXL3U	138	1	8
170	11/17/12 23:27	11/17/12 23:32	A3E0AY1XXP8IBQ	77	1	9
171	11/17/12 23:57	11/18/12 0:21	A1R7CIMWXC79UO	170	1	10
172	11/17/12 23:03	11/17/12 23:10	A5VWAZZ49D5WU	22	1	10
173	11/17/12 23:21	11/17/12 23:31	AGX6FRHVVUZWS	74	1	10
174	11/17/12 23:25	11/17/12 23:37	A24JC2CF7MMG41	84	1	10
175	11/17/12 23:46	11/17/12 23:58	A1REWUVT3N8SN7	128	1	11
176	11/17/12 23:37	11/17/12 23:50	A27MJOV91GA8R3	106	1	11
177	11/17/12 23:06	11/17/12 23:17	A17M7G85OEIB3U	35	1	11
178	11/17/12 23:06	11/17/12 23:21	A2IF1VIC7GZUN	50	1	12
179	11/17/12 23:07	11/17/12 23:17	A2GPIQQ2PJ87Q0	38	1	13

As was the case with previous datasets, we believe that these observations were manually altered to produce the desired effect.

There are three things worthy of note here.

First, as before, it is not possible to sort the dataset to generate the order in which the data were saved. They were either originally entered this way (which is implausible, since the data originate in a Qualtrics file, which by default sorts by time), or they were manually altered.

Second, because rows are sorted by the variable of interest, "numberOfUses", if the values that are out of order were changed, it is straightforward to impute what they were changed from. For example, row #141 is "13", the number right before it is "4", and the first non-suspicious value after it is "5". Therefore, if the data were changed, then we can assume that that "13" used to be either a "4" or a "5".

One can do this for each of the 13 highlighted values in the dataset. We can thus reconstruct what the data looked like before they were tampered with. The screenshot below shows the imputed values for all relevant cells. The first new column ("Imputed1") imputes the lowest value that is consistent with the neighboring observations, and the second new column ("Imputed2") shows the highest value. So we see, for example, that that first "13" could have been either a "4" or a "5".

I	StartDate	EndDate	MTurkID	Cum_ID	cheated	Numberofresponses	imputed1	imputed2
137	11/18/12 0:01	11/18/12 0:20	A0TNOFJHTTB1L	167	1	3	3	3
138	11/17/12 23:34	11/17/12 23:53	A1UNAJF3F5HH17	114	1	3	3	3
139	11/17/12 23:44	11/17/12 23:57	A0377367199XXE56OT9GZ	126	1	4	4	4
140	11/17/12 23:36	11/17/12 23:46	A2DUKWR9I6FFZV	99	1	4	4	4
141	11/17/12 23:02	11/17/12 23:17	AF3D6SE2D8UPQ	36	1	13	4	5
142	11/17/12 23:32	11/17/12 23:43	A21MCWTDIKATV5	97	1	9	4	5
143	11/17/12 23:59	11/18/12 0:10	A28XLOE0FMG1ZX	153	1	5	5	5
144	11/17/12 22:55	11/17/12 23:04	A126XP3VIWJKD6	8	1	5	5	5
145	11/18/12 0:07	11/18/12 0:21	A3E1EPRY1OYE34	171	1	9	5	5
146	11/17/12 23:30	11/18/12 0:03	A27AEIRFEFR4US	136	1	5	5	5
147	11/17/12 23:30	11/18/12 0:44	A07854333QXCSICF01THG	191	1	9	5	5
148	11/17/12 23:38	11/17/12 23:50	A311BZDLCK6HQQ	105	1	8	5	5
149	11/17/12 22:59	11/17/12 23:15	A1ILA0RGDB9JJ6	32	1	9	5	5
150	11/17/12 23:11	11/17/12 23:22	A22LZ62E0UC4VL	51	1	5	5	5
151	11/17/12 23:49	11/18/12 0:03	A1SHH0U3JHSCSV	187	1	6	6	6
152	11/18/12 0:03	11/18/12 0:22	A37JD0XUZHQYRC	172	1	6	6	6
153	11/17/12 22:52	11/17/12 23:04	ALML8V38FDV0	9	1	9	6	6
154	11/17/12 23:58	11/18/12 0:14	A3W4736CCV8TT4	157	1	11	6	6
155	11/18/12 0:07	11/18/12 0:15	AUN8AE8UCO3MD	159	1	14	6	6
156	11/17/12 23:13	11/17/12 23:29	Jazzy67033	180	1	6	6	6
157	11/17/12 22:58	11/17/12 23:08	A208MTGA7V29TP	14	1	8	6	7
158	11/17/12 23:51	11/18/12 0:08	A2UL07RCDZRO8R	146	1	10	6	7
159	11/17/12 22:51	11/17/12 23:10	AP37A6DG5TTEM	20	1	7	7	7
160	11/18/12 0:03	11/18/12 0:14	A2H18EYM79ZRCW	156	1	7	7	7
161	11/17/12 23:59	11/18/12 0:09	A1BCCFEEN32OWP	149	1	8	7	7
162	11/17/12 23:03	11/17/12 23:15	A3TN3GQAO61BVB	31	1	7	7	7
163	11/18/12 0:03	11/18/12 0:21	hhendric@hotmail.com	169	1	7	7	7
164	11/17/12 23:13	11/17/12 23:26	A62RZY5BWOZZM	63	1	14	7	8
165	11/17/12 23:25	11/17/12 23:47	AVUAN8WKJ443M	102	1	8	8	8
166	11/17/12 23:48	11/17/12 23:59	A25KUZ6Y8FTJPV	129	1	8	8	8
167	11/17/12 22:55	11/17/12 23:06	A3OF0DCN3KU8HT	11	1	8	8	8

Third, when one reconstructs the data in this way, by replacing the highlighted values with the values one would impute based on the order in which data are sorted, the significant relationship between cheating and creativity on the uses task entirely disappears. It's p-value goes from <.0001 to .292 ("Imputed1") or .180 ("Imputed2").

The Inquiry Committee replicated the anomalies identified by the Complainant by conducting its own comparison and analysis of the dataset from your research records. It found that the mean "# Responses" score of "in-sequence" observations was 7.5, while the mean "# Responses" score of "out-of-sequence" observations was much higher, at 10.1. When the Committee made an adjustment, similar to the Complainant, by replacing an out-of-sequence entry in the "# responses" column with an adjacent "in sequence" score, the mean score of respondents in the Cheating condition decreased from 8.3 to 7.0, greatly closing the gap to the mean score of 6.5 for Honest respondents.

The Committee found an additional anomaly. The data file from your research records, which you identified as the file for this experiment, contains data for 178 participants. However, the published paper reports 208 participants.

Among the questions we would like you to address about Allegation 3 during your interview with the Committee are the following:

1. Are there any descriptions of or assertions about this study or its data in either the Complainant's section or our Inquiry Committee section that, in your view, are incorrect? Please explain each of those in detail.
2. How do you explain the apparent data tampering described by the Complainant and also observed by the Committee?
3. How do you explain the discrepancy between the number of participants in the data file from your research records and the number of participants in the published paper?

Allegation 4b (*Study 1 in the 2012 PNAS Paper*)

From the Complainant's document:

> In this paper, the authors present three studies suggesting that "signing before—rather than after—the opportunity to cheat makes ethics salient when they are needed most and significantly reduces dishonesty" (page 15197).
>
> Here we focus on Experiment 1, which was run at the University of North Carolina (UNC). Our understanding is that Gino supervised the execution of this experiment, and analyzed the data, but perhaps it is worth checking with co-authors to make sure. It is possible that an RA assisted Gino (e.g., [redacted] is thanked in the acknowledgements; she has an online presence as a life coach, making it easy to contact her if deemed appropriate by those investigating these matters).
>
> *Procedure*
>
> In Experiment 1, 101 participants first completed a math puzzles task. "Participants were told that they would have 5 min to find two numbers in each

puzzle that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. Once the 5 min were over, the experimenter asked participants to count the number of correctly solved puzzles, note that number on the [anonymized] collection slip, and then submit both the test sheet and the collection slip to the experimenter." Note that participants had the ability and incentive to cheat on this task, by simply overreporting the number of puzzles that they solved on that collection slip.

After this task, participants filled out a one-page "tax return form." On that form, participants reported both how much money they had earned from the math puzzles task, as well as "how many minutes it took them to travel to the laboratory, and the cost of their commute. These expenses were 'credited' to their posttax earnings from the [math puzzles] task to compute their final payment." Thus, participants were motivated not only to overreport their math puzzle task performance, but also to overreport the cost of their commute.

The critical intervention in this study involved the format of the "tax return form." Participants were randomly assigned to one of three conditions. In the sign-at-the-top condition, participants had to sign at the top of the page, under a statement that read, "I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete." In the sign-at-the-bottom condition, participants instead signed at the bottom of the page. And in the control condition, participants did not sign the form at all.

In sum, this experiment featured one independent variable – the placement of the signature on the tax return form – and two dependent variables – (1) how much participants cheated on the math puzzles task[8] and (2) how many expenses they claimed for their commute on the tax-return form.

Reported Results

Participants in the sign-at-the-top condition overclaimed fewer correct solutions (M=.77) than those in the sign-at-the-bottom condition (M=3.94), $p < .001$. Similarly, they claimed lower commuting expenses (M=$5.27, vs M=$9.62, $p < .01$). These are very big effects: Signing at the bottom vs. top quadrupled cheating on the math task, and doubled cheating on claimed commuting expense.

Anomaly: Out-of-Order Observations In The Dataset

We retrieved the dataset for Experiment 1 from the OSF, where, since 2020, it has been publicly posted (https://osf.io/4b7mu/).

[8] Because of a clever design feature of the math puzzles task, the researchers could link participants' reported math puzzle performance to their actual math puzzle performance. Thus, the researchers could compare how many math puzzles participants reported solving to how many puzzles they actually solved.

The posted dataset seems to be sorted by two columns, first by a column called "Cond", indicating participants' condition assignment (0 = control; 1 = sign-at-the-top; 2 = sign-at-the-bottom), and then by a column called "P#", indicating a Participant ID number assigned by the experimenter.

For example, this is a screenshot of a few dozen observations from the sign-at-the-top and sign-at-the-bottom condition. You can see that within each condition the data are almost perfectly sorted by Participant ID (the first column on the left). However, we have highlighted eight observations that are out of order.[9]

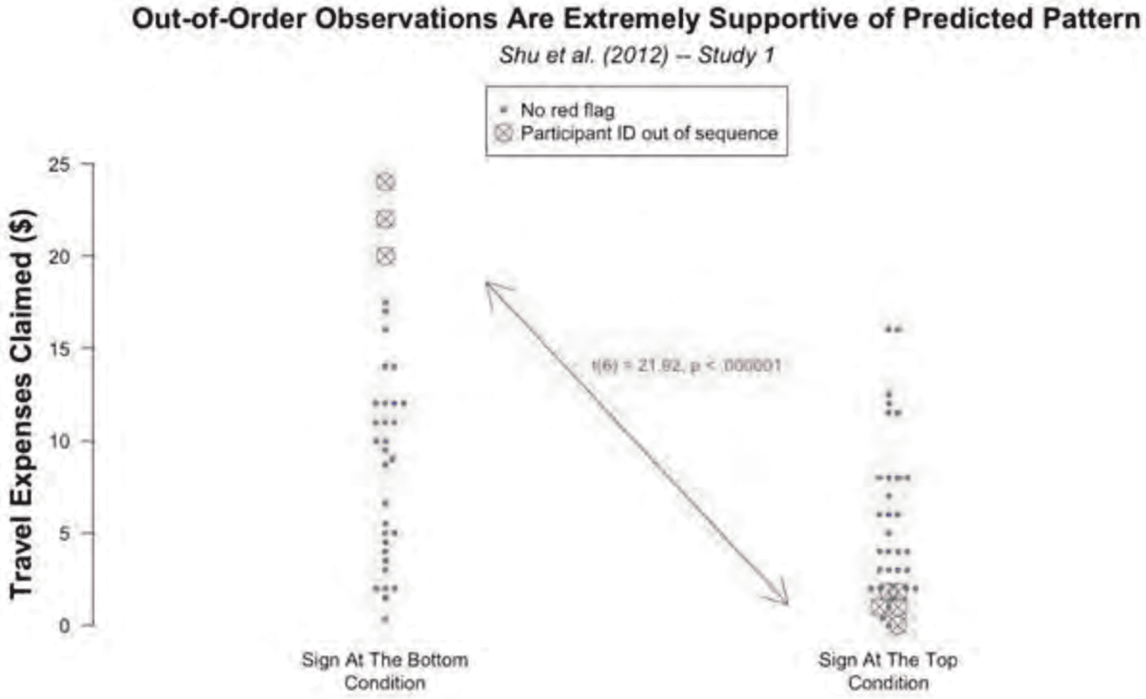
	A	B	C	D	E	F	G	H	I
1	P#	Cond	Stude	Major	CS3	Male	Age	#8	$8
47	35	1	1	Journalism	3	1	19	12	12
48	37	1	1	Economics	4	0	21	9	9
49	40	1	1	Political Science	5	1	29	15	15
50	42	1	1	Political Science	3	0	20	7	7
51	46	1	1	Political Science	4	0	21	12	12
52	49	1	1	English	4	1	21	9	9
53	49	1	1	English	4	1	21	7	7
54	55	1	1	Biology	4	1	21	12	12
55	58	1	1	Environmental Sciences	3	0	20	10	10
56	61	1	1	Nursing	3	0	20	15	15
57	63	1	0	NA		0	22	12	12
58	66	1	1	Business	3	1	20	16	16
59	70	1	1	Chemistry	4	0	21	11	11
60	73	1	1	Chemistry	5	0	20	10	10
61	76	1	1	Chemistry	2	1	19	15	15
62	80	1	1	Nursing	4	0	21	15	15
63	82	1	1	Economics	4	1	21	9	9
64	85	1	1	Psychology	4	0	20	5	5
65	88	1	1	Chemistry	3	0	20	13	13
66	95	1	1	Math Education	3	1	22	13	13
67	51	1	0	NA	0	0	52	4	4
68	12	1	1	Psychology	3	0	20	13	13
69	101	1	0	Business	3	1	20	6	6
70	7	2	0	Political Science	5	1	22	17	17
71	91	2	1	Japanese	2	1	20	17	17
72	52	2	0	NA	5	0	22	8	8
73	5	2	1	Biology/Psychology	2	0	18	16	16
74	8	2	1	Communication Studies	4	0	22	15	15
75	13	2	1	Chemistry	4	0	20	18	18
76	17	2	1	Communications	4	0	21	14	14
77	18	2	1	Communications	4	1	22	13	13
78	22	2	0			0	23	13	13
79	26	2	0			0	47	6	6
80	27	2	1	Mathematics - Sociology	3	1	19	18	18

Participant ID 49 appears twice in the dataset, with identical demographic variables. In addition, Participants 51, 12, 101 are out of order in Condition 1, and Participants 7, 91, and 52 are out of order in Condition 2. We see this as a red flag because, to our knowledge, there is no way to sort the data in a way that achieves this ordering. It suggests that observations must have been moved around (or duplicated), manually, perhaps to alter a participant's condition assignment in a way that achieves the desired result.

A deeper dive into the data of these eight participants provides support for this form of data tampering. The figure below shows a "Bee Swarm" plot, which depicts each observation in the dataset, separately for each experimental

[9] There is one additional out-of-order observation in the control condition (not shown). But for simplicity we focus our analyses on the comparison between the sign-at-the-bottom and sign-at-the-top conditions. That one out-of-order control condition observation scored highly on overreporting math puzzles, with a score of 4 (the median is 1), and low on travel expenses claimed ($1).

condition. The plot depicts one of the cheating measures, the amount of money participants claimed in travel expenses. Every "normal", in-sequence observation is represented as a blue dot, whereas the eight out-of-sequence observations are represented as red X's.



In the sign-at-the-bottom condition, the authors predicted expenses to be high, and indeed the three out-of- sequence observations in this condition are the very highest. In the sign-at-the-top condition, the authors predicted expenses to be low, and indeed the five out-of-sequence observations in this condition were all among the very lowest. As shown in the plot, the condition difference between just these eight observations on this dependent variable is very highly significant; it would occur by chance less than 1 in a million times.[10] We have been unable to generate a benign explanation for this pattern.

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[10] This p-value (probably correctly) assumes that there are truly no differences between conditions. We ran 1 million simulations that examined what this p-value would be if we instead very conservatively assumed that the condition differences are exactly as large as what was observed in the data. In each simulation, we drew five observations at random from the sign-at-the-top condition and three observations at random from the sign-at-the-bottom conditions (without replacement), mirroring the number of flagged observations we observed in each condition in the data. We then conducted a t-test to analyze the condition difference between those observations. We observed a t-value as large as what we observed for the flagged observations (21.92) only 10 times in those 1 million simulations, suggesting a p-value of 1 in 100,000. Thus, even when we assume that the true condition differences are exactly as large as they are in the observed dataset, there is only an extremely small chance of finding such a large condition difference among a *randomly* selected subset of eight observations.

> A similar effect emerges when analyzing the other dependent variable, the overreporting of the number of math puzzles solved. The five out-of-sequence observations in the sign-at-the-top condition, predicted to be low, are all equal to zero, the lowest value observed in the dataset. The three out-of-sequence observations in the sign-at-the-bottom condition, predicted to be high, were all greater than zero: 2, 6, and 7. The condition difference between these eight observations on this dependent variable was again highly significant, even with so few observations: $t(6) = 4.48$, $p = .004$.[11]
>
> In sum, there are eight observations that are out of order in this dataset, and to our knowledge no sorting function can account for their placement. This suggests to us that these eight observations may have been altered to produce the desired effect. Supporting that contention, those eight observations play a sizable role in producing the published effect in Study 1, as all eight observations have values on the dependent variables that are extremely consistent with the authors' hypothesis.
>
> Before moving on, we should be clear that we do not believe that these eight observations are necessarily the only ones that may have been tampered with. Rather, they may be a mere subset, identifiable only because the person tampering with the data neglected to re-sort the dataset. We cannot identify every instance of fraud. We can only identify it when those doing the tampering leave observable traces of what they have done.

The Inquiry Committee replicated the anomalies identified by the Complainant by conducting its own comparison and analysis of the dataset from your research records. It found that when the anomalous observations were removed from the dataset, the mean score on Travel Expenses of the "Signature at Top" group increased from 5.3 to 6.0, and the mean score of the "Signature at Bottom" group decreased from 9.6 to 8.4. The adjustment reduced the difference between the two groups in a direction opposite to that of the authors' hypothesis.

Among the questions we would like you to address about Allegation 4b during your interview with the Committee are the following:

1. Are there any descriptions of or assertions about this study or its data in either the Complainant's section or our Inquiry Committee section that, in your view, are incorrect? Please explain each of those in detail.
2. How do you explain the apparent data tampering described by the Complainant?

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[11] Using the same conservative approach described in the previous footnote, the p-value is .065

APPENDIX A
ALLEGATIONS

Relevant Publications:

Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 ("*2020 JPSP Paper*")

Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 ("*2015 Psychological Science Paper*")

Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 ("*2014 Psychological Science Paper*")

Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*")

Allegation 1:

Dr. Gino falsified and/or fabricated the dataset for ***Study 3a in the 2020 JPSP Paper*** by altering observations to affect the significance of findings of the study in the hypothesized direction. In particular:

a) In the promotion-focus condition, by changing extreme values of "7" to "1" to drive the expected effect. Specifically, for 9 observations there seems to be a mismatch between participants' impurity ratings and the words participants chose to describe how they felt;
b) In the prevention-focus condition, by changing some values of "1" to either "2" or "3" to drive the expected effect. A number of observations also show a mismatch between participants' impurity ratings and the words participants chose to describe how they felt.

Allegation 2:

Dr. Gino falsified and/or fabricated the datasets for ***Study 4 in the 2015 Psychological Science Paper*** by altering a number of observations. Notably, 20 observations substantially contribute to the significance of the hypothesized effects, and these same 20 observations presented an anomalous response pattern, in which study participants seemingly entered "Harvard" as their

response to a question asking them to indicate "Year in School," in contrast to the vast majority of research participants who correctly answered this question.

Allegation 3:
Dr. Gino falsified and/or fabricated the datasets for ***Study 4 in the 2014 Psychological Science Paper*** by altering a number of observations. In particular, when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found, it appears there are 13 observations out of sort within the cheating condition. These observations substantially contribute to the significance of the hypothesized effects. When these observations are corrected with the values implied by the sort, the effect in the expected direction is no longer significant (from p=.0003 to p >.17)

Allegation 4:
With respect to ***Study 1 in the 2012 PNAS Paper***:

a) Dr. Gino falsified and/or fabricated the results by removing part of the description of study instructions to research participants from a draft of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. Such instructions pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.
b) Dr. Gino falsified and/or fabricated the datasets by altering a number of observations. In particular, when sorted by "experimental condition" and by "participant ID number," the dataset for Study 1 appears to include 1 duplicate observation and 8 observations where the "participant ID number" is out of sort. The out of sort observations substantially contribute to the significance of the hypothesized effects.

Exhibit 5

Inquiry Committee Memo Addendum sent to Respondent on January 24, 2022

Confidential

Date: January 24, 2022

To: Francesca Gino – Respondent in Case RI21-001

From: Teresa Amabile, Chair - Inquiry Committee
Robert S. Kaplan, Inquiry Committee Member

Subject: Additional Information Related to Allegation 4a of Research Misconduct

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As part of its inquiry into the research misconduct allegations that were shared with you on October 27, 2021 (see Appendix A), the Inquiry Committee has been gathering preliminary data and information to begin assessing whether the allegations may have substance and thus warrant an investigation. This is an addendum to the memorandum the Committee shared with you on January 14, 2022. It includes information pertaining to allegation 4a, along with some questions the Committee will ask you to address in the interview.

Allegation 4a (*Study 1 in the 2012 PNAS Paper*)

The anonymous Complainant did not include additional information about this allegation in its written document to the Inquiry Committee. The Complainant did share the following information with the Committee via the HBS Research Integrity Officer:

- The Complainant alleged that Study 1 was not run as described in the published paper and that one of the dependent variables, self-reported performance on the math task, was measured before the independent variable (the experimental manipulation of filling out the tax form) was administered.
- Furthermore, the Complainant alleged that email exchanges occurred among the co-authors of the paper about the content of early drafts of the manuscript that contained the original study materials. These materials included the Collection Slip that appears to have been used to compensate participants after the math task, and a description of the sequence in which materials were presented to participants.
- Finally, the Complainant alleged that an email exchange occurred in which a co-author of the paper, concerned about a potential flaw in the execution of the study, asked for more information about the initial study procedure. The Complainant further alleged that, subsequent to that request, the Respondent revised the manuscript draft by changing the description of the study procedures so as to obscure the flaw and by removing the study materials.

In order to verify this information, the Inquiry Committee conducted a focused search of your email records, in an effort to identify correspondence among the coauthors of the paper that may have included early versions of the manuscript. The email search yielded no results, as it appears that your email records do not go back to the time when this manuscript was being written.

The Committee also conducted a review and analysis of study documents found in your laptop (\IRB UNC\CLOSED STUDIES\Taxes and over-reporting (10-1127)) and compared these documents to the written description of the study procedures in the published paper.

The review revealed some ambiguities and inconsistencies between the documents in your study records and the study procedure as reported in the paper. The Committee's analysis identified two specific issues, having to do with: (1) a potential flaw related to the timing of the dependent variable; and (2) the description of the study's procedure in the published article, which could be seen as ambiguous or potentially misleading.

Issue #1: Timing of the Performance-self-report Dependent Variable

1. Pages 7-8 in the IRB protocol in your research records (Taxes and Over-Reporting Behavioral Study IRB Application CLEAN.doc) contain a step-by-step procedure for the experiment. From that procedure, it seems that participants were paid in Room 1, before they saw the tax form in Room 2. Based on this description, one can assume that participants were compensated based on a tally of the number of puzzles solved (their performance on the math task).
2. The tax form (TaxStudyForm.doc), Line 1, states "Please enter the payment you received on the problem solving task." The use of the past tense in this instruction implies that payment had already been made to participants before they saw the tax form.
3. The procedure description in the IRB protocol does not explicitly state that the participants tallied up and recorded their own performance scores in Room 1. However, the procedure reported in the 2012 paper clearly states that the participants themselves tallied up and recorded their performance on the math task, using the Collection Slip, while still in Room 1.
4. The matrix stimuli document (matrix stimuli.doc in your research records) also makes it clear that participants themselves tallied up and recorded their performance and, in addition, that participants were then paid for their performance by the experimenter in Room 1. The instruction page (first page of that document) states: "When finished: Fill out the attached collection slip. Submit the collection slip to the experimenter. In order to enable the experimenter to quickly calculate your payment…" The last sentence in those instructions reads, "The experimenter will give you your payment." The Committee assumes, therefore, that participants knew that their self-reported performance on the Collection Slip was known to Experimenter 1, as was their payment for performance, and that they had their payment in their possession when they moved to Room 2. This seems to make it much less likely that they would alter their self-reported performance in Room 2, after seeing the tax form. Presumably, participants would assume that the experimenter in Room 2 would know that they had already been paid for puzzle performance in Room 1; the only payment issue in Room 2, then, was compensation for expenses, minus taxes. With payment already received in Room 1, overstating income on the tax form would result only in a higher tax to be computed in Room 2.

5. The Committee noted that the tax form, which participants filled out in Room 2, did not request that participants enter the number of puzzles they solved correctly; it only requested the amount of the payment they had received, based on puzzle performance. Thus, it appears that the only time during the experiment that participants directly self-reported their performance was on the Collection Slip in Room 1. The recording of the dependent variable, self-reported puzzle performance, therefore, appears to have occurred before the independent variable manipulation. In this scenario, many participants may, indeed, have cheated in recording their puzzle performance on the Collection Slip to increase their payment, but that cheating would not have depended on the independent variable of signing the tax form at the top or the bottom or not at all, because they would not yet have seen the tax form.
6. The Committee also noted an additional possible flaw in the study procedure, but the evidence is ambiguous because there are two similar documents in your research records, one called "matrix stimuli," dated February 20, 2010, and one called "matrix stimuli new," dated July 11, 2010. It is unclear which document was actually used in data collection. The earlier document has participants fill in "Your Participant ID Number" at the top of the Collection Slip. Since this would have further made it obvious to participants that whatever they wrote on the Collection Slip was identifiable with them, that would have also invalidated the indirect measure of self-reported puzzle performance on the tax form.
7. Putting all of this together: if, indeed, the dependent measure of self-reported puzzle performance was collected before the independent variable manipulation, as suggested by the evidence the Committee analyzed, this would be a serious flaw in the study procedure. Even if the dependent measure analyzed in the experiment was derived from Line 1 of the tax form (income received for math puzzle performance), that indirect measure of self-reported performance would not have been a valid measure of cheating as a function of the tax form, given that participants had already been paid for puzzle performance. In either case, it is possible that the study procedure contained a serious flaw.

Issue #2: Ambiguous Description of the Study Procedure

Neither of the possible flaws described in Issue #1 is evident in the description of the study procedure that appears in the published paper. Specifically:

1. The published paper (page 15199) states that "The sole purpose of the collection slip was for the participants themselves to learn how many puzzles in total they had solved correctly." The Committee's analysis, above, suggests that the Collection Slip was also used to compute participants' payment (which they received immediately) and, possibly, to get the participants' ID number. Thus, this may be a misstatement of the purpose of the Collection Slip.
2. The published paper (page 15199) states, referring to the expenses participants reported on the tax form in Room 2: "These expenses were "credited" to their posttax earnings from the problem-solving task to compute their final payment." This is the only place in the Method section of the published paper where

payment is mentioned. Thus, the Committee's analysis, above, suggests that this part of the published procedure may obfuscate when participants received their payments.

Among the questions we would like you to address about Allegation 4a during your interview with the Committee are the following:

1. Were any changes made to the procedure, as described in the IRB protocol that we have from your research records, for the experiment as it was actually carried out? Please explain what those changes were and why they were made. Also, please explain: (a) exactly when and how participants self-reported their performance and, if they did so more than once during the experiment, which of those was used as the dependent measure of self-reported performance; and (b) exactly when, during the experiment, participants received payment and, if they received payment in both Room 1 and Room 2, how each payment was computed.
2. Are there any descriptions of or assertions about this study or its procedures in the above information that, in your view, are incorrect? Please explain each of those in detail.
3. Can you explain the possible incongruences between the documents in your study records and the published paper?
4. Did you alter the procedure description in a substantive way between the first draft of that section of the paper and the final version? If so, what were the alterations?
5. Can you provide locations on your hard drive of drafts of the manuscript and any correspondence with co-authors from the time period in which data were collected and the paper's early drafts were prepared and exchanged between co-authors?

APPENDIX A
ALLEGATIONS

Relevant Publications:

Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 ("*2020 JPSP Paper*")

Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 ("*2015 Psychological Science Paper*")

Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 ("*2014 Psychological Science Paper*")

Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*")

Allegation 1:

Dr. Gino falsified and/or fabricated the dataset for ***Study 3a in the 2020 JPSP Paper*** by altering observations to affect the significance of findings of the study in the hypothesized direction. In particular:

a) In the promotion-focus condition, by changing extreme values of "7" to "1" to drive the expected effect. Specifically, for 9 observations there seems to be a mismatch between participants' impurity ratings and the words participants chose to describe how they felt;
b) In the prevention-focus condition, by changing some values of "1" to either "2" or "3" to drive the expected effect. A number of observations also show a mismatch between participants' impurity ratings and the words participants chose to describe how they felt.

Allegation 2:

Dr. Gino falsified and/or fabricated the datasets for ***Study 4 in the 2015 Psychological Science Paper*** by altering a number of observations. Notably, 20 observations substantially contribute to the significance of the hypothesized effects, and these same 20 observations presented an anomalous response pattern, in which study participants seemingly entered "Harvard" as their response to a question asking them to indicate "Year in School," in contrast to the vast majority of research participants who correctly answered this question.

Allegation 3:
Dr. Gino falsified and/or fabricated the datasets for ***Study 4 in the 2014 Psychological Science Paper*** by altering a number of observations. In particular, when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found, it appears there are 13 observations out of sort within the cheating condition. These observations substantially contribute to the significance of the hypothesized effects. When these observations are corrected with the values implied by the sort, the effect in the expected direction is no longer significant (from p=.0003 to p >.17)

Allegation 4:
With respect to ***Study 1 in the 2012 PNAS Paper***:

a) Dr. Gino falsified and/or fabricated the results by removing part of the description of study instructions to research participants from a draft of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. Such instructions pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.
b) Dr. Gino falsified and/or fabricated the datasets by altering a number of observations. In particular, when sorted by "experimental condition" and by "participant ID number," the dataset for Study 1 appears to include 1 duplicate observation and 8 observations where the "participant ID number" is out of sort. The out of sort observations substantially contribute to the significance of the hypothesized effects.

Exhibit 6

Respondent's Written Response to Inquiry Committee Memos received on February 22, 2022

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February 22, 2022

VIA ELECTRONIC MAIL ([redacted])

Diane E. Lopez, Esq.
Vice President and General Counsel
Harvard University
Smith Campus Center, Suite 980
1350 Massachusetts Avenue
Cambridge, MA 02138

Re: Dr. Francesca Gino

Dear Ms. Lopez,:

I am writing on behalf of Dr. Francesca Gino, the respondent in a research misconduct matter pending at Harvard Business School ("HBS"). We request that you forward this letter to Dr. Alain Bonacossa, Research Integrity Officer ("RIO") at HBS, and the members of the Inquiry Committee: Dr. Teresa Amabile and Dr. Robert Kaplan. On behalf of Dr. Gino, we thank you, Dr. Bonacossa, the Inquiry Committee, and HBS for your ongoing efforts in this process. For the reasons described below, we respectfully submit that there is insufficient evidence of possible research misconduct to warrant an investigation.

I. The Allegations

Noted in the October 27, 2021 letter from the RIO to Dr. Gino (the "Notice of Inquiry") are four allegations of falsification and/or fabrication by Dr. Gino. Each allegation corresponds to a different paper of which Dr. Gino is an author. According to the Notice of Inquiry, Dr. Gino:

1. "… falsified and/or fabricated the dataset for Study 3a in the *2020 JPSP Paper* by altering observations to affect the significance of findings of the study in the hypothesized direction";[1]

[1] Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 (the "*2020 JPSP Paper*").

2. "…falsified and/or fabricated the datasets for Study 4 in the *2015 Psychological Science Paper* by altering a number of observations…";[2]

3. "…falsified and/or fabricated the datasets for Study 4 in the *2014 Psychological Science Paper* by altering a number of observations";[3] and

4. "…falsified and/or fabricated the results [of Study 1 in the *2012 PNAS Paper*] by removing part of the description of study instructions to research participants from a draft of the manuscript submitted for publication" and "by altering a number of observations."[4]

See Notice of Inquiry. For the reasons described herein, we and Dr. Gino respectfully disagree with the allegations.

II. Applicable Definitions

Harvard Business School's Interim Policy and Procedures for Responding to Allegations of Research Misconduct (the "HBS Policy") defines research misconduct as "fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results." *See* HBS Policy at App. A. The Notice of Inquiry states that the allegations involve falsification and/or fabrication of data. *See* Notice of Inquiry.

The HBS Policy defines falsification as "manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record." *See* HBS Policy at App. A. It defines fabrication as "making up data or results and recording or reporting them." *See id.* Research is defined as "a systematic experiment, study, evaluation, demonstration, or survey designed to develop or contribute to general knowledge or specific knowledge by establishing, discovering, developing, elucidating, or confirming information about, or the underlying mechanism relating to, the matters to be studied." *See id.* For a finding of research misconduct, the alleged fabrication or falsification must be intentional, knowing, or reckless and constitute a "significant departure from accepted practices of the relevant research community." *See id.* at § (III)(A). Importantly, "[r]esearch misconduct does not include honest error or differences of opinion." *See id.* at App. A.

The HBS Policy does not define the terms intentional, knowing, or reckless, and therefore we encourage the Inquiry Committee to consider the definitions from Black's Law Dictionary. As cited in a 2018 administrative decision regarding research misconduct findings, Black's Law

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[2] Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 (the "*2015 Psychological Science Paper*").

[3] Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 (the "*2014 Psychological Science Paper*").

[4] Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 (the "*2012 PNAS Paper*").

Dictionary defines intentional as "[d]one with the aim of carrying out the act." *See In re Decision of Kreipke*, Recommended Decision, Docket No. C-16-402, Decision No. CR5109 (May 31, 2018) at p. 14. It defines knowing as "[h]aving or showing awareness or understanding; well-informed" or "[d]eliberate; conscious." And it defines reckless as "[c]haracterized by the creation of a substantial and unjustifiable risk of harm to others and by a conscious (and sometimes deliberate) disregard for or indifference to that risk; heedless; rash," and further states that "[r]eckless conduct is much more than mere negligence: it is a gross deviation from what a reasonable person would do." *See id.* at p. 14; *see also* Black's Law Dictionary.

Pursuant to the HBS Policy, the Inquiry Committee is tasked with determining whether: "(1) there is a reasonable basis for concluding that the allegation falls within the definition of research misconduct; and (2) the preliminary information-gathering and preliminary fact-finding from the inquiry indicates that the allegation may have substance." *See* HBS Policy at § (IV)(C). We respectfully submit that the allegations lack substance, and in multiple incidences do not align with actions that fall within the definition of research misconduct.

III. Comments on the Allegations

A. Comments on Allegation 1

Allegation 1 alleges, "Dr. Gino falsified and/or fabricated the dataset for Study 3a in the *2020 JPSP Paper* by altering observations to affect the significance of findings of the study in the hypothesized direction. In particular:

> (a) in the promotion-focus condition, by changing extreme values of "7" to "1" to drive the expected effect. Specifically, for 9 observations there seems to be a mismatch between participants' impurity ratings and the words participants chose to describe how they felt;
>
> (b) in the prevention-focus condition, by changing some values of "1" to either "2" or "3" to drive the expected effect. A number of observations also show a mismatch between participants' impurity ratings and the words participants chose to describe how they felt."

See Notice of Inquiry at p. 4. In the *2020 JPSP Paper*, Dr. Gino and her co-authors argued and showed that the "focus" or motivation someone has when networking influences how that person experiences networking and the frequency with which they engage in it. This paper was a follow-up to a 2014 paper published in *ASQ* that showed networking often feels inauthentic and immoral.

Allegation 1 focuses on two types of data discrepancies. First, whether extreme values were changed to drive the expected effect, and second, whether numerical impurity ratings given by participants do not match the words participants used to describe how they felt. Dr. Gino was not the person cleaning the dataset and preparing it for analysis, and will need more time to understand the discrepancies alleged. [redacted], Dr. Gino's research associate at this time, would often help conduct studies and clean data, sometimes with the help of research associates that were hired temporarily or undergraduate students helping for class credit. Dr. Gino did not run this study and did not tamper with the data herself, but she is unsure if the study was ran by [redacted] or

corresponding author [redacted] is also the corresponding author on the paper and a co-author of Dr. Gino. Over the years, [redacted] and Dr. Gino have met regularly to discuss their projects, in person and virtually.

In her work, Dr. Gino relies on the help of research associates, doctoral students or junior colleagues collaborating on any given project to prepare IRB applications, conduct laboratory studies, clean the data, prepare it for analyses and often conduct preliminary analyses on the data. It is common practice for Dr. Gino to share her account information for software programs with those working with her, so that they can access information needed to run or post studies. Over the years, Dr. Gino's research assistants, students, and co-authors have had her account information for MTurk, Qualtrics, and other platforms if sharing allowed research to move forward at a good pace, without Dr. Gino experiencing a bottleneck. Pre-COVID, it was not unusual for research associates or students to work in Dr. Gino's office, entering data on her computer or conducting analyses with her to aid their learning. This type of delegation is a common practice amongst behavioral scientists.

To the best of her knowledge, the data Dr. Gino used for the analyses in this study is in the file: data study3A anonymous.sav. Dr. Gino also notes that the words used by the participants in the essay are not supposed to correspond with the impurity ratings. That data concerns a networking event in broad terms, and as discovered in prior research, a person can feel satisfied or happy having connected to a new person, but impure due to the instrumental nature of creating or nurturing a new tie. As Dr. Gino did not run the study or prepare the data in the *2020 JPSP Paper*, Allegation 1 cannot have substance.

B. Comments on Allegation 2

Allegation 2 claims, "Dr. Gino falsified and/or fabricated the datasets for Study 4 in the *2015 Psychological Science Paper* by altering a number of observations. Notably, 20 observations substantially contribute to the significance of the hypothesized effects, and these same 20 observations presented an anomalous response pattern, in which study participants seemingly entered 'Harvard' as their response to a question asking them to indicate 'Year in School,' in contrast to the vast majority of research participants who correctly answered this question." *See* Notice of Inquiry at p. 4-5.

Dr. Gino and her co-authors argued in the *2015 Psychological Science Paper* that experiencing inauthenticity leads people to feel immoral. Dr. Gino was first author, and [redacted] was corresponding author. Dr. Gino herself did not clean the dataset and prepare it for analysis. She believes that this discrepancy is simply due to student participants who answered the question incorrectly because they are often asked to report which college or school they attend. It is possible that a student reading the questions quickly answered in the wrong way. However, as Dr. Gino did not clean the dataset, she cannot be sure who did so.

To the best of her knowledge, the data Dr. Gino used for the analyses in the study is in the file name: data Experiment_4.sav. She has attempted to reconstruct the history of this paper, but

is not certain who was in charge of cleaning the data.[5] It appears the two datasets may have been merged, but Dr. Gino cannot confirm that is what occurred. The data collection occurred over eight years ago, making it difficult to remember precisely. Dr. Gino remembers clearly, however, that she was not the person who cleaned the dataset or prepared it for analysis. Because Dr. Gino did not clean the relevant data or alter the datasets, Allegation 2 cannot have substance.

C. Comments on Allegation 3

Allegation 3 states, "Dr. Gino falsified and/or fabricated the datasets for Study 4 in the *2014 Psychological Science Paper* by altering a number of observations. In particular, when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found, it appears there are 13 observations out of sort within the cheating condition. These observations substantially contribute to the significance of the hypothesized effects. When these observations are corrected with the values implied by the sort, the effect in the expected direction is no longer significant (from p=.0003 to p >.17)." *See* Notice of Inquiry at p. 5.

In this paper, Dr. Gino and her co-author, [redacted] built on prior work to argue and demonstrate, across five studies, that dishonesty leads to creativity. The data for this paper was collected at the University of North Carolina (UNC) online and at HBS. When Dr. Gino moved to HBS, she continued to run studies at the behavioral laboratory at UNC Kenan Flagler Business School with the help of [redacted] her lab manager at UNC. As lab manager, [redacted] had many responsibilities, including helping with IRB applications, posting studies, preparing any materials needed for studies, piloting studies and making changes to procedures if needed, conducting studies, paying participants, entering data, cleaning data if needed and conducting preliminary analyses. Dr. Gino recruited two individuals to help create the experimental materials in these studies: [redacted] a research computing specialist at the Decision Science Laboratory at the Harvard Kennedy School, and [redacted] a programmer who helped other HBS colleagues develop programs to use in their work.

The data at issue in Allegation 3 was collected on MTurk using a program developed by Mr. [redacted] since the study involved a virtual coin-toss task. [redacted] created links to use to download the data and links to use to erase the data once downloaded so the program could be used again. Dr. Gino believes [redacted] conducted the study and received IRB approval at UNC. Dr. Gino is unable to find any record of IRB approval from HBS. To the best of Dr. Gino's knowledge, the data used for the analyses in the study is in the file named: data DAC Study_4 PS.sav.

Dr. Gino did not tamper with the data at issue. As is most often the case when conducting experiments, the research assistant or a co-author is responsible for downloading the data, cleaning

[5] During the relevant period, [redacted] worked as a research associate for Dr. Gino and would often conduct studies with the help of undergraduate students. [redacted]'s duties included preparing IRB applications, preparing and conducting Qualtrics surveys, conducting studies, entering data, downloading data, and cleaning data, as necessary. Dr. Gino does not know for certain whether [redacted] performed the data cleaning for the paper at issue.

the data if necessary (e.g., removing responses from the research assistant him/herself running tests to assure the survey works correctly) and preparing it in a format that can be used for analyses. Dr. Gino generally received data files in excel or cvs format and then uploaded them in SPSS to conduct the analyses. The research assistant would also let Dr. Gino know how many participants started the study but did not complete it, usually because they did not pass an attention check. It was also common practice in the lab for Dr. Gino to share her account information for software programs with the lab manager, [redacted] so that she could access information needed to run or post studies.

Dr. Gino acknowledges it is possible that the incorrect sorting is due to how the data was merged by the research assistant, and believes the data showing whether a participant cheated or not came directly from the software/webpage developed for this study. A research assistant would need to merge that data with the data from the other measures. Dr. Gino generally did not conduct quality checks on the data unless the research assistant raised specific issues, and there was no apparent need here. Dr. Gino believes it is possible the research assistant coded the uses from the original file, potentially sorting the uses alphabetically or by length of the written text before coding them into numbers. However, determining if this is the case would be difficult. The data at issue was exchanged as Dr. Gino traveled between UNC and HBS multiple times to work with [redacted] and other co-authors. This was occurring at a time when files were often still exchanged via USB keys.

Additionally, Dr. Gino wishes to clarify that the number of the participants reported in the data file and in the paper are consistent, showing 208 participants for Study 5. *See* Inquiry Committee Memo to Respondent at p. 23. While Study 5 had 208 participants, Study 4 had 178 participants. Because Dr. Gino did not merge, clean, or otherwise alter the data in question, Allegation 3 cannot be found to have substance.

D. Comments to Allegation 4a

Allegation 4a claims with respect to Study 1 in the *2012 PNAS Paper*, "Dr. Gino falsified and/or fabricated the results by removing part of the description of study instructions to research participants from a draft of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. Such instructions pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results." *See* Notice of Inquiry at p. 5.

The *2012 PNAS Paper* aimed to identify a simple intervention that "nudges" people to be more honest when filling out forms, such as their income tax return or a mileage report for the company that insures their car. Specifically, based on the results of three experiments, the co-authors claimed that if an organization asks people to sign a statement promising to tell the truth before they fill out a form, they will provide more honest information than if they sign such a statement after providing the requested information. The paper combined two previously unpublished empirical efforts: (1) two laboratory experiments by [redacted], [redacted], and Gino that claimed to demonstrate the "signing first" effect, and (2) one field experiment conducted at an insurance company by [redacted] and [redacted] that also claimed to show the "signing first"

effect. [redacted] had presented the results of his and [redacted]'s data in multiple public forums, which is how [redacted], [redacted], and Gino learned they were all working on similar research questions. By early 2011, the five co-authors decided to combine efforts as their individual papers responded to limitations within the others: the Shu-Gino-Bazerman studies claimed to offer well-controlled laboratory experiments, while the Mazar-Ariely study claimed to provide a field experiment using data from an insurance company.

The two laboratory studies (Experiment 1 and Experiment 2) in this paper were conducted at UNC, receiving IRB approval in June 2010. The data was collected at the behavioral laboratory at UNC Kenan Flagler Business School, and Dr. Gino's lab manager, [redacted] ran the studies. Dr. Gino believes the original, raw data is labeled: Tax Study STUDY 1 2010-07-13.xlsx.

The studies were conducted on paper, as were most studies Dr. Gino conducted while on the faculty at UNC, and in her first few years at HBS. [redacted] was in charge of modifying materials as needed before printing them out if the changes were required to the procedures. At that time, IRB applications were even delivered through the mail at UNC and small modifications to procedure did not need further IRB approval unless they affected the research question under investigation or were large in scope. Given that Dr. Gino had used the matrix task in the past, she cannot be confident that the materials in her folders for this particular study are the ones that were printed and used in the study that were conducted by [redacted] Any changes made would have been discussed, but those conversations were often verbal. To the best of Dr. Gino's knowledge, the original paper versions of the studies do not exist anymore. The committee is respectfully reminded that this presents a good example of why older papers, typically beyond six years old, are not reviewed for research misconduct matter. *See* 42 CFR § 93.105(a). The passage of time presents common problems with such investigations – loss of data and faded memories being the most common. Such is the case here, where in this allegation, the subject paper is now more than 10 years old.

We respectfully note that the unavailability of records is only to be considered evidence of research misconduct where it can be shown "by a preponderance of evidence that the respondent intentionally, knowingly, or recklessly had research records and destroyed them, had the opportunity to maintain the records but did not do so, or maintained the records and failed to produce them in a timely manner ***and*** that the respondent's conduct constitutes a significance departure from accepted practices of the relevant research community." 42 C.F.R. § 93.106(b)(1) (emphasis added). The UNC General Records Retention and Disposition Schedule instructs a researcher to destroy in office IRB study records three years after the completion date of the research study. *See* UNC General Records Retention and Disposition Schedule, Series # 6.6. As the research study at issue here was completed during a period more than three years in the past, the lack of original in office paper records is not a significant departure from accepted practices.

When writing the descriptions for the studies, as a general rule, Dr. Gino provides any needed details for other authors to understand the procedures and follow them in they were to re-run the study themselves. Dr. Gino does not include every single statement used in the instructions, but ensures clarity regarding the steps followed in conducting the study. This is standard practice in the field of behavioral sciences.

The description at issue, absent in the final publication, appears in the versions of the paper dated February 23, 2011[6] and March 9, 2011.[7] The information is missing from the March 15, 2011 version of the paper.[8] The later version does not include track changes, so Dr. Gino cannot know for certain who deleted the information from the draft of the paper. However, Dr. Gino was able to locate an email from co-author [redacted] from March 9, 2011 where [redacted] asks for clarity regarding the collection slip timing and cheating in the matrix tax, as participants had to indicate their performance on the tax form. Dr. Gino had previously relied on a collection slip in other studies and believes the write up of the study reflected procedures used in those other studies. Upon receiving the email from [redacted] bringing the discrepancy to her attention, Dr. Gino would have checked with the research assistant who ran the study, [redacted] to assure there were no issues and the details were described accurately to how the study was in fact conducted. Dr. Gino and [redacted] held regular meetings to check in during Dr. Gino's first years at HBS while studies continued to occur at UNC under [redacted]

The language in the IRB application, as the Inquiry Committee noted, is ambiguous about the procedure used. It is basic, foundation knowledge in experimental research to collect the dependent measure after the manipulation occurred. Dr. Gino is confident [redacted] would have pointed out this procedural flaw while running the study if in fact the manipulation happened after participants received payment for their matrix task.[9] Dr. Gino is also confident that participants received no payment before the end of the entire study. Because of the number of years since these studies were conducted, Dr. Gino cannot remember whether changes to the procedures as stated in the IRB were made, and if so, what those changes were. Any changes would have been made to assure (1) the procedures allowed the researchers to test the hypotheses they were set out to test, and (2) that all steps were clear to participants. If the flaw discussed in Allegation 4a had occurred, Dr. Gino asserts that [redacted] would have brought it to her attention and it would have been remedied. If Dr. Gino made the changes as alleged in Allegation 4a, it would have been to fix an inaccuracy in the draft manuscript and to ensure the experiment procedure was described accurately. Therefore, Allegation 4a cannot be found to have substance.

Further correspondence related to this paper can be found in the [redacted] folder in Dr. Gino's inbox, as well as the [redacted] folder, the [redacted] folder, or the [redacted] folder. Because the project has multiple co-authors, related correspondence may be located in any and all of the folders. When Dr. Gino joined HBS, she encountered limits on inbox folder size. Due to this limitation, she deleted emails with attachments to save space. Dr. Gino saves drafts of papers in her hard drive: fgino/Documents/Submissions/PUBLISHED/Signing on the dotted line.[10]

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[6] Labeled *Signing on the dotted line turns moral gaze inward 2011-02-23* in Dr. Gino's files.
[7] Labeled *Making Ethics Salient 2011-03-09_vs2* in Dr. Gino's files.
[8] Labeled *Making Ethics Salient 2011-03-15* in Dr. Gino's files.
[9] Dr. Gino asserts that [redacted] always conducted at least one pilot study to assure there were no procedural issues. If participants had received payment prior to completion, it would have been very difficult to get money back for those who failed completion, something that [redacted] and Dr. Gino would have flagged and changed.
[10] While Dr. Gino makes an effort to save multiple drafts of every paper, this folder may not contain every draft circulated among co-authors.

E. Comments to Allegation 4b

Allegation 4b claims that in Study 1 in the *2012 PNAS Paper*, "Dr. Gino falsified and/or fabricated the datasets by altering a number of observations. In particular, when sorted by 'experimental condition' and by 'participant ID number,' the dataset for Study 1 appears to include 1 duplicate observation and 8 observations where the 'participant ID number' is out of sort. The out of sort observations substantially contribute to the significance of the hypothesized effects." *See* Notice of Inquiry at p. 5.

When Dr. Gino's lab manager, [redacted] would conduct studies at UNC, she would prepare "ID cards" to distribute to the participants entering the lab. The ID would include numbers used to track the number of participants who took part in the study. In each session, the ID were unique, but if the participant returned their ID card at the end of the study session, it was not unusual for [redacted] to re-use them. Each session only had a few participants, as the lab was quite small and only consisted of eight workstations between two rooms. Because the dataset gives no date or session number, Dr. Gino cannot verify whether the duplicate ID number is in fact one used in multiple sessions. As the ID number has different data in the columns, it appears to reference two different participants.

Dr. Gino is also unable to verify whether the research assistants used random numbers or ascending numbers for this particular study. The use of random numbers would have been consistent with what was indicated in the IRB application: "The file will contain no identifiers needed other than a random number given to participants at the beginning of the study (which is used for the random draw)." If the research assistants gave IDs to participants randomly, without a particular order, then the "out of sort" nature of the IDs is not a mistake, but a product of the study procedure.

Dr. Gino did not tamper with the data, and does not clean her own data. The research assistants make sure the data is clean and accurate, often running simple analyses before Dr. Gino begins to conduct her own analyses. Dr. Gino does not typically run quality checks unless the research assistant were to notify her of an issue. Dr. Gino believes the incorrect sorting is likely due to how the data was entered by the research assistant. The original paper data is unavailable for verification. The allegation states that the eight data points in question affect the hypothesis, but Dr. Gino notes that removal of any eight random data points from the data changes the results, some making the effect reported in the paper more pronounced, and some less pronounced. Based on the practices regarding ID distribution and use in studies and the consistency with the IRB application language, Allegation 4b cannot be found to have substance.

We and Dr. Gino are confident that upon review of the record and analyses of the relevant data, there will be a finding that the Allegations in this inquiry lack substance. Multiple allegations involve allegations of potential data manipulation, but Dr. Gino did not perform her own data cleaning and did not under any circumstances alter experimental data. Other allegations describe ID labels and written procedures that are consistent with the experiments themselves. Therefore, these allegations should be dismissed and an investigation should be found unwarranted.

On behalf of Dr. Gino, we thank you, Harvard, Dr. Bonacossa, Dr. Amabile, and Dr. Kaplan for your time and careful attention to this matter.

Very truly yours,

Paul S. Thaler

Exhibit 7

Transcript of Respondent Interview on February 28, 2022

Respondent Interview
February 28, 2022

[00:00:00.18] ALAIN BONACOSSA: Let me welcome you again, and I want to welcome you, Francesca, and Sydney, Francesca's advisor. As a reminder, as I said, the interview is recorded. It will be transcribed, and as you know, Francesca, you will be given an opportunity to receive the transcript, review, and edit it for accuracy.

[00:00:19.48] So one thing that I will do first is to introduce everyone in the room so that you know who you are. And first is the inquiry committee. Professor Teresa Amabile, as the chair of the inquiry committee, Professor Bob Kaplan, also in the inquiry committee, and then moving on to you, Francesca, as the respondent in this case, Francesca Gino, professor at Harvard Business School, and your advisor, Sydney Smith, who's joining us. She's an attorney at Cohen Seglias in Washington, DC. So welcome you both.

[00:00:52.74] On the call, we also have Heather Quay, a university attorney from the Harvard's Office of the General Counsel, and Alma Castro, Assistant Director in Research Administration at the Harvard Business School. And I should have started maybe with myself. I'm Alain Bonacossa, the Research Integrity Officer at Harvard Business School, as well. So let me explain how the interview process will work, and then I'll give a couple of reminders before passing it on to Teresa.

[00:01:22.05] So this is a faculty review of a faculty matter. So essentially, the interview will be a conversation between the committee and you, Francesca, as a respondent. It will entail a simple series of questions and answers. And towards the end of the interview, we may ask you and Sydney to be in the breakout room for a few minutes so that Teresa and Bob have a chance to confer in case they need to determine whether there are other questions that they would like to ask you.

[00:01:51.70] So some general rules of the road for the interview. So to make the transcription clear from this tape, only one person at a time can speak. As you know, other than the Inquiry Committee and you, Francesca, no one else has a speaking role in this proceeding. So Sydney, myself, and Heather will turn our cameras off at the end of this introduction, and we're going to mute ourselves. And we will not jump in in any way.

[00:02:21.31] And for you as the respondent, specifically, Francesca, a couple of rules of the road. One, please answer questions truthfully. All answers need to be audible so that they can appear on the transcript, so nodding doesn't work. So if you want to agree with something, please say that audibly. If you don't understand the question that the committee will ask you, just ask for the question to be rephrased, and if you don't know the answer, just please say so.

[00:02:50.34] If you need a break to confer with your advisor, or just need a break, please let us know. We can accommodate that. We will put you and your advisor in a break room and pause the recording every time we put you in a breakout room.

[00:03:04.26] And lastly, a couple of important reminders. HBS has an obligation to keep this matter confidential, as you know, so even the fact that this interview occurred is confidential, or the fact that there is a research misconduct case happening is confidential. And lastly, per the HBS policy, HBS community members may not retaliate in any way against the complainants, witnesses, the research integrity officer, or the committee members. Francesca, do you have any questions for me before I hand it off to Teresa?

[00:03:40.60] FRANCESCA GINO: No, thank you. I'm very clear.

[00:03:43.53] RESEARCH INTEGRITY OFFICER: Perfect. So Sydney, Heather, Alma, and I will now mute ourselves, turn our camera off, and it's off to you, Teresa. So you can take it from here. Thank you.

[00:04:01.65] FRANCESCA GINO: Oh, Teresa, I can't hear you.

[00:04:04.26] TERESA AMABILE: Sorry. Can you hear me--

[00:04:06.46] FRANCESCA GINO: Yes.

[00:04:06.89] TERESA AMABILE: --now? OK. Thanks. Thanks a lot, Alain. And just for the record, let's say our names again. I'm Teresa Amabile, professor at Harvard Business School and chair of this inquiry committee. And Bob, could you introduce yourself?

[00:04:25.92] ROBERT KAPLAN: Hello, Francesca. This is Bob Kaplan, as you know, faculty in the accounting and management unit. And this may be our first professional interaction, so I'm very sorry it is occurring under these circumstances.

[00:04:39.12] TERESA AMABILE: And Francesca, could you just introduce yourself quickly?

[00:04:42.21] FRANCESCA GINO: Absolutely. I am Francesca Gino, a faculty member at Harvard Business School.

[00:04:48.24] TERESA AMABILE: Thanks. So Francesca, we've received and carefully reviewed your written response, which was sent to us last Tuesday, February 22, to the allegations of research misconduct against you. Thank you for that. We do have specific questions for each allegation that we will go through during our interview. But before we get started with those questions, is there anything you would like to say or any statement that you would like to make about the allegations and/or about this inquiry overall?

[00:05:23.78] FRANCESCA GINO: I would like to just thank you for taking the time to go through everything so carefully. I know that this is not part of the job, and so I am just very grateful that you paid so close attention to everything. The only other thing that I'd like to say, if at all possible, to go through the claims in reverse since, I think, in my own head, it's a little bit easier to go from the oldest to the newest. I think it might be helpful to know how, in terms of practices, I set up my labs. But thank you for all the effort and time and energy you're putting into this.

[00:06:08.56] TERESA AMABILE: I appreciate that, Francesca. Thanks. I am going to see what Bob feels about this. But my initial thought on your request to go-- so you're suggesting that we start with allegation 4B and then go to 4A, and then go to 3, and then 2, and then 1? Is that what--

[00:06:32.47] FRANCESCA GINO: Right. Yeah.

[00:06:35.68] TERESA AMABILE: We actually have a general question that we'll ask you, in general, how you conceive of your responsibilities as a principal investigator when you're leading a study for the studies run in your lab at HBS and at UNC. So I think what I'd like to do is go through the allegations in the order that we have them in our inquiry committee memo.

[00:07:06.15] But start with that general question so that you can give us a good feeling of how you approach running your studies, and what your oversight is at each stage of the process. But let me check in with my colleague, Bob, and Bob, let me know if you'd like to talk about that just between you and me for a moment.

[00:07:27.27] ROBERT KAPLAN: I can speak about this. I think you responded in ways that similarly-- that I anticipated that Teresa was going to ask you a general question-- well, specific question, but not specific on each allegation, but to give you a description of your research style, both at UNC, which would be your earliest one, and more recently at Harvard Business School. And you could do that in whatever order you want. But I think we'd like to keep the sequence of allegations about just the same way that they appeared in the complainant's report and the way we analyzed them. Is that all right?

[00:08:08.94] FRANCESCA GINO: Absolutely.

[00:08:10.82] TERESA AMABILE: Yeah, and Francesca, I appreciate that your processes may have evolved from the time you were an early assistant professor at UNC until now. Since the earliest allegation goes back to research that was being done in the 2010 time frame, maybe you don't need to go back to the very beginning of your time at UNC, but if you could start by talking about that.

[00:08:37.17] So let me just read this question as Bob and I wrote it. Before we get to specific questions on each allegation, we have a general question. We'd like you to outline, for us the committee, how you conceive of your responsibilities as principal investigator for the studies run in your lab, both at HBS and when you were leading studies at UNC.

[00:09:03.15] We'd like you to briefly describe your role in data collection, data cleaning-- and we'd appreciate if you could just say what you include under the phrase data cleaning-- data analysis, writing up a study for publication, posting data on OSF, the Open Science Framework public platform for posting of research data, and so on, activities that are basically involved in, essentially, the entire research process, starting with the actual collection of data.

[00:09:58.15] FRANCESCA GINO: Absolutely. So I'll start from UNC, since that was my first job as an assistant professor. When I joined the department there, I would refer to the

organizational behavior department as more mainstream OB, and what that meant is that there wasn't really a lab, as we know it at Harvard Business School, where researchers would show up and collect data through experiments. I had watched that process quite closely, being a lab manager at Carnegie Mellon University when I was a postdoc there. And so one of my primary roles that I took on when I was at UNC was to create a lab.

[00:10:48.86] And I reviewed multiple applications. I actually don't remember how I came across [redacted], but she seemed to have a lot of enthusiasm, a lot of thirst for learning, and the right set of skills needed to launch the lab. And so we took over two small rooms at the business school. Each of them, I believe, had about four computers, and we created an online platform to post the studies, recruit individuals, and bring them into the lab.

[00:11:36.36] This is now many years ago since I started there in 2008, and so a lot of the studies-- especially given that the business school was on a small hill away from main campus, a lot of the studies were paper survey that [redacted] would conduct with other RAs that were hired for that reason, or for class credits to help her out. But to launch the lab and create a participants pool, we were running studies constantly every single week, and we had meetings multiple times a week to check in on anything that was needed to run the study.

[00:12:25.62] But as I do when I hire people working for me, we go through what I expected together. These are people that I trust, whose capabilities I rely on for the work that they do. And I also try my best to let them know that if there are any issues coming up, they should bring that to my attention.

[00:12:55.39] And so with [redacted] in particular, we worked quite closely. She had a variety of responsibilities: first, she helped to prepare IRB applications. At the time, they were on paper, so you had to send them to the IRB, in their building on main campus. She would be in charge of posting the studies online and then doing everything needed to conduct the study. She always ran pilots to make sure that if she had to improve on procedures, we would discuss it and then she would conduct the studies.

[00:13:38.45] She was the person responsible for entering the data. As I said, this was now 12, 13, 14 years ago, and so most studies were on paper. The data was stored in cabinets in the lab, and she would be the person running some initial means and averages and then bring the data to me for full analysis. In general, this is true of [redacted] as well as other RAs.

[00:14:21.11] Everything that has to do with the write-up of a study is my responsibility. I always asked RAs to check since they were the ones running the studies. When the paper is written, in most cases, they get to read it and tell me whether anything is inaccurate, from my understanding of how the procedure was conducted. But during the time at UNC, there wasn't the Open Science Framework, so none of that is relevant for studies conducted at UNC.

[00:14:55.01] When I moved to Harvard Business School in 2010, initially, I myself had a lab with [redacted]. I also had the BIG lab-- I believe that's how we called it-- that used to be the lab that [redacted] used to run with the students, and the idea was to get help from undergraduates who would take a class for credit, as well as working with doctoral students on their research.

[00:15:33.13] I came to HBS with the understanding that life would get busy with teaching, et cetera, and so I always had an RA who, in my mind, would serve the role that [redacted] had, despite the fact that the lab here at Harvard is set up differently. And so they would be the people working closely with-- whether it's the lab in Shad or the lab at the Kennedy School, when it existed, they would take care of running procedures, running the studies.

[00:16:15.10] And again, we would meet regularly to talk through how I envisioned running the study, but also ask for their help since they are the ones in the room if there were changes in procedures that were needed, to be the one letting me know.

[00:16:36.91] For some of these studies, I showed up before the pilot session to help with the recruitment. I think, early on, I might have conducted a study myself. I remember being in Shad. And then over the years, as other activities of being a professor took more of my time, I relied more on RA help for activities that are broader than just conducting studies. And so even for the case of working with organizations for field experiments or collecting larger datasets, the initial analyses were carried out often by research associates.

[00:17:39.20] Often if they felt that they needed extra help, they were also the ones talking to specialists in the RCS group at Harvard Business School in case that was needed. But again, a lot of conversations, meetings to talk through any of the details of the research that was being conducted, as well as-- as I said earlier, I always try to create an environment where if there are issues or problems, they would bring them to my attention, and there are certainly studies that I ended up not writing up because the procedure was faulty, or analysis or study that we re-ran because they weren't conducted in the way that I had intended.

[00:18:34.77] So there are certainly situations where RAs brought up problems to me. The only thing that I would note is that, again, it was slightly different in the earlier years when I had a shared lab manager with [redacted] where the lab manager and RAs did a lot of the handling with doctoral students, and now-- there were often large bills for studies coming from students that I thought took too much freedom. And so over the last few years, I decided that it would be best to just work with a research associate rather than being part of a lab that seemed to bring too many projects and too many students for oversight.

[00:19:35.44] I think I spoke about the responsibilities early on; that remain the same for-- when I think about responsibility for my research associate, even when I talk to them about the job, in the case of experimental research, they are the one helping or working entirely on IRB applications, again, under my supervision.

[00:20:04.05] They are the one collecting the data and running the studies, preparing surveys. They are the one cleaning the data since they were the one knowing what pilots they ran and what data needs to be cleaned, or if there were issues running the studies. And then they usually run preliminary analysis.

[00:20:24.67] So, for example, if scales were used, they would be the one checking that the alphas, the reliability of the scale, is proper and the quality of the data is good. And since embracing the open science movement, they're also the people who prepare pre-registrations,

they upload them, and also upload data on the Open Science Framework, with obviously my oversight at every single step of the process.

[00:21:08.06] TERESA AMABILE: Is there more that you'd like to say before I jump in with just a couple of follow-ups?

[00:21:16.46] FRANCESCA GINO: No, I think the last thing that I see on my list that you mentioned writing up a study for publication. As I said, that's me. I think over the last few years, there are situations where I asked the RA to, just in bullet points, to remind me the procedure that they followed so that I can be the one doing the write-ups.

[00:21:43.32] TERESA AMABILE: OK. Thank you. Bob, is it OK if I ask a couple of follow-ups first?

[00:21:49.53] ROBERT KAPLAN: Yes. Please go ahead.

[00:21:50.85] TERESA AMABILE: OK. So Francesca, you said toward the end that over time, your RAs have, at your direction, taken over more responsibility, for doing things like data cleaning, reviewing the data, doing preliminary analyses, and actually doing the analyses, I guess, sometimes helped by research computing services. Can you tell us what activities you would include under what you call data cleaning?

[00:22:29.60] FRANCESCA GINO: So usually in a study, I ask that pilots be conducted to make sure that, especially nowadays where a lot of the studies are conducted online, that the participants are clear on the procedures, that are paid for the amount of time that they take on average to take the studies. And just, I think as a general practice, it's a good idea, especially given the movement towards pre-registrations.

[00:23:10.51] And so if there is an uncertainty about whether or not to include a scale, pilots can help us there, we can ramp our analysis, and so if at the discretion of the RA-- let's imagine that they're using a Qualtics survey. They are the one running it, they're the one to know whether the pilot data is in the same survey or whether those responses got deleted, and so they're best suited to clean the data.

[00:23:42.94] When studies were conducted in the lab, similarly, if students, or participants, more broadly, seemed to have behaved in a way that was not consistent with what was to be expected, or disturbed the session, they're generally things that we would talk about or that would be brought to my attention. But it's, again, part of the data cleaning process. They are the one closest to conducting the study, and so the one, I think, that were more suited for the responsibility of cleaning the data.

[00:24:24.20] TERESA AMABILE: OK, so it sounds like data cleaning involves removing pilot data, data that's not part of the actual study that you're calling the real study. That's obviously extremely common with online studies, but it can happen with studies that are run in labs, too, that you'd run pilots. You want to make sure that that data is thrown out, sequestered from the real data.

[00:24:53.69] And also, it sounds like if it was a lab study, removing any data that might have been collected from a participant who ended up disrupting a session, and possibly, if there were multiple participants in that session, having to toss out all of the data from that session. Would that be an example?

[00:25:12.62] FRANCESCA GINO: Yep. The other one that comes to mind is-- again, evolution over the years, but we have attention checks for online studies. I am now quite specific in making sure that the attention checks come up front, such that if you don't answer the attention check correctly, your answers for the rest of the studies don't get recorded and you're booted out. And so that would appear, I imagine, as a line on the dataset and the RA would take that off.

[00:25:49.52] TERESA AMABILE: Got it. Got it. Yeah.

[00:25:51.47] FRANCESCA GINO: Sometimes it's also possible with-- I think Qualtrics does this, where-- let's imagine there are two conditions, and so you see-- for some of the participants who went through that condition, you see the data points recorded, and then another set of participants-- or other participant in the other condition, they're off-- they are basically under different columns.

[00:26:22.19] But when you analyze the data, you want to make sure that you have the manipulation under the same column and then the responses right after, and so the RA would be in charge of doing that. I don't-- I wouldn't call that data cleaning. It's data organization so that by the time the analysis happened, you can just take the data file and analyze it.

[00:26:47.63] TERESA AMABILE: And do you-- do you review the raw data files in any way after the RAs have cleaned the data files? Do you just look at the raw data to see if anything irregular leaps out at you? Is that a common practice of yours?

[00:27:06.96] FRANCESCA GINO: So there is an expectation that if issues occurred, or if the RA had issues with cleaning the data or organizing it, that they would ask. My practices have evolved given what happened last summer. With the retraction of the 2012 PNAS paper, I am now using different practices to plot the data right up front and ask many more questions of the RA who conducted the study.

[00:27:47.73] I did ask many colleagues who are in behavioral science like me. Since August, I was curious what kind of data quality checks people do with experimental lab data, and I don't think it's yet common practice for people to run deep quality-check analyses, and so it's a practice that I took on since last summer and not prior.

[00:28:22.58] TERESA AMABILE: I understand. Before that, you would basically trust the RAs to come to you if there seemed to be anything irregular in the raw data file.

[00:28:33.24] FRANCESCA GINO: That's right. And as I said, I have examples where they did bring up an error that I realized that the procedure wasn't the way we intended or talked about, again, participants who didn't seem to give their full attention to the study. I think very hard

about the people I hire. I ask a lot of questions when I interview them. And I trust their work and the competencies that they bring to the team.

[00:29:14.17] TERESA AMABILE: Speaking of that, could you just say, what were [redacted] qualifications at the time that you hired her? Did she have an advanced degree of any kind?

[00:29:25.52] FRANCESCA GINO: You're asking a question that I don't have a good--

[00:29:28.25] TERESA AMABILE: You don't remember.

[00:29:29.16] FRANCESCA GINO: I do not have a--

[00:29:30.37] TERESA AMABILE: OK, OK. And--

[00:29:34.25] FRANCESCA GINO: I believe she has a degree from UNC, but I don't-- we should check.

[00:29:40.64] TERESA AMABILE: You mean an undergrad degree from UNC.

[00:29:43.01] FRANCESCA GINO: Yeah.

[00:29:43.34] TERESA AMABILE: Yeah, OK. And this is the last follow up I think I have right now. Reviewing data analyses, when your RA does data analyses or RCS does data analyses, what kind of review do you do you give to those analyses when you get the output?

[00:30:08.53] FRANCESCA GINO: Most generally is we sit down together so that I can ask a lot of questions about the analyses that were conducted. And why certain procedures were used over others is also-- as many other faculty, I work with a lot of students. And so I use the same approach to make sure that I understand the choices that they've made, especially nowadays where the software that they use is not the one I'm used to.

[00:30:47.98] So a lot of people since over the last three or four years have started using R, is something I'm not familiar with. And so I have a lot of questions. This is a practice that, again, I took on over the last few months where I rerun-- especially with students, I rerun at least some of the analysis or ask my RA to rerun some of the same analysis.

[00:31:23.38] Another technique that has emerged thanks to the Open Science movement is there are statcheck. So you can run your paper through statcheck. And so that's a new practice for any papers that get submitted. Since there are lots of studies in papers, students might make mistakes. And so it's something that I started doing.

[00:31:49.83] TERESA AMABILE: Statcheck. It's called statcheck?

[00:31:52.28] FRANCESCA GINO: I believe that that is the case.

[00:31:53.53] TERESA AMABILE: I'm not familiar with that.

[00:31:55.04] FRANCESCA GINO: Yeah.

[00:31:55.14] TERESA AMABILE: And does it check-- do you say what analysis was supposed to have been done on this and it re-does the analysis or something?

[00:32:02.53] FRANCESCA GINO: It basically check how you report the data. And if there seems to be inconsistencies, it points that out to you. And in a lot of cases, it's just a typo, that as you were copying the t-test from your analysis to the paper, there is an error.

[00:32:21.53] And again, over the years, especially with junior people or students, I might not be the one writing up studies. And so I think that the need for closer oversight, given that mistakes can happen, has become a more important aspect of the work that I do. And so that's a good software that can support those efforts.

[00:32:47.93] TERESA AMABILE: OK, OK. And that's something you've started doing since August--

[00:32:51.16] FRANCESCA GINO: Mmhmm.

[00:32:51.70] TERESA AMABILE: --you say?

[00:32:52.27] FRANCESCA GINO: Yeah.

[00:32:52.53] TERESA AMABILE: OK. Thank you, thank you. Bob, do you have any follow-ups to what Francesca--

[00:32:58.39] ROBERT KAPLAN: Yeah, I'd like to just ask extensions to this discussion. So I think I understand the cleaning of the data and maybe getting rid of missing observations or the participants who failed the attention check. So we basically say now we have n good observations.

[00:33:22.36] Who would be the person that would first calculate, say, the means between a treatment group and a control group, I mean, not just having data that are clean, but actually beginning the statistical analysis?

[00:33:38.23] FRANCESCA GINO: I believe that that changed over the years, and it's not a consistent practice. Oftentimes, it's the RA who conducted the study who would check on the means.

[00:33:54.49] ROBERT KAPLAN: So even going back 10 or 12 years, you would have expected the RA to do that first preliminary estimate?

[00:34:03.76] FRANCESCA GINO: Yeah. So [redacted] would often talk to me about the means and average across conditions on studies that were very simple.

[00:34:13.94] ROBERT KAPLAN: Yeah. And would she and subsequent RAs generally know what's being tested in the study so they'd have some idea how you and all the other people participating were hoping this might come out, you know, what directions you were testing? Because one thing to have people that are just running the experiment, getting the data, cleaning the data but not really knowing what the data are going to be used for or analyzed.

[00:34:44.54] FRANCESCA GINO: Yeah. So there are specific cases where I want the RA not to be aware. So for example, if an RA is doing coding of a certain variable, so for example, something more qualitative about somebody wrote an essay and I want to know how descriptive of a situation that is emotionally charged that would be. So I usually have other RAs or ask the RA not to keep track of the conditions as they're doing that work.

[00:35:28.29] But for the RAs like [redacted] who would run the study, she has helped with the IRB applications or be the first one drafting the procedures after us talking. And so she knows what we're testing and why. I believe that's important knowledge in order for her to understand how the study is going to go from a procedural perspective.

[00:35:59.09] ROBERT KAPLAN: OK. That's fine, thank you. I understand that response. And Teresa, I don't have any other questions.

[00:36:09.95] FRANCESCA GINO: Oh, we can't hear you.

[00:36:11.33] TERESA AMABILE: Sorry. Are we good to go to into our next question? Or does anybody need a break? Francesca, you're OK?

[00:36:20.50] FRANCESCA GINO: I'm OK. Yep.

[00:36:21.96] TERESA AMABILE: OK. Bob, you're OK?

[00:36:23.83] ROBERT KAPLAN: Yes.

[00:36:24.58] TERESA AMABILE: OK. So we'll turn now to allegation one, which concerns study 3A in the 2020 JPSP paper on networking. So apart from what was covered in your written response, Francesca, are there any descriptions of or assertions about this study or its data in the first inquiry committee memo that Bob and I wrote, dated January 14th, that, in your view, are incorrect? And if there is anything, please explain in detail.

[00:37:14.38] FRANCESCA GINO: The thing that I wanted that I mentioned in the responses that is worthwhile expanding on is that the claimants make a point about the fact that the emotional description in the words that people have used about the networking event seems to be inconsistent with the rating for impurity. And I don't think that there needs to be a one-on-one correspondence.

[00:38:01.46] In some of the research that my colleagues and I had done in the past on how people experience networking events, they could be happy or satisfied about the connections that they made, but at the same time feeling tainted or anxious about the fact that the action was

instrumental. And so I felt that the claimants were making a connection that is not necessarily one to be expected.

[00:38:37.36] TERESA AMABILE: OK. And yeah, we did get that sense from reading the written response that we got last week. Thank you for that. What we'd like to do is actually look at some of the data--

[00:38:51.79] FRANCESCA GINO: Mmhmm.

[00:38:52.27] TERESA AMABILE: --with you about this. So as you know from that first inquiry committee memo, we, Bob and I, did our own comparison--

[00:39:03.20] FRANCESCA GINO: Mmhmm.

[00:39:03.55] TERESA AMABILE: --of the dataset from your computer for this study, which the complainant didn't have, obviously. So we did a comparison between that dataset and the publicly posted dataset on OSF, which is what the complainant was using.

[00:39:20.37] And that revealed that the means of the experimental conditions, those two experimental conditions, are directionally opposite. And that prompted us to compare a few lines of raw data, not exhaustively, but to compare a few lines of raw data. So I'd like us to look at pages 10 and 11--

[00:39:42.32] FRANCESCA GINO: Yep.

[00:39:42.72] TERESA AMABILE: --in that first inquiry committee memo. I'm actually going to ask Alain if he can show those pages on screen-share so we're all looking at the same thing at the same time. So Alain, page 10, if you could?

[00:39:57.17] OK. So this table on page 10 shows a comparison between the OSF dataset and the dataset on your computer, which is here identified in the first column as Author, or Author Row. And this is for comparing three observations in condition one, the promotion focus condition.

[00:40:20.70] FRANCESCA GINO: Mmhmm.

[00:40:21.18] TERESA AMABILE: I want to direct your attention to the middle seven columns, the numerical ratings of different moral impurity feelings. As you can see, these ratings are all different in the two datasets, while the written responses-- and those are in the columns labeled, Essay, Hope/Aspiration, and Reflect on the Party, are all identical.

[00:40:51.81] The numerical differences are such that the numbers in the OSF dataset are all strongly in the direction of the hypothesized effect. So let's just take a few seconds to absorb what we're looking at.

[00:41:10.25] OK, and now we'll look at the next page in the memo, which is page 11. And this shows the same kind of comparison for three observations in condition two, prevention focus.

Again, the numerical ratings in the two datasets are all different, with the numbers in the OSF dataset being strongly in the hypothesized direction. And let's take a few seconds to study that.

[00:41:45.41] OK, Alain, I think you can stop the screen-share now. Thanks. So Francesca, can you explain the discrepancies that we identified between the moral impurity ratings in otherwise identical rows of data in your dataset and the OSF dataset?

[00:42:06.86] FRANCESCA GINO: I am not the person who cleaned the data and downloaded it from the Qualtrics account. I am not sure whether the RA or the junior coauthor who is on the paper made mistakes. And translated what was raw data, I believe, to the data that I analyzed that then got posted on the Open Science Framework.

[00:42:54.31] In this case, I am not even sure I was the one analyzing the data. One of the things that I'm hoping to do in my practices going forward is keep track of, for any study that is being done, across the various responsibilities that you asked about earlier, who is doing what for each of the steps.

[00:43:19.90] TERESA AMABILE: Can you tell us who the RA was for this particular study?

[00:43:26.36] FRANCESCA GINO: So I am looking at my notes.

[00:43:34.59] TERESA AMABILE: So this is study 3A in that 2020 JPSP, Networking.

[00:43:43.14] FRANCESCA GINO: So I didn't reach out since the allegations were made to any of my coauthors since I didn't think that would be appropriate. But I did reach out to the RA office at Harvard to understand when people were hired. And I also looked at submissions of the paper to try to get a better understanding of dates.

[00:44:08.54] And so the person in this case who worked with me for 75% of his time was [redacted]. And then there were people who were part of the BIG lab. And I'm not entirely sure how to gather their names if, in fact, they helped with the studies.

[00:44:34.49] TERESA AMABILE: Those would have been undergrads who were--

[00:44:36.50] FRANCESCA GINO: That's exactly right.

[00:44:37.10] TERESA AMABILE: --in a part of the BIG lab that you described earlier.

[00:44:39.78] FRANCESCA GINO: That's exactly right.

[00:44:40.20] TERESA AMABILE: And you mentioned a junior coauthor. Can you say…

[00:44:43.82] FRANCESCA GINO: Yeah. So the corresponding author on the paper is [redacted] Again, I have no reasons to believe that she made errors. I trust my coauthors. I have done quite a bit of work with her. She used to be a postdoc at Harvard a few years back.

[00:45:10.34] TERESA AMABILE: And she was a postdoc when you worked together.

[00:45:14.66] FRANCESCA GINO: I got to know her first when she was a student at Utah. And we started working together. She was a postdoc at Harvard at the Safra Center. And then she moved on to be a faculty member at Kellogg.

[00:45:32.99] TERESA AMABILE: Thank you. Bob, do you have a follow-up on this?

[00:45:35.72] ROBERT KAPLAN: Yeah, I do. You characterize the discrepancies in the exhibits that we were just looking at as potentially due to errors and mistakes. And I certainly understand that a dataset with 600 observations that you're moving from an original data file to a published data file, that you may have entered a two and ended up, instead of a three or seven it could be a two.

[00:46:03.89] But when I looked at the data, it didn't seem that could be attributable to random error or random mistakes. There was a very consistent pattern that, in one condition, moving in one direction, towards the hypothesis and then the other condition, moving in the reverse direction.

[00:46:26.18] To explain what we saw, how does the mean between two treatments shift between an original dataset and the dataset being published? It doesn't seem that kind of an occasional mistake or random error could have led to that. But that's what caused us to look more deeply to see if there were just kind of noise going in the data.

[00:46:50.54] FRANCESCA GINO: Yep.

[00:46:50.99] ROBERT KAPLAN: This didn't look like noise, at least to me, you know? Yeah. It looked like--

[00:46:55.68] TERESA AMABILE: So Bob, is there a question in there?

[00:46:58.91] ROBERT KAPLAN: No. I'm just wondering if you-- the question was why you feel that this just could have been done by error or mistakes?

[00:47:10.82] FRANCESCA GINO: So I appreciate all the work and checking that you have done. This is the one dataset where I didn't go through the effort that you went through. And so I have been unable to recreate the discrepancy.

[00:47:34.54] I am surprised by the discrepancies that you found. I did not tamper the data. I did not change any values as the claimants suggest.

[00:47:48.58] But I don't know who's responsible for any errors. And I don't have evidence that there is anything else other than errors for the time being, because I would be blaming coauthors that I've worked with for quite some time.

[00:48:13.95] This is a paper that we submitted first in 2016. So it's been in the works for quite some times. Got rejected multiple times since it come out of research where the evidence in support of our hypothesis also come from two different field experiments.

[00:48:37.28] And so I am a bit unclear of where the discrepancies come from. So probably error is not appropriate. Discrepancies, I don't have a good explanation other than what I talked about.

[00:48:58.44] TERESA AMABILE: So Francesca, I just wanted to ask about one part of what you just said. Toward the beginning of this answer that you just gave, you said that you have not been able to replicate the discrepancies that we identified that were in the memo that we just looked at on screen.

[00:49:15.45] Is that because you just haven't gone back into the raw data or because you did and you were not able to see the same discrepancies that we saw in these particular lines of data?

[00:49:27.97] FRANCESCA GINO: This is the most important activity, issue that is happening in regards to work. But when the note came, I was about to teach a course with 1,011 MBA students with two other colleagues. And the course has been quite a roller coaster.

[00:49:57.67] And so every single minute, day and night over, the last month has gone into reading 1,011 reflections, grading them, talking one-on-one to students, and meeting with students since we had to unfortunately redesign the course midway since the students complained about what we were teaching. This is a new course on inclusive leadership.

[00:50:24.04] So unfortunately, the last month has just been insanely time-consuming. And it was the reason why I initially had asked for the process to go on hold, which I know was impossible. And it wasn't a proper request.

[00:50:41.45] But I expected the month to be difficult. And it ended up being even more difficult than I expected. And so unfortunately, that's the dataset where I trust the inconsistencies as you pointed them out. But I wasn't sure that going into the dataset and trying to recreate something that others took care of would prepare me any differently today.

[00:51:14.74] TERESA AMABILE: OK, thank you. And by the way, thank you for taking on that course. I know it must be-- yeah-- hard. So I now want us to take a look at the graph on page eight in the first inquiry committee memo. And this is on the same study, of course. And it's really the same issue.

[00:51:42.88] FRANCESCA GINO: Yep.

[00:51:43.15] TERESA AMABILE: But now we're going to look at something that the complainant prepared. Alain, could you get to that page 8 and do a screen-share for us?

[00:51:51.85] FRANCESCA GINO: Yep.

[00:51:52.15] TERESA AMABILE: Thank you. So you've seen this, Francesca, this graph created by the complainant shows the relationship between participants' moral impurity ratings and the sentiment implied by what they wrote.

[00:52:06.12] FRANCESCA GINO: Yep.

[00:52:06.78] TERESA AMABILE: So Francesca, can you explain the 79 apparently anomalous observations in the prevention focus condition-- and that's the only condition that we're looking at here in this graph-- where higher ratings of moral impurity were paired with positive descriptors of the networking event as described by the complainant and shown on this graph, with those-- and this is I think the key point for Bob and me, the key puzzle-- with those anomalous observations being indicated by the red circles with X's in them, which of course shows immediately that they are strongly in the direction of the hypothesized effect?

[00:52:52.30] And can you-- so this is the graph that I think we've all had the chance to look at. So we've got an n of 61 data points that are anomalous where the average moral impurity rating is exactly 2.0, and 18 where the average moral impurity rating is exactly 3.0, of the seven items. OK, Alain, I think you can stop the screen share for that.

[00:53:25.04] So Francesca, we'd like to know if you can address that in any way. And also if you can explain the nine apparently anomalous observations in the promotion focus condition, which we didn't-- there was no graph of that, it's only nine data points-- where the lowest possible ratings of moral impurity, all 1s, are paired with text implying high levels of moral impurity. But I think it's really that the graph, the 79 points--

[00:53:59.02] FRANCESCA GINO: Yeah.

[00:53:59.47] TERESA AMABILE: --in the other condition, in the prevention focus condition, that Bob and I are probably most puzzled by.

[00:54:06.75] FRANCESCA GINO: The only thing that I can say-- and I'm thinking from the perspective of a person if I were to run data quality checks, would that stand out to me as problematic? And as I said, the experiment was such that people would write an essay about their networking. And so the feelings of impurity are not necessarily going along with feelings that are more captured by something like the PANAS, so positive and negative emotions.

[00:54:46.63] And we had done research to show that is the case, where, again, the idea of feeling morally impure or tainted might be a focus that you take on the instrumentality of that action, but not necessarily the feeling happy that the networking event went well. And so I am not sure whether, had I run quality checks on the data, that would have come up for me. I don't think I asked an RA to code the words to reflect back to the event as a way to check for data quality. That's the only explanation that I have.

[00:55:45.83] TERESA AMABILE: And when you look at the pattern in the graph, does it look surprising, unusual to you? Because that sentiment analysis was done on--

[00:55:57.19] FRANCESCA GINO: Mmhmm.

[00:55:57.79] TERESA AMABILE: --all data points in the prevention focus condition?

[00:56:11.23] FRANCESCA GINO: I think that the question that keeps running into my mind is, and I'm probably repeating myself, had I been doing quality checks on the data, would I have picked up on this? And I don't know. I think that as part of the efforts of having more checks for data that I don't handle, since August 2021, I have been writing to people who deal with a lot of field data to see if they have a checklist such that I would be able to pick up on things that is strange.

[00:56:49.98] I also thought about the idea of talking to a forensic expert. But I haven't done that yet, in light of what is going on.

[00:56:59.59] TERESA AMABILE: OK. And Bob?

[00:57:00.87] ROBERT KAPLAN: Yeah.

[00:57:01.35] TERESA AMABILE: And Bob.

[00:57:03.29] ROBERT KAPLAN: So I just want to just clarify one issue here. And I'm not familiar with the research underlying this. But I thought I heard you say that there have been previous studies that would have explained why a participant's quantitative response-- one, one, one, one, one-- may have differed from their qualitative essay that they wrote. Maybe two different lines of reasoning go on, in which case, if you did a quality check you would have said, oh, this is one of those examples of the inconsistency between a quantitative score and the subjective assessment. But most recently, you were saying, well, maybe if we had done better quality checks and really looked at this we might have detected this. I'm not sure.

[00:57:54.23] We suggest that there is a discrepancy there that potentially a better quality check might have picked up. So which one of those you think is more likely or the explanation, the fact that it's generally known by people in this field that we can get this discrepancy between the quantitative and qualitative, or at the time, we just didn't have all of our analytics working to pick up these type of discrepancies, as we were preparing the analysis and writing up the paper?

[00:58:27.50] FRANCESCA GINO: Yes. So I apologize for being unclear. I stand by both points. But I think they are different. The claimants make an association that the descriptor in terms of positive or negative emotions, that they provided when thinking back to their networking event has a match one on one with the ratings of impurity. That's incorrect, since we know from prior research that the two are distinct, that you might be remembering a networking event in positive terms but still feel tainted or impure for an experience of creating a connection with a person who is going to be important. And in fact, in some of our research, we control for that positive and negative affect and focused on the impurity.

[00:59:25.04] So what I was trying to say is that if I were to run quality checks, I wouldn't even look at the parallel between those two columns of data because they don't necessarily need to move together. So that was the first point.

[00:59:46.10] On the second one, I was taking Teresa's questions to say, but if you just look at the graph in the way the distribution shows up on page 8, would anything catch your data? Sorry, would anything catch your eye as potentially something to go investigate? And on that, I don't know. I don't exactly-- I'm unsure what kind of forensic analysis or data quality check would lead me to focus on something that is the type of graph that we're looking at on page 8.

[01:00:27.35] And so what I was suggesting is that-- again, this is something that started since August. I've been broadening the type of people I reach out to since it seems like, as a common practice, experimentalists don't start by opening their datasets and plotting distributions. It's more an approach that people working with large datasets or doing large field studies tend to engage in. And so I've been contacting those individuals to try to understand how I can come up with a good series of steps to use even in the case of smaller datasets.

[01:01:10.88] ROBERT KAPLAN: OK, thanks. All right. That's a good clarification. Thank you.

[01:01:15.17] FRANCESCA GINO: I appreciate you asking about that.

[01:01:18.74] TERESA AMABILE: OK, thank you. I would like to call a five-minute break right now if that's OK with you, Francesca and OK with you, Bob.

[01:01:28.49] ROBERT KAPLAN: Yes.

[01:01:29.48] TERESA AMABILE: OK. So we'll take a really quick five-minute break. Francesca, we'll put you and Sydney into a breakout room during the break. And we will pause the Zoom recording. In the breakout room, you'll see a reminder with a countdown when one minute remains in the break. And we'll reconvene. My computer says 11:03. So we'll reconvene in five minutes at 11:08. And at that time, we'll close the breakout room. And you and your advisor will automatically be brought back into the main room.

[01:02:06.14] If you happen not to be at your computers at that moment, you'll have 30 seconds to be back at your computer so we can get going again. Is that OK?

[01:02:15.92] FRANCESCA GINO: That sounds perfect. Thank you.

[01:02:16.97] TERESA AMABILE: OK, great. See you back in five minutes. Thanks.

[BREAK]

[01:02:32.38] TERESA AMABILE: All right. So we're going to move now to allegation 2, which concerns study 4 in the 2015 Psychological Science Paper on inauthenticity, and feelings of immorality and impurity. So this first question is similar to the first question I asked on allegation 1. Apart from what was covered in your written response, Francesca, are there any

descriptions of or assertions about this study or its data, in the first inquiry committee memo, that, in your view, are incorrect? And if so, please explain each of those in detail. And that's apart from what you said in your written response.

[01:03:19.88] FRANCESCA GINO: Yeah. So I don't believe that there is any error in the data. I realize that Harvard as an answer to the question class here might seem strange. And yet, I had had situations in the past where I asked similarly how old are you? And people respond with 1978. So it seems a reasonable error on the part of participants who look at the answer quickly and move on. And again, from the perspective of, let's imagine if I were to do data quality on the data now, would that catch my attention? I don't think so.

[01:04:15.86] TERESA AMABILE: OK. For this next question, I want us to look at page 15 in the first inquiry committee memo. Alain, can you bring that up for us on screen share please? This table shows 20 lines of data highlighted with an incorrect entry of Harvard as the response to the year in school question. Now let's look at the bee swarm plot on page 16 of the same memo. And, Alain, if you can move there. Thank you.

[01:04:55.35] This plot where, again, the anomalous responses appear as red circles with red X's in them, illustrates a directionality to those responses in line with the--

[01:05:11.14] ROBERT KAPLAN: I'm sorry. I'm not seeing the screen share. Am I the only one?

[01:05:14.85] TERESA AMABILE: I'm seeing it. I'm seeing it, Bob.

[01:05:17.60] ROBERT KAPLAN: OK, well, I'll keep looking for it.

[01:05:19.10] TERESA AMABILE: And Francesca is nodding her head. She's seeing it.

[01:05:21.28] ROBERT KAPLAN: OK. Hmm. OK.

[01:05:25.97] TERESA AMABILE: I don't know what to suggest.

[01:05:28.31] ROBERT KAPLAN: No, no. Why don't you continue. I'll--

[01:05:30.89] TERESA AMABILE: OK. So Bob, we're on page 16 of our first inquiry committee memo if you happen to have that on your other screen or something. So Francesca, just calling attention to these anomalous points, which are the ones in red, can you explain the anomalous Harvard response to the year in school question in 20 lines of data-- these 20 lines of data in the OSF dataset? Alain, I think you can stop screen sharing now. And so it's that, plus the fact that the bee swarm plot reveals that those particular lines of data strongly support the hypothesized effect. So again, it's not that the anomalous response has happened. It's the pattern of them.

[01:06:24.44] FRANCESCA GINO: So what I did to try to understand this dataset better is again with the eyes of what would catch my attention if I were to do data quality. The fact that some of

the years are spelled out the way they are-- so 2015, 2010. So it's people not reporting what I would have expected, which is a senior, junior, sophomore. And so I try to recreate my own versions of the data histograms. And you can find analyses where in those years the points are extremes.

[01:07:15.01] And so, again if I were the one running quality checks on the data, I wouldn't have picked up on those being problematic. It seems like from the plots even in the way they were created by the claimants, the one that you just share that I see on page 16, I'm not sure I would have picked up on any problem. And I'm not sure that there is any issue with the data.

[01:07:58.73] TERESA AMABILE: So are you saying that as you look at that bee swarm plot you do not see a problem?

[01:08:04.35] FRANCESCA GINO: So what I'm saying is that if I were to create different plots, as I have tried, with ways of answering year in school that is not Harvard, that is not sophomore or junior as I would have expected, that I end up with plots that-- like this one, I wouldn't have caught up as problematic.

[01:08:36.76] TERESA AMABILE: OK, Bob, do you have a follow up?

[01:08:44.00] ROBERT KAPLAN: So let me just look at that.

[01:08:50.03] FRANCESCA GINO: I should also say--

[01:08:51.80] ROBERT KAPLAN: My follow up would really be the next question here that when we track those same observations in the author's dataset, they again, were not random as to which of the respondents happened to put Harvard in that field. There was another field that showed a consistent misalignment between them.

[01:09:21.21] TERESA AMABILE: Bob, why don't I just move to that question?

[01:09:23.58] ROBERT KAPLAN: Yeah, so OK.

[01:09:24.65] TERESA AMABILE: Does that make sense?

[01:09:25.42] ROBERT KAPLAN: Yes.

[01:09:25.62] TERESA AMABILE: OK. So Francesca, can you explain the discrepancy that we, the committee, observed between your data file and the OSF data file, in the number of participants who responded with Harvard as their year in school? So it was 24 in your data file, 20 in the OSF data file. And additionally, can you explain our observation that among the participants who list Harvard as their answer to the year in school question, none had a college.harvard.edu email address, while most of the other participants did.

[01:10:15.41] FRANCESCA GINO: I am not sure how to best answer that question. In looking at the data again from the perspective of where is it the opportunity from my standpoint to pick

up on the problem, I don't think I would have necessarily noticed it. Again, I see the highlighted in yellow Harvard rows. But I would have picked up on the 2015 as we said earlier. And it doesn't seem that the data was copied across rows since the data in there is different.

[01:11:05.84] I am unsure why some of the people have a college Harvard address and some have a personal one. I believe that that might be something that we didn't ask participants to specify, and so they made their own choice.

[01:11:29.55] TERESA AMABILE: OK, Bob. Bob, I don't have a follow-up on that. Do you?

[01:11:34.02] ROBERT KAPLAN: No.

[01:11:35.22] TERESA AMABILE: OK. So our next question is still on this allegation. Can you explain, Francesca, the anomaly that some participants in the OSF data file were not in your data file?

[01:11:52.76] FRANCESCA GINO: When I was asked to send you both the original datasets, I tried my best to go find them and connected them to, if available, the software program where they were. And so the only explanations in differences between what is in Qualtrics versus what ended up on the Open Science Framework is any cleaning that was conducted on the data.

[01:12:36.34] TERESA AMABILE: So let me just make sure I understand what you just said. So you're saying it's possible that there was cleaning that happened, of the dataset that was on your computer, that could explain a discrepancy with the OSF dataset?

[01:12:59.01] FRANCESCA GINO: Yes. So what I'm suggesting is that the data that gets posted is the data that was analyzed, the results of which were reported in the paper. And if there is any discrepancies with what I believe, based on the reconstructions of history, was the original raw data that comes out of cleaning. But I can't tell for sure since I was not the one performing the cleaning.

[01:13:40.28] TERESA AMABILE: Bob, do you have a follow up on that?

[01:13:42.47] ROBERT KAPLAN: No, I don't.

[01:13:43.82] TERESA AMABILE: OK. And Francesca, can you explain the relevance of the smaller of the two data files from your computer that you identified as containing data for this study? So you actually pointed to two data files on your computer. And there's one that's a lot smaller, has many fewer rows of data, than the larger one. And we couldn't see a way to find matches between anything in that smaller data file and what was posted on OSF.

[01:14:21.06] FRANCESCA GINO: So apologies. But in the spirit of raw data, that's what my reconstructing of history led me to. It might have been a pilot study that the RA conducted is not something that I recorded in my files. We are talking about the paper we started. The first submission of this paper-- again, going back to history-- was 2010. And so, unfortunately, these are papers that go back a few years. And if I think about, again, best practices, keeping track of

was there a pilot study, and making sure that I know the existence of it so that I can remove the data if I were to go back and rerunning from scratch is something that I definitely want to take on.

[01:15:19.93] TERESA AMABILE: OK. Thank you. Bob, any follow-up?

[01:15:23.73] ROBERT KAPLAN: No, I don't have.

[01:15:26.02] TERESA AMABILE: OK. Great. Are we good to go on to allegation three? Anybody need a break? OK. So we're going to turn now to allegation three, which concerns study four in the 2014 Psychological Science paper on dishonesty leading to creativity.

[01:15:49.97] FRANCESCA GINO: Yeah.

[01:15:51.11] TERESA AMABILE: So apart from what was covered in your written response, Francesca, are there any descriptions of or assertions about the study or its data, in the first inquiry committee memo of January 14 that, in your view, are incorrect? And if so, please explain each of those in detail.

[01:16:15.52] FRANCESCA GINO: No, I believe I pointed out one of the differences that you identified already in the report. So I don't believe I have anything to add.

[01:16:31.41] TERESA AMABILE: OK. So for this next question, we're going to look at page 21 in the first inquiry committee memo, which shows a screenshot of the dataset that the complainant used. Alain, could you please put that page up. OK this table highlights 13 anomalously sorted entries. All of which show a dependent variable response strongly in line with the hypothesized effect. OK and I think we've all seen this in that memo. Just give another second or two.

[01:17:19.26] OK, Alain, I think you can take that down. So Francesca, can you explain this apparent data tampering as described in the first inquiry committee memo, and illustrated in that table that we just looked at?

[01:17:37.78] FRANCESCA GINO: So I can't speak to the facts again since I was not the person in charge of dealing with the original data. This is a case where multiple datasets had to be merged because the cheating measure came from a different software as compared to the creativity measures. And the number of responses had to be coded. So what I thought might have happened is that in the column number of responses, there should be words there, not numbers. And so the RA doing the coding substituted the words for the number of uses as it should be so that it gets evaluated as a dependent measure. And that's the pattern that resulted.

[01:18:40.59] Again, I ask myself the question of, would I have picked up on that as a data quality check? And I am unsure. I usually don't take the view, maybe I should, of, is there something wrong in the data. And so I'm not sure whether this is an error. It seems an interesting coincidence that could be, in fact, explained by coding. But I don't know.

[01:19:21.11] TERESA AMABILE: I just wanted to be sure I understood what you said earlier about- Did you say that the RA should have put the actual word responses in that column rather than numbers?

[01:19:35.97] FRANCESCA GINO: So the creativity measure--

[01:19:40.53] TERESA AMABILE: That's the number of uses for a newspaper?

[01:19:43.32] FRANCESCA GINO: That's exactly right. And so the participants would have responded by saying door stopper or-- being very non-creative at the moment -- fly killer, whatever. It's a common task that is used to measure creativity. And so the way participants would have provided a response is by mentioning a number of uses and then when a dependent measure like that is used, it's the RA job to code it into a number by counting. And they would, in certain cases, also measure other types of creativity, like originality, by looking at how different the users are.

[01:20:46.60] TERESA AMABILE: OK. I would just like you to reiterate the bridge from what you just said to the possible apparent mis-sort of those 13 responses, out of the many, many responses, those 13 which are not sorted, as all the others are, on that number of responses column. So can you make the bridge between what the RAs were doing and what might have resulted in this pattern?

[01:21:18.63] FRANCESCA GINO: Yeah, and again, I'm trying to reconstruct-- put civility in light of the question that you're asking. But I would imagine that if the RA did the merging of the datasets prior to the uses being coded, not necessarily the numbers would go in ascending orders. I am not sure. It could be that. There is a way in Excel where you count the numbers of letters. Whether she used that, and then some of the uses are longer versus shorter. That might be a possibility to lead to the type of pattern that we see in the data.

[01:22:04.40] TERESA AMABILE: Yeah. I don't think I have any more follow ups on that. Bob, do you?

[01:22:12.23] ROBERT KAPLAN: OK. For my understanding, I think the response was that this could have been due to a coding error. And again, it seems that having 135 observations go into a perfectly predictable sequence. And then run into several that get out of sequence. I don't see how that could be done on an Excel sort, that that would occur.

[01:22:51.25] FRANCESCA GINO: Yes. So just to clarify. The explanation that I could come up with is that the sorting was done based on the words. I don't know. You can list alphabetically. You can list by number of words prior to the RA actually counting the number of responses that each participants provided. But again, I can't be sure.

[01:23:23.14] ROBERT KAPLAN: OK, we'll leave it at this.

[01:23:25.90] FRANCESCA GINO: Yeah, I think when you ask the question, is it possible, I try to think whether it is possible.

[01:23:36.77] TERESA AMABILE: OK. Does either of you want a break at this point, before we go on to allegation 4? No? OK. So we'll move on to allegation 4a, which concerns study 1 in the 2012 PNAS paper on signing at the beginning decreasing dishonesty.

[01:24:04.11] FRANCESCA GINO: Yep.

[01:24:04.86] TERESA AMABILE: So apart from what was covered in your written response, Francesca, are there any descriptions of or assertions about this study or its data in the second inquiry committee memo, dated January 24th, that, in your view, are incorrect? And, if so, please explain each of those in detail.

[01:24:30.87] FRANCESCA GINO: I don't have anything to add other than saying that, again, I don't believe there is an error here. This collaboration has been very contentious.

[01:24:50.31] TERESA AMABILE: Can you explain what you mean by that?

[01:24:57.37] FRANCESCA GINO: The paper was born out of two sets of individuals coming together to work on what appeared to be the same research question. And so back in-- I think I wrote this down.

[01:25:21.61] Back in 2009, 2010, when [redacted] [redacted] and I were thinking about the role that signing might have on honesty. We had heard that [redacted] and [redacted] had, potentially, a field study, and I was the point of connection. So I had worked with [redacted] I knew [redacted] pretty well, and I was working with [redacted] and [redacted] And so I was the one contacting [redacted] and [redacted] to see if we could join forces. And we did.

[01:26:02.42] And as we started working and writing up the paper and more questions appeared on the field data, [redacted] was generally the one asking a lot of questions of [redacted] and [redacted] And it was contentious since [redacted] thought that the questions were more aggressive than they needed to be. And I was trying to explain that [redacted] was on the job market with this paper and that [redacted] was coming from a point of wanting to understand. But it has been a difficult collaboration.

[01:26:47.87] TERESA AMABILE: So the collaboration was contentious while the paper was being put together, while the paper was being written and the data were being reviewed? Is that-- am I hearing that right?

[01:26:59.11] FRANCESCA GINO: Yes. And the fact that the paper ended up being retracted in August, I think, made a situation that was difficult even more difficult. We wrote a paper that failed to replicate the results that we published. And again, the authors disagreed. And I think across the entire history of this paper I always found myself in the middle, since I was the one who knew the two sets of coauthors.

[01:27:36.67] TERESA AMABILE: OK. And you referred to the paper being retracted in August. You're referring to August 2021, correct?

[01:27:44.63] FRANCESCA GINO: Yes, that's correct.

[01:27:46.87] TERESA AMABILE: OK. Bob, did you have any follow-up on this first question?

[01:27:51.79] ROBERT KAPLAN: No, I found that useful background and context for the discussion we're about to have.

[01:27:59.74] TERESA AMABILE: OK. So, Francesca, next question-- your written response from last week stated, quote, "Dr. Gino is also confident that participants received no payment before the end of the entire study," end quote. You also directed us to a folder on your hard drive with several documents related to the drafting of the paper, and we thank you for pointing us to the location of these documents. So I'd like us to look now at page two of a document from that folder with the file name "tax study summary of results." And there's a date in the file name, 2010-07-28, which from the file name appears to have been prepared after the data were analyzed.

[01:28:51.56] So, Alain, could you show the document on screen share on that page two? OK, page two here lays out the step-by-step procedures of this study. If we look at the highlighted material, particularly steps three and four, this document indicates that participants were paid for performance on the matrix task in the first room before being told about going to a second room to fill out a payment form. So let's take a few seconds to just look at this.

[01:29:43.26] OK, Alain, I think you can stop the screen share now. Next I want us to look at page 10 of another document from that same folder with the file name, quote, "signing on the dotted line turns moral gaze inward." And there's a date in that file name—2011-02-23. And that's the earliest draft of the paper that we found in that folder.

[01:30:17.07] Alain, could you show that document on screen share? It's page 10 we need. OK. Page 10 of this document seems to imply that payment was made to participants before going to the second room. We'll take a few seconds to look at this.

[01:30:56.31] Yep, OK. All right. So you can stop that screen share, Alain. The procedures, as written step-by-step in the first document, the summary of results document, and implied in the second document, an early draft of the paper, both differ from the procedures in the published paper. So Francesca, given what is described in these two documents that you directed us to, can you explain your confidence that, quote, "participants received no payment before the end of the entire study," end quote, because it appears that participants were paid for matrix task performance when they were still in the first room.

[01:31:44.39] FRANCESCA GINO: So the reason why I say I am confident is twofold. One is that I know that collecting a dependent measure prior to manipulations-- it's a fundamental piece of running lab experiments. And [redacted] would have come to me to point that out. She would not have conducted the study with that flaw.

[01:32:21.00] And I also know from having worked with her- We had all sorts of funny money stories where, at the time I was conducted studying in-- at UNC, you had to show up at the bank and receive all these $1 bills and $10 bills and then bring them to the lab and then get reimbursed afterwards.

[01:32:46.11] And she would have not conducted a study where you give money to participants and then you take them back from them if there are discrepancies, because you would have created a nightmare from a payment perspective. So knowing her and how she was always very clear in running studies that are smooth, these are two things on the procedures that, had they been that way, she would have brought them up to me.

[01:33:23.83] And I can also say that it seems strange that I would have allowed for that since I know that dependent measures need to be collected after the manipulation. The matrix task is a task that has been used a lot in the research that has been done over the years in the context of cheating. And so even the materials that I believe are on my computers are from studies where that task was used, and the general procedure would be that you do get paid after completing the matrix task. But I say confident, coming to your question, because I'm sure that [redacted] would have pointed that out if I had put her through giving participants payment and then taking it back.

[01:34:21.51] TERESA AMABILE: Given that, can you explain this document, which actually does have the results of the study in it?

[01:34:31.26] FRANCESCA GINO: So--

[01:34:31.61] TERESA AMABILE: The document that's called summary of results that actually has results, so clearly, after the data were collected, that shows a step-by-step procedure--

[01:34:41.36] FRANCESCA GINO: Yes, so--

[01:34:42.12] TERESA AMABILE: --that clearly indicates that participants were paid for their performance, and then they were told they'd have to go to a second room to fill out a form about that payment.

[01:34:53.76] FRANCESCA GINO: So I appreciate you pointing that out. And I also appreciate that you've done extra work since reading my responses and today. The practice-- a lot of my practices and what I do are practices that I learn from a previous mentor. And one practice that I took on is, as close as possible to the time that a study is conducted, write it up, so that by the time you write the paper, you can see the progress.

[01:35:31.31] But that is something that I would do from a procedural perspective sometimes, even before running the study. And then I would add the results when the study is conducted and the analysis are conducted, again, in the spirit of progressing quickly. And that is something that I generally do without going to the RA and saying, is this accurate? The RA gets to read the paper in its entirety, and so I think that that might have been me writing things up as-- not noticing that I was putting-- describing the task as I used it in other studies, without thinking about the fact that that's the study to conduct.

[01:36:23.30] But again, I'm pretty confident that [redacted] would have brought that to my attention, because that's a big flaw. It goes to the foundations of what experiments are all about. And when [redacted] in one of our emails-- so the errors went into the paper. And when we shared the draft with

the broader team, [redacted] was the one who asked about that. And then I would imagine I went to [redacted] and talked through the procedure with her and that got corrected.

[01:37:00.46] I don't have draft that shows that that was edited away by me, but I would imagine that, based on the discussion and learning what the procedure was, that was corrected so that the procedure actually matched how the study was conducted. I'm also surprised that that has not come up in the years since. So I think that [redacted] was satisfied with that answer and didn't ask more about that.

[01:37:35.72] TERESA AMABILE: So, Francesca, you said a little bit earlier that the RA-- in this case, [redacted] would not have seen the paper until there was a draft-- she would not have seen these-- the write up of an individual study until she saw the draft of the whole paper. Is-- did I hear that correctly?

[01:38:00.55] FRANCESCA GINO: Yeah, I generally don't share-- I can think of examples where we have the body of the paper, in terms of all the studies. And then as the-- as I write up the introduction, the RA reviews the study. But again, that's a practice that is more recent.

[01:38:36.04] TERESA AMABILE: So when you were working with [redacted] would you be more likely to show her just that early, quick write-up that you did as soon as the data were analyzed?

[01:38:49.27] FRANCESCA GINO: No, she would see the paper. And in fairness with [redacted] I don't think she read all the papers that I've written since the lab was running a lot of studies. So she had many more responsibilities that were related to running studies rather than checking typos on drafts. If I think about my RA now, it's more balanced where she reads many more drafts for accuracy and typos rather than not. So I can't be 100% sure since we are talking about something that happened many years ago, but I don't believe that she saw the initial write-up of the study.

[01:39:37.68] TERESA AMABILE: So you don't think-- are you saying that you don't think she saw that first draft of the manuscript--

[01:39:45.84] FRANCESCA GINO: That's exactly--

[01:39:46.48] TERESA AMABILE: --that we just screen shared. Is that correct?

[01:39:49.07] FRANCESCA GINO: That's exactly right.

[01:39:50.09] TERESA AMABILE: That's what you're saying.

[01:39:50.11] FRANCESCA GINO: I think that when she heard about the procedure is when [redacted] pointed that out and I went and talked to her. That's, I think, what happened. But again, we're going back so much in times that I can't be sure.

[01:40:04.80] TERESA AMABILE: OK. Bob, do you do you have follow-ups on that.

[01:40:07.95] ROBERT KAPLAN: I do. So getting back to the documents about the matrix test, and you said that this is a commonly used test.

[01:40:18.64] FRANCESCA GINO: Mmhmm.

[01:40:19.79] ROBERT KAPLAN: And so I'm supposing-- you're saying that in many of the uses, the participants got paid immediately after the matrix test was delivered to them. In your-- in this particular experiment, that didn't happen. But in many--

[01:40:37.52] TERESA AMABILE: Wait, I just want to say, for the record, Francesca's nodding as Bob is talking.

[01:40:41.57] ROBERT KAPLAN: Yes. And-- but in this particular experiment, given the research design, you deferred the payment until they went through the signing treatment scope. And so is the explanation of the documents that Teresa and I were looking at is that you were kind of using the standard protocol for the matrix test as it was done by many other people, but that was not actually what happened in this particular experiment? You were using the forms from the standard matrix test where most people were getting paid right after completion, but in actuality, the process didn't pay them as it was described in those documents. Is that correct? Is that your interpretation of the--

[01:41:32.27] FRANCESCA GINO: I am one of the people who use the matrix task a lot. And so I believe that, in the spirit of leveraging the help of [redacted] even the materials I sent-- here's the matrix task as we used it in the 2007 paper, the 2008 paper, and that she prepared it for the experiment. And when it was time to write things up as we were waiting for the results, I imagine I just brought up the procedure as I'm used to running the study, rather than thinking carefully about variations that were made. And again, I'm saying this trying to reconstruct history.

[01:42:16.84] But also, on this one I feel strongly, because it's such a foundational aspect of experimental research that it just seems impossible to me that I would run a study or that [redacted] would run a study with the dependent measure before the manipulation. This is also a study that we piloted, since I remember initially there wasn't a limit on the number of expenses. And we had some participants cheating by really large amounts of monies, and so we capped it to reasonable expenses for a cost that participants might have sustained in coming from main campus to the business school where the lab was.

[01:43:12.96] ROBERT KAPLAN: OK. But the one other document, which is the tax document itself that had signed in the statements that were written in the past tense, as if they had already received the money, even though they wouldn't have until they had, in a way, signed the document. And that was also pointing in the direction that they had been paid already, since they were-- describing it was written in the past tense, not in-- you're about to get this payment or the payment receipt I will receive.

[01:43:48.93] FRANCESCA GINO: Yeah. And so again, my explanation is that those are the documents as used in prior studies. Part of the reason why I also say confident is that, again, we

had to rerun the study again when we were looking at replications effort for this paper. And so I would imagine the doctoral students that were leading this effort to point this out to me as problematic if that was how the study was conducted.

[01:44:29.24] TERESA AMABILE: Follow up for me on that-- so you used tax forms in previous-- you had used tax forms in previous studies? Is that what you just said?

[01:44:39.95] FRANCESCA GINO: No, no, no, no.

[01:44:40.91] TERESA AMABILE: No. OK, no.

[01:44:42.26] FRANCESCA GINO: Sorry, apologies. So in 2020, a larger team published a paper that failed to replicate the 2012 paper. And as part of our replications effort, we reviewed the procedures used in the original paper to then run the study similarly in other labs. And so I was mentioning that as an extra opportunity for people to point to flawed procedures, if that were the case. Again, it's so foundational to what we do in experimental research that it seemed-- it seems a really difficult flaw to have happened in the running of the study.

[01:45:56.12] TERESA AMABILE: OK. And Bob raised the question of the past tense appearing on that tax form, "payment you received."

[01:46:06.14] FRANCESCA GINO: Sorry, I--

[01:46:07.23] TERESA AMABILE: --for the problem solving task. So how can you address that past tense?

[01:46:17.18] FRANCESCA GINO: I appreciate pointing that out, since I have misunderstood part of your question, Bob. I apologize. So for-- the tax form is payment received in the sense of you completed that part of the task, but not received physically. And so I don't-- the past doesn't point to an action as it occurred physically, of you receiving the money. It's more payment that you received based on how you performed.

[01:46:56.92] ROBERT KAPLAN: This might be an accountant's quibble here, because you distinguish between earned and received.

[01:47:01.99] FRANCESCA GINO: That's right.

[01:47:02.39] ROBERT KAPLAN: Received implies that the cash has occurred-- transfer has occurred. Earned is the way exactly you describe it. You've earned it through your performance on the test.

[01:47:12.25] FRANCESCA GINO: Yep.

[01:47:13.51] ROBERT KAPLAN: It might have been a more-- I don't know--

[01:47:15.74] FRANCESCA GINO: Yeah.

[01:47:16.41] ROBERT KAPLAN: Felicitous term to have used.

[01:47:18.16] FRANCESCA GINO: Yeah, and I appreciate it. And in fact, I'm sort of smiling internally saying, that's the Italian of me, not thinking about qualification of the right words. Again, in thinking about the procedures, my coauthors looked them over. And so as the English speaking one, I think "earned" might have been a better word in light of what you're suggesting.

[01:47:45.88] TERESA AMABILE: OK. Bob, are we good to go on to question 3?

[01:47:49.21] ROBERT KAPLAN: Yes.

[01:47:49.96] TERESA AMABILE: OK.

[01:47:50.42] ROBERT KAPLAN: Yep.

[01:47:51.10] TERESA AMABILE: In your written response from last week, Francesca, you indicated that there was relevant email correspondence in inbox folders labeled [redacted], [redacted], [redacted], and [redacted] Those are your coauthors on the original 2012 paper. We have been unable to find such folders or relevant correspondence in the previously sequestered material from your hard drive.

[01:48:25.06] We need to know where on your hard drive this correspondence can be found. So would you please give Alain this information by close of business today. And additionally, by close of business today we'd like you to please provide Alain with copies of all folders, documents, and correspondence relevant to this study, including any correspondence you may have exchanged with [redacted], other RAs, or your paper coauthors directly from your inbox or any other location where they may be stored.

[01:49:06.23] FRANCESCA GINO: So you already have that data, since--

[01:49:11.36] TERESA AMABILE: Yeah, we just don't know where to find it.

[01:49:13.92] FRANCESCA GINO: It's in my inbox. And there are-- if I'm going to open up my inbox right now so that I can-- the way I tend to store data is that, under inbox, there are generally names. So if I were to read now, it's [redacted], Alain, and there I put-- I don't like to have full inboxes. And so when I read through the data, if the email doesn't seem to be substantial, I sometimes delete it. Or if it's trash, I delete it.

[01:49:52.98] And if not, I put it in the folder of the personal projects where it belongs. I think that part of the difficulty is that, when I moved in-- when I moved to Harvard in the initial years, Harvard had a lot of limits on data that could be saved in one's inbox. And I think for a while I started offloading papers, getting PDF of emails. And it became a really arduous task, when you receive multiple hundreds of emails every day.

[01:50:30.15] And so I believe that my inbox is local on my computer, which is why you also have it. And so anything that comes through gets put into those folders. I don't think I have a

different way of explaining it. But when the data was sequestered on October 27, I mentioned this to Alain, as well as the IT person who was there. And so I know that it exists and was copied over.

[01:51:05.15] And then the other thing that I would add is that for projects where there are multiple coauthors, unfortunately, I don't have a consistent system. And so the reason why you might want to look into the [redacted] one or the [redacted] one for each of the coauthors is because I don't-- I was inconsistent in putting them by primary author.

[01:51:32.24] TERESA AMABILE: OK. So yeah, OK. But you're saying-- let me just make sure I understand. Under your inbox--

[01:51:41.27] FRANCESCA GINO: Yeah.

[01:51:42.44] TERESA AMABILE: --on your hard drive--

[01:51:44.15] FRANCESCA GINO: Yeah.

[01:51:44.66] TERESA AMABILE: --we should be able to find-- there's inbox at the high, high level. And then subfolder under inbox for [redacted] subfolder for [redacted] subfolder for [redacted] subfolder for [redacted]

[01:51:59.75] FRANCESCA GINO: That's exactly right.

[01:52:00.65] TERESA AMABILE: And it sounds like what we should see when we look at the hard drive that was sequestered, the copy that was sequestered on October 27. We should see them, it sounds like, alphabetized by first name?

[01:52:16.01] FRANCESCA GINO: That's exactly right.

[01:52:17.91] TERESA AMABILE: OK, we will take another look there. And I'm going to say that I'm going to be tasking Alain with something. I'm going to ask Alain to yourself, or with an IT person if necessary, to look again in the inbox for all of that today. And, Francesca, can you be available to Alain later today, if he were to reach out to you with questions about-- if there's continuing difficulty finding those subfolders?

[01:52:59.31] FRANCESCA GINO: Yes, and if you want, I can screen share so that you see what I'm talking about. If that's helpful, I'm happy to--

[01:53:05.15] TERESA AMABILE: If you wouldn't mind, if you could--

[01:53:07.53] FRANCESCA GINO: Absolutely.

[01:53:09.80] TERESA AMABILE: I don't know if you have the ability to screen share, unless whoever is running the show-- that could be Alma-- gives you the ability to screen share. But

that should pop up in just a sec. Yeah, Alma says, yeah, she's doing that. So hopefully you now have the ability to screen share.

[01:53:29.76] FRANCESCA GINO: So this is my inbox. And so, as you can see, this is what stays on the cloud. But then--

[01:53:39.17] TERESA AMABILE: So are you linking-- so under all accounts up there--

[01:53:43.58] FRANCESCA GINO: Yeah. So what-- you need to move down. It says, on my computer.

[01:53:47.78] TERESA AMABILE: On my computer, OK.

[01:53:49.28] FRANCESCA GINO: And so if you see, there is basically a lot of the people I work with and then, for some of them, conferences, consulting.

[01:54:02.82] TERESA AMABILE: Wait. Just go up a second. So I think I saw [redacted]'s name at the bottom.

[01:54:06.51] FRANCESCA GINO: That's exactly right.

[01:54:07.56] TERESA AMABILE: Yeah. Yeah. Got it. Got it. Yeah.

[01:54:11.34] FRANCESCA GINO: And so you can see the entire correspondence. The only issue that I am going to highlight for you is that I don't have, I think I should have but I don't have a standard practice. And so if an email has multiple co-authors I'm not sure I have-- what's the rule?

[01:54:31.97] I put it in the person who at the time seems to be driving the process or maybe the person who wrote the email, and so unfortunately, you're checking across different--

[01:54:44.12] TERESA AMABILE: OK.

[01:54:44.47] FRANCESCA GINO: --folders. And so here's the one for [redacted]. And then--

[01:54:49.07] TERESA AMABILE: Can you just-- so we're looking at the one from [redacted].

[01:54:51.83] FRANCESCA GINO: Yeah.

[01:54:52.25] TERESA AMABILE: So the second column here, can you go down and can you show us? Do you actually have emails going back to 2010?

[01:54:59.78] FRANCESCA GINO: So I--

[01:55:00.71] TERESA AMABILE: Yes, you do, it looks like.

[01:55:02.78] FRANCESCA GINO: Yeah, so I have-- and again because of the way HBS was giving limits, I know for a fact that not every single email is there. And again, I don't have a rule-- if we are working really actively on a paper back and forth and we keep exchanging throughout the week, I might delete one so that I don't have to categorize into folders.

[01:55:31.58] And so it really varies. It's probably a practice where I need rules.

[01:55:39.20] TERESA AMABILE: You know, it looks to me from just a little skim here of the first line that the paper was submitted-- it looks like in November of 2010 to PNAS. I'm looking at the fifth or sixth one from the bottom, dated 11/14/10. “Let's hope for good news.”

[01:56:04.62] FRANCESCA GINO: Yeah. No, this is a different one, sorry. This is a paper with [redacted] and [redacted] I can tell you that-- since I'd found what appeared to be in an email in the folder [redacted]. So if you don't mind, I'll move--

[01:56:24.19] TERESA AMABILE: Yeah, let's go there. It just looks to me like the earliest email in here with [redacted] is October of 2010. But maybe you didn't scroll down all the way. So--

[01:56:36.42] FRANCESCA GINO: No, that I think is accurate. And in the sent folder, I don't-- it seems like there are a few from 2010. It's from 2010, and then a few are missing. I'm not entirely sure what happened there. But if I go--

[01:56:53.81] TERESA AMABILE: Yeah, let's go to the earliest that you have from [redacted].

[01:56:56.84] FRANCESCA GINO: So there is an email on March 9th in 2011, so this is the write-up that they sent.

[01:57:19.50] TERESA AMABILE: And that's what's called, I think, study 2 in the paper? The insurance experiment.

[01:57:26.17] FRANCESCA GINO: So this is the one. So this is what caught my attention. It says, in studies 2 and 3, it's unclear why we find different [INAUDIBLE], since the collection slip is submitted before the tax form. Could it be that there was no collection slip?

[01:57:42.18] So that's, I think, is the point where the observation was made, and I went back to [redacted] to talk through the procedures. And so I would appreciate if you do this search yourself. When I look through my email, I don't have-- it seems like the issue was resolved in the next draft. And then we moved on.

[01:58:11.46] TERESA AMABILE: So the version that's attached to this [redacted] email is the version where she said she saw this problem. “It's unclear.”

[01:58:21.89] FRANCESCA GINO: That's exactly right.

[01:58:23.19] TERESA AMABILE: OK. And then you-- and then it was resolved in the next version, you think. But you have been-- are you saying that you've been unable to find an email that has that next version where it had been corrected?

[01:58:41.86] FRANCESCA GINO: So for reasons that I don't understand and IT doesn't either, but when I go to my sent folder, I am missing a lot of the emails from 2010, 2011, and some of 2012. I don't know why. And so I don't know. I don't know how to track down whether I was the one who edited out the piece of information.

[01:59:13.92] But again, I think that was a conversation, likely with [redacted] But what I'm suggesting for you, if you want to understand the paper drafts that maybe are not saved and may be on an email attachment that, unfortunately, you have to go to [redacted] You have to go to [redacted]. You have to go to [redacted] and you have to go to [redacted].

[01:59:44.85] TERESA AMABILE: Yeah

[01:59:47.25] FRANCESCA GINO: And for [redacted], his folder is under HBS NOM unit, so that is there.

[02:00:06.50] TERESA AMABILE: So you have research relevant correspondence, all correspondence with [redacted], is under that HBS NOM unit subfolder.

[02:00:16.85] FRANCESCA GINO: Yep.

[02:00:17.75] TERESA AMABILE: Under HBS-- under inbox on my computer.

[02:00:23.03] FRANCESCA GINO: That's right.

[02:00:24.17] TERESA AMABILE: OK. I think I've got that. Alain, I'm going to ask you to give-- either give a thumbs up that you think you've got information from the screen share and what Francesca just went through that's going to be useful to you or maybe you could just come on and say if you feel that you will need a conversation with Francesca about this later today.

[02:00:52.98] ALAIN BONACOSSA: Would this be a good time for us to take a break so that we can confer with the committee for a few minutes?

[02:00:59.28] TERESA AMABILE: Yeah, let's do that. Let's definitely do that. And then we'll come back, and we'll move on to just to that very last allegation 4B.

[02:01:13.36] FRANCESCA GINO: The reason-- just so that we're clear, so in 2012, that's when we submitted the paper. But the paper was submitted to other journals prior, so I believe that we went through OBHDP first. I can look at that just to be sure.

[02:01:33.28] TERESA AMABILE: Thank you. Thank you for telling us that. OK. Yeah. Why don't we take a break? I'm going to say five minutes, and Francesca and Sydney, we'll put you into the breakout room like before. And you'll see a countdown when there's one minute left.

[02:01:58.12] We will try to come back in five minutes. I don't think we'll need more than that. It may be a minute or two over that, but we'll try to do it very quickly, our little conference here. Thank you. Appreciate that. Appreciate the screen share.

[BREAK]

[02:02:22.42] TERESA AMABILE: OK. Thank you. So we're now going to turn to allegation 4B, which also concerns that same study, study one in the 2012 PNAS paper on signing at the beginning decreasing dishonesty. So apart from what was covered in your written response, Francesca, are there any descriptions of or assertions about this study or its data in the first inquiry committee memo, of January 14, that, in your view, are incorrect that you haven't already mentioned?

[02:02:57.00] FRANCESCA GINO: No. I'm just saying that I don't believe that there is an error in the data.

[02:03:06.21] TERESA AMABILE: OK, so for this next question, we're going to look at page 25 in the first inquiry committee memo, which shows part of the OSF dataset used by the complainant. And, Alain, I'm going to ask if you can screen share that page 25.

[02:03:28.26] OK, this table shows eight lines of data highlighted in yellow that are out of sort. So we'll just take a few seconds to look at that. We've all seen this in the memo. OK, and, Alain, could you now move to page 26 so we can look at the plot? OK. That's large on my screen. Is it visible to you, Francesca, and to you, Bob? Yes?

[02:04:04.20] ROBERT KAPLAN: Yes, it is.

[02:04:05.19] TERESA AMABILE: OK. This plot shows a strong directionality to the anomalous out-of-sort responses, which are, again, indicated by red circles with red Xs in them. Again, the directionality of these anomalous data points is that they strongly support the hypothesized effect.

[02:04:37.56] So we'll take a few moments to study that. OK, Alain you can stop the screen share. And, Francesca, can you explain the anomalous out of sort responses in those eight lines of data and the fact that the plot reveals that those particular lines of data strongly support the hypothesized effect?

[02:05:08.03] FRANCESCA GINO: For studies that were conducted in the lab at UNC, we used index cards that would be given to participants and sometimes be reused across sessions, and so the fact that the numbers are the way they are in the ID doesn't seem problematic to me since, again, I think we're used to a lab at Harvard, as well as in many other universities, where you have 40 participants at the same time, or 20 participants at the same time.

[02:05:51.44] This was a lab where often there were three, four, at a maximum eight participants. And so I don't believe that's an error. Again, in the spirit of thinking through the standpoint of running data quality, if you look at the graph with all blue dots without the red ones, nothing

would have popped out to me as a problematic other than with the eyes of 2022 that running a study with so few participants is probably-- was good practice then, probably not good practice today.

[02:06:33.72] I tried to run simulations by taking other few data points that not necessarily have numbers-- like numbers above 100-- and so the results get shifted, sometimes in support and sometimes not in support of the hypothesis.

[02:07:03.15] TERESA AMABILE: So let me just follow up quickly on that. When you talked about the ID cards that would be handed to participants when they came into the lab, two, three, up to maybe eight at a time, they would be given a card kind of randomly, I guess, with a participant ID number.

[02:07:22.36] FRANCESCA GINO: Mmhm.

[02:07:23.54] TERESA AMABILE: So that's in reference to two of those eight highlighted points that we just looked at.

[02:07:29.09] FRANCESCA GINO: Yep.

[02:07:29.55] TERESA AMABILE: The ones that have the duplicate ID number of 49?

[02:07:32.27] FRANCESCA GINO: Yep.

[02:07:34.72] TERESA AMABILE: Yeah.

[02:07:37.99] TERESA AMABILE: I just wanted to-- my question is, does it seem surprising to you that there's only one duplicate identification number if that was the practice in this lab, rather than several duplicate identification numbers in this dataset?

[02:08:05.41] FRANCESCA GINO: So with the eyes and mind of today, in light that everything that has happened over the last many months, I think I would go and ask [redacted] and say, hey, [redacted] there seems to be a double 49. Let's go back to the original data and check. I don't know if she entered the data twice.

[02:08:35.69] Again, I come from the standpoint of trusting the people who work in research and knowing that they're very careful in the way that they enter, and so even in looking at the out of sort, I would imagine that you pile up the data. That's what I used to do when I was the lab manager at CMU. And then you enter the data as you look at it.

[02:09:05.66] So I don't-- I see the issue, but I also see as a very possible situation the fact that the ID card was there and she just reused it for a different session. I think that what I would have hoped for is that the dataset recorded the day and the time the session were run so that I could easily tell that those were two different data points rather than being the same one.

[02:09:37.06] TERESA AMABILE: OK. Bob, did you have a follow-up now?

[02:09:41.62] ROBERT KAPLAN: Given what's in that left-hand field, it doesn't seem that could be done from a handful of cards that are being reused. I mean, we have numbers that go from one to a hundred-something. So it means the coding of that column shouldn't be on a set of 10 index cards that are being reused over and over again with different participants.

[02:10:05.42] FRANCESCA GINO: But let--

[02:10:06.10] ROBERT KAPLAN: That's the first thing. I'll come back on some other questions.

[02:10:08.86] FRANCESCA GINO: But let's imagine-- and again, this comes from the standpoint of a person who worked as a lab manager for many years prior to taking on a job at UNC. Let's imagine that participants left an index card instead of trashing it on the way out. I would have no problem reusing it. I don't think I would-- and so I could imagine [redacted] doing something like that. Can I be 100% sure? I cannot.

[02:10:36.76] ROBERT KAPLAN: But that would only be one out of 100 index cards that somehow got reused.

[02:10:44.02] FRANCESCA GINO: Right, and so it would be one participant who left it on the desk rather than all others being put away.

[02:10:52.12] ROBERT KAPLAN: Yeah, and the two people who used that same index card had exactly the same deductions to the second digit, 1.8, 1.8.

[02:11:05.53] You're not seeing that. I'm looking at an original dataset. So I don't know, Alain, do you want to share the other screenshot of the more complete dataset?

[02:11:14.84] TERESA AMABILE: Bob, I've gotten a little bit lost. Could you say-- so what is the question that you're pursuing here?

[02:11:23.39] ROBERT KAPLAN: Well, they're saying the reason-- well, I guess we're focused on that the same index card could have been reused and that explains the duplication.

[02:11:32.06] TERESA AMABILE: Is that essentially the same question that I had?

[02:11:34.70] ROBERT KAPLAN: Yeah, it was, but I'm just saying it was unusual that the one index card that apparently was reused, the respondents gave exactly the same deduction to two significant digits.

[02:11:46.88] TERESA AMABILE: OK, so--

[02:11:47.96] ROBERT KAPLAN: So to me, the likelihood that that's two different people-- and they're the only two people who use the same index card and they both had exactly the same deductions--

[02:11:59.84] TERESA AMABILE: OK. So I'm going to ask you--

[02:12:01.07] ROBERT KAPLAN: Seems statistically unlikely. Yeah.

[02:12:02.90] TERESA AMABILE: If you have a question, can you formulate it? Otherwise, I'd like to move on.

[02:12:07.51] ROBERT KAPLAN: Well, I just-- Well, I want to-- yeah, OK, let's move on.

[02:12:13.66] TERESA AMABILE: OK. So I'm thinking that-- let me see if I have any follow-ups that I wanted to ask on this one.

[02:12:24.39] ROBERT KAPLAN: No, but before we lose the screenshot, I did have questions on the six other observations.

[02:12:30.90] TERESA AMABILE: Oh, OK, Bob. Yeah, go ahead. Go ahead. At this point, I don't have any other follow-ups. Did you want to ask Alain to do the screen share again, so we can both-- so that we can all be looking at it while you ask?

[02:12:43.53] ROBERT KAPLAN: Yeah, maybe, if, Alain, you could screen share actually the analysis that I did. Not the analysis, but just the presentation. Yeah, that one.

[02:12:54.39] TERESA AMABILE: OK, but so, Bob, could you say what this is?

[02:12:56.94] ROBERT KAPLAN: So this screenshot actually is working with the same dataset that the-- I think the complainant used, and I just included more columns in this. But it's exactly the same sort.

[02:13:11.88] So we first sorted within condition one and then somewhere between number 69 and number 70. Or participant number 101 and number 70, the condition switched to condition two, and so we have six out of sequence observations in the column p, pound, all the way on the left.

[02:13:40.74] And the three in condition one all come in with zero and one deductions, strongly in support of the hypothesis. And the three out of sequence observations still-- that are now shown in yellow in the highlight-- all have the highest number of deductions, strongly again in direction of supporting the hypothesis.

[02:14:10.83] And again to explain this as, this is just due to random error, that somehow in a hundred observations, you get this pattern showing up here.

[02:14:27.91] TERESA AMABILE: So, Bob, is your question-- Could you--

[02:14:32.32] ROBERT KAPLAN: How do you explain how this could have been, the out of sequence, first, have scores strongly in support of the hypothesis, and they all appear together at the end of condition one and the start of condition two? And how any kind of sort or random error or sort could have allowed that sequence to have occurred. Teresa, is that a--

[02:14:59.29] TERESA AMABILE: That's a question. OK, yeah, Francesca, can you address that?

[02:15:04.06] FRANCESCA GINO: So I appreciate the question. I start thinking about a book, Fooled by Randomness, where there seems to be coincidences where there are necessarily none. The only explanation that I can give, thinking through, from the eyes of [redacted] running the studies, is that that's how the data was stacked up, and that's how the data was entered by her or any other RA running the research.

[02:15:45.57] I think on the questions of running simulations and seeing what is possible, given the size of the dataset, I have done some picking randomly. But I think I would want more time to run more simulation as a forensic person would do to see if there was in fact any errors. From my perspective, it's difficult to imagine that there would be, simply because of the care that I know [redacted] took in conducting the work. And she clearly didn't have any incentives to make the research come out one way or the other, since it's not that her pay depended on that or how I treated her depended on that.

[02:16:45.58] And so what I can think of is data are being stacked in the way that they were.

[02:16:52.30] TERESA AMABILE: Francesca, when you say data being stacked, are you referring to the actual physical pieces of paper--

[02:16:57.94] FRANCESCA GINO: That's right.

[02:16:59.12] TERESA AMABILE: --on which people--

[02:17:00.81] FRANCESCA GINO: Yeah.

[02:17:01.69] TERESA AMABILE: …like the tax forms...

[02:17:02.73] FRANCESCA GINO: Yeah.

[02:17:03.01] TERESA AMABILE: …the physical tax forms, just the way they happened to be stacked up, that could be the way in which they were entered?

[02:17:10.01] FRANCESCA GINO: Yeah. And in-- it didn't seem appropriate for me to reach out to UNC, or [redacted] as the investigation is going on. I don't know if the data exists. I doubt that it does, since IRB rules were such that data, original data on paper, could be destroyed after a few years after the study.

[02:17:36.33] And I don't think anybody sent me the data when I moved to HBS and [redacted] left the lab. But I don't know.

[02:17:48.68] ROBERT KAPLAN: Is there some explanation other than kind of random error that could have led to this pattern, that somehow these data points got added later, or do you just feel that in a lot of experiments stuff like this happens?

[02:18:14.57] TERESA AMABILE: Bob, I kind of feel like Francesca's given us her--

[02:18:18.46] ROBERT KAPLAN: OK.

[02:18:18.93] TERESA AMABILE: --her possible explanation.

[02:18:20.29] ROBERT KAPLAN: Well, I just thought of-- well, the point-- I mean, I heard you say that [redacted] was unlikely to have done this, as you say, because she had no incentive to stack the data. I'm just trying to understand what other sources could have generated this.

[02:18:41.47] FRANCESCA GINO: I guess what I'm suggesting is that it's the data itself without attributing it to an intentional error of some type. But I'm also not a forensic expert, and so I can't tell for sure.

[02:19:02.56] TERESA AMABILE: Bob, are we OK to stop the screen share at this point?

[02:19:05.53] ROBERT KAPLAN: Yes, yes, we can.

[02:19:06.88] TERESA AMABILE: OK, thanks. Thank you, Alain, for that. OK, we've gone through the prepared questions we had, but-- and we are going to go to a break pretty soon. But, Francesca, I just wanted to first ask you if there's anything else you'd like to add right now? We will be bringing you back after we take a break, but is there anything else you'd like to add right now?

[02:19:36.33] FRANCESCA GINO: No, I would say especially that given you didn't have a lot of days since looking over the responses, and you looked as if you did an extra analysis and work, I'm just very appreciative of the care and attention that you're giving to this.

[02:19:54.23] TERESA AMABILE: We appreciate your saying that. Thank you. OK, so we're going to go to a break of about 10 minutes for a bio break and also for Bob and me to discuss if we have any additional questions for you before we end the meeting. We'll put you and Sydney into a breakout room during the break, and we'll pause the Zoom recording, as we've been doing for all the breaks.

[02:20:25.03] We will reconvene at-- so my clock says 12:38. We'll reconvene at 12:48, so if you could be back at your computer by then. We'll close the breakout room, bring you and Sydney back into the main room, and we'll finish up the meeting. We'll ask any additional questions that we have at that time, OK?

[02:20:51.32] FRANCESCA GINO: Sounds great.

[02:20:51.73] TERESA AMABILE: All right, I think we're ready for the break. Thank you.

[BREAK]

[02:21:03.03] TERESA AMABILE: OK, Francesca, we just spent a few minutes talking, and we decided we don't have any additional questions for you right now.

[02:21:11.97] FRANCESCA GINO: OK.

[02:21:13.50] TERESA AMABILE: I do want to ask you to please be in touch with Alain this afternoon to coordinate on locating those emails and those documents that we're having trouble locating.

[02:21:28.54] FRANCESCA GINO: OK.

[02:21:29.45] TERESA AMABILE: OK, and I just want to thank you very much for your time. It's been a long time. And we want to thank you, and for answering our questions, and I think we're done. I'm going to officially end the meeting. OK.

[02:21:45.82] FRANCESCA GINO: Thank you both.

[02:21:46.96] TERESA AMABILE: Thank you.

[02:21:47.51] ROBERT KAPLAN: Teresa, unless Francesca has some summary comments or questions, concerns of her own that you'd like to raise with us.

[02:21:57.48] FRANCESCA GINO: No, just as I said, it's not what you sign up for when you are a faculty member at Harvard Business School, so I'm very appreciative of all the time and effort that you put into this.

[02:22:12.78] TERESA AMABILE: Thank you, Francesca. OK, bye-bye. Take care.

[02:22:17.19] FRANCESCA GINO: Bye.

[02:22:17.97] TERESA AMABILE: Good luck with the course. OK.

Exhibit 8

Respondent's comment to the interview transcript received on March 8, 2022

To the Inquiry Committee

Thank you again for all the energy, attention, and effort you are giving to this process. In reading the transcript of the 2/28 interview, I thought it would be helpful to clarify three points. They are below.

At minute [00:29:34.25], I mentioned [redacted] may have a degree from UNC, and noted we should check. I did check: [redacted] has an undergraduate degree in Psychology from the University of Florida. She then completed an MBA from UNC between 2011-2013, after 3 years of working with me as a lab manager (while she was still a lab manager).

When giving context about the contentious collaboration on the 2012 PNAS paper, I could have added the following. (Minute [01:26:02.42]) It may be worth noting that [redacted] was so displeased by the interactions with [redacted] and the fact that I did not do enough to defend her or "stand up for her" (in her own words) that she told me she hoped one day I would feel as hurt by a collaboration as she did at the time.

At minute [01:57:26.17], a part in the transcript is inaudible. I was reading this part of an email: "1) In studies 2&3 it's unclear why we find differences in cheating in the matrix task, since the collection slip is supposedly submitted before the tax form with the signature manipulation. could it be that there was no collection slip as participants also had to indicate their performance on the tax form? could you clarify that part."

With appreciation,
Francesca

Exhibit 9

Respondent's Written Response to Draft Inquiry Report received on April 1, 2022

Comments to the Draft Inquiry Report

As I mentioned during the interview, I appreciate all the time, attention, and effort the committee has put into this case. I have reviewed the Draft Inquiry Report and understand that, at this preliminary stage, the Inquiry Committee recommends that each allegation should move forward to investigation. While this process has been personally very difficult, I understand that the investigation can more thoroughly interview others and review corroborating accounts. I am confident that further investigation will show that I did not commit research misconduct.

In reflecting on my interview with the Inquiry Committee, I was struck by a comment that Bob Kaplan made: during the introduction, he noted that this was the first time he was meeting me professionally. This is certainly not the way I want my colleagues to get to know me. So, I would like to take a moment to explain "who I am" and how I approach research.

Learning about the allegations has been *by far* the lowest moment in my career as a professor. It is sad, tragic, and incredibly stressful. I take the role of being a scholar and the privilege of being a faculty member at HBS very seriously. I deeply care about studying problems I see people in organizations struggle with, and have worked really hard over the years to gain insights from research that I can bring back to them through my writing and teaching. I deeply care about the integrity of the research I publish and always want to be confident in the research findings so that I can draw recommendations for employees and leaders alike. I hold myself fully accountable for the research I publish, whether it is a solo-authored paper or one I collaborated on with others.

I very much enjoy the research process and have collaborated with many students and colleagues over the years to examine questions that, I believed, were theoretically interesting and practically important. Most of my work, whether it is the many academic articles I wrote (over 100 of them) or the case studies I worked on (over 50 of them), has been in collaboration with others, trusted colleagues I learned from or students eager to gain more experience through joint work. In fact, I am known in the field in part because I have had many collaborators, I have been told.

In my initial remarks to the committee during the interview, I asked whether we could talk about the allegations from oldest to newest. I made this request since I thought it was important to highlight how I set up a research lab for the first time, when I was on the Faculty at UNC's Kenan-Flagler Business School (between 2008-2010), and how that approach seemed very effective and influenced my research practices in the years that followed.

I had spent two years working as a Post-Doctoral Fellow at Carnegie Mellon University before joining UNC (between 2006-2008). As part of that role, I was also the lab manager for scholars in behavioral sciences and Organizational Behavior. I got to experience first-hand what it means to run a lab, work with professors and doctoral students helping them in their research, and take on a wide range of responsibilities, from working on IRB applications and running studies to entering data and reviewing paper drafts or conducting literature reviews. The CMU experience was foundational to my development as a scholar. It gave me a full understanding of common practices for managing a lab, but also a deep understanding of the research process. I was lucky enough to work under the supervision of [redacted] (now a professor at Berkeley) who, in my mind, always approached research with a great thirst for learning and the highest levels of

research integrity. There were plenty of research projects we started but then dropped since the data from initial studies did not support our hypotheses or was not strong enough to suggest continuing the project. [redacted] never made dropping a project an issue– it was just part of learning and discovery.

When I created the lab at UNC, I wanted to recreate the same experience for the RAs working in it and helping. Whenever a project did not work out, because the data from a study did not support the hypotheses, we moved on to another research idea. I always tried to create an atmosphere in the lab and in any research collaboration of genuine learning and psychological safety. And I made a point of discussing projects that were not conducted in the way that was intended (for instance, because of a flaw in the procedure) and thus abandoned.

This is why I find the allegations about the 2012 PNAS paper ("Signing at the Beginning Makes Ethics Salient and Decreases Dishonest Self-reports in Comparison to Signing at the End."), Allegations 4a and 4b, to be difficult to accept. As the committee noted during the interview, I used the word "confident" when suggesting that the lab manager at the time, [redacted], would have caught these issues if in fact they were errors in the way the experiment was conducted or the data entered. There had been plenty of occasions where [redacted] and I discussed results of projects that did not work out, and then abandoned. After running pilot studies, she regularly reported back on whether participants followed every step of the procedures, or whether certain parts of the instructions needed more clarity, so that we could make appropriate changes to the procedures if needed before running the full study.

I also find it very strange that the co-author who pointed out the potential flaw in the procedural write-up ([redacted]) in an email on March 9, 2011 (submitted previously as an exhibit), did not have any issue with the changes made to the paper and never raised the issue again over the next 10 years. [redacted] talked multiple times to the authors of the blogpost that led to the retraction of the 2012 PNAS paper in the summer of 2021, while I never had the opportunity to have a conversation with them. I am surprised [redacted] noted this change in the procedural description to be an issue when it was per her suggestion in 2011 that the change was made when we were writing up the paper. As I noted in the interview, [redacted]'s email comment prompted me to review the experimental procedures with [redacted] and revise them to accurately reflect the procedures used. Any changes made were to more accurately represent the reality of the experiment. I am interested in publishing research that points to real effects, that allows us to learn, as individuals, how we behave and why, and in which ways we can make better decisions.

When I joined HBS in July 2010, I continued running studies at UNC with [redacted]'s help because of the relationship we had developed. I trusted her competence, but also her willingness to talk about problems if she encountered any issue while running the studies. We conducted many studies that did not work, and there has never been an issue with dropping projects she had spent a lot of energy and time working on. That's just part of the learning through research, and she well understood that that was the case.

Through the years we worked together, [redacted] entered data from many experiments and also merged datasets when the study required for two or more datasets to be merged (e.g., in the case

of a longitudinal study). So, as I mentioned in the interview, I believe Allegation 3 points not to an error, but rather to how [redacted] coded the data and merged it.

Throughout the interview, I made comments about how I work with RAs (research assistants). As I mentioned, my practices are a reflection of what I learned from other scholars I respect, like [redacted], and the types of responsibilities I had when I was in a position of RA or lab manager.

I should also have added, though, that as the author of papers that are published, it is *my* full responsibility to take appropriate steps to try to ensure that the procedures are explained clearly, that the studies are properly conducted, and that the data is valid, rather than the result of errors.

Since the interview, I downloaded what I believe is the raw data of the study mentioned in Allegation 1 – something I did not have time to analyze before the interview, unfortunately. As the committee observed in preliminary analyses, there seem to be discrepancies between the data posted on OSF and what I believe is the raw data. I am unsure about how to explain these discrepancies since I was not the person cleaning the data and preparing it for analyses. Like the committee, I am interested in understanding the cause of discrepancies and correct errors if needed. The study is part of research that has demonstrated reliably a robust effect, so I want to understand what happened and how to avoid any error in the future. As I mentioned, I deeply care about the accuracy of my work. And I've never compromised that accuracy, even when my collaborators and I had made big investments of time and money in the research. I dropped a field study in collaboration with a Japanese Bank that took months of my energy when I discovered that randomizations into experimental condition had been done alphabetically rather than randomly. I dropped a labor-intensive laboratory study that cost over $20,000 to conduct because the results were not strong, under different robustness checks.

I welcome the opportunity for the committee, in the next stage, to talk to as many of my collaborators as they'd like, and to as many of my RAs as most helpful. I am confident that the committee will hear that I work diligently and professionally in a way consistent with both these comments and what I mentioned in the interview.

Over the last few days, I used statcheck on a random set of the papers I published (35 of them) and found no errors in the way the statistics were reported on the paper. Though that is simply a check for papers being typo-free when it comes to the reporting of statistical tests, it is a sign of precision in the work I publish. Since the summer of 2021, I started using statcheck as a new practice before submission of papers to journals.

The experience of learning about problems in the field data of the 2012 PNAS paper and the subsequent retraction of that paper was hard, professionally and personally. Really hard. I tried to make the best of an incredibly sad and stressful experience, and revised my research practices as I described in the interview. I dropped many projects that I felt I was not involved too closely with, introduced more checks and oversight in the research where a student or a junior collaborator is driving the project, and introduced reviews to better understand the quality of the data used in my projects. My RA and I are also working to identify consistent ways to keep track of every study my collaborators and I conduct. I have made each of these choices as I take

appropriate measures to ensure the data in the papers I publish is accurate and even those errors that are likely honest errors are caught early. I will continue to evolve in my lab practices as necessary over time to ensure accuracy in my work.

Thank you again for considering these comments.

With gratitude,
Francesca

Exhibit 2
Sequestration Inventory

HBS Records Sequestration Inventory Log

Incident #: RI21-001

Data/File/Directory Name	Date Acquired	Data Location	Original Copy	Initials of Individual aquiring data	
crashplan-restore-10192021-200558	10/19/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Code42 (HBS Endpoint Backup Service) Restore of Home HBS provided system "catseye"
Dropbox.zip	10/28/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Fgino Copy of Dropbox HBS Data from personal dropbox account.
Exchange.pst	10/20/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Fgino 1 of 3 hbs email extracts.
Exchange-2.pst	10/20/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Fgino 2 of 3 hbs email extracts.
Exchange-3.pst	10/20/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Fgino 3 of 3 hbs email extracts.
Fgino_hbs_edu_OneDrive_1_10-19-2021.zip	10/19/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Fgino O365 OneDrive data
Fileserver-Home/Fac_project_Gino_FeedbackStudy	10/21/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Fgino HBSFiles Project work Space
Fileserver-Home/fgino	10/20/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Fgino HBSfiles home space
Qualtrics/Account-A-Errors	10/22/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Qualtrics Original Survey Data
Qualtrics/Accounts-B-Data	10/22/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Qualtrics Original Survey Data
Qualtrics/AccountA files202110222131028	10/22/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Qualtrics Original Survey Data
RI21-001-Hardware log – 102821	10/28/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Hardware log of HBS provisioned Endpoints received.
SurveyIDs.xlsx	10/21/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	List of Qualtrics Surveys and Associated IDs

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 258 of 1282

List All- Errors-Master.xlsx	10/22/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Master Qualtrix List with highlighted Errors of ones that could not be extracted.
merged error.xlsx	10/22/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	Error list of merged Qualtrics Surveys and associated IDs.
errorSurveys.json	10/22/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	JSON error file from quatrics extract script via API.
Fgino Laptop-C02TCB6GTF1	11/4/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	fgino macbook provisioned HBS system data
fgino-macpro-F5NG0HAF694	11/9/2021	/hbsfiles/project/Dean-RCS-FY22/Master-Data	YES	CWP	fgino macpro provisioned HBS system data

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 259 of 1282

Exhibit 3
Deciding Official Response to Inquiry Report received on April 13, 2022

Harvard Business School

Srikant Datar
George F. Baker Professor of Administration
Dean of the Faculty
[redacted]

MEMORANDUM

To: Alain Bonacossa, Research Integrity Officer

From: Srikant Datar

Re: Response to Report of Inquiry Committee Concerning Allegations against Dr. Francesca Gino – Case RI21-001

Date: April 13, 2022

I have read the Committee's April 8, 2022 report and supporting materials, and concur with the recommendation of the Inquiry Committee that we move to investigation of allegations 1, 2, 3, 4a, and 4b of Case RI21-001 pursuant to the HBS Policy.

I will now work to identify a third faculty member who might join Teresa Amabile (chair) and Bob Kaplan to comprise the Investigation Committee, and will notify you when that individual is confirmed.

I am deeply grateful for the incredible care and thoughtfulness you, Teresa, and Bob have brought to the work thus far. Thank you.

Exhibit 4
Investigation Notice sent to Respondent on April 15, 2022

HARVARD | BUSINESS | SCHOOL

ALAIN BONACOSSA
RESEARCH INTEGRITY OFFICER

Confidential

April 15, 2022

RE: Notice of Investigation Related to Allegations of Research Misconduct

Dear Professor Gino,

As you are aware through a letter dated April 8, 2022, Harvard Business School ("HBS") recently completed an Inquiry into allegations of research misconduct concerning your work.

We are writing to inform you that based on the findings of the Inquiry, Dean Srikant Datar, the HBS Deciding Official, concluded that an Investigation into the allegations is warranted. The Investigation will consider whether you falsified and/or fabricated data in the following publications (Appendix B):

> Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 ("*2020 JPSP Paper*")
>
> Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 ("*2015 Psychological Science Paper*")
>
> Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 ("*2014 Psychological Science Paper*")
>
> Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("2012 PNAS Paper")

The specific allegations can be found in Appendix A to this letter. The Investigation will be conducted in accordance with the HBS Interim Policy and Procedures for Responding to Allegations of Research Misconduct ("HBS Policy;" see Appendix C). The Investigation will be carried out by a faculty committee, appointed by Dean Datar, which shall be charged with assessing whether research misconduct has been committed, by whom, and to what extent. A finding of research misconduct requires that:

- There be a significant departure from accepted practices of the relevant research community;
- The respondent committed the research misconduct intentionally, knowingly, or recklessly; and
- The allegation be proven by preponderance of the evidence.

Dean Datar has proposed to appoint the following faculty members to serve on the Investigation Committee: Teresa Amabile (Chair), Shawn Cole, and Robert (Bob) Kaplan. Per the HBS Policy, you are afforded five (5) calendar days to lodge objections based upon a proposed committee member's alleged personal, professional, or financial conflict of interest. If you wish to lodge an objection, please do so in writing to me by Wednesday, April 20, 2022. The Dean or their designee will make the final determination as to whether a conflict exists.

The Investigation Committee will want to interview you and others who may have relevant information, and I will reach out to you to set up a date and time. Any interviews will be audio recorded and transcribed and you will be given the opportunity to review and correct the transcript of your interview. Per HBS policy, you may choose up to two personal advisors for support during the process. Personal advisors may be attorneys but may not be principals or witnesses in the research misconduct matter. Personal advisors may be present at any proceedings or interviews that the respondent attends but may not question witnesses or otherwise take part in the research misconduct proceedings. In lieu of or in addition to an interview, you also may wish to submit a written statement to the Committee.

At the conclusion of the Investigation, the Committee will prepare a draft report with its conclusions and recommendations. You will be provided with a copy of the draft report and given the opportunity to review and make comments for the Committee to consider before the report is finalized. The Investigation Committee's final report, along with all exhibits and any comments you provided to the draft report, will be reviewed by Dean Datar or their designee, who will make a final finding of research misconduct. For further information regarding the Investigation process, and research misconduct proceedings more generally, please refer to the HBS Policy (Appendix C).

In addition to the research records sequestered at Inquiry, we will let you know if additional evidence or records are requested by the Investigation Committee. Please note that no materials relevant to the Investigation should be altered or destroyed, even in the course, for example, of routine disposal of old papers or electronic files, extra copies, or drafts of documents. Under the HBS Policy, the destruction of research records, absence of research records, or failure to provide research records adequately documenting the questioned research may be evidence of research misconduct.

Please understand that you are to take no steps to retaliate against anyone who came forward with the allegations or against anyone who may participate in the Investigation process.

We consider this to be a confidential matter and will make every effort to ensure that confidentiality is maintained. Under the HBS Policy, you also are responsible for maintaining confidentiality and cooperating with the conduct of an Investigation. To ensure confidentiality and a fair, thorough and objective process, please refrain from disclosing any information related to these proceedings, including the fact that there is an ongoing Investigation, with others, unless specifically instructed to do so by the Investigation Committee.

I will be your main point of contact throughout these proceedings and will be available to answer any questions you may have—about the policy and the process, as well as other issues that might arise—at any time. I can be reached at [redacted] or [redacted].

Sincerely,

Alain Bonacossa

SOLDIERS FIELD | BOSTON, MA 02163 | Ph [redacted] | [redacted] | GEORGE F. BAKER FOUNDATION

Appendix A

Summary of Allegations

Relevant Publications:

Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 ("*2020 JPSP Paper*")

Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 ("*2015 Psychological Science Paper*")

Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 ("*2014 Psychological Science Paper*")

Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*")

Allegation 1:

Dr. Gino falsified and/or fabricated the dataset for ***Study 3a in the 2020 JPSP Paper*** by altering observations to affect the significance of findings of the study in the hypothesized direction. In particular:

a) In the promotion-focus condition, by changing extreme values of "7" to "1" to drive the expected effect. Specifically, for 9 observations there seems to be a mismatch between participants' impurity ratings and the words participants chose to describe how they felt;
b) In the prevention-focus condition, by changing some values of "1" to either "2" or "3" to drive the expected effect. A number of observations also show a mismatch between participants' impurity ratings and the words participants chose to describe how they felt.

Allegation 2:

Dr. Gino falsified and/or fabricated the datasets for ***Study 4 in the 2015 Psychological Science Paper*** by altering a number of observations. Notably, 20 observations substantially contribute to the significance of the hypothesized effects, and these same 20 observations presented an anomalous response pattern, in which study participants seemingly entered "Harvard" as their response to a question asking them to indicate "Year in School," in contrast to the vast majority of research participants who correctly answered this question.

Allegation 3:
Dr. Gino falsified and/or fabricated the datasets for ***Study 4 in the 2014 Psychological Science Paper*** by altering a number of observations. In particular, when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found, it appears there are 13 observations out of sort within the cheating condition. These observations substantially contribute to the significance of the hypothesized effects. When these observations are corrected with the values implied by the sort, the effect in the expected direction is no longer significant (from p=.0003 to p >.17)

Allegation 4:
With respect to ***Study 1 in the 2012 PNAS Paper***:

a) Dr. Gino falsified and/or fabricated the results by removing part of the description of study instructions to research participants from a draft of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. Such instructions pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.
b) Dr. Gino falsified and/or fabricated the datasets by altering a number of observations. In particular, when sorted by "experimental condition" and by "participant ID number," the dataset for Study 1 appears to include 1 duplicate observation and 8 observations where the "participant ID number" is out of sort. The out of sort observations substantially contribute to the significance of the hypothesized effects.

Appendix B

Articles Referenced in Appendix A Summary of Allegations

American Psychological Association

Journal of Personality and Social Psychology:
Attitudes and Social Cognition

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2020, Vol. 119, No. 6, 1221–1238
http://dx.doi.org/10.1037/pspa0000226

ATTITUDES AND SOCIAL COGNITION

Why Connect? Moral Consequences of Networking With a Promotion or Prevention Focus

Francesca Gino
Harvard University

Maryam Kouchaki
Northwestern University

Tiziana Casciaro
University of Toronto

Networks are a key source of social capital for achieving goals in professional and personal settings. Yet, despite the clear benefits of having an extensive network, individuals often shy away from the opportunity to create new connections because engaging in instrumental networking can make them feel morally impure. In this article, we explore how the motives people have when engaging in networking impact these feelings and, as result, change how frequently they engage in networking and their job performance. Across a correlational survey study, a laboratory experiment (with samples from the United States and Italy), two online studies, an organizational network survey study, and a field experiment with professionals (total $N = 2,551$), we examine how self-regulatory focus, whether promotion or prevention, affects people's experience of and outcomes from networking. We find that a promotion focus, as compared to a prevention focus or a control condition, is beneficial to professional networking, as it lowers feelings of moral impurity from instrumental networking. As such, networking with a promotion focus increases the frequency of instrumental networking as compared to a control condition, whereas networking with a prevention focus decreases frequency of instrumental networking as compared to a control condition.

Keywords: networking, impurity, morality, motivation, regulatory focus

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The importance of professional networks for work performance and career advancement has been well-established in hundreds of empirical studies (for reviews, see Borgatti & Foster, 2003; Brass, Galaskiewicz, Greve, & Tsai, 2004; Borgatti, Mehra, Brass, & Labianca, 2009; Fang et al., 2015). More recently, a growing literature has documented that networking behaviors—commonly defined as individuals' efforts to develop and maintain relationships with others who can potentially provide assistance to them in their career or work (Forret & Dougherty, 2004)—are critical to developing such professional networks (Adler & Kwon, 2002).

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Francesca Gino, Harvard Business School, Harvard University; Maryam Kouchaki, Kellogg School of Management, Northwestern University; Tiziana Casciaro, Rotman School of Management, University of Toronto.

All three authors contributed equally and are listed in alphabetical order by first name. All studies' materials can be found on OSF at https://osf.io/kf2ut/?view_only=26073af04f9046cd9e0a62159a5755d4, together with the data from Studies 1, 3A, and 3B.

Correspondence concerning this article should be addressed to Maryam Kouchaki, Kellogg School of Management, Northwestern University, 2211 Campus Drive, Evanston, IL 60208. E-mail: m-kouchaki@kellogg.northwestern.edu

Despite the benefits people derive from having an extensive and diverse network, they often shy away from playing an active role in cultivating professional connections (Belmi & Laurin, 2016; Bensaou, Galunic, & Jonczyk-Sédès, 2013; Wanberg, Kanfer, & Banas, 2000). In exploring this phenomenon, Casciaro, Gino, and Kouchaki (2014) showed that when networking is the result of individuals' intentional (instrumental) effort to form connections that will help them attain a professional goal (as opposed to social and spontaneous forms of networking), they tend to feel inauthentic and dirty because they have difficulty justifying the selfish intent behind instrumental professional networking morally. This research also showed that people deem instrumental professional networking to be more morally acceptable when they have power and therefore have more to give, because they can more readily self-justify networking as potentially beneficial to others (Casciaro et al., 2014). Yet power is largely an objective experience based on the asymmetric distribution of valued resources in social relations (Magee & Galinsky, 2008); because power is driven by structural and contextual forces, people with lower power may therefore have limited psychological agency to make instrumental professional networking morally palatable to them.

In this article, we wish to identify more universal ways in which people can transform their moral experience of intentional networking as they engage in it to pursue professional goals. We propose that

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people's motives when engaging in instrumental professional networking predict the extent to which they feel inauthentic and morally impure in the process. Specifically, we argue that self-regulatory focus, in the form of prevention and promotion, provides an essential motivational basis for networking behavior which shapes the emotional and psychological experience of networking. Building on earlier self-regulation models (Bowlby, 1969; Higgins, 1987), regulatory focus theory (RFT; Higgins, 1997) identifies two motivational systems that regulate two different basic needs. The promotion-focus system serves nurturance needs. People in a promotion focus care about growth, advancement, and accomplishment, and strive toward ideals, wishes, and aspirations. The prevention-focus system, instead, regulates security needs. People in a prevention focus care about safety, maintaining the status quo, and meeting their responsibilities and duties (Friedman & Förster, 2001; Sacramento, Fay, & West, 2013).

With this research, we aim to advance scholarly understanding of the moral psychology of networking in four ways. First, we theorize that people's motivational approach—promotion versus prevention—predicts how morally impure they feel from instrumental networking for professional goals. Casciaro et al. (2014) demonstrated how moral impurity is heightened by certain types of networking behaviors and not others, and found evidence that impurity reduces the frequency of networking, and thus performance. Though insightful, their research is silent on what people could do to change their perspective toward instrumental networking to avoid the costs of withdrawing from it, nor do Casciaro and her colleagues shed light on the role that motives play in developing and nurturing professional ties. Here, we extend this work by arguing and showing that promotion and prevention focus are independent predictors of how people experience instrumental networking and how much, as a result, they engage in it.

Second, we further develop the theoretical link between regulatory foci and morality advanced by Cornwell and Higgins (2015) and establish it empirically. Third, we elaborate on the theoretical path between people's motives to engage in instrumental professional networking, their experience of moral impurity, and how frequently they network. Fourth, we aim to establish that this path persists across three forms of regulatory focus: (a) the chronic disposition (Higgins, 1997, 1998), (b) the temporarily activated psychological state (Liberman, Idson, Camacho, & Higgins, 1999), and (c) a domain-specific form of promotion and prevention focus (Browman, Destin, & Molden, 2017), which we introduce to allow for the possibility that general trait and state regulatory foci may differ systematically from how a promotion and a prevention focus regulate a specific behavior, such as networking.

How Motives Influence Moral Purity and Networking

Self-Regulatory Foci and Moral Impurity

RFT states that promotion and prevention are mutually inhibitory modes of self-regulation: When one mode is unavailable or blocked, the other mode kicks in to compensate (Higgins, 1998). So, while a person may approach the same goal with both promotion and prevention, only one of the two systems is actively engaged in achieving the goal at any point in time. When pursuing goals, people commonly use either a promotion or a prevention mode, and they can switch modes (Shah, Higgins, & Friedman, 1998). Which system is engaged at any given time depends on the characteristics of the situation and the person's regulatory orientation (Higgins, 1997; Strauman, 1996).

Regulatory focus is studied as either a chronic disposition people have (Higgins, 1997, 1998) or a psychological state that is temporarily activated, such that a person's emphasis on one over the other is primed by cues in the external environment (Friedman & Förster, 2001; Liberman et al., 1999). In addition to chronic and state forms of regulatory foci, we echo developments in regulatory-focus theory (Browman et al., 2017) by exploring a domain-specific form of regulatory foci, networking-specific promotion and prevention focus, to introduce the possibility that generalized trait and state regulatory foci may differ systematically from how a promotion and a prevention focus regulate a specific behavior.

Regulating behavior via promotion and prevention foci influences goal attainment in various performance domains. This is because a person's regulatory focus affects the strategies the person uses to get to their goals (e.g., surpassing a high score) and to overcome challenges that impede attainment of those goals (e.g., getting over an error limit; Higgins, 1998). Because regulatory focus influences people's performance, its role has been studied in organizations too (Brockner & Higgins, 2001; Johnson, Chang, & Yang, 2010; Wallace, Johnson, & Frazier, 2009). This research shows that whether people approach work with a promotion or prevention focus is related to distinct behaviors that are organizationally relevant, including productivity, innovation, and safety compliance (e.g., De Cremer, Mayer, van Dijke, Bardes, & Schouten, 2009; Wallace et al., 2009). For instance, Wallace and Chen (2006) found that prevention focus is positively and strongly related to safety behavior, while promotion focus is negatively and weakly related to it.

Similarly, regulatory focus can influence how people experience their social networks and how intensely they engage in professional networking. A promotion focus leads people to notice and remember information and emotions that result from positive outcomes, thus further directing their behavior toward achieving them (Higgins, Roney, Crowe, & Hymes, 1994; Higgins, Shah, & Friedman, 1997; Higgins & Tykocinski, 1992). Promotion-focused people invest their energy in activities that allow them to grow or fulfill their aspirations, and away from those that translate into sticking to the status quo (Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008). By contrast, a prevention focus leads people to pay attention to and remember information and emotions they experienced at some point in their past as a result of losses, failures, or punishments (Higgins & Tykocinski, 1992). As a result, prevention-focused individuals are vigilant and concerned with accuracy when approaching tasks (Förster, Higgins, & Bianco, 2003), as they seek to meet their obligations and others' expectations (Higgins, 1997, 1998). Therefore, a prevention focus leads people to engage in actions that will likely avoid negative outcomes and comply with expectations or policies set by others (Higgins et al., 1994). These motivational orientations lead individuals with a high prevention focus to derive greater life satisfaction when they are part of a highly dense network that allows them to meet obligations and responsibilities. People with a high promotion focus, instead, derive greater life satisfaction from a low-density network that supports creative inspiration and personal development (Zou, Ingram, & Higgins, 2015). Likewise, a promotion focus increases the frequency of professional network-

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 271 of 1282

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ing, whereas a prevention focus decreases it (Pollack, Forster, Johnson, Coy, & Molden, 2015).

We inform and deepen these insights by theorizing that the relationship between self-regulatory focus and networking behavior hinges on morality. We posit, in particular, that promotion and prevention regulatory foci have distinct consequences for an individual's sense of moral purity and authenticity when engaging in instrumental professional networking. Our arguments hinge on a moral psychology of motivation that reflects advances in contemporary moral philosophy. A building block for such theorizing stems from Cornwell and Higgins (2015), who underscored the existence of two ethical systems that motivate human behavior, mirroring the dual-process approach to motivation of RFT (Higgins, 1998). Specifically, Cornwell and Higgins (2015) posited that both promotion and prevention regulatory foci have ethical implications: prevention focus refers to "a system of ethical *oughts* that is concerned with maintaining obligations," while promotion focus refers to "a system of ethical *ideals* that is concerned with attaining virtues" (Cornwell & Higgins, 2015, p. 312). When motivated by the pursuit of ethical oughts, the individual responds to duties and obligations imposed externally. By contrast, ethical ideals are internally held aspirations that the individual pursues freely.

Contemporary philosophy in turn sheds lights on the diametrically different implications that ethical oughts and ethical ideals have for authenticity. A fundamental premise of moral philosophy, from Hegel's phenomenology to Nietzsche and Sartre's existentialist analyses, is that conducting one's life by conforming to prevailing morality—that is, in pursuit of the "ought" self—compromises authenticity as an ethical ideal (Varga, 2012). Hegel contrasts the "authentic self" that is incessantly committed to self-creation from the "honest individual" who submits to prevailing duties and thus nullifies the urge of the human spirit to live in complete freedom. In doing so, the "honest individual" in Hegel's analysis is a hypocrite who lacks real freedom and suffers from self-alienation (Golomb, 1995). Hegel's premise paved the way for the existentialist revolution in modern moral philosophy, in which "the concept of authenticity is a protest against the blind, mechanical acceptance of an externally imposed code of values" (Golomb, 1995, p. 11). Rejecting premodern views of morality as justified by recourse to some higher authority, an ethic of authenticity is guided instead by motives and reasons that express a subject's core individuality (Taylor, 1991), the ideal self (Cornwell & Higgins, 2015). An ethic of authenticity does not object to the normative content of motives but focuses instead on how a motive "fits with the wholeness of a person's life, and whether and how it expresses who the person is" (Varga, 2012, p. 12).

Consistent with these arguments, Kim and colleagues (Kim, Chen, Davis, Hicks, & Schlegel, 2019) theorized a link between prevention and promotion self-regulatory focus—defined as the pursuit of externally imposed oughts versus personally held ideals, respectively (Cornwell & Higgins, 2015)—and subjective authenticity. According to their argument, "certain behaviors feel more natural and less constrained by external influences. When individuals engage in these actions, their subsequent psychological mindsets contribute to the expression of core values and thus enhance subjective authenticity"; it follows that "promotion focus, relative to prevention focus, functions similarly in fostering authentic experiences" (Kim et al., 2019, p. 166). Evidence from both correlational studies and controlled experiments consistently supported a link between promotion focus and subjective authenticity, in the context of both goal pursuit and interpersonal interaction (Kim et al., 2019).

The moral psychological foundations of this association between regulatory focus and subjective authenticity are further corroborated by theory and evidence that people experience feelings of authenticity as moral and pure; conversely, feelings of inauthenticity are experienced as immoral and impure (Gino, Kouchaki, & Galinsky, 2015). These different streams of work in moral philosophy and moral psychology, then, consistently provide arguments suggesting that prevention self-regulatory focus increases feelings of moral impurity because fulfilling the ought-self compromises authenticity; by contrast, promotion self-regulatory focus is negatively linked to moral impurity because fulfilling the ideal-self does not compromise authenticity.

These arguments can be readily applied to the context of instrumental networking. Namely, making professional connections with a prevention focus stems from an ethic consisting of a sense of professional duty and adherence to behavioral norms in one's field of activity. Prevention-focused instrumental networking is therefore likely to induce feelings of inauthenticity and moral impurity because the motivation to network instrumentally stems from oughts that a professional context imposes on the individual. By contrast, people who engage in instrumental networking with a promotion focus do so to achieve the aspirations of their ideal self. They are motivated by the pursuit of advances and virtues that express their core individuality (Taylor, 1991), instead of mechanically accepting an externally imposed code of values (Golomb, 1995). They are thus likely to experience instrumental networking as more authentic and morally pure than prevention-focused networkers are.

According to moral psychology research, morality can be thought in terms of purity and cleanliness (Zhong & Liljenquist, 2006). When people experience moral threats by acting in ways that are not consistent with their moral values (e.g., by cheating when caring about honesty), they feel a greater need to cleanse physically, and cleansing-related concepts become more accessible in their minds (Zhong & Liljenquist, 2006). Thus, moral threats lead people to engage in cleansing so that they can reaffirm their values and clean their tainted consciences (Tetlock, Kristel, Elson, Green, & Lerner, 2000). Regulatory focus may therefore predict how inauthentic and dirty people feel in engaging in instrumental networking. Specifically, a promotion focus may yield networking concerned with authentic virtues and meeting one's ethical ideal, and a prevention focus may yield networking motivated by the "shoulds" prevailing in one's professional environment and thus triggers feelings of inauthenticity and impurity (Gino et al., 2015). Thus, we hypothesize, engaging in instrumental networking with a prevention focus increases feelings of inauthenticity and dirtiness, whereas a promotion focus decreases them. As a result, people who engage in instrumental networking with a prevention focus will experience higher levels of moral impurity as compared to those with a promotion focus.

Moral Impurity and the Frequency of Instrumental Networking

People vary in terms of both how likely they are to network and how frequently they engage in networking behavior (Forret & Dougherty, 2001; Wanberg et al., 2000), in part because they

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have different attitudes toward networking (Azrin & Besalel, 1982). Those with low "networking comfort" (i.e., embarrassment and discomfort when asking others for job leads or advice; Wanberg et al., 2000) or even stronger feelings of moral impurity (which underlies networking discomfort; Casciaro et al., 2014) tend to engage in networking less often than others (Casciaro et al., 2014; Wanberg et al., 2000). Given that a promotion focus versus a prevention focus results in lower levels of feelings of impurity and authenticity when engaging in instrumental networking, we expect people in a promotion focus to engage in instrumental networking more frequently than those in a prevention focus because the former approach lowers feelings of moral impurity.

Instrumental Networking Frequency and Job Performance

Finally, we wish to further corroborate existing theory and evidence on the consequences of disengaging from instrumental networking on a professional's job performance (Casciaro et al., 2014; Forret & Dougherty, 2001, 2004; Pollack et al., 2015; Wolff & Moser, 2009). Consistent with that prior work, we expect that more frequent instrumental networking will give people greater access to valuable information, opportunities and resources, and thus will lead them to perform better in their jobs.

Given that a promotion focus results in greater frequency of instrumental networking, we expect people with a promotion focus to also experience higher levels of performance. We also expect prevention focus to result in lower frequency of networking and thus lower levels of performance. Figure 1 summarizes the predicted associations between regulatory focus, moral impurity, frequency of instrumental professional networking, and job performance.

Overview of the Studies

We tested our main hypotheses in six complementary studies of the consequences of regulatory focus for the moral experience of professional instrumental networking, relying on both correlational and causal evidence and using measures capturing either trait regulatory focus (general and domain-specific) or state regulatory focus (see Figure 2 for an overview).

In Study 1, we tested our predictions using a correlational design in which we measured individuals' chronic regulatory focus and assessed their feelings of moral impurity. In Study 2, a laboratory experiment conducted both in the United States (Sample A) and in Italy (Sample B), we manipulated regulatory focus and provided causal evidence for a relationship between people's state regulatory focus and their feelings of moral impurity from instrumental networking for professional goals. In Studies 3A and 3B, we use online samples to provide further evidence for these relationships using designs that also include a control condition in addition to a prevention-focus and a promotion-focus condition. In Study 4, we conducted a cross-sectional survey of lawyers in a law firm to test our predictions in a field context, where we measured trait promotion and prevention foci both as a general orientation and one specific to networking. We tested for a serial mediation from a lawyer's trait promotion and prevention focus, to feelings of moral impurity they experience when they network instrumentally, to the frequency with which they network, and to their job performance. Finally, in Study 5, we used a field experiment with working professionals to test the causal link between state networking-specific regulatory focus, moral purity, and frequency of instrumental professional networking.

We report all participants recruited, all experimental conditions, and all measures in each of our studies. The sample size for each study was determined before data collection began. We calculated our sample size based on an estimate of medium effect size ($f = 0.25$), requiring a sample size of approximately 50 participants per condition for a study powered at 80%. These numbers are also consistent with the recommendations of Simmons, Nelson, and Simonsohn (2013). For the laboratory and field studies, the final number was dictated by the availability of participants, we targeted more participants hoping to recruit at least about 50 of them for each condition. For our correlational studies, an a priori power analysis with 80% power and assuming modest correlations among variables ($r = .25$) requires about 99 participants, however, we targeted larger samples at the outset, which would provide higher power to detect a small to medium effect size.

All studies' materials can be found on OSF at https://osf.io/kf2ut/?view_only=26073af04f9046cd9e0a62159a5755d4, together with the data from Studies 1, 3A and 3B. The consent form used in Studies 2 and 5 stated that we would not be sharing any data outside of the research team, even if the data were deidentified. We collected data for these studies before the institutional review board changed the recommended language on consent forms, to allow for data sharing and posting. For Study 4, we are prohibited from sharing the data by a nondisclosure agreement with the law firm where the data was collected.

Study 1

Study 1 used a correlational design to examine how chronic promotion and prevention regulatory focus affect people's feelings of moral impurity from instrumental networking.

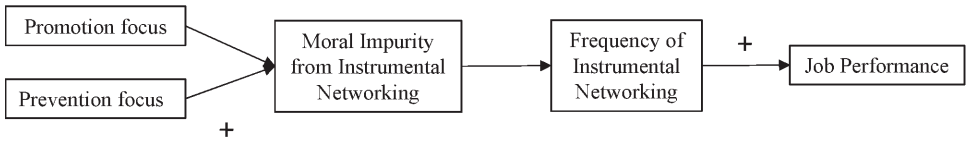

Figure 1. Summary of predicted associations.

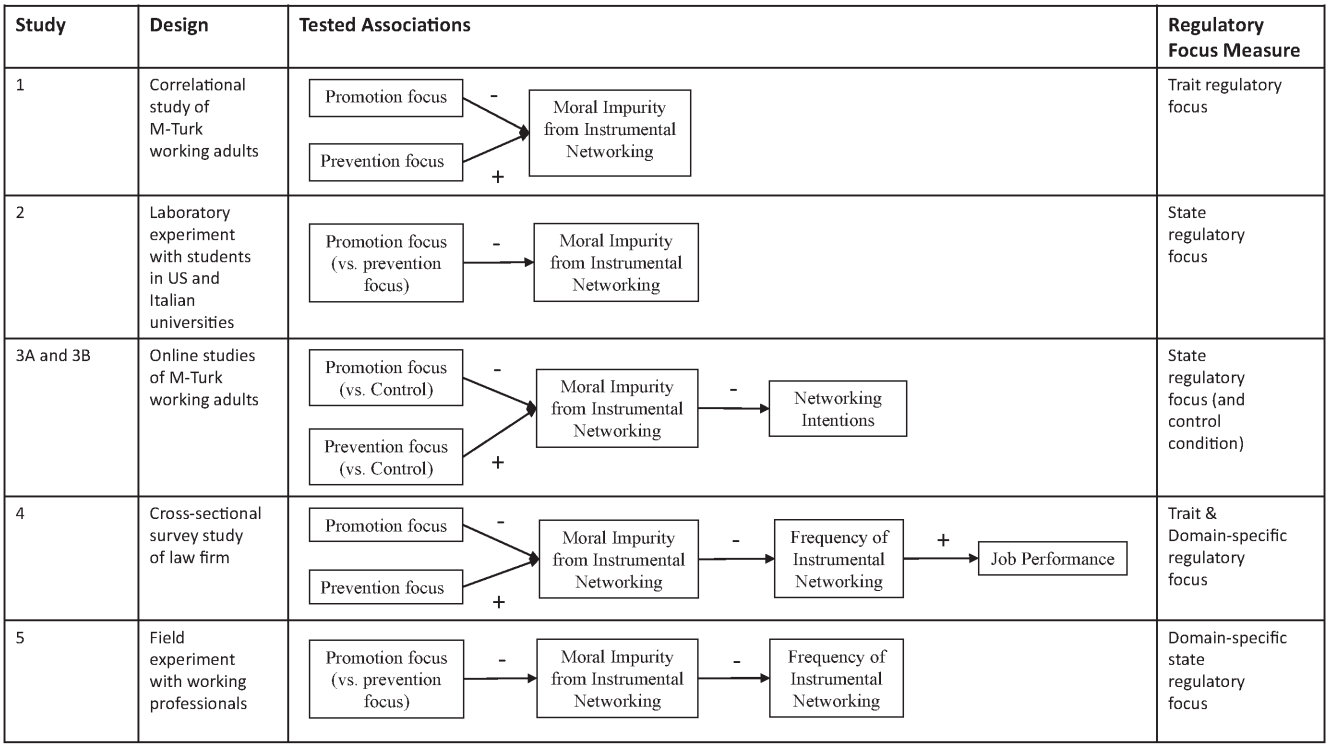

Figure 2. Overview of studies.

Method

Participants. A total of 412 people (M_{age} = 36.28, *SD* = 9.05, 56% male) from Amazon Mechanical Turk (MTurk; all located in the United States) participated in a two-part study for $2. They received $0.50 for completing Part 1 and $1.50 for completing Part 2. We initially recruited 500 people, but only 412 completed both Parts 1 and 2; thus, we used this smaller sample in our analyses.

Procedure. The initial instructions that welcomed participants to the study included three attention checks. Those who failed one or more received a message letting them know that they did not qualify for the study given their answer. Their data was not recorded.

In Part 1, participants first indicated their age and gender. Next, they completed the Composite Regulatory Focus Scale (Haws, Dholakia, & Bearden, 2010), which measures a person's trait promotion and prevention regulatory focus on a 7-point scale (ranging from 1 = *strongly disagree* to 7 = *strongly agree*). A sample item for promotion focus is "I see myself as someone who is primarily striving to reach my 'ideal self'—to fulfill my hopes, wishes, and aspirations." A sample item for prevention focus is "I see myself as someone who is primarily striving to become the self I 'ought' to be—to fulfill my duties, responsibilities, and obligations."

We contacted participants four days later for the second part of the study. In Part 2, participants received the following instructions:

> You will now be asked to recall a certain event and then write about it for about five minutes. We are interested in how people remember and reflect on events from their past. You will then be asked to answer a few questions.

We asked all participants to recall a situation in which they engaged in professional instrumental networking. The instructions (adapted from Casciaro et al., 2014) read,

> Please recall a time in your professional life where you did something with the intention of strategically making a professional connection. We are interested in a situation where you tried to create or maintain relationships that would aid the execution of work tasks and your professional success.
>
> Other people engaging in this type of introspective task frequently write about instances where they attended receptions or networking events because they wanted to meet potential clients or higher status colleagues.
>
> Please describe the details about this situation. What was it like to be in this situation? What thoughts and feelings did you experience?
>
> Please provide as many details as possible so that a person reading your entry would understand the situation and how you felt.

Next, to test the relationship between participants' self-regulatory focus and the feeling of moral impurity they experience when engaging in instrumental networking, we measured participants' feelings of impurity.

Moral impurity. Using a 7-point scale (ranging from 1 = *not at all* to 7 = *very much*), participants indicated the extent to which the situation they described made them feel dirty, tainted, inauthentic, and ashamed (α = .90; adapted from Casciaro et al., 2014). Though drawing on prior research, these items may evoke prevention rather than promotion focus. Thus, we also

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included items that are more regulatory-focus neutral: wrong, unnatural and impure ($\alpha = .84$; from the moral foundation questionnaire, Graham et al., 2011). When conducting a factor analysis, we found that the seven items loaded onto the same factor, so we also created a composite measure by averaging all items ($\alpha = .94$).

Comprehension check. We asked participants to indicate whether they wrote about a professional or personal situation in the initial writing task they had completed.

Results

All answers to the comprehension check question were correct. Table 1 reports the descriptive statistics and bivariate correlations among the main variables we measured in this study. As expected, on all three ways we constructed a measure of moral impurity (the four-item measure, the three-item measure with regulatory-focus neutral words, and the composite seven-item measure), we found a negative and significant correlation between the promotion orientation index and feelings of impurity, and a positive and significant correlation between the prevention orientation index and feelings of impurity.

We also conducted partial correlations analyses to test for the independent effects of a promotion focus and a prevention focus on felt moral impurity. When controlling for prevention, the promotion orientation index was negatively correlated with feelings of impurity ($r = -.10$, $p = .04$ for the four-item measure, $r = -.10$, $p = .055$ for the three-item measure with regulatory-focus neutral words, and $r = -.10$, $p = .04$ for the seven-item measure). When controlling for promotion, the prevention orientation index was positively correlated with feelings of impurity ($r = .18$, $p < .001$ for the four-item measure, and $r = .19$, $p < .001$ for the three-item measure with regulatory-focus neutral words, and $r = .19$, $p < .001$ for the seven-item measure).

Discussion

The results of Study 1 provide initial evidence for the relationship between regulatory focus and feelings of moral impurity that people commonly experience when engaging in instrumental professional networking.

Study 2

In Study 2, we moved to the controlled environment of the laboratory to examine how promotion and prevention regulatory focus influence how people feel when engaging in instrumental professional networking. In this study, we included two manipulations: one for regulatory focus (promotion vs. prevention) and another for the type of professional networking (instrumental vs. spontaneous). Previous work by Casciaro and colleagues (2014) distinguished between instrumental networking, where a person initiates a social relationship proactively and with the goal of obtaining benefits (e.g., advancement or an advantage), and spontaneous networking, where the social tie emerges naturally, with no premeditated purpose, and is initiated by someone else. The authors found that the former leads to greater feelings of dirtiness and inauthenticity than the latter. We build on this work by examining the effect of regulatory focus for each type of professional networking. We also extend our findings from Study 1 by examining regulatory focus triggered in the moment rather than measured as an individual difference. To examine the contextual robustness of our findings, we collected data on two culturally different samples of students, one from the United States and one from Italy. This allowed us to test our main proposition in two different cultures.

Across our main dependent measures of interest (i.e., feelings of moral impurity and desire to physically cleanse), we expect to find a significant interaction between the two manipulations, such that a promotion focus leads to lower feelings of moral impurity and a lower desire to cleanse oneself than a prevention focus in the case of instrumental networking, but regulatory focus leads to no differences on these measures in the case of spontaneous networking.

Method

Participants and design. Participants were randomly assigned to one of four conditions in a 2 (Type of Networking: instrumental vs. spontaneous) × 2 (Motive: promotion vs. prevention focus) between-subjects design.

Sample A. A total of 367 students ($M_{age} = 21.93$, $SD = 2.91$; 43% male) recruited through a U.S. university-affiliated research pool participated in the study. Participants received $20 for completing the experiment.

Sample B. A total of 254 students ($M_{age} = 20.80$, $SD = 1.76$; 54% male) recruited through an Italian university-affiliated research pool participated in the study. Participants received €15 for completing the experiment. All the materials (including the word completion task) were translated into Italian.

Procedure. We used the same procedure in each sample but used materials translated into Italian for the Italian sample.[1] Participants read initial instructions that welcomed them to the study. Next, we asked them to complete a writing task, which was intended to manipulate regulatory focus (as in Freitas & Higgins, 2002). The instructions specified that we were "interested in detailed writing skills, and in the way people naturally express themselves." In the promotion condition, the instructions (as in Zhang, Higgins, & Chen, 2011) read, "Please think about something you ideally would like to do. In other words, think about a hope or aspiration that you currently have. Please list the hope or aspiration below." In the prevention condition, the instructions read, "Please think about something you think you ought to do. In other words, think about a duty or obligation that you currently have. Please list the duty or obligation below."

Next, participants engaged in a task designed to manipulate the type of professional networking. Using the manipulation of instrumental versus spontaneous professional networking in Casciaro et al. (2014), we asked participants to put themselves in the shoes of the protagonist in the story they were about to read. Each story asked participants to imagine being invited to attend an event during which they socialized with other people. In the story used in the instrumental condition, the main character was described as "actively and intentionally pursuing professional connections with

[1] To ensure we had a proper translation of the materials, we first translated them from English to Italian (with the help of two Italian native speakers who are fluent in English) and then translated them back into English to resolve any inconsistency.

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 275 of 1282

Table 1
Descriptive Statistics and Correlations Among the Variables Collected in Study 1

Variable	*M* (*SD*)	Bivariate correlations				
		1	2	3	4	5
1. Moral impurity (MI; 4 items)	1.73 (1.27)					
2. MI, regulatory-focus neutral (3 items)	1.68 (1.26)	.89***				
3. MI (7 items)	1.71 (1.23)	.98***	.96***			
4. Promotion orientation index	5.18 (1.08)	−.13**	−.12*	−.13**		
5. Prevention orientation index	4.57 (1.05)	.20***	.21***	.21***	−.16**	

* $p < .05$. ** $p < .01$. *** $p < .001$.

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the belief that connections are important for future professional success" (from Casciaro et al., 2014). In the story used in the spontaneous condition, instead, the main character found herself or himself making connections rather than pursuing them intentionally.

Next, participants saw a list of behaviors and had to indicate the extent to which they found each of them to be desirable (1 = *completely undesirable* to 7 = *completely desirable*). We listed both cleansing behaviors (i.e., taking a shower, washing hands, and brushing teeth) and neutral behaviors (e.g., talking a walk, having something to eat, going to the movies, listening to music, reading a book, and watching TV), as in Zhong and Liljenquist (2006).

We then asked participants to report how they felt at that moment, by indicating the extent to which they felt various positive and negative emotions from the Positive and Negative Affectivity Schedule (Watson, Clark, & Tellegen, 1988), using a 5-point scale (1 = *very slightly or not at all*, 5 = *extremely*). Using the same scale, they also indicated how much they felt dirty, inauthentic, and impure (as in Gino et al., 2015) to assess feelings of moral impurity ($\alpha_{U.S._sample} = .64$; $\alpha_{Italy_sample} = .70$). The order in which the Positive and Negative Affectivity Schedule items (negative affect, $\alpha_{U.S._sample} = .88$, $\alpha_{Italy_sample} = .85$; positive affect, $\alpha_{U.S._sample} = .92$, $\alpha_{Italy_sample} = .87$) and those used to measure feelings of impurity were presented to participants was random. Though we did not have predictions about positive and negative affect, we included these measures to show that our hypotheses are specific to moral emotions rather than general affect more broadly.

Next, we reminded participants of the writing task they had completed earlier. The instructions for the promotion (prevention) condition (adapted from Lalot, Quiamzade, & Falomir-Pichastor, 2018) read,

> Now please take a minute and think about what you wrote earlier about something *you ideally would like to do [you ought to do]*; in other words, think about *a hope or aspiration [a duty or obligation]* that you currently have. Please reflect on your experience for 1–2 min and then proceed to the next task.

We also reminded participants of the story they read and asked them to reflect on it for a minute or two and write a few words that came to mind regarding the story before proceeding to the next task.

Next, participants moved onto a word-completion task we used to measure how accessible cleansing was in their mind at that moment (adapted from Zhong & Liljenquist, 2006). In this task, participants need to turn word fragments into meaningful words by relying on the first word they could think of. The task consisted of six word fragments. Three of them (W _ _ H, S H _ _ E R, and S _ _ P) could be turned into cleansing-related words (wash, shower, and soap) or into unrelated, neutral words (e.g., wish, shaker, and step), and the other three word fragments (F _ O _, B _ _ K, and P A _ _ R) could be turned only into unrelated, neutral words (e.g., food, book, and paper). Finally, participants indicated their age and gender.

Results

We report the results of our analyses separately for each sample. Importantly, the nature and significance of the results did not vary based on the location where the data was collected.

Sample A: Data collected in the United States.

Moral impurity. A 2 (Regulatory Focus) × 2 (Type of Networking) between-subjects analysis of variance (ANOVA) using feelings of moral impurity as the dependent measure revealed a significant main effect of regulatory focus, $F(1, 363) = 4.41$, $p = .036$, $\eta_p^2 = .012$, such that participants who approached networking with a promotion focus reported feeling less impure ($M = 1.58$, $SD = 0.69$) than those who approached networking with a prevention focus ($M = 1.74$, $SD = 0.77$). The main effect of type of networking was also significant, $F(1, 363) = 5.63$, $p = .018$, $\eta_p^2 = .015$: Participants who imagined engaging in instrumental networking felt more impure ($M = 1.75$, $SD = 0.81$) than did those who imagined engaging in spontaneous networking ($M = 1.57$, $SD = 0.64$). Importantly, consistent with our predictions, the interaction of regulatory focus and type of networking was also significant, $F(1, 363) = 12.66$, $p < .001$, $\eta_p^2 = .034$. When participants imagined engaging in instrumental networking, they reported feeling less dirty when they had a promotion focus ($M = 1.53$, $SD = 0.66$) than when they had a prevention focus ($M = 1.96$, $SD = 0.88$), $F(1, 363) = 16.03$, $p < .001$. However, when they imagined engaging in spontaneous networking, they felt about equally impure, independent of their regulatory focus ($M_{promotion} = 1.62$, $SD = 0.71$ vs. $M_{prevention} = 1.51$, $SD = 0.56$), $F(1, 363) = 1.07$, $p = .30$.

Negative and positive affect. A similar 2 × 2 ANOVA using negative affect as the main dependent measure revealed no significant effects (all $ps > .18$). As for positive affect, we only found a marginally significant effect of type of networking, $F(1, 363) = 3.60$, $p = .059$, $\eta_p^2 = .01$: Participants who imagined engaging in instrumental networking reported lower positive affect ($M = 2.64$, $SD = 0.92$) than did those who imagined engaging in spontaneous

networking ($M = 2.82$, $SD = 0.89$). No other effects were significant ($ps > .24$).

Cleansing behaviors. As predicted, a 2 (regulatory Focus) × 2 (Type of Networking) between-subjects ANOVA using desirability of cleansing behaviors as the dependent variable revealed a significant interaction, $F(1, 363) = 4.15$, $p = .042$, $\eta_p^2 = .011$. When participants imagined engaging in instrumental networking, they reported a lower desire for cleansing behaviors when they had a promotion focus ($M = 4.37$, $SD = 1.16$) than when they had a prevention focus ($M = 5.02$, $SD = 1.13$), $F(1, 363) = 15.48$, $p < .001$. However, when they imagined engaging in spontaneous networking, they reported about the same degree of desire, independent of their regulatory focus ($M_{promotion} = 4.46$, $SD = 1.06$ vs. $M_{prevention} = 4.64$, $SD = 1.12$), $F(1, 363) = 1.11$, $p = .29$. When considering neutral behaviors, however, we did not find any significant effects (all $ps > .34$).

Accessibility of cleansing-related words. A similar 2 × 2 between-subjects ANOVA revealed a significant interaction between regulatory focus and type of networking, $F(1, 363) = 6.28$, $p = .013$, $\eta_p^2 = .017$, as predicted. When participants imagined engaging in instrumental networking, they generated fewer cleansing-related words when they had a promotion focus ($M = 1.08$, $SD = 0.97$) than when they had a prevention focus ($M = 1.40$, $SD = 0.88$), $F(1, 363) = 5.88$, $p = .016$. However, when they imagined engaging in spontaneous networking, they generated about the same number of cleansing-related words independent of their regulatory focus ($M_{promotion} = 0.99$, $SD = 0.87$ vs. $M_{prevention} = 0.84$, $SD = 0.93$), $F(1, 363) = 1.28$, $p = .26$.

Sample B: Data collected in Italy.

Moral impurity. A 2 (Regulatory Focus) × 2 (Type of Networking) between-subjects ANOVA using feelings of moral impurity as the dependent measure revealed the predicted significant interaction of regulatory focus and type of networking, $F(1, 250) = 9.57$, $p < .001$, $\eta_p^2 = .037$. When participants imagined engaging in instrumental networking, they reported feeling less impure when they had a promotion focus ($M = 1.70$, $SD = 0.62$) than when they had a prevention focus ($M = 2.27$, $SD = 0.82$), $F(1, 250) = 19.78$, $p < .001$. However, when they imagined engaging in spontaneous networking, they felt about equally impure, independent of their regulatory focus ($M_{promotion} = 1.66$, $SD = 0.62$ vs. $M_{prevention} = 1.67$, $SD = 0.74$), $F(1, 250) < 1$, $p = .89$.

Negative and positive affect. A similar 2 × 2 ANOVA using negative affect as the main dependent measure revealed no significant effects (all $ps > .44$). As for positive affect, we found a significant effect of regulatory focus, $F(1, 250) = 6.28$, $p = .013$, $\eta_p^2 = .024$: Participants in the prevention-focus condition reported lower positive affect ($M = 3.31$, $SD = 0.63$) than those in the promotion-focus condition ($M = 3.51$, $SD = 0.64$). No other effects were significant ($ps > .20$).

Cleansing behaviors. As predicted, a 2 (Regulatory Focus) × 2 (Type of Networking) between-subjects ANOVA using desirability of cleansing behaviors as the dependent measure revealed a significant interaction, $F(1, 250) = 11.18$, $p = .001$, $\eta_p^2 = .043$. When participants imagined engaging in instrumental networking, they reported a lower desire for cleansing behaviors when they had a promotion focus ($M = 4.27$, $SD = 1.21$) than when they had a prevention focus ($M = 5.09$, $SD = 1.22$), $F(1, 250) = 11.64$, $p = .001$. However, when they imagined engaging in spontaneous networking, they reported about the same degree of desire, independent of their regulatory focus ($M_{promotion} = 4.46$, $SD = 1.31$ vs. $M_{prevention} = 4.15$, $SD = 1.58$), $F(1, 250) = 1.66$, $p = .20$. When considering neutral behaviors, however, we did not find any significant effects (all $ps > .14$).

Accessibility of cleansing-related words. A similar 2 × 2 between-subjects ANOVA revealed the predicted interaction between regulatory focus and type of networking, $F(1, 250) = 14.80$, $p < .001$, $\eta_p^2 = .056$. When participants imagined engaging in instrumental networking, they generated fewer cleansing-related words when they had a promotion focus ($M = 1.05$, $SD = 0.78$) than when they had a prevention focus ($M = 1.77$, $SD = 1.08$), $F(1, 250) = 20.45$, $p < .001$. However, when they imagined engaging in spontaneous networking, they generated about the same number of cleansing-related words independent of their regulatory focus ($M_{promotion} = 1.02$, $SD = 0.89$ vs. $M_{prevention} = 0.88$, $SD = 0.80$), $F(1, 250) < 1$, $p = .39$.

Discussion

The results of our second study are consistent with our expectations and provide evidence that the motives people have when they approach networking influence how morally impure they feel after engaging in instrumental networking as well as their resulting desire to physically cleanse themselves. Specifically, a focus on promotion rather than prevention in approaching instrumental networking reduces both feelings of moral impurity and the desire to physically cleanse oneself. We found support for these relationships in two different samples, in the United States and in Italy, suggesting that our observed effects may hold across cultures.

Study 3

In Studies 3A and B, both conducted online, we further examine the independent effects of promotion and prevention regulatory focus on feelings of impurity and intentions to engage in networking by also including a control condition in the experimental design.

Study 3A

Method.

Participants and design. A total of 599 working adults recruited through MTurk ($M_{age} = 36.94$, $SD = 9.15$; 46% male), all located in the United States, participated in a 15-min online study, and received $2 for their participation. We recruited 600 participants but only 599 completed the study in the time allotted. We randomly assigned participants to one of three conditions: control versus promotion focus versus prevention focus.

Procedure. Participants read initial instructions that welcomed them to the study. Next, we asked them to complete a writing task, which was intended to manipulate regulatory focus (as in Freitas & Higgins, 2002). The instructions specified that we were "interested in detailed writing skills, and in the way people naturally express themselves." In the promotion condition, the instructions (as in Zhang et al., 2011) read, "Please think about something you ideally would like to do. In other words, think about a hope or aspiration that you currently have. Please list the hope or aspiration below." In the prevention condition, the instruc-

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 277 of 1282

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tions read, "Please think about something you think you ought to do. In other words, think about a duty or obligation that you currently have. Please list the duty or obligation below." In the control condition, the instructions read, "Please think about something you usually do in the evening. Please list the activities you engage in during the evening on a typical day below."

Next, participants engaged in a task simulating instrumental networking. Similar to Casciaro et al. (2014), we asked participants to put themselves in the shoes of the protagonist in the story they were about to read. The story asked participants to imagine being invited to attend an event during which they socialized with other people. In the story, the main character was described as "actively and intentionally making professional connections with the belief that connections are important for future professional effectiveness" (from Casciaro et al., 2014).

Next, we asked participants to report how they felt at that moment, by indicating the extent to which they felt using the comprehensive list of 7 items from Study 1: dirty, inauthentic, and impure, ashamed, wrong, unnatural, and tainted ($\alpha = .95$). We then reminded participants of the writing task they had completed earlier. The instructions for the promotion (prevention) condition read,

> Now please take a minute and think about what you wrote earlier about something *you ideally would like to do [you ought to do]*; in other words, think about *a hope or aspiration [a duty or obligation]* that you currently have. Please reflect on your experience for 1–2 min and then proceed to the next task.

We also reminded participants of the story they read and asked them to reflect on it for a minute or two and write a few words that came to mind regarding the story before proceeding to the next task.

Next, all participants were asked to answer questions about their networking intentions, our main dependent measure. We relied on a measure used in prior work (Raj, Fast, & Fisher, 2017): a self-reported measure of the extent to which participants intended to engage in professional networking in the near future. Participants indicated the extent to which they believed they would seek to expand their professional network in the next month. We used the following four items: "To what degree will you try to strategically work on your professional network in the next month?"; "In the next month, how likely are you to voluntarily engage in behaviors that expand your professional network?"; "To what degree do you plan to establish new professional connections in the next month?"; and "In the next month, to what degree is having a strong professional network a goal that you plan to pursue?" Participants indicated their intention to network in the next month using a 7-point Likert-type scale (1 = *not at all*, 7 = *very much*). These items were averaged to create a composite measure of networking intentions ($\alpha = .96$). Finally, participants indicated their age and gender.

Results.

Moral impurity. Given that all items loaded onto one factor, we averaged them all into a composite measure of moral impurity ($\alpha = .95$).[2] We found that this seven-item measure varied by condition, $F(2, 596) = 17.69$, $p < .001$, $\eta_p^2 = .056$. Participants felt more morally impure in the prevention-focus condition ($M = 2.39$, $SD = 1.36$) as compared to the promotion-focus condition ($M = 1.64$, $SD = 1.07$; $p < .001$) or the control condition ($M = 1.93$, $SD = 1.34$; $p < .001$). Moral impurity was also lower in the promotion-focus condition than in the control condition ($p = .024$).

Networking intentions. Networking intentions also varied by condition, $F(2, 596) = 19.84$, $p < .001$, $\eta_p^2 = .062$. Participants indicated they would network less frequently in the future in the prevention-focus condition ($M = 4.07$, $SD = 1.70$) as compared to the promotion-focus condition ($M = 5.12$, $SD = 1.68$; $p < .001$) or the control condition ($M = 4.74$, $SD = 1.71$; $p < .001$). Network intentions were higher in the promotion-focus condition than they were in the control condition ($p = .024$).

Mediation. We tested for moral impurity as the mediator of the relationship between our regulatory focus manipulation and networking intentions. We first conducted analyses using the dummy for the prevention-focus condition as the independent variable, and the dummy for the control condition as covariate. Using bootstrapping with 10,000 iterations, we estimated the direct and indirect effects of prevention focus through moral impurity on our dependent variable, networking intentions. The 95% bias-corrected confidence interval (CI) for the size of the indirect effect (-0.36, $SE = .06$) excluded zero (95% CI [-0.496, -0.243]), suggesting that feelings of moral impurity mediated the link between prevention focus and lower networking intentions.

Next, we conducted analyses using the dummy for the promotion-focus condition as the independent variable, and the dummy for the control condition as covariate. Using bootstrapping with 10,000 iterations, we found that the 95% bias-corrected CI for the size of the indirect effect (0.36, $SE = .06$) excluded zero (95% CI [0.242, 0.496]), suggesting that feelings of moral impurity mediated the link between promotion focus and higher networking intentions.

Study 3B

Method.

Participants and design. A total of 572 working adults ($M_{age} = 35.37$, $SD = 8.81$; 52% male), all located in the United States and recruited through MTurk, participated in a 15-min online study. They received $2 for their participation. Only participants who had a LinkedIn account could participate. We recruited 600 participants, but only 572 completed the study in the time allotted. We randomly assigned participants to one of three conditions: control versus promotion focus versus prevention focus.

Procedure. In Study 3B, we used the same procedure and design as in Study 3A with one difference: Instead of reading the story as explained above, we asked participants to actually engage in instrumental networking. We did so to add richness to the paradigm as we wanted participants to experience what it feels like to engage in instrumental networking. Specifically, as in Casciaro et al. (2014, Study 4), we asked participants to select a person in their network (someone they were already connected with or someone they would like to connect with), draft a message, and send the message to that individual through their personal

[2] Similar to Study 1, feeling of impurity varied by condition, independent of whether moral impurity was measured with four items: dirty, tainted, inauthentic, and ashamed, $\alpha = .91$, $F(2, 596) = 18.10$, $p < .001$, $\eta_p^2 = .057$, or the three regulatory-focus neutral items: wrong, unnatural and impure, $\alpha = .89$, $F(2, 596) = 16.15$, $p < .001$, $\eta_p^2 = .051$.

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LinkedIn account. Participants were told, "Your intention in sending the message should be to strategically make a professional connection. With this message, you are trying to create a connection that would aid the execution of work tasks and your professional effectiveness." We did not have a way of tracking whether participants actually sent the message they wrote through LinkedIn.

Afterward, all participants answered questions about their networking intentions, as in Study 3A. Specifically, they completed the four-item self-reported measure of the extent to which they believed they would seek to expand their professional network in the next month ($\alpha = .95$, adapted from Raj et al., 2017). Finally, participants indicated their age and gender.

Results.

Moral impurity. Given that all seven items loaded onto one factor, we averaged them all into a composite measure of moral impurity ($\alpha = .93$).[3] We found that this seven-item measure varied by condition, $F(2, 570) = 20.66$, $p < .001$, $\eta_p^2 = .068$. Participants felt more morally impure in the prevention-focus condition ($M = 2.30$, $SD = 1.33$) as compared to the promotion-focus condition ($M = 1.53$, $SD = 0.96$; $p < .001$) or the control condition ($M = 2.01$, $SD = 1.17$; $p = .016$). However, moral impurity was lower in the promotion-focus condition than it was in the control condition ($p < .001$).

Networking intentions. Networking intentions also varied by condition, $F(2, 570) = 19.56$, $p < .001$, $\eta_p^2 = .064$. Participants indicated they would network less frequently in the future in the prevention-focus condition ($M = 4.17$, $SD = 1.53$) as compared to the promotion-focus condition ($M = 5.19$, $SD = 1.51$; $p < .001$) or the control condition ($M = 4.53$, $SD = 1.73$; $p = .025$). Network intentions were higher in the promotion-focus condition than they were in the control condition ($p < .001$).

Mediation. As in Study 3A, we tested for the mediating role of moral impurity in the relationship between our regulatory focus manipulation and networking intentions. We first conducted analyses using the dummy for prevention-focus condition as the independent variable, and the dummy for the control condition as covariate. Using bootstrapping with 10,000 iterations, we estimated the direct and indirect effects of prevention focus through moral impurity on our dependent variable, networking intentions. The 95% bias-corrected CI for the size of the indirect effect (-0.29, $SE = .06$) excluded zero (95% CI [-0.422, -0.193]), suggesting that feelings of moral impurity mediated the link between prevention focus and lower networking intentions.

Next, we conducted analyses using the dummy for the promotion-focus condition as the independent variable, and the dummy for the control condition as covariate. Using bootstrapping with 10,000 iterations, we found that the 95% bias-corrected CI for the size of the indirect effect (0.29, $SE = .06$) excluded zero (95% CI [0.193, 0.426]), suggesting that feelings of moral impurity mediated the link between promotion focus and higher networking intentions.

Coding. We asked a research assistant blind to our hypotheses and study conditions to code the messages participants wrote. We coded the messages on three dimensions. First, we coded whether the message was a new connection attempt: We used 0 if participants wrote the message to someone they already had a connection with (existing connection) and 1 if they wrote the message to someone who would be a new connection (new connection). Second, we coded whether the message was aimed at forming a connection to meet a professional goal (value of 1), as we had defined instrumental networking in the instructions, or whether they were using the assigned task to just make a social connection (e.g., saying hello to a friend; value of 0 in our coding). Given the instructions we used we expected no differences across conditions on this dimension. Finally, we coded for language indicating promotion or prevention focus. We used a value of 1 when messages related to growth, advancement, and accomplishment, and striving toward wishes and aspirations (for promotion). We used a value of 0 when the messages related to missing opportunities and meeting their responsibilities and duties (for prevention). When messages did not include either, we left the cell in the data blank.

We found no differences across conditions on the first and second dimension ($p = .20$ and $p = .51$, respectively). As for the third dimension, we found differences across conditions, $\chi^2(461) = 6.38$, $p = .041$: A higher percentage of participants used promotion language in the promotion condition (73% of them) as compared to the prevention condition or the control condition (67.7% and 59.5%, respectively).

Discussion

The results of Studies 3A and 3B provide further support for the independent effects of promotion and prevention focus on feelings of impurity and instrumental networking, by showing differences as compared to a control condition.

Study 4

In Study 4, a field setting, we explored the implications of networking-related promotion and prevention regulatory focus for the frequency of instrumental professional networking by professionals and the feelings of impurity they associate with it. To that end, we surveyed lawyers employed at a large North American law firm. Business lawyers work either as counsel when hired by client or as experts on a client's file when asked by a colleague. In either case, acquiring the work requires having relationships with colleagues and clients. Thus, law professionals at both junior and senior levels can benefit from and care deeply about instrumental networking, making this a particularly appropriate empirical context.

Method

Sample and procedure. When we conducted our study, 425 lawyers were employed at the law firm where we collected survey data. Hierarchically, the law firm was structured according to levels of legal experience, as is common for the industry: junior associate, midlevel associate, senior associate, junior partner (i.e., nonequity partner), and senior partner (i.e., equity partner). The firm had five offices across North America and 13 law practices.

[3] Similar to Studies 1 and 3A, feeling of impurity varied by condition, independent of whether moral impurity was measured with four items: dirty, tainted, inauthentic, and ashamed, $\alpha = .87$; $F(2, 570) = 19.54$, $p < .001$, $\eta_p^2 = .064$, or the three regulatory-focus neutral items: wrong, unnatural and impure, $\alpha = .85$; $F(2, 570) = 19.34$, $p < .001$, $\eta_p^2 = .064$.

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The lawyers employed at the firm served business clients working across practices and locations, as the needs of the clients required. We sent to all the lawyers employed at the firm an invitation to complete a survey about their approach to professional networking. In the invitation, we made clear that participation in the survey was voluntary, and withdrawal from the study was available at any time with no penalty. We also reassured participants that all their responses would be entirely confidential, such that the firm's management would never get access to any individual responses, and would only receive aggregated findings with the goal of aiding the firm in supporting its lawyers' development and effectiveness as legal professionals. For their efforts, we offered to participants a confidential and personalized report on how their own professional networking compared to that of their peers at the firm.

In total, 164 lawyers completed the survey in its entirety, for a 39% response rate. We compared participants to nonparticipant s, and we found no statistically significant differences between the two groups regarding office location, legal specialty, sex, or formal rank.

Dependent and independent variables.

Job performance. We assess performance by using yearly revenue generated by a lawyer, which is the standard metric for evaluating performance in law firms. Firm management shared with us the revenue data they had collected and on record for each of the lawyers working there. We corrected for skewness in revenue distribution using the *lnskew0* function in STATA (STATA 13).

Frequency of instrumental professional networking. In the survey, we defined professional networking as "the purposeful building and nurturing of relationships to create a system of information and support for professional and career success" (as in Casciaro et al., 2014). We then asked respondents, "How often do you engage in professional networking?" The respondents indicated their answers using one of the following options on a 5-point scale: *not at all*, *rarely*, *sometimes*, *frequently*, and *a great deal*.

Feelings of moral impurity from networking. We measured the experience of impurity from instrumental professional networking by using the average and logged (to correct for skewness) response to three survey items on the 5-point scale (adapted from Casciaro et al., 2014), each starting with the sentence, "When I engage in professional networking, I usually feel. . ." followed by the following adjectives: dirty, inauthentic, and ashamed (α = .78). To reduce demand effects, the list interspersed these adjectives with markers of various emotions (Feldman Barrett & Russell, 1998), such as happy, excited, stressed, and satisfied.

Trait promotion and prevention regulatory focus. As in Study 1, we measured chronic regulatory focus with the Composite Regulatory Focus Scale (Haws et al., 2010).

Networking-specific trait promotion and prevention focus. To measure the extent to which instrumental networking resulted from a promotion or a prevention focus, we developed eight survey items intended to capture a concern with growth, advancement, and aspirations of promotion focus on the one hand, and a concern with meeting one's duties and the threat of lost opportunity of prevention focus on the other hand. These items were adapted from the Composite Regulatory Focus Scale (Haws et al., 2010) to fit the domain of instrumental networking. We thus measured promotion focus with the average response to four survey items (each assessed on a 5-point scale): "I am excited about the opportunities that networking can open up for me," "Networking allows me to achieve my professional aspirations," "I engage in professional networking because I want to be successful," and "I engage in professional networking because connections help me do well" (α = .81). The four items measuring prevention focus were "Networking is a necessary part of my job that I just have to do," "It is my professional duty and responsibility to network," "I engage in professional networking because I am concerned that I'll miss opportunities if I don't," and "I engage in professional networking because I don't want to fall behind in my profession" (α = .69).

Control variables.

Law practice and office location. To control for the law practice a lawyer belonged to, we used indicator variables for each of the 13 departments of the firm (insolvency and restructuring, corporate law, intellectual property, etc.). Likewise, we used indicator variables to control for each of the firm's five offices in which each lawyer was located. None of these dummy variables affected the study's findings, and therefore we excluded them from the analyses reported below because their inclusion reduced the models' goodness of fit.

Extraversion. In light of research documenting a positive association between extraversion and networking frequency (Casciaro et al., 2014; Wanberg et al., 2000), as well as a negative association between extraversion and feelings of dirtiness experienced from engaging in instrumental networking (Casciaro et al., 2014), we controlled for a lawyer's extraversion, measured with the two extraversion items of the Big Five Inventory (Rammstedt & John, 2007).

Power. Previous research has also documented the effects of power on feelings of dirtiness that result from instrumental networking (Casciaro et al., 2014). To account for these effects, we operationalized power in terms of a lawyer's formal rank (seniority), which defines power differentials clearly in law firms (Nelson, 2004). This variable ranged from senior partner at the top of the hierarchy (denoted with a numerical value equal to 5), followed by junior partner (4), senior associate (3), midlevel associate (2), and junior associate at the bottom of the hierarchy (1).

Modeling approach. To test simultaneously the paths that our predictions entail, and also control for all relevant covariates, we estimated direct and indirect effects using the corresponding structural equation model (Kline, 2011) of a path analysis (Wright, 1934). This approach allows us to simultaneously account for effects of promotion focus and prevention focus, so that we can examine the unique effects of each orientation.

Results

Descriptive statistics and correlation coefficients for all variables are in Table 2, while the results of the path analysis are in Table 3. The estimated models use two measures of promotion and prevention focus: general trait regulatory foci (right-hand side of Table 3) and networking-specific trait regulatory foci (left-hand side of Table 3). The path analysis provides estimate for both direct effects and indirect effects. Directs effects occur when a predictor affects a dependent variable directly. Indirect effects occur when the effect of a predictor on dependent variable is mediated by another variable. Our theory predicted four direct effects in the path analysis: (a) a positive effect of prevention focus on moral impurity from instrumental networking, (b) a negative

Table 2
Study 4 Mean, Standard Deviations, and Correlation of Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Job performance	1,603,193	3,063,196										
2. Job performance (log)	10.568	3.886	.667									
3. Networking frequency	3.579	0.904	.362	.458								
4. Moral impurity	1.562	0.633	−.176	−.208	−.431							
5. Moral impurity (log)	−0.664	0.847	−.173	−.231	−.494	.893						
6. Extraversion	3.102	1.491	.541	.860	.401	−.147	−.188					
7. Seniority	3.549	0.923	−.032	−.036	.342	−.418	−.463	−.089				
8. Chronic prevention focus	3.322	0.825	−.217	−.218	−.236	.330	.308	−.171	−.263			
9. Chronic promotion focus	3.533	0.741	−.081	−.039	.199	−.164	−.170	−.065	.231	.396		
10. Networking prevention focus	3.624	0.810	−.109	−.023	.266	.028	−.013	.046	−.051	.158	.173	
11. Networking promotion focus	3.935	0.723	.007	.037	.545	−.302	−.333	.035	.459	−.058	.310	.496

Note. Correlation coefficients >.14 are significant at $p < .05$.

effect of promotion focus on moral impurity from instrumental networking, (c) a negative effect of moral impurity on the frequency of instrumental networking, and (d) a positive effect of networking frequency on job performance.

When measuring regulatory focus as generalized trait promotion and prevention focus (right-hand side of Table 3), all predictions were supported. Namely, networking frequency had a positive and statistically significant direct effect on job performance ($\beta = .550$; $p < .01$). In turn, moral impurity had a negative direct effect on networking frequency ($\beta = -.364$; $p < .001$). Generalized promotion focus had the predicted negative effect on moral impurity ($\beta = -.282$; $p < .01$), and generalized prevention focus had the predicted positive effect on moral impurity ($\beta = .294$; $p < .001$).

When measuring regulatory focus as networking-specific trait promotion and prevention focus (left-hand side of Table 3), all predictions were supported, except the positive effect of prevention focus on moral impurity. Namely, in addition to the predicted direct effects of networking frequency on job performance and of moral impurity on networking frequency, promotion focus had the predicted negative effect on moral impurity ($\beta = -.250$; $p < .05$), while the negative effect of prevention focus on moral impurity was not statistically significant, contrary to our prediction.

Thus, our predictions were strongly supported when regulatory foci were measured as a general trait, indicating that people with a promotion focus experience lessened feelings of impurity from instrumental professional networking, while those with a prevention focus tend to feel more morally impure when networking instrumentally. When regulatory foci were measured as networking-specific promotion and prevention focus, however, these predictions were supported only for promotion focus, which was negatively associated with moral impurity. Figure 3 summarizes how the findings from Study 4 supported our theoretical model.

In addition to the direct effects we predicted, the path analysis revealed effects of interest, both direct and indirect. Seniority (our operationalization of power in the context of law firms) had positive direct and indirect effects on networking frequency, and negative effects on moral impurity, replicating the findings of Casciaro et al. (2014). Likewise, positive direct and indirect effects of extraversion on networking frequency, and its indirect effect on job performance mediated by networking frequency is consistent with previous work (Casciaro et al., 2014). More relevant to our theory, promotion focus and prevention focus also had significant indirect effects on network frequency, mediated by moral impurity, consistent with the theoretical model we advanced (see Table 3).

Discussion

Taken together, the findings of Study 4 show that the effects of trait promotion and prevention focus on moral impurity and instrumental professional networking generalize to professionals in field settings. People who are motivated to pursue ideals, growth, and aspirations feel more authentic and morally pure when networking than do people who are motivated by the fulfilment of duties and obligations. These feelings of moral impurity in turn relate to how frequently professionals engage in networking, with consequences for their job performance. The results of Study 4 also indicate that domain-specific regulatory foci are not as strongly predictive of either moral purity from instrumental networking or of the frequency with which people network professionally. While we did find evidence that networking-specific promotion focus reduces moral impurity and networking frequency, we did not find such evidence for a networking-specific prevention focus.

Study 5

Method

Although in Study 4, networking-specific trait measures of regulatory focus exhibited weaker effects on moral purity and networking frequency than did general trait regulatory focus, we wished to explore the possibility that such domain-specific motives might be amenable to manipulation in the field. In organizations, domain-specific situational cues can be particularly important in evoking either promotion or prevention focus, as employees look for and pay attention to information about what behaviors are expected of them and their consequences (James, James, & Ashe, 1990; Scott & Bruce, 1994). For instance, situational cues that highlight potential gains and attainment of ideals are likely to trigger a promotion mindset. Instead, those that highlight potential losses and fulfillment of obligations are likely trigger a prevention mindset (Higgins, 1997, 1998).

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 281 of 1282

Table 3
Study 4 Results of Path Analysis of Regulatory Focus

	Networking-specific trait regulatory focus[a]				General trait regulatory focus[b]			
	Direct effects		Indirect effects		Direct effects		Indirect effects	
Dependent variable	Standardized coefficient	OIM *SE*	Standardized coefficient	OIM *SE*	Standardized coefficient	OIM *SE*	Standardized coefficient	OIM *SE*
Job performance								
Networking frequency	**.550**	**.172****	.000	(no path)	**.550**	**.172****	.000	(no path)
Moral impurity	.000	(no path)	−.200	.075**	.000	(no path)	−.200	.075**
Seniority	2.263	.110***	.149	.052**	2.263	.110***	.145	.051**
Extraversion	.000	(no path)	.175	.065**	.000	(no path)	.170	.064**
Prevention focus	.000	(no path)	−.015	.018	.000	(no path)	−.059	.027
Promotion focus	.000	(no path)	.050	.028†	.000	(no path)	.056	.027*
Networking frequency								
Moral impurity	**−.364**	**.075*****	.000	(no path)	**−.364**	**.075*****	.000	(no path)
Seniority	.217	.041***	.054	.018**	.217	.041***	.047	.018**
Extraversion	.188	.068**	.130	.038**	.188	.068**	.121	.034***
Prevention focus	.000	(no path)	−.027	.031	.000	(no path)	−.107	.036**
Promotion focus	.000	(no path)	.091	.043*	.000	(no path)	.103	.038**
Moral impurity								
Seniority	−.149	.041***	.000	(no path)	−.129	.040**	.000	(no path)
Extraversion	−.356	.073***	.000	(no path)	−.331	.066***	.000	(no path)
Prevention focus	**.074**	**.084**	.000	(no path)	**.294**	**.080*****	.000	(no path)
Promotion focus	**−.250**	**.106***	.000	(no path)	**−.282**	**.087****	.000	(no path)

Note. OIM = observed information matrix. Coefficients and standard errors in bold are for predicted effects.
[a] $N = 164$; absolute fit: standardized root mean square residual = .063; incremental fit: comparative fit index = .927. [b] $N = 164$; absolute fit: standardized root mean square residual = .018; incremental fit: comparative fit index = .993.
† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$. Two-tailed tests.

To that end, with the help of SurveySignal (a survey distribution and survey management platform; Hofmann & Patel, 2015), we recruited professionals to complete a 6-week study. After determining eligibility (participants needed to have a smartphone and work for a professional services firm in law, accounting, consulting, sales, insurance, or realty), participants received informed consent and were asked to register and verify their smartphone in the system. A total of 444 participants consented to participate and successfully registered and verified their smartphones. These participants were then randomly assigned to one of the two conditions (either promotion or prevention focus). The system randomly assigned 207 participants to a promotion focus and 237 to a prevention focus right after verification of registration. For the next 6 weeks, each of these professionals received a text message once a week on Mondays at 9 a.m. as part of our manipulation.

In addition, we invited all participants to complete a survey days before the intervention study started. The survey included some demographic questions, a measure of promotion and prevention focus for networking (similar to law survey), and the Big 5 personality traits (Gosling, Rentfrow, & Swann, 2003). The survey included a definition of professional networking (from Casciaro et al., 2014) as "the purposeful building and nurturing of relationships to create a system of information and support for professional and career success" and asked them to indicate how frequently they currently engage in professional networking using a 5-point scale ranging from 1 (*never*) to 5 (*daily*). At the end, participants indicated their age and gender.

From the original 444 participants in our sample (who would receive the text messages containing the manipulation), 256 completed the initial survey (58% response rate). To assure there were

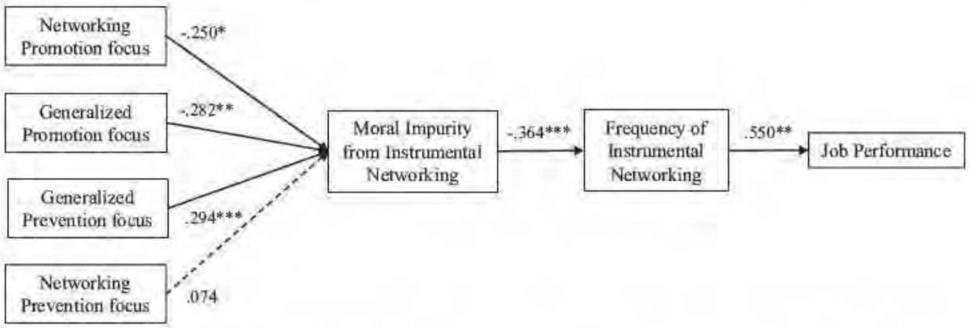

Figure 3. Overview of Study 4 results. All arrows represent predicted effects. The dotted arrow represents a statistically insignificant effect.

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no differences between the two conditions, even though participants were randomly assigned to the intervention conditions and had not yet started receiving their text messages, we checked and found there was no condition effect on responses rate ($p > .10$). We also checked the baseline frequency of networking, networking promotion ($\alpha = .90$) and prevention ($\alpha = .79$) focus, and Big 5 personality traits and found no significant differences on any of the measured variables between two conditions ($ps > .10$). Thus, as expected, preintervention, there were no significant differences between the two groups. All participants ($n = 444$) who consented to participate in our study received text messages once a week on Mondays at 9 a.m. for 6 weeks.

In the promotion-focus group, participants received a text that read,

> We are interested in how people create and nurture relationships at work. Many people focus on the opportunities that networking can open up for them. They also consider how networking can help them achieve their professional aspirations. Please set aside a few minutes to identify how you will approach your next opportunity to network with these potential benefits in mind.

In the prevention-focus group, participants read,

> We are interested in how people create and nurture relationships at work. Many people consider networking a necessary part of their job that they just have to do, a professional obligation. They also focus on opportunities they will miss if they do not network. Please set aside a few minutes to identify how you will approach your next opportunity to network with these potential costs in mind.

At the conclusion of the 6 weeks, we asked all 444 participants who received the weekly text messages (whether they completed the initial survey or not) to fill out a final survey, which contained our dependent variables. A total of 183 participants responded to this final survey (41% response rate), and 116 participants completed both surveys. There were no significant differences between conditions (promotion vs. prevention) on whether participants returned to complete the last survey ($p > .10$). This confirms that our manipulation had no effect on participants' likelihood of returning to the final survey. In addition, among those who provided responses to the initial survey, there was no significant difference on baseline networking or Big 5 personality traits between those who responded to the final survey or not ($ps > .10$).

In the final survey, we asked participants to first report their frequency of professional networking over the last month on a 5-point scale ranging from 1 (*not at all*) to 5 (*a great deal*). Next, they were asked to identify how many new people they added to their professional network over the last month (new connections) and how many existing professional relationships they nurtured or rekindled over the last month (nurturing). Afterward, they reported their feelings about the professional networking they engaged in over the last month using 1 (*strongly disagree*) to 5 (*strongly agree*) scales, beginning with the stem, "When I engaged in professional networking over the last month, I usually felt . . . "

Moral impurity. We assessed moral impurity with four items (dirty, tainted, inauthentic, and ashamed; $\alpha = .80$) from Casciaro et al. (2014).

Affect. To minimize demand effects, we also included positive and negative affect adjectives. Positive affect was measured with five items (enthusiastic, satisfied, happy, relaxed, excited; $\alpha = .88$) and negative with three items (stressed, tired, and bored; $\alpha = .81$).

Results

Moral impurity. Consistent with our predictions, participants who received the promotion-focus intervention reported feeling less morally impure ($M = 1.71$, $SD = 0.76$) than those who received the prevention-focus intervention ($M = 2.06$, $SD = 0.91$), $t(181) = 2.84$, $p = .005$.

Positive and negative affect. Participants' positive and negative affect did not differ depending on whether they were in a promotion focus or a prevention focus, $t(181) = -.98$, $p = .33$ and $t(181) = .98$, $p = .33$, respectively.

Networking frequency. Consistent with our hypothesis, participants in a promotion focus reported engaging in networking more frequently over the last month ($M = 3.39$, $SD = 1.16$) as compared to those in a prevention focus ($M = 2.78$, $SD = 1.05$), $t(181) = -3.71$, $p < .001$. Given that we have data on some of our participants' baseline networking frequency, we also ran analyses controlling for the frequency of networking before the start of the study and found a significant effect of regulatory focus manipulation on network frequency on this more restricted sample, $F(1, 113) = 9.33$, $p = .003$, $\eta_p^2 = .076$.

New connections. When asked how many new connections they added to their professional network over the last month, 14 participants did not respond. Examining the responses from the remaining 169 respondents, we found a significant effect of regulatory focus manipulation on creating new connections ($M_{promotion} = 7.80$, $SD = 8.05$ vs. $M_{prevention} = 5.52$, $SD = 5.05$), $t(167) = -2.21$, $p = .030$.

Nurturing existing ties. Eight participants did not respond to this question. Examining the responses from the remaining 175 respondents, we found a significant effect of regulatory focus manipulation on nurturing existing ties ($M_{promotion} = 8.01$, $SD = 7.01$ vs. $M_{prevention} = 4.64$, $SD = 4.21$), $t(173) = -3.90$, $p < .001$.

Mediation. We tested for moral impurity as the mediator of the relationship between our regulatory focus manipulation and networking frequency over the last month. Using bootstrapping with 10,000 iterations, we estimated the direct and indirect effects of regulatory focus condition through moral impurity on our dependent variable, networking frequency. The 95% bias-corrected CI for the size of the indirect effect (0.20, $SE = .07$) excluded zero (95% CI [0.071, 0.368]), suggesting that feelings of moral impurity mediated the link between promotion focus (vs. prevention focus) and higher network frequency.

We also ran the mediation analysis with number of new connections as a dependent variable. The 95% bias-corrected CI for the size of the indirect effect (0.65, $SE = .33$) excluded zero (95% CI [0.134, 1.410]). The mediation analysis with nurturing existing ties yielded similar findings and the 95% bias-corrected CI for the size of the indirect effect (0.99, $SE = .34$) excluded zero (95% CI [0.404, 1.746]). In sum, the three analyses suggest that feelings of moral impurity mediated the link between promotion focus (vs. prevention focus) and higher networking (frequency as well nurturing existing ties and creating new ones).

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Discussion

Together, the results of Study 5 provide further evidence that regulatory focus influences how people react to instrumental professional networking. As compared to participants encouraged to take a prevention focus, participants encouraged to take a promotion focus felt less inauthentic and morally impure, and engaged in networking more often.

General Discussion

Despite the well-demonstrated and well-known benefits that creating and maintaining professional connections can have on the diversity and size of one's network, people often shy away from engaging in instrumental networking to pursue professional goals. This is because they feel inauthentic, impure, and even dirty (Casciaro et al., 2014) when attempting to create and maintain relationships with other people with the clear purpose of finding or strengthening support for their professional goals and work tasks. Such feelings, unfortunately, are often detrimental to their development and job performance because they do not allow people to access valuable information, resources, and opportunities that are important to their careers. In the current research, we proposed that the motives people have when engaging in networking can impact these feelings by affecting their moral experience of networking, and lead them to network with different frequency.

Using two laboratory studies, two online studies, one field experiment with working professionals, and field data from lawyers from a large North American business law firm, we examined how self-regulatory focus, in the form of promotion and prevention, affects people's experiences and outcomes when networking. Consistent with our propositions, we find that a promotion regulatory focus, as compared to a prevention focus or a control condition, is beneficial to instrumental professional networking. People who are motivated to network professionally for the growth, advancement, and accomplishments they can achieve through their connections network more frequently and experience decreased feelings of moral impurity. In contrast, networking with the prevention focus of meeting one's professional responsibilities reduces the frequency of instrumental networking because it worsens the feelings of impurity people experience from it.

Theoretical Implications

Our research contributes to the literature on networking, regulatory focus, and morality in various ways. First, building on the work of Casciaro et al. (2014), the current article contributes to the network literature by focusing on the primary motives people have when approaching networking. Despite its many insights, existing work on networks has focused primarily on their structural properties and paid less attention to the important role of individual psychology in network dynamics. Although certain basic psychological phenomena—such as affect, cognition, and personality—have been integrated to varying degrees with the network perspective on organizations, psychological theory on motivation is still largely absent from network research (Casciaro et al., 2015). Our work complements this body of research by suggesting and providing evidence that people's psychological experience when networking has powerful effects on their likelihood of engaging in instrumental networking and that interventions that specifically change the motives people have when approaching networking can potently impact their psychological experience and subsequent behaviors. A psychological account of motivation in networking behavior can inform network theories of human agency by examining people's motivational approach to goals and by conceptualizing agency itself as a variable that can be measured or manipulated.

Second, our work contributes to research on regulatory focus by extending it to a new context—professional networking—and introducing a domain-specific form of promotion and prevention focus to complement trait and state forms of regulatory foci typically studied in the literature. By doing so, we echo and strengthen new developments in research on regulatory focus (Browman et al., 2017). RFT (Higgins, 1997) concerns how people pursue goals. In a promotion focus, people's goals are represented as hopes and aspirations; in a prevention focus, they are represented as duties and obligations. Given its wide applicability and the importance of goal pursuit in organizations, several scholars have explored the role of regulatory focus in work settings (e.g., Brockner & Higgins, 2001; Wallace et al., 2009) and found that promotion and prevention foci are uniquely associated with a variety of work behaviors (De Cremer et al., 2009; Neubert et al., 2008; Wallace et al., 2009). Our research advances this body of work by examining how regulatory focus affects the way people experience networking and how often they engage in it, with important consequences for performance. We also demonstrate that manipulations of state promotion and prevention foci specific to the domain of networking are sufficient to change the networking behavior of professionals in the field. Manipulating the generalized regulatory foci typically studied in the literature may therefore not be necessary to affect specific behaviors at work. By showing that people's psychological reactions to networking vary depending on their promotion versus prevention focus, our work opens up new investigations of primary human motives, networking, and the structure of networks.

Finally, our work also contributes to research on morality and behavioral ethics—research that has received increased attention in the last decade from both psychology and management scholars. Prior work has shown that authenticity is experienced as a moral state (Gino et al., 2015) and that instrumental networking leads people to feel dirty and impure (Casciaro et al., 2014). Here, we proposed and found that regulatory focus profoundly affects such feelings, as the motives people have to engage in instrumental networking give them room to justify (or discourage) approaching others to accomplish their professional goals. In so doing, we built on Cornwell and Higgins' (2015) view of both promotion and prevention regulatory foci as ethical systems of ideals concerned with attaining virtues (promotion) and of oughts concerned with maintaining obligations (prevention). By connecting ought and ideal selves to the moral philosophy of authenticity and moral purity, we identified an important motivational factor that can change the perceived morality of instrumental professional networking and be directly triggered or manipulated.

Our research both assessed regulatory focus as an individual difference and manipulated it with simple interventions in lab and, importantly, in the field. Short writing tasks that focused participants' attention on their hopes and aspirations or on their duties and obligations influenced the primary motivations they used when approaching instrumental networking. In addition, short text

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 284 of 1282

messages that reinforced promotion versus prevention foci affected real networking behaviors. The effectiveness of regulatory focus manipulations narrowly directed at networking behavior shows that interventions to change people's motivational orientations need not generalize to all domains of their lives, but rather can effectively target a specific domain of action. Our manipulations and, in particular, our simple intervention study provide insights into how organizations or managers could similarly focus organizational members' attention on specific aspects of networking, thus influencing their willingness to engage in it and frequency of doing so. Simply helping people focus on specific motives before approaching networking could prove to be an effective means of making networking morally palatable and influence their development and job performance for the better.

Limitations and Directions for Future Research

Our findings, as well as the limitations of our studies, point to several potential areas of future inquiry. First, our research focused heavily on individuals' psychological states and their reported frequency of networking rather than on objective measures of networking. It is important to examine more objective variables, such as frequency of networking—an outcome we considered in two of our studies—and to measure them in more objective ways. More importantly, potential differences in the psychological and behavioral patterns people display while networking deserve further inquiry. It is possible that promotion-focused or prevention-focused individuals use different emotional and nonemotional expressions consciously or unconsciously. For example, during a networking event, promotion-focused individuals might display more positive emotions and approach their targets with a firm handshake. Additionally, while our studies focused on the person networking, it would be fascinating to examine whether others can recognize the motivation behind individuals' instrumental networking.

In our studies, we both measured and manipulated self-regulatory focus. Future research could extend our work by investigating framing effects. An individual's regulatory focus can be shaped by her environment (e.g., the school she attends, the organization she works in), such that certain environments make one regulatory focus predominant over the other. Future work could examine the active role organizations can play in inducing a promotion focus, because companies can shape members' regulatory focus through their cultures, policies, and incentive schemes. Additionally, in our studies we examined the general self-regulatory focus and networking-specific regulatory focus (measured or manipulated) at one time. It is likely that individuals' past experiences with networking influence the extent to which they adopt a promotion or prevention focus toward networking. For example, negative past experiences could lead people to view networking with dread and thus approach networking with a prevention focus.

Future studies could examine the role of felt authenticity and selfishness in various types of networking. Casciaro and colleagues (2014) argued that networking behaviors create negative self-attributions when the actions are difficult to justify to oneself. People perceive instrumental professional networking specifically as less justifiable to themselves and as morally tainted because it has a selfish intent, as the person initiating the relationship is pursuing certain benefits. Regulatory focus can influence how people experience networking, because regulatory focus influences creativity (Crowe & Higgins, 1997; Friedman & Förster, 2001), an important factor when individuals are justifying their actions, particularly those that may be morally problematic (Gino & Ariely, 2012). Future research examining how regulatory focus influences one's ability to justify selfish intentions during instrumental networking (through the greater creativity that regulatory focus triggers) would further our understanding of the impact of people's motives on their psychological state and actions when networking.

We note that these insights on the complex interrelationships between selfishness, authenticity, moral purity and regulatory focus could well apply to behaviors beyond instrumental networking. Any form of instrumental relational behavior—be it advice seeking and giving, leadership, social influence, or intergroup relations—undertaken with selfish or altruistic motives, and invoking either promotion or prevention motivational orientations, may have significant consequences for an individual's morality, which may in turn affect the likelihood of engaging in such behavior. Further work is needed to further understand the interplay motivation, and the moral psychology of instrumental behavior and its outcomes.

Future research could also examine whether promotion and prevention focus lead people to use different strategies when networking, and approach new professional connections with a different mindset. For instance, it is possible that people with a promotion focus create or nurture professional relationships to learn something new, more so than people with a prevention focus, and this attention to the potential for learning may contribute to their lower feelings of moral impurity as the connection feels less instrumental.

Finally, in our studies, we tested our predications with different samples, such as Americans recruited through online platforms (Mturk) and panels, as well as U.S. college students and lawyers in a professional services firm. Additionally, we assessed the cultural generalizability of our main prediction with a sample from Italy. Nonetheless, it is possible that some non-Western cultures differ in their views of instrumental networking and as such our effects might not hold in such cultures. Future research could further examine the cultural generalizability of the current findings.

Conclusion

Why is it that many people do not take on opportunities to network or do so with dread, even when networking would benefit them professionally? How could they be encouraged to do so, and with enthusiasm? Our research addresses both of these questions. Building on recent work showing that engaging in professional instrumental networking makes people feel morally impure and physically dirty, we explored how the motives people have when engaging in networking can reduce these feelings and lead people to network more often, with potentially beneficial effects on their performance. By adopting a promotion focus rather than a prevention one, individuals can orient their motivation to network toward the growth, advancement, and accomplishment they can receive from it and thus network more frequently and experience greater authenticity and moral purity. That is, a promotion focus can help people wash away their dirty feelings and draw their attention to the aspirations they can pursue by creating new professional ties or strengthening existing ones.

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 285 of 1282

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The Moral Virtue of Authenticity: How Inauthenticity Produces Feelings of Immorality and Impurity

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Abstract

The five experiments reported here demonstrate that authenticity is directly linked to morality. We found that experiencing inauthenticity, compared with authenticity, consistently led participants to feel more immoral and impure. This link from inauthenticity to feeling immoral produced an increased desire among participants to cleanse themselves and to engage in moral compensation by behaving prosocially. We established the role that impurity played in these effects through mediation and moderation. We found that inauthenticity-induced cleansing and compensatory helping were driven by heightened feelings of impurity rather than by the psychological discomfort of dissonance. Similarly, physically cleansing oneself eliminated the relationship between inauthenticity and prosocial compensation. Finally, we obtained additional evidence for discriminant validity: The observed effects on desire for cleansing were not driven by general negative experiences (i.e., failing a test) but were unique to experiences of inauthenticity. Our results establish that authenticity is a moral state—that being true to thine own self is experienced as a form of virtue.

Keywords

authenticity, morality, compensatory ethics, helping, prosocial behavior, open data, open materials

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In a notable passage of *Hamlet*, Polonius exhorted his departing son, Laertes, to live to the full extent of his humanity: "This above all: to thine own self be true, . . . Thou canst not then be false to any man" (Shakespeare, 1603/1885, Act 1, Scene iii). Not just the province of a Shakespearean turn of phrase, the desire to be authentic—to act in accordance with one's own sense of self, emotions, and values—seems to be a driving force of human nature (Gecas, 1986, 1991). Scholars, writers, and philosophers have argued that authenticity is a fundamental aspect of individuals' well-being (Harter, 2002). A disconnect between one's expressions and internal states can be psychologically costly, producing palpable discomfort, dissonance, and exhaustion (Ashforth & Tomiuk, 2000; Festinger, 1957; Grandey, 2000). Indeed, some schools of psychotherapy ascribe to Polonius's belief that psychological health can be achieved only by expressing one's true inner thoughts and feelings (Rogers, 1961).

Yet it is also the case that people often profess opinions, modulate their emotional expressions, and act in the service of interpersonal relationships and goal-directed behavior (Ekman & Friesen, 1975; Schlenker, 2002). In fact, the more successful a person is at portraying inauthentic experiences or expressions, the more interpersonally competent he or she is judged to be (Snyder, 1987). Indeed, some scholars have argued that the ability to express thoughts and feelings that contradict one's mental states is an important developmental adaptation (Harter, Marold, Whitesell, & Cobbs, 1996).

In the current research, we attempted to resolve these contradictory claims by exploring whether there is a link

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Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 288 of 1282

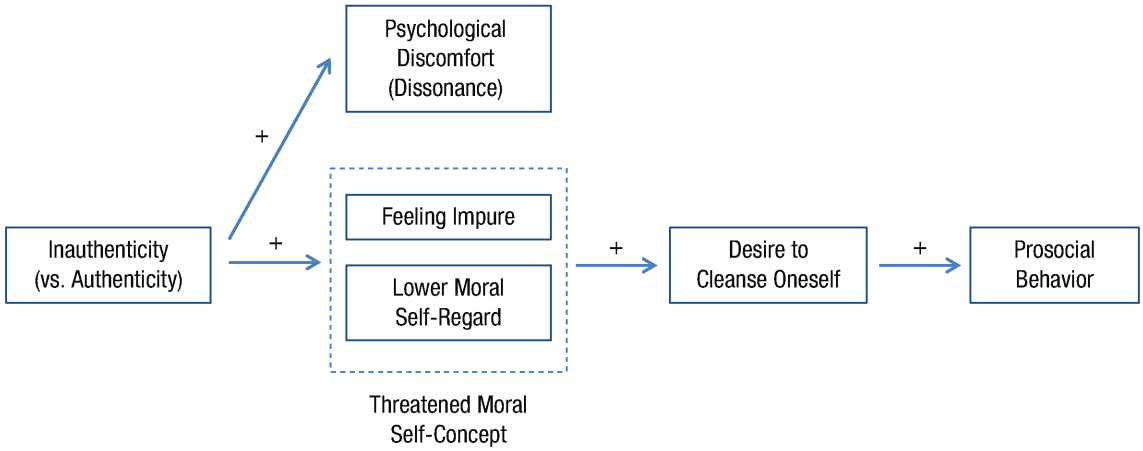

Fig. 1. Theoretical model for the link between inauthenticity and moral cleansing. Inauthenticity leads to two main consequences of a threatened moral self-concept—feelings of impurity and lower self-regard—as well as dissonance. However, only a threatened moral self-concept explains the link between experiencing inauthenticity and a heightened desire to cleanse oneself and behave prosocially.

between feeling inauthentic and feeling immoral and impure. We suggest that inauthenticity poses a challenge to a person's sense of self. Authenticity involves both owning one's personal experiences (thoughts, emotions, needs, and wants) and acting in accordance with those experiences. A commitment to one's identity and values (Erickson, 1995) is important for effective self-regulation. When this commitment is violated, people feel inauthentic.

Though being untrue to oneself is psychologically costly, by definition it does not constitute immoral behavior. Yet, we argue, people do experience inauthenticity as immoral, feeling that it taints their moral self-concept. Our arguments build on the writings of the numerous philosophers—such as Kierkegaard, Nietzsche, Rand, and Sartre—who have discussed authenticity in relation to morality. For instance, Nietzsche and Sartre believed that individuals need to create their own moral code and act in ways consistent with that code (i.e., they should act authentically).

By contrast, morality is commonly defined in social and interpersonal terms (Haidt & Kesebir, 2010). For example, Turiel (1983) defined morality as "prescriptive judgments of justice, rights, and welfare pertaining to how people ought to relate to each other" (p. 3). Philosophers and psychologists alike have treated being untrue to oneself (inauthenticity) differently from being untrue to others (dishonesty), and have suggested that society tolerates or promotes inauthenticity but universally prohibits dishonesty (Harter et al., 1996).

We, however, suggest that inauthenticity and dishonesty share a similar root: They are both a violation of being true, whether to others or oneself. As a result, they elicit similar psychological and behavioral responses. For instance, expressing excitement for an activity or person one does not like or trying to fit in with a group that does not share one's values is not defined as immoral behavior per se, but we argue that individuals experience those behaviors as immoral. Feeling as if one is an imposter to oneself produces moral distress and feelings of being morally tainted and impure that are similar to those that accompany dishonesty.

Previous studies have shown that moral threats activate the need to cleanse oneself (Lee & Schwarz, 2010a; Zhong & Liljenquist, 2006). Similarly, the sacred-value-protection model (see Tetlock, Kristel, Elson, Green, & Lerner, 2000) suggests that when people violate their own values, they engage in symbolic or literal moral cleansing to purify their contaminated conscience and reaffirm their core values. Building on this research, we suggest that experiencing inauthenticity results in lower moral self-regard and feelings of impurity, which trigger a desire for physical cleansing and acting prosocially to compensate for violating the true self (Fig. 1). We also argue that cleansing breaks the link between inauthenticity and prosocial compensation.

Our hypotheses differ from cognitive dissonance theory and its variants in two ways. First, building on the sacred-value-protection model, we suggest that the mere contemplation of acting inauthentically is sufficient to produce feelings of moral contamination. It is the inauthenticity and impurity experienced in these situations, and not the inconsistency itself, that lead to the desire to cleanse and morally compensate. Second, dissonance processes are often triggered not by mere inconsistency but rather by aversive consequences (Cooper & Fazio, 1984); what provokes dissonance is the knowledge that one's actions have produced material consequences that violate one's attitudes.

Finally, the research we report here is related to the work by Lee and Schwarz (2010b) showing that the physical act of washing reduces cognitive dissonance by creating a clean slate. However, their research did not examine whether experiencing dissonance increases the desire for physical cleansing, whereas we theorized about and empirically tested the link between inauthenticity and cleansing. Specifically, we directly examined the need for cleansing as a result of feeling morally tainted by experiencing inauthenticity.

Overview of the Present Research

We tested our predictions in five studies in which people recalled and wrote about a time when they felt authentic or inauthentic. We measured whether inauthenticity influenced people's moral self-regard and feelings of impurity (Experiments 1 and 3) and their desire to cleanse themselves (Experiments 2, 4, and 5). We also linked inauthenticity to prosocial behavior in the form of helping (Experiment 3) and donating money (Experiment 5). To establish discriminant validity, we compared the effects of inauthenticity with the effects of recalling a morally irrelevant, negative experience (i.e., failing a test) in Experiment 3 and with the effects of cognitive dissonance in Experiment 4.

Experiment 1: The Impurity of Inauthenticity

Experiment 1 examined whether inauthenticity produces feelings of immorality and impurity, independently of whether it involves being untrue to others or untrue only to oneself.

Method

Participants and design. Two hundred sixty-nine individuals (mean age = 30.73 years, *SD* = 8.07; 143 male) from Amazon Mechanical Turk participated in this study for $1. We calculated our target sample size using an estimated effect size, *f*, of 0.2, which would require a sample size of approximately 270 participants for the study to be powered at 90%.[1] We randomly assigned participants to a 2 (type of behavior: authentic vs. inauthentic) × 2 (type of event: general vs. unrelated to lying) between-subjects design. Two participants did not write an essay and were excluded from the analyses, according to a decision made prior to conducting the study.

Procedure. Participants first read initial instructions welcoming them to the study and answered an attention check. Those who failed the attention check were automatically informed that, on the basis of their answers, they did not qualify for the study. Thus, their data were not recorded. Participants were then asked to recall an event and write about it for 5 to 10 min. In the authentic-behavior, general-event condition, the instructions read as follows (word changes in the inauthentic-behavior, general-event condition are shown in brackets):

> Please recall a time in your personal or professional life when you behaved in a way that made you feel true [untrue] to yourself, that made you feel authentic [inauthentic]. It should just be a situation in which you felt authentic [inauthentic] with your core self. Please describe the details about this situation that made you feel authentic [inauthentic]. What was it like to be in this situation? What thoughts and feelings did you experience?

In the authentic-behavior, event-unrelated-to-lying condition, the instructions read as follows (word changes in the inauthentic-behavior, event-unrelated-to-lying condition are shown in brackets; boldface is used here for emphasis but was not used in the original instructions):

> Please recall a time in your personal or professional life when you behaved in a way that made you feel true [untrue] to yourself, that made you feel authentic [inauthentic]. **It is important that you choose a situation that is unrelated to telling the truth to others [unrelated to lying or deceiving others].** It should just be a situation in which you felt authentic [inauthentic] with your core self. Please describe the details about this situation that made you feel authentic [inauthentic]. What was it like to be in this situation? What thoughts and feelings did you experience?

Next, participants completed measures assessing their moral self-regard and feelings of impurity. The order in which these two sets of questions were presented was randomly determined for each participant. Participants then completed manipulation checks and reported their age and gender.

Moral self-regard. Participants indicated the extent to which the event they described made them feel moral, generous, cooperative, helpful, loyal to others, dependable, trustworthy, reliable, caring, and respectful (α = .965; adapted from Walker & Hennig, 2004). Responses were on a 7-point scale (ranging from 1, *not at all*, to 7, *to a great extent*).

Feelings of impurity. Using the same 7-point scale, participants indicated the extent to which the event they described made them feel impure, dirty, and tainted (α = .94).

Table 1. Distribution of Event Descriptions in Experiment 1 by Content Category

Category	Event unrelated to lying or telling the truth	General event	Average across event types
Inauthentic-behavior condition			
1. Expressing emotions, attitudes, or opinions that do not match one's internal state	39.1%	46.7%	42.9%
2. Attempting to fit in by conforming to norms or shared attitudes and behaviors, or in the face of social pressure	53.6%	30.0%	41.8%
3. Lying to obtain a material self-interested advantage	0.0%	13.3%	6.7%
4. Theft, stealing	0.0%	5.0%	2.5%
5. Cheating in a relationship	0.0%	0.0%	0.0%
6. Not being able to create something for oneself	0.0%	1.7%	0.8%
7. General[a]	7.2%	3.3%	5.3%
Authentic-behavior condition			
1. Expressing emotions, attitudes, or opinions that match one's internal state	35.8%	31.0%	33.4%
2. Not conforming to norms or shared attitudes and behaviors in the face of social pressure	32.8%	36.6%	34.7%
3. Avoiding lying to obtain a material self-interested advantage	0.0%	1.4%	0.7%
4. Helping (e.g., giving somebody assurance, advice, or support)	17.9%	21.1%	19.5%
5. Being honest in a relationship	0.0%	1.4%	0.7%
6. Creating something for oneself	6.0%	4.2%	5.1%
7. General[a]	7.5%	4.2%	5.9%

[a]Essays in this category were mainly descriptions of general feelings resulting from the experience.

Manipulation check: self-alienation. As a manipulation check, we measured feelings of self-alienation with four items (e.g., "After experiencing the situation I described I felt out of touch with the 'real me,'" "After experiencing the situation I described I felt as if I did not know myself very well"; $\alpha = .88$) that have been used in prior work to measure inauthenticity (Gino, Norton, & Ariely, 2010). We asked participants to indicate their agreement with each of the four items using a 7-point scale (from 1, *strongly disagree*, to 7, *strongly agree*).

Manipulation check: content of the essay. As an additional manipulation check, we asked participants to think back to the initial writing task and indicate whether they had written about an event that made them feel authentic, inauthentic, or neutral.

Results

Coding of the essays. Two coders, who were blind to conditions and hypotheses, categorized the situations participants described in their essays. The two coders agreed on the categorization 94% of the time, and disagreements were resolved with a third coder. As Table 1 shows, about 90% of the essays described situations unrelated to ethics. Most were situations in which people expressed emotions, attitudes, or opinions that did not match their internal state or attempted to fit in by conforming to social norms or peer attitudes.

Manipulation check: content of the essay. All participants correctly answered the manipulation-check question asking them to indicate how the event they wrote about had made them feel.

Manipulation check: self-alienation. A 2 (type of behavior: authentic vs. inauthentic) × 2 (type of event: general vs. unrelated to lying) between-subjects analysis of variance (ANOVA) using self-alienation as the dependent measure revealed only a main effect of type of behavior. Participants in the inauthentic-behavior condition reported greater self-alienation ($M = 4.04$, $SD = 1.37$, 95% confidence interval, CI = [3.82, 4.26]) compared with participants in the authentic-behavior condition ($M = 1.90$, $SD = 1.19$, 95% CI = [1.70, 2.12]), $F(1, 263) = 186.16$, $p < .001$, $\eta_p^2 = .41$.

Impurity and moral self-regard. Similar 2 × 2 ANOVAs using impurity and moral self-regard as dependent measures also revealed only a significant main effect of type of behavior. Participants in the inauthentic-behavior condition reported greater feelings of impurity ($M = 3.56$, $SD = 1.86$, 95% CI = [3.30, 3.85]) and lower moral self-regard ($M = 2.90$, $SD = 1.50$, 95% CI = [2.61, 3.16]) than did participants in the authentic-behavior condition (impurity: $M = 1.51$, $SD = 1.29$, 95% CI = [1.25, 1.78]; moral self-regard: $M = 4.99$, $SD = 1.68$, 95% CI = [4.72, 5.26]), $F(1, 263) = 111.06$, $p < .001$, $\eta_p^2 = .30$, and $F(1, 263) = 115.25$, $p < .001$, $\eta_p^2 = .31$, respectively.

Word count. We also examined whether participants' essays varied in length across conditions and found that they did not (all *p*s > .30).

Discussion

Inauthentic experiences made participants feel more impure and less moral than authentic ones, independently of whether those experiences involved lying to themselves or lying to others. Thus, people experience inauthenticity as a moral state.

Experiment 2: From Inauthenticity to Cleansing

Experiment 2 examined whether feelings of impurity that result from experiencing inauthenticity lead to a desire to physically cleanse oneself. We measured participants' desire to physically cleanse themselves using both an implicit measure and an explicit measure (Zhong & Liljenquist, 2006).

Method

Participants and design. Nine hundred six responses were collected from individuals (mean age = 31.88 years, *SD* = 9.05; 439 male) recruited on Amazon Mechanical Turk, who participated in exchange for $1. We calculated our target sample size using an estimated effect size, *f*, of 0.1, which would require a sample size of 900 participants for the study to be powered at 85%. As in Experiment 1, we randomly assigned participants to a 2 (type of behavior: authentic vs. inauthentic) × 2 (type of event: general vs. unrelated to lying) between-subjects design.

Sixty-eight responses did not meet our inclusion criteria: Some participants completed the study two or more times (22 participants, 49 responses), did not write the requested essay (3 participants), or failed the manipulation check asking them to indicate what type of essay they wrote (16 participants). We excluded the responses of these participants from the analyses, according to a decision made prior to conducting the study. We conducted analyses on the remaining 838 observations.

Procedure. Participants first read some welcoming instructions and then answered two attention checks. Those who failed either attention check were automatically informed that, on the basis of their answers, they could not take part in the study. Participants who passed both attention checks were asked to recall an event and write about it for 5 to 10 min. In each of the four conditions, we used the same instructions for the writing task as in Experiment 1.

Next, participants completed measures assessing accessibility of cleansing-related words, desire to use cleansing-related products (e.g., Tide detergent), and desire to cleanse through behaviors such as taking a shower. The order in which these three sets of measures were presented was randomly determined. Participants then completed manipulation checks and reported their age and gender.

Accessibility of cleansing-related words. Participants completed a word-completion task using the first word that came to mind (Zhong & Liljenquist, 2006). The instructions read,

> You will now be presented with a word completion task. You will be given a list of words with letters missing. Your task is to fill in the blanks to make complete words. Please use the first word that comes to mind.

Three of the word segments (W_ _H, SH_ _ER, and S_ _P) could be completed as cleansing-related words (*wash, shower*, and *soap*) or as unrelated, neutral words (e.g., *wish, shaker*, and *step*). The remaining three word segments (F_ O _, B_ _ K, and PA_ _ R) could be completed with neutral words only.

Cleansing products. Participants indicated how desirable they found a list of products to be (using a 7-point scale, ranging from 1, *completely undesirable*, to 7, *completely desirable*). The list included five cleansing products (i.e., Dove shower soap, Crest toothpaste, Windex cleaner, Tide detergent, and Lysol disinfectant) and five neutral products (i.e., Post-it Notes, Nantucket Nectars juice, Energizer batteries, Sony CD cases, and Snickers bars). We averaged responses to the five cleansing products to create one aggregate measure (α = .86).

Cleansing behaviors. Participants indicated the desirability of various behaviors on a 7-point scale (ranging from 1, *completely undesirable*, to 7, *completely desirable*). Some of the behaviors were related to cleansing (taking a shower, washing hands, brushing teeth, and taking a bath), and others were not (taking a walk, having something to eat, watching TV, and listening to music). We averaged responses to the four cleansing behaviors to create one aggregate measure (α = .75).

Manipulation checks. As a manipulation check, we measured self-alienation using the same four-item measure as in Experiment 1 (α = .87). We also asked participants to think back to the initial writing task and indicate the type of essay they wrote, that is, whether they wrote

about an event that made them feel authentic, inauthentic, or neutral.

Results

Manipulation check: self-alienation. A 2 (type of behavior: authentic vs. inauthentic) × 2 (type of event: general vs. unrelated to lying) between-subjects ANOVA using self-alienation as the dependent measure revealed only a main effect of type of behavior. Participants in the inauthentic-behavior condition reported greater self-alienation (M = 4.07, SD = 1.41, 95% CI = [3.95, 4.19]) than did participants in the authentic-behavior condition (M = 1.87, SD = 1.07, 95% CI = [1.75, 1.99]), $F(1, 834)$ = 655.80, $p < .001$, $\eta_p^2 = .44$.

Accessibility of cleansing-related words. A similar 2 × 2 ANOVA using the sum of cleansing-related words participants generated as the dependent measure revealed only a main effect of type of behavior (authentic vs. inauthentic). Participants who recalled and wrote about an inauthentic behavior (M = 1.32, SD = 0.99, 95% CI = [1.23, 1.42]) generated more cleansing-related words than did those who recalled and wrote about an authentic behavior (M = 1.11, SD = 0.93, 95% CI = [1.02, 1.20]), $F(1, 834)$ = 10.02, p = .002, η_p^2 = .012.

Desirability of cleansing products. Similarly, a 2 × 2 ANOVA using participants' desirability ratings of cleansing products as the dependent measure revealed only a main effect of type of behavior (authentic vs. inauthentic). Recalling an inauthentic rather than an authentic behavior led to greater desirability of cleansing products (M = 3.47, SD = 1.48, 95% CI = [3.33, 3.61], vs. M = 3.11, SD = 1.39, 95% CI = [2.97, 3.24]), $F(1, 834)$ = 13.03, $p < .001$, $\eta_p^2 = .015$, but the desirability of noncleansing products did not differ between the inauthentic-behavior condition (M = 3.08, SD = 1.21, 95% CI = [2.96, 3.20]) and the authentic-behavior condition (M = 3.09, SD = 1.18, 95% CI = [2.98, 3.21]), $F < 1$. The effect of inauthenticity on the desirability of cleansing products but not noncleansing ones was confirmed by a significant interaction between type of behavior and type of product (i.e., cleansing related or neutral), $F(1, 834)$ = 23.94, $p < .001$, $\eta_p^2 = .028$.

Desirability of cleansing behaviors. Similarly, recalling an inauthentic experience increased the desirability of cleansing behaviors (M = 4.36, SD = 1.37, 95% CI = [4.22, 4.50], vs. M = 4.04, SD = 1.46, 95% CI = [3.91, 4.18]), $F(1, 834)$ = 10.19, p = .001, η_p^2 = .012, but the desirability of noncleansing behaviors did not differ between the inauthentic-behavior condition (M = 4.77, SD = 1.26, 95% CI = [4.65, 4.89]) and the authentic-behavior condition (M = 4.70, SD = 1.19, 95% CI = [4.58, 4.82]), $F < 1$. The effect of inauthenticity on the desirability of cleansing behaviors but not noncleansing ones was confirmed by a significant interaction between type of behavior in the writing task (authentic vs. inauthentic) and type of behavior in the rating task (i.e., cleansing related vs. neutral), $F(1, 834)$ = 7.92, p = .005, η_p^2 = .009.

Discussion

Recalling and writing about an inauthentic experience enhanced a desire for physical cleanliness as measured both implicitly and explicitly. Thus, experiencing inauthenticity heightens the desire to cleanse oneself.

Experiment 3: Prosocial Compensation and Discriminant Validity

One concern with the previous experiments is the possibility that the results were driven by recalling a negative, or uncomfortable, event. In Experiment 3, we compared effects of inauthenticity and effects of a morally irrelevant negative experience—failing a test—to test whether the observed link between inauthentic behavior and moral cleansing generalizes to any negative experience. By so doing, we tested for discriminant validity and furthered our understanding of the triggers of moral cleansing. We also tested whether inauthenticity produces moral compensation, leading people to act prosocially, and whether feelings of impurity but not dissonance mediate this effect.

Method

Participants and design. Two hundred ninety-one individuals (mean age = 30.06 years, SD = 7.87; 47% male) from local universities in the northeastern United States participated in this study for pay. We calculated our target sample size using an estimated effect size, f, of 0.2, which would require a sample size of approximately 280 participants for the study to be powered at 85%. At some of the experimental sessions, however, participants showed up at a higher rate than expected. Experiment 3 was the first in an hour-long series of experiments for which participants received $20 as compensation. Participants were randomly assigned to one of three conditions: inauthenticity, failure, or control. Three participants failed the manipulation check asking them to indicate the type of essay they wrote and were thus excluded from the analyses, according to a decision made prior to conducting the study. We conducted analyses on the remaining 288 participants.

Procedure. Participants first read some general instructions welcoming them to the study, answered one

attention-check question, and then, if they successfully responded to it, moved on to the writing task. In the inauthenticity condition, the instructions read (as in the inauthentic-behavior, general-event condition of Experiments 1 and 2):

> Please recall a time in your personal or professional life when you behaved in a way that made you feel *untrue* to yourself, that made you feel *inauthentic*. It should just be a situation in which you felt inauthentic with your core self.
>
> Please describe the details about this situation that made you feel *inauthentic*. What was it like to be in this situation? What thoughts and feelings did you experience?

In the failure condition, we asked participants to describe a time when they failed in an activity, test, or project. The instructions read:

> Please recall a time in your personal or professional life when you *failed* in an activity, test, or project in a way that made you feel disappointed.
>
> Please describe the details about this situation in which you *did not succeed* on a task. What was it like to be in this situation? What thoughts and feelings did you experience?

Finally, in the control condition, we asked participants to describe their activities from the previous day. The instructions read:

> Please recall what happened yesterday, throughout the day.
>
> Please describe the details about this situation. What was it like to be in this situation? What thoughts and feelings did you experience?

After the writing task, participants completed a questionnaire with a few measures of interest (i.e., feelings of impurity, psychological discomfort, negative and positive affect, and embarrassment), two manipulation-check questions, and demographic questions (age and gender). They then indicated their willingness to help the experimenter with another survey that would take 15 min of their time.

Feelings of impurity. As in Experiment 1, participants used a 7-point scale to indicate the extent to which the event they described made them feel impure, dirty, and tainted (α = .94).

Cognitive dissonance. To assess cognitive dissonance, we used a measure developed by Elliot and Devine (1994) that includes psychological discomfort, negative and positive affect, and also embarrassment. In their work, Elliot and Devine found that psychological discomfort was the distinct affective consequence of engaging in counterattitudinal behavior. For completeness, however, we included all the original items. All items were rated on 7-point scales. Psychological discomfort was assessed through three items: Participants rated how uncomfortable, uneasy, and bothered they felt (α = .94). Negative affect was assessed with three items: "angry toward myself," "disgusted with myself," and "annoyed with myself" (α = .93). Three items measured positive affect ("happy," "good," and "energetic"; α = .95), and two items measured embarrassment ("embarrassed" and "ashamed"; α = .90).

Manipulation Check 1: self-alienation. As a manipulation check, we measured feelings of self-alienation as in Experiments 1 and 2 (α = .90).

Manipulation Check 2: content of the essay. As an additional manipulation check, we asked participants to think back to the initial writing task and indicate whether they wrote about an event that made them feel inauthentic, what they did the day before, or a time when they did not succeed.

Helping. At the conclusion of the experiment, participants were told that the "research team is interested in understanding how people make choices across various domains (health care, work, food purchases). We have prepared a 15-minute survey. We would love your help. If you can help us out, please click yes below and you will be redirected to the survey. Otherwise, please press No. Note that you will receive no extra payment for completing it." If participants decided to help, they received a message thanking them for choosing to help the research team and then were asked to answer a short questionnaire with general bogus questions.

Results

Table 2 reports the means and confidence intervals for the variables in this study, separately for each condition.

Manipulation check: self-alienation. A one-way ANOVA using self-alienation as the dependent measure revealed a main effect of condition, $F(2, 285) = 43.23$, $p < .001$, $\eta_p^2 = .23$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported greater self-alienation when they recalled and wrote about an inauthentic experience ($M = 3.83$, $SD = 1.51$) than when

Table 2. Means and 95% Confidence Intervals (in Brackets) for the Variables Assessed in Experiment 3

	Condition		
Variable	Inauthenticity	Failure	Control
Self-alienation	3.83_a [3.53, 4.13]	3.21_b [2.92, 3.50]	1.92_c [1.64, 2.21]
Feelings of impurity	3.66_a [3.37, 3.95]	2.09_b [1.81, 2.37]	1.21_c [0.93, 1.49]
Discomfort	5.11_a [4.78, 5.45]	4.90_a [4.57, 5.23]	2.41_b [2.09, 2.73]
Negative affect	4.62_a [4.30, 4.95]	4.61_a [4.30, 4.93]	1.88_b [1.56, 2.19]
Positive affect	1.99_a [1.72, 2.27]	1.84_a [1.57, 2.11]	4.46_b [4.29, 4.73]
Embarrassment	4.40_a [4.07, 4.74]	4.69_a [4.36, 5.01]	1.97_b [1.64, 2.29]
Helping	$33.7\%_a$ [25.3, 42.1]	$17.5\%_b$ [9.4, 25.7]	$16.2\%_b$ [8.1, 24.3]

Note: Within a row, means with different subscripts are significantly different, $p < .05$.

they recalled and wrote about either a failure ($M = 3.21$, $SD = 1.62$; $p = .012$) or what they had done the previous day ($M = 1.92$, $SD = 1.19$; $p < .001$). Participants also reported greater self-alienation in the failure than in the control condition ($p < .001$).

Feelings of impurity. Feelings of impurity also differed by condition, $F(2, 285) = 72.29$, $p < .001$, $\eta_p^2 = .34$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported feeling more impure in the inauthenticity condition ($M = 3.66$, $SD = 1.82$) than in either the failure condition ($M = 2.09$, $SD = 1.57$; $p < .001$) or the control condition ($M = 1.21$, $SD = 0.61$; $p < .001$). Participants also reported greater feelings of impurity in the failure than in the control condition ($p < .001$).

Psychological discomfort. Psychological discomfort, which has been tied to cognitive dissonance, varied across conditions, $F(2, 285) = 82.67$, $p < .001$, $\eta_p^2 = .37$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported less psychological discomfort in the control condition ($M = 2.41$, $SD = 1.71$) than in either the inauthenticity condition ($M = 5.11$, $SD = 1.53$; $p < .001$) or the failure condition ($M = 4.90$, $SD = 1.64$; $p < .001$). Participants felt the same amount of psychological discomfort in the failure and inauthenticity conditions ($p = 1.00$).

Negative and positive affect, and embarrassment. Our manipulation also led to differences across conditions in negative affect, $F(2, 285) = 98.28$, $p < .001$, $\eta_p^2 = .41$; positive affect, $F(2, 285) = 116.76$, $p < .001$, $\eta_p^2 = .45$; and embarrassment, $F(2, 285) = 80.77$, $p < .001$, $\eta_p^2 = .36$. As shown in Table 2, participants in the control condition reported lower negative affect, higher positive affect, and lower embarrassment compared with participants in both the failure and the inauthenticity condition (all ps $< .001$), whereas participants in the latter two conditions did not differ on these measures (all ps $> .71$).

Moral compensation through helping. The percentage of participants who decided to help the experimenter varied by condition, $\chi^2(2, N = 288) = 10.35$, $p = .006$, Cramér's $V = .19$. Participants who recalled and wrote about an inauthentic experience were more likely to help the experimenter (33.7%, 31 of 92 participants) than were those in the failure condition (17.5%, 17 of 97 participants), $\chi^2(1, N = 189) = 6.48$, $p = .011$, and those in the control condition (16.2%, 16 of 99 participants), $\chi^2(1, N = 191) = 6.88$, $p = .009$.

Mediation analysis. Next, we examined whether feelings of impurity or psychological discomfort due to cognitive dissonance explained the link between inauthenticity and greater helping. In the logistic regressions, we included a dummy variable for both the inauthenticity condition and the failure condition, using the control condition as the condition of reference. When feelings of impurity and psychological discomfort were included in the equation (in addition to the dummies for the failure condition and the inauthenticity condition), the effect of inauthenticity on helping was reduced (from $b = -0.97$, $SE = 0.35$, Wald = 7.63, $p = .006$, to $b = 0.37$, $SE = 0.49$, Wald = 0.57, $p = .45$). Feelings of impurity predicted helping ($b = 0.38$, $SE = 0.11$, Wald = 12.25, $p < .001$), but psychological discomfort did not ($b = 0.14$, $SE = 0.11$, Wald = 1.67, $p = .20$). We conducted bootstrap analyses with 10,000 iterations using a macro provided by Preacher and Hayes (2008) for situations involving multiple mediators. The bootstrapped 95% bias-corrected CI around the indirect effect for impurity, [0.38, 1.56], did not contain zero, but the 95% bias-corrected CI around the indirect effect for psychological discomfort did, [−0.20, 1.01].

Discussion

Inauthenticity produced greater feelings of impurity and greater moral compensation compared with failing a test. This study demonstrates that the effect of inauthenticity

on moral compensation cannot be attributed to general negative experiences. It also shows that feeling impure, not cognitive dissonance, explains the relationship between inauthenticity and moral compensation through helping.

Experiment 4: Inauthenticity Is Not Dissonance

Experiment 3 provided preliminary evidence that inauthenticity is distinct from cognitive dissonance. In Experiment 4, we explored this issue further using a cognitive dissonance paradigm. In a typical dissonance study, participants are asked to write a counterattitudinal essay on a personally relevant topic, and perceived choice is manipulated. In the high-choice condition, participants are persuaded to write a counterattitudinal essay, but the request provides a feeling of choice. In the low-choice condition, participants are instructed to write the counterattitudinal essay, which gives them little choice. Dissonance studies show a positive correlation between perceived choice and attitudes toward the counterattitudinal topic (Cooper & Fazio, 1984).

Whereas choice is critical in producing cognitive dissonance, we suggest that choice does not play a role in increasing the desire for cleanliness that is associated with feeling inauthentic. We tested our hypothesis in Experiment 4 by including three conditions: high-choice, counterattitudinal; low-choice, counterattitudinal; and high-choice, proattitudinal. We predicted that participants would experience a greater sense of choice in the high-choice conditions than in the low-choice condition. But we also predicted that participants would express a greater desire for cleanliness whenever they wrote essays that were not consistent with their internal beliefs, regardless of their perceived level of choice. We expected to observe a greater desire for cleanliness in both the high-choice, counterattitudinal condition and the low-choice, counterattitudinal condition compared with the high-choice, proattitudinal condition.

Method

Participants and design. Four hundred ninety-one college students (mean age = 20.42 years, *SD* = 1.90; 43% male) from Harvard University participated in the study in return for a $10 Amazon gift card. Fifty-four additional students started the study, but dropped out after reading the initial instructions and before the manipulation took place; their data were thus not recorded. We calculated our target sample size using an estimated effect size, *f*, of 0.15, which would require a sample size of approximately 490 participants for the study to be powered at 85%. We recruited 550 participants, knowing—from prior experience running online studies with this population—that about 10% to 15% of them likely would not complete the study after reading the initial instructions. We randomly assigned participants to one of three conditions: high-choice, counterattitudinal; low-choice, counterattitudinal; or high-choice, proattitudinal.

Procedure. Participants first read initial instructions welcoming them to the study. They were then asked to confirm that they were college students at Harvard. Next, as part of the cognitive dissonance manipulation, we asked participants for their opinion whether or not difficulty ratings should be a part of the Q guide (in which all Harvard courses are rated and reviewed by students who have taken them in the past). This issue was topical and familiar because it was a common topic of debate at the college at the time of the study; most students supported the inclusion of difficulty ratings, and most faculty were against it. Participants indicated whether they were for or against the inclusion of difficulty ratings in the Q guide and reported how strongly they held their opinion (from 1, *not at all*, to 7, *very much so*).

Next, participants were asked for their age, gender, and year in school. They were then told that their first task was to write an essay on a current topic, a task that would take about 5 to 10 min to complete. We manipulated dissonance by giving some participants a choice and other participants no choice regarding whether to write a counterattitudinal essay. All participants were told, "We are interested in the effectiveness of writing on current topics of interest to students." The rest of the instructions varied by condition.

Instructions in the low-choice, counterattitudinal condition indicated,

> We are randomly assigning people to write either a short essay that indicates they are in favor of including difficulty ratings in the Q guide or a short essay that indicates that they are against it. You have been assigned to write a list of arguments in favor of/against [depending on their initial opinion] including difficulty ratings in the Q guide. Therefore, you must argue in support of/against [depending on their initial opinion] including difficulty ratings in the Q guide.

In contrast, the instructions in the high-choice, counterattitudinal condition indicated,

> We are asking people to write a short essay about including difficulty ratings in the Q guide. While we would like to stress the voluntary nature of your decision regarding which side of the issue to write on, we would like you to list arguments in favor of/

Table 3. Means and 95% Confidence Intervals (in Brackets) for the Variables Assessed in Experiment 4

Variable	Condition		
	Low-choice, counterattitudinal	High-choice, counterattitudinal	High-choice, proattitudinal
Perceived choice	2.85_a [2.54, 3.15]	3.63_b [3.29, 3.96]	5.24_c [4.97, 5.52]
Self-alienation	2.70_a [2.49, 2.91]	2.56_a [2.36, 2.77]	1.88_b [1.75, 2.02]
Desirability of neutral products	3.84_a [3.65, 4.03]	3.81_a [3.61, 4.01]	3.64_a [3.46, 3.83]
Desirability of cleansing-related products	4.34_a [4.12, 4.56]	4.18_a [3.95, 4.42]	3.72_b [3.51, 3.93]

Note: Within a row, means with different subscripts are significantly different, $p < .05$.

against [depending on their initial opinion] including difficulty ratings in the Q guide. Although you are under no obligation to write this, it would be very helpful for us.

Participants in this condition had to check a box to confirm their willingness to write the counterattitudinal essay.

Finally, the instructions in the high-choice, proattitudinal condition were the same as the instructions in the high-choice, counterattitudinal condition except that participants were asked to write about the perspective they supported.

In all three conditions, the last part of the instructions read,

> We will be using the essay you write to describe this issue to current undergraduates at Harvard. So it is important that you be as persuasive and convincing as possible to convey the message that difficulty ratings should be included in the Q guide.

Participants in all conditions were instructed to start their essay with the same statement, which appeared at the top of the open box where they wrote their essay: "I believe that Harvard College should [should not] include difficulty ratings in the Q guide because. . . ."

After the writing task, participants received a list of products and indicated how desirable they found them to be, as in Experiment 2. We averaged ratings of the five cleansing products to create one aggregate measure ($\alpha = .84$).

Next, participants indicated the extent to which the writing task they had completed earlier made them feel inauthentic. We measured inauthenticity using the measure of self-alienation we employed in Experiments 1, 2, and 3 ($\alpha = .91$).

Finally, we asked participants, "How much choice did you have in writing the essay you wrote?" (1 = *none at all*, 7 = *a lot*).

Results

Table 3 reports the means and confidence intervals for the variables measured in this study, separately for each condition.

Manipulation check: self-alienation. A one-way ANOVA using self-alienation as the dependent measure revealed a main effect of condition, $F(2, 487) = 21.14$, $p < .001$, $\eta_p^2 = .08$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported lower self-alienation in the proattitudinal condition ($M = 1.88$, $SD = 0.87$) than in both the high-choice, counterattitudinal condition ($M = 2.56$, $SD = 1.31$; $p < .001$) and the low-choice, counterattitudinal condition ($M = 2.70$, $SD = 1.40$; $p < .001$). Participants reported the same perceived self-alienation in the two counterattitudinal conditions ($p = .94$).

Perceived choice. A one-way ANOVA using perceived amount of choice as the dependent measure revealed a main effect of condition, $F(2, 487) = 62.35$, $p < .001$, $\eta_p^2 = .20$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported lower perceived choice in the low-choice, counterattitudinal condition ($M = 2.85$, $SD = 1.98$) than in the high-choice, counterattitudinal condition ($M = 3.63$, $SD = 2.16$; $p = .001$) and in the proattitudinal condition ($M = 5.24$, $SD = 1.78$; $p < .001$). Perceived choice was higher in the proattitudinal condition than it was in the high-choice, counterattitudinal condition ($p < .001$).

Desirability of cleansing products. A one-way ANOVA using participants' desirability ratings of cleansing products as the dependent measure revealed a main effect of condition, $F(2, 487) = 8.24$, $p < .001$, $\eta_p^2 = .033$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported less desire for cleansing products in the proattitudinal condition ($M = 3.72$, $SD = 1.33$) than in both the high-choice, counterattitudinal condition ($M = 4.18$, $SD = 1.51$; $p = .012$) and the low-choice, counterattitudinal condition ($M = 4.34$, $SD = 1.44$; $p < .001$).

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 297 of 1282

Desirability ratings of cleansing products did not differ between the latter two conditions ($p = .94$). There were no differences across conditions in desirability ratings of the noncleansing products, $F(2, 487) = 1.21$, $p = .30$, $\eta_p^2 = .005$.

Discussion

Whereas choice is a critical ingredient in producing cognitive dissonance, it played no role in increasing the desire for cleanliness. When participants wrote essays that were not consistent with their internal beliefs, regardless of choice, they showed a greater desire for cleanliness.

Experiment 5: Reducing Prosocial Compensation Through Cleansing

We have demonstrated that inauthenticity makes people feel morally tainted and leads to a greater desire for cleanliness. In Experiment 5, we used moderation to test whether the relationship between inauthenticity and prosocial compensation is explained through a greater desire for cleansing. We manipulated the opportunity to cleanse to examine whether having this opportunity eliminated the link between inauthenticity and helping.

Method

Participants and design. Two hundred ninety-one individuals (mean age = 22.38 years, $SD = 2.99$; 45% male) from local universities in the northeastern United States participated in this study for pay ($20). We calculated our target sample size using an estimated effect size, f, of 0.2, which would require a sample size of approximately 310 participants for the study to be powered at 85%, but the rate at which participants showed up for some of our experimental sessions was lower than expected. We randomly assigned participants to a 2 (behavior recalled: authentic vs. inauthentic) × 2 (opportunity for cleansing: cleansing vs. control) between-subjects design.

Procedure. We manipulated authenticity using the same instructions as in the authentic-behavior general-event conditions of Experiments 1 and 2. After completing the writing task, participants were told that the second part of the study consisted of evaluating a product that had been randomly chosen for them. In the cleansing condition, participants were asked to clean their hands carefully with a hand sanitizer placed next to their computer. In the control condition, they were instead asked to place a pen in their hands for a few seconds and examine it carefully. In both conditions, participants were told that they would answer questions about the product later on—which they did, as a filler task.

Following this task, we informed participants that they could donate money to a charity of their choosing. We used willingness to donate money and the amount participants actually donated (from their pay for participating in the experiment) as our main dependent measures.

Next, we asked participants to indicate the extent to which the writing task they had completed earlier made them feel inauthentic. We measured inauthenticity using the measure of self-alienation we employed in our other studies ($\alpha = .88$). Finally, participants reported their age and gender.

Results

Manipulation check: self-alienation. As expected, participants reported feeling more self-alienated in the inauthentic-behavior condition ($M = 3.12$, $SD = 1.42$, 95% CI = [2.89, 3.35]) than in the authentic-behavior condition ($M = 2.36$, $SD = 1.25$, 95% CI = [2.15, 2.57]), $F(1, 287) = 22.82$, $p < .001$, $\eta_p^2 = .074$.

Likelihood of donating. We examined whether having the opportunity to cleanse would moderate the effect of inauthenticity on donations. There was a marginally significant interaction between the type of behavior recalled and opportunity for cleansing in predicting the likelihood of donating, $b = 1.65$, $SE = 0.93$, Wald(1) = 3.16, $p = .076$. As depicted in Figure 2, participants in the inauthentic-behavior condition were more likely to donate when they did not clean their hands (25.3%, 95% CI = [16, 35]) than when they did (4.5%, 95% CI = [–0.1, 10]), $\chi^2(1, N = 149) = 11.72$, $p = .001$, Cramér's $V = .28$.

Participants who recalled and wrote about an authentic behavior decided to donate about as often whether they cleaned their hands (6.0%, 95% CI = [0, 12]) or did not (8.0%, 95% CI = [2, 14]; see Fig. 2), $\chi^2(1, N = 142) = 0.22$, $p = .64$, Cramér's $V = .04$. Thus, increased helping was observed in the inauthentic-behavior condition only among those participants who were not given an opportunity to cleanse themselves. Our results suggest that the act of cleaning their hands assuaged participants' feelings of impurity from acting inauthentically and reduced their motivation to compensate for these feelings by acting prosocially.

Amount donated. The results for the amount of money participants actually donated mirrored the results for the likelihood of donating. There was a significant interaction between the type of behavior recalled and opportunity for cleansing in predicting the amount donated, $F(1, 287) = 6.17$, $p = .014$, $\eta_p^2 = .021$. Participants in the inauthentic-behavior condition donated a larger amount of money when they did not clean their hands than when

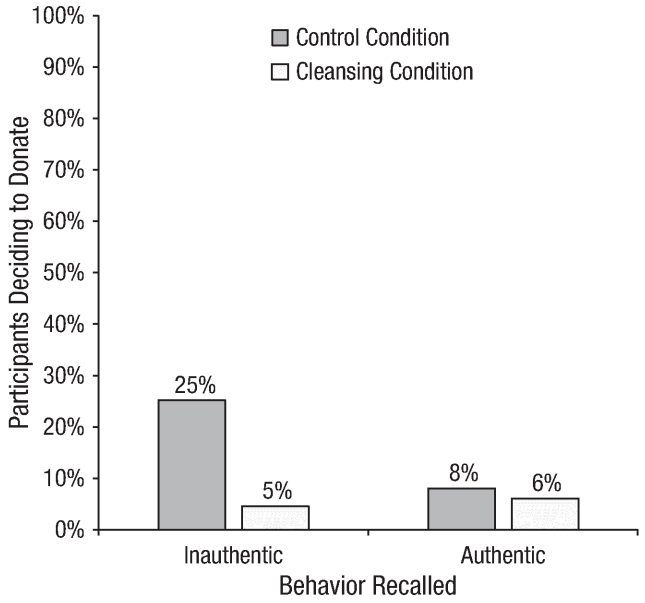

Fig. 2. Results from Experiment 5: percentage of people who decided to donate by condition.

they did (M = \$1.33, SD = \$2.76, 95% CI = [\$0.72, \$1.93], vs. M = \$0.24, SD = \$1.37, 95% CI = [−\$0.09, \$0.58]), $F(1, 287) = 12.09$, $p = .001$. But when participants recalled and wrote about an authentic behavior, they tended to donate the same amount of money whether they cleaned their hands with the hand sanitizer (M = \$0.42, SD = \$1.84, 95% CI = [−\$0.03, \$0.87]) or they did not (M = \$0.35, SD = \$1.42, 95% CI = [\$0.02, \$0.67]), $F(1, 287) < 1$, $p = .77$.

Discussion

Experiment 5 further established that the relationship between inauthenticity and moral compensation is explained through cleansing behavior. When participants had the opportunity to cleanse themselves, the relationship between inauthenticity and prosocial behavior was eliminated.

General Discussion

People often act inauthentically, in various ways, from arguing for a cause they do not believe in to expressing affection toward someone they truly dislike. Our five experiments establish that authenticity is linked to a moral state. When participants recalled a time that they behaved inauthentically, rather than authentically, they felt more impure and less moral, and experienced a greater desire for physical cleanliness. This heightened desire, in turn, made them more likely to behave prosocially to compensate for their feelings of impurity. We established the role of cleanliness as the link between inauthenticity and moral compensation through both mediation and moderation. Our results for feelings of impurity, the desire to cleanse, and prosocial behavior cannot be attributed to negative experiences more generally (e.g., failing a test), but rather must be attributed to inauthenticity. Our findings provide the first empirical evidence of discriminant validity in the literature on moral cleansing and moral compensation. We also found that the effects of inauthenticity were not reducible to cognitive dissonance or driven by psychological distress.

Our research contributes to the literature on moral psychology and behavioral ethics. Past research has found that morality is malleable and dynamic, that situational and social pressure can lead moral people to act dishonestly (Monin & Jordan, 2009). It is commonly assumed that unethical behavior involves people violating a norm shared by others and that this violation produces negative feelings. We have shown that violating internal norms can lead to very similar consequences. When people behave in ways that are inconsistent with their own sense of self, they feel morally tainted and engage in behaviors to compensate for these feelings.

Our results also contribute to the literature examining compensatory behaviors that follow threats, and aversive states that accompany threats. Proulx and Inzlicht's (2012; see also Proulx, Inzlicht, & Harmon-Jones, 2012) meaning-maintenance model integrates various social-psychological theories about compensatory behaviors following threats and expectancy violations. Our results are consistent with this model: Inauthenticity serves as a threat and leads people to experience a greater desire for cleanliness, to compensate for the aversive experience that made them feel immoral and impure.

Although we have demonstrated that inauthenticity is not reducible to dissonance, we have not established that inauthenticity is distinct from other inconsistency-related threats (e.g., ambivalence, self-uncertainty). It is possible that the dissonance participants experienced in the low-choice condition of Experiment 4 resulted from a more general sense of ambivalence, inconsistency, or self-uncertainty (e.g., van Harreveld, Schneider, Nohlen, & van der Pligt, 2012). Future research should establish the unique characteristics that differentiate inauthenticity from these other inconsistency-related threats. We expect that ambivalence or self-uncertainty would not increase feelings of impurity or desire for cleanliness but would lead to compensation through other pathways.

From Shakespeare to Sartre to Rand, writers and philosophers alike have suggested that authenticity is a moral state. Our research provides the first empirical demonstration that there is indeed a link between authenticity and morality. Our results suggest why laughing at the jokes of detested colleagues or dancing when one feels blue makes one run for the showers and behave more prosocially.

Author Contributions

All authors developed the study concept and contributed to the study design. Testing and data collection were performed by F. Gino and M. Kouchaki. F. Gino and M. Kouchaki drafted the manuscript, and A. D. Galinsky provided critical revisions. All authors approved the final version of the manuscript for submission.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Open Practices

All data and materials have been made publicly available via the Harvard Dataverse Network and can be accessed at https://osf.io/sd76g/. The complete Open Practices Disclosure for this article can be found at http://pss.sagepub.com/content/by/supplemental-data. This article has received badges for Open Data and Open Materials. More information about the Open Practices badges can be found at https://osf.io/tvyxz/wiki/view/ and http://pss.sagepub.com/content/25/1/3.full.

Note

1. We used a high level of power for the first study we conducted and then adjusted power levels as we conducted more studies.

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Evil Genius? How Dishonesty Can Lead to Greater Creativity

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Abstract

We propose that dishonest and creative behavior have something in common: They both involve breaking rules. Because of this shared feature, creativity may lead to dishonesty (as shown in prior work), and dishonesty may lead to creativity (the hypothesis we tested in this research). In five experiments, participants had the opportunity to behave dishonestly by overreporting their performance on various tasks. They then completed one or more tasks designed to measure creativity. Those who cheated were subsequently more creative than noncheaters, even when we accounted for individual differences in their creative ability (Experiment 1). Using random assignment, we confirmed that acting dishonestly leads to greater creativity in subsequent tasks (Experiments 2 and 3). The link between dishonesty and creativity is explained by a heightened feeling of being unconstrained by rules, as indicated by both mediation (Experiment 4) and moderation (Experiment 5).

Keywords

creativity, dishonesty, ethics, moral flexibility, rule breaking, morality, decision making

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Researchers across disciplines have become increasingly interested in understanding why even people who care about morality predictably cross ethical boundaries. This heightened interest in unethical behavior, defined as acts that violate widely held moral rules or norms of appropriate conduct (Treviño, Weaver, & Reynolds, 2006), is easily understood. Unethical behavior creates trillions of dollars in financial losses every year and is becoming increasingly commonplace (PricewaterhouseCoopers, 2011).

One form of unethical behavior, dishonesty, seems especially pervasive (Bazerman & Gino, 2012). Like other forms of unethical behavior, dishonesty involves breaking a rule—the social principle that people should tell the truth. Much of the scholarly attention devoted to understanding why individuals behave unethically has therefore focused on the factors that lead people to break rules.

Although rule breaking carries a negative connotation in the domain of ethics, it carries a positive connotation in another well-researched domain: creativity. To be creative, it is often said, one must "think outside the box" and use divergent thinking (Guilford, 1967; Runco, 2010; Simonton, 1999). Divergent thinking requires that people break some (but not all) rules within a domain to construct associations between previously unassociated cognitive elements (Bailin, 1987; Guilford, 1950). The resulting unusual mental associations serve as the basis for novel ideas (Langley & Jones, 1988; Sternberg, 1988). The creative process therefore involves rule breaking, as one must break rules to take advantage of existing opportunities or to create new ones (Brenkert, 2009). Thus, scholars have asserted that organizations may foster creativity by hiring people slow to learn the organizational code (Sutton, 2001, 2002) and by encouraging people to break from accepted practices (Winslow & Solomon, 1993) or to break rules (Baucus, Norton, Baucus, & Human, 2008; Kelley & Littman, 2001).

Given that both dishonesty and creativity involve rule breaking, the individuals most likely to behave dishonestly and the individuals most likely to be creative may be one and the same. Indeed, highly creative people are

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more likely than less creative people to bend rules or break laws (Cropley, Kaufman, & Cropley, 2003; Sternberg & Lubart, 1995; Sulloway, 1996). Popular tales are replete with images of "evil geniuses," such as Rotwang in *Metropolis* and "Lex" Luthor in *Superman*, who are both creative and nefarious in their attempts to ruin humanity. Similarly, news articles have applied the "evil genius" moniker to Bernard Madoff, who made $20 billion disappear using a creative Ponzi scheme.

The causal relationship between creativity and unethical behavior may take two possible forms: The creative process may trigger dishonesty; alternatively, acting unethically may enhance creativity. Research has demonstrated that enhancing the motivation to think outside the box can drive people toward more dishonest decisions (Beaussart, Andrews, & Kaufman, 2013; Gino & Ariely, 2012). But could acting dishonestly enhance creativity in subsequent tasks?

In five experiments, we obtained the first empirical evidence that behaving dishonestly can spur creativity and examined the psychological mechanism explaining this link. We suggest that after behaving dishonestly, people feel less constrained by rules, and are thus more likely to act creatively by constructing associations between previously unassociated cognitive elements.

Experiment 1: Cheaters Are Creative

In our first study, we examined whether individuals who behave unethically are more creative than others on a subsequent task, even after controlling for differences in baseline creative skills.

Method

Participants. One hundred fifty-three individuals recruited on Amazon Mechanical Turk (MTurk; 59% male, 41% female; mean age = 30.08, *SD* = 7.12) participated in the study for a $1 show-up fee and the opportunity to earn a $10 performance-based bonus. We told participants that 10% of the study participants would be randomly selected to receive this bonus.

Procedure. The study included four supposedly unrelated tasks: an initial creativity task (the Duncker candle problem), a 2-min filler task, a problem-solving task, and the Remote Association Task (RAT; Mednick, 1962).

Participants first completed the Duncker candle problem (Fig. 1). They saw a picture containing several objects on a table and next to a cardboard wall: a candle, a pack of matches, and a box of tacks. Participants had 3 min "to figure out, using only the objects on the table, how to attach the candle to the wall so that the candle burns properly and does not drip wax on the table or the floor."

Fig. 1. The Duncker candle problem presented to participants in Experiment 1.

The correct solution involves using the box of tacks as a candleholder: One should empty the box of tacks, tack it to the wall, and then place the candle inside. Finding the correct solution is considered a measure of insight creativity because it requires people to see objects as capable of performing atypical functions (Maddux & Galinsky, 2009). Thus, the hidden solution to the problem is inconsistent with the preexisting associations and expectations individuals bring to the task (Duncker, 1945; Glucksberg & Weisberg, 1966).

Next, participants performed a filler task. They then completed a problem-solving task under time pressure. Each of 10 matrices presented a set of 12 three-digit numbers (e.g., 4.18; see Mazar, Amir, & Ariely, 2008), and the task was to find two numbers in the matrix that added up to 10. Participants were shown one matrix at a time and had 20 s to solve each one. If participants did not find the solution within the allotted time, the computer program moved to the next matrix. After participants attempted to solve the 10 matrices, they self-reported their performance. For each correct solution, participants could receive $1 if they were among those randomly selected to receive the bonus. The program recorded participants' answer for each matrix, but the instructions did not explicitly state this. Thus, participants could cheat by inflating their performance on this task.

Finally, participants completed the RAT, which measures creativity by assessing people's ability to identify associations between words that are normally associated. Each item consists of a set of three words (e.g., *sore, shoulder, sweat*), and participants must find a word that

is logically linked to them (*cold*). Participants had 5 min to solve 17 RAT items. Success on the RAT requires people to think of uncommon associations that stimulus words may have instead of focusing on the most common and familiar associations of those words.

Results and discussion

Forty-eight percent of the participants correctly solved the Duncker candle problem. Almost 59% of the participants cheated on the problem-solving task by reporting that they had solved more matrices than they had actually solved. Cheaters performed better on the RAT (M = 9.00 items correct, SD = 3.38) than did noncheaters (M = 5.76, SD = 3.38), even when we controlled for creative performance on the Duncker candle problem, $F(1, 150) = 22.03$, $p < .001$, $\eta_p^2 = .13$.

Cheating on the matrix task mediated the effect of participants' initial creativity on their RAT performance (Baron & Kenny, 1986). The effect of baseline creativity weakened (from $\beta = 0.30$, $p < .001$, to $\beta = 0.15$, $p = .056$) when cheating was included in the regression, and cheating significantly predicted RAT performance ($\beta = 0.37$, $p < .001$). A bootstrap analysis showed that the 95% bias-corrected confidence interval (CI) for the size of the indirect effect excluded zero (0.57, 1.80), suggesting a significant indirect effect (MacKinnon, Fairchild, & Fritz, 2007).

These results provided initial evidence that behaving dishonestly enhances creativity. Individual differences in creative ability between cheaters and noncheaters did not explain this finding.

Experiment 2: The Act of Cheating Enhances Creativity

One limitation of Experiment 1 is that people decided for themselves whether or not to cheat. In Experiment 2, we used random assignment to test whether acting dishonestly increases creativity in subsequent tasks. To induce cheating, we used a manipulation in which cheating occurs by omission rather than commission and in which people are tempted to cheat in multiple rounds. Because of these features, most people tend to cheat on this task (Shu & Gino, 2012).

Method

Participants. One hundred one students from universities in the southeastern United States (39% male, 61% female; mean age = 21.48, SD = 7.23) participated in the study for a $5 show-up fee and the opportunity to earn an additional $10 performance-based bonus. We randomly assigned participants to either the likely-cheating or the control condition.

Procedure. The study included two supposedly unrelated tasks: a computer-based math-and-logic game and the RAT. The cheating manipulation was implemented in the computer-based game (Vohs & Schooler, 2008; von Hippel, Lakin, & Shakarchi, 2005), which involved answering 20 different math and logic multiple-choice problems presented individually. Participants had 40 s to answer each question and could earn 50¢ for each correct answer.

In the control condition, participants completed the task with no further instructions. In the likely-cheating condition, the experimenter informed participants that the computer had a programming glitch: While they worked on each problem, the correct answer would appear on the screen unless they stopped it from being displayed by pressing the space bar right after the problem appeared. The experimenter also informed participants that although no one would be able to tell whether they had pressed the space bar, they should try to solve the problems on their own (thus being honest). In actuality, the presentation of the answers was a feature of the program and not a glitch, and the number of space-bar presses was recorded. We used the number of times participants did not press the space bar to prevent the correct answer from appearing as our measure of cheating.

After the math-and-logic game, participants completed 12 RAT problems, which constituted our creativity measure.

Results and discussion

Most participants (51 out of 53) cheated in the likely-cheating condition of the math-and-logic game. An analysis including only these 51 cheaters in the likely-cheating condition revealed that RAT performance was higher in the likely-cheating condition (M = 6.20 items correct, SD = 2.72) than in the control condition (M = 4.65, SD = 2.98), $t(97) = 2.71$, $p = .008$. Similarly, we found a significant difference in RAT performance between the two conditions when all 53 participants in the likely-cheating condition were included in the analysis (likely-cheating condition: M = 6.25, SD = 2.70), $t(99) = 2.83$, $p = .006$. These results indicate that cheating increased creativity on a subsequent task and provide further support for our main hypothesis.

Experiment 3: Breaking Rules With and Without Ethical Implications

One may argue that people often deviate from rules when they can and that this makes them more creative—even when the rule they break does not have ethical implications. In Experiment 3, we addressed this alternative explanation by using two conditions that did not differ in how likely participants were to disobey the rules

on how to solve the task at hand but did differ in whether they enabled participants to lie. Because of this feature, participants who lied would break an additional rule, a rule with ethical implications. We reasoned that breaking rules with ethical implications (i.e., people should not lie) promotes greater creativity than does violating rules without ethical implications because the former constitutes a stronger rejection of rules. As a result, we predicted that only the condition that enabled lying would enhance creativity, which would provide evidence that cheating specifically increases creativity. Another difference from the prior experiments is that we used two different tasks to measure creativity in Experiment 3.

Method

Participants. One hundred twenty-nine individuals recruited on MTurk (58% male, 42% female; mean age = 27.72, *SD* = 7.86) participated in this study for $2.

Procedure. We described the study as including various tasks, the first of which was a standard anagram task that tested verbal abilities. To motivate successful performance on this task, we told participants that performance on an anagram task predicts verbal ability, which is correlated with career potential. In this task (adapted from Irwin, Xu, & Zhang, 2014), participants had to complete as many anagrams as they could in 3 min. The instructions specified several rules participants had to follow (see the Supplemental Material available online). For each anagram, participants had to rearrange a set of letters to form a meaningful word (e.g., *tiarst* can make *artist*). In addition, participants were supposed to provide only one answer per anagram, even if the anagram had more than one solution. Because each anagram had multiple answers, the instructions stated, the computer program could not validate their answers automatically. Thus, participants had to keep track of how many anagrams they had solved and self-report the number at the end of the task.

After participants completed the task, they were randomly assigned to either the likely-cheating or the control condition. These two conditions differed in the choice options people were given to report their performance. In a pretest, we found that, on average, participants recruited on MTurk (age range: 18–50) solved 5 to 8 anagrams in the allotted time. Thus, to induce participants to inflate their performance, in the likely-cheating condition, we used the following options: "0–8: lower verbal learners"; "9–14: average for students in good colleges"; "15–20: typical for students in Ivy League colleges"; and "21–higher: common for English professors and novelists." Because most participants would likely fall into the "lower verbal learners" category, their intelligence would be threatened, and they would therefore be tempted to cheat by inflating their performance (as in Gino & Mogilner, 2014). In the control condition, we used the following options: "0–5: average for students in good colleges"; "6–10: typical for students in Ivy League colleges"; and "11–higher: common for English professors and novelists." In this case, most participants would likely fall into an acceptable bracket and would therefore not feel tempted to lie. Thus, participants in both conditions had the opportunity to break the numerous rules listed in the instructions, but those in the likely-cheating condition were more tempted to lie.

Following the anagram task, participants completed two tasks assessing their creativity: the uses task and 17 RAT problems (as in Experiment 1). For the uses task, they had to generate as many creative uses for a newspaper as possible within 1 min (Guilford, 1967). To assess creativity on this task, we coded responses for fluency (i.e., the total number of uses), flexibility (i.e., the number of uses that were different from one another), and originality (averaged across the different suggested ideas).

Results and discussion

Table 1 reports the means for the key variables assessed in this study, separately for the two conditions.

Forty percent of participants (26 out of 65) in the likely-cheating condition cheated, and only 4.7% (3 out of 64) in the control group did, $\chi^2(1, N = 129) = 23.08$, $p < .001$. Actual performance on the anagram task did not differ between conditions, $t(127) = 0.23$, $p = .82$.

All measures of creativity were higher in the likely-cheating condition than in the control condition—RAT performance: $t(127) = 2.17$, $p = .032$; fluency on the uses task: $t(127) = 2.47$, $p = .015$; flexibility on the uses task: $t(127) = 1.82$, $p = .072$; and originality on the uses task: $t(127) = 3.24$, $p = .002$. Thus, cheating enhanced creativity.[1]

Experiment 4: Feeling Unconstrained by Rules

In Experiment 4, we examined why cheating enhances creativity by measuring the extent to which participants felt that they were not constrained by rules. We also used a different task to assess cheating. In our previous studies, we used tasks in which performance was partially due to ability and effort. Such tasks may be cognitively depleting, and behaving honestly may have required greater cognitive effort than behaving dishonestly. In Experiment 4, we used a coin-toss task in which cheating and acting honestly likely involve the same cognitive effort. Finally, we also measured affect to rule out the possibility that emotions partially explain the effects of dishonesty on creativity.

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 305 of 1282

Table 1. Means for the Key Variables in Experiment 3

Condition	Number of anagrams solved	Uses task			Number of RAT items solved
		Fluency	Flexibility	Originality	
Likely-cheating	4.17 (3.26)	6.02 (2.02)	5.18 (2.01)	3.69 (1.21)	6.85 (3.82)
Control	4.05 (2.89)	5.20 (1.70)	4.58 (1.78)	3.06 (0.97)	5.47 (3.38)

Note: The values in parentheses are standard deviations. RAT = Remote Association Task (Mednick, 1962).

Method

Participants. One hundred seventy-eight individuals recruited on MTurk (47% male, 53% female; mean age = 28.59, *SD* = 7.72) participated in the study for $1 and the opportunity to earn a $1 bonus.

Procedure. The instructions explained that the goal of the study was to investigate the relationships among people's different abilities, such as attention, performance under pressure, and luck. Participants also learned that they would receive monetary bonuses based on their performance on different tasks.

We first asked participants to guess whether the outcome of a virtual coin toss would be heads or tails. After indicating their prediction, participants had to press a button to toss the coin virtually. They were asked to press the button only once. To give participants room for justifying their own cheating, we included a note at the bottom of the screen that stated, "Before moving to the next screen, please press the 'Flip!' button a few more times just to make sure the coin is legitimate" (a procedure adapted from Shalvi, Dana, Handgraaf, & De Dreu, 2011). Participants then reported whether they had guessed correctly and received a $1 bonus if they had. The program recorded the outcomes of the initial virtual coin tosses so that we could tell whether participants cheated.

Afterward, for each of three pictures (see Fig. 2), participants used a 7-point scale (1 = *not at all*, 7 = *very much*) to respond to the question, "If you were in the situation depicted in the picture, to what extent would you care about following the rules?" We averaged each participant's answers across the three items to create a measure for caring about rules (α = .81).

Participants then completed the same two creativity tasks as in Experiment 3. Finally, participants indicated how they felt right after finishing the coin-toss task, using the 20-item Positive and Negative Affectivity Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS captured both positive affect (α = .90) and negative affect (α = .90) on a 5-point scale (1 = *very slightly or not at all*, 5 = *extremely*).

Results and discussion

Twenty-four percent of participants (43 out of 178) cheated on the coin-toss task. Table 2 reports the means for the key variables assessed in this study, separately for cheaters and noncheaters.

Participants who cheated on the coin-toss task reported caring less about rules than did those who did not cheat, $t(176) = -6.48$, $p < .001$. All four measures of creativity were higher for cheaters than they were for noncheaters—fluency on the uses task: $t(176) = 4.24$, $p < .001$; flexibility on the uses task: $t(176) = 4.02$, $p < .001$; originality on the uses task: $t(176) = 6.85$, $p < .001$; and RAT performance: $t(176) = 2.54$, $p = .012$. Cheaters and noncheaters reported similar levels of positive and negative affect after the coin-toss task (ps > .36).

We tested whether participants' feelings about rules explained the link between cheating and creativity. For this analysis, we standardized the four measures of creative performance and then averaged them into one composite measure. The effect of cheating on subsequent creativity was significantly reduced (from $\beta = 0.43$, $p < .001$, to $\beta = 0.35$, $p < .001$) when participants' caring about rules was included in the equation, and such feeling predicted creative performance ($\beta = -0.18$, $p = .017$; 95% bias-corrected CI = [0.02, 0.29]). These results provide evidence that feeling unconstrained by rules underlies the link between dishonesty and creativity.

Experiment 5: Evidence for Mediation Through Moderation

In Experiment 4, we tested whether caring about rules explained the relationship between dishonesty and creativity using a traditional mediation approach. In Experiment 5, we obtained further evidence for this mediating mechanism using a moderation approach (as recommended by Spencer, Zanna, & Fong, 2005).

Method

Participants. Two hundred eight individuals from the northeastern United States (56% male, 44% female; mean

Fig. 2. Images used to assess the extent to which participants in Experiment 4 felt unconstrained by rules.

age = 21.66, *SD* = 2.64; 88% students) participated in the study for $10 and the opportunity to earn additional money.

Procedure. Participants were randomly assigned to one of four experimental conditions in a 2 (cheating condition: opaque vs. transparent) × 2 (prime condition: rule-breaking prime vs. neutral prime) between-subjects design. They read that they would be completing a series of short tasks involving luck and skill, and that some of these tasks involved a bonus payment.

The first task was a die-throwing game (Jiang, 2013). In this game, participants could throw a virtual six-sided die 20 times to earn points (which would be translated to real dollars and added to participants' final payment). Participants were reminded that each pair of numbers on opposite sides of the die added up to 7: 1 vs. 6, 2 vs. 5, and 3 vs. 4. We called the visible side that was facing up "U" and the opposite, invisible side that was facing down "D." Participants received the following instructions:

> In each round, the number of points that you score depends on the throw of the die as well as on the side that you have chosen in that round. Each round consists of one throw. Before throwing, you have to choose the relevant side for that round. Note that the die outcomes are random and the outcome you see on the screen corresponds to the upside. . . . For instance, if you have chosen "D" in your mind and the die outcome turns up to be "4," you earn 3 points for that throw, whereas if you have chosen "U" in your mind, you earn 4 points. Across the 20

Table 2. Means for the Key Variables in Experiment 4

Participant group	Uses task			Number of RAT items solved	Caring about rules	Positive affect	Negative affect
	Fluency	Flexibility	Originality				
Cheaters	8.33 (2.80)	6.81 (2.85)	3.60 (1.26)	9.47 (4.38)	3.66 (1.76)	2.52 (0.80)	1.56 (0.62)
Noncheaters	6.52 (2.31)	5.25 (1.98)	2.33 (1.00)	7.84 (3.38)	5.28 (1.31)	2.42 (0.89)	1.46 (0.63)

Note: The values in parentheses are standard deviations. RAT = Remote Association Task (Mednick, 1962).

rounds you can earn a maximum of 100 points. Each point is worth 20 cents, so you can make a maximum of $20.

In the opaque condition, participants had to choose between U and D in their mind before every throw, and after each throw, they had to indicate the side they had chosen before the throw. In the transparent condition, participants were also asked to choose between U and D in their mind before every throw, but in this case, they had to report their choice before throwing the virtual die. Thus, the opaque condition tempted participants to cheat (by indicating after each throw that they had chosen the side of the die that corresponded to the higher number of points), whereas the transparent condition did not allow for cheating.

After the die-throwing task, participants performed an ostensibly unrelated task called "Memory Game." Their task was to find matching graphics in a 4 × 4 grid that contained eight different pairs of hidden images; participants could click on two cells in the grid at a time to reveal the images. Participants were reminded that we were interested not in how quickly they completed the task, but rather in how many clicks they needed to complete it successfully. We used this task to introduce our second manipulation. Half of the participants (rule-breaking prime condition) were presented with a grid in which five of the pairs were pictures of people breaking rules (as in Fig. 2), and the remaining three pairs were neutral pictures (e.g., mountains). The other half of the participants (neutral prime condition) saw eight pairs of neutral pictures.[2]

Finally, participants completed the measure of creativity, the same RAT problems used in Experiment 1.

Prediction. We expected the rule-breaking prime to promote creative behavior only in the transparent condition. We expected participants in the opaque condition to feel already sufficiently unconstrained by rules after behaving dishonestly in the die-throwing game. We therefore did not expect the rule-breaking prime to influence creativity among these participants.

Results and discussion

A 2 × 2 analysis of variance using RAT performance as the dependent measure revealed a significant main effect of cheating condition, $F(1, 204) = 10.23$, $p = .002$, $\eta_p^2 = .048$, and a nonsignificant effect of prime condition, $F(1, 204) = 1.63$, $p = .20$. The interaction was significant, $F(1, 204) = 4.08$, $p = .045$, $\eta_p^2 = .02$ (see Fig. 3). In the opaque condition, RAT performance did not vary with prime condition, $F < 1$. In the transparent condition, participants were more creative in the rule-breaking prime condition than in the neutral prime condition, $F(1, 204) = 5.29$, $p = .023$. These results provide further evidence that acting dishonestly makes people feel unconstrained by rules, and that this lack of constraint enhances creative behavior.

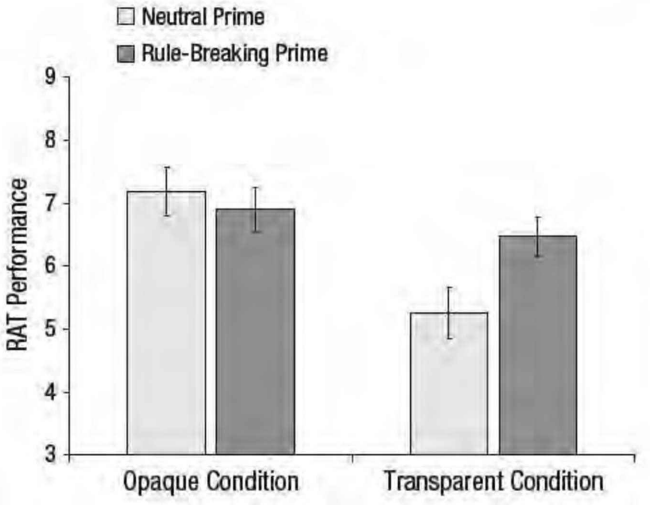

Fig. 3. Performance on the Remote Association Task (RAT) in Experiment 5 as a function of cheating and prime condition. Error bars indicate standard errors.

General Discussion

There is little doubt that dishonesty creates costs for society. It is less clear whether it produces any positive consequences. This research identified one such positive consequence, demonstrating that people may become more creative after behaving dishonestly because acting dishonestly leaves them feeling less constrained by rules.

By identifying potential consequences of acting dishonestly, these findings complement existing research on behavioral ethics and moral psychology, which has focused primarily on identifying the antecedents to unethical behavior (Bazerman & Gino, 2012). These findings also advance understanding of creative behavior by showing that feeling unconstrained by rules enhances creative sparks. More speculatively, our research raises the possibility that one of the reasons why dishonesty is so widespread in today's society is that by acting dishonestly, people become more creative, which allows them to come up with more creative justifications for their immoral behavior and therefore makes them more likely to behave dishonestly (Gino & Ariely, 2012), which may make them more creative, and so on.

In sum, this research shows that the sentiment expressed in the common saying "rules are meant to be broken" is at the root of both creative performance and

dishonest behavior. It also provides new evidence that dishonesty may therefore lead people to become more creative in their subsequent endeavors.

Author Contributions

Both authors developed the study concept, contributed to the study design, collected data, and performed the data analysis. Both authors worked on various drafts of the manuscript and approved the final version of the manuscript for submission.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Supplemental Material

Additional supporting information may be found at http://pss.sagepub.com/content/by/supplemental-data

Notes

1. We obtained the same results when we compared the creativity of cheaters and noncheaters (all *p*s < .01).
2. In a pilot study ($N = 103$), we tested the effect of our primes on participants' willingness to follow rules as indicated by their scores on a four-item scale adapted from Tyler and Blader (2005; e.g., "If I received a request from a supervisor or a person with authority right now, I would do as requested"). Participants in the rule-breaking prime condition demonstrated less willingness to follow rules ($M = 5.65$, $SD = 0.79$) than did participants in the neutral prime condition ($M = 6.03$, $SD = 0.91$), $t(101) = -2.27$, $p = .025$.

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Retraction

PSYCHOLOGICAL AND COGNITIVE SCIENCES

Retraction for "Signing at the beginning makes ethics salient and decreases dishonest self reports in comparison to signing at the end," by Lisa L. Shu, Nina Mazar, Francesca Gino, Dan Ariely, and Max H. Bazerman, which was first published August 27, 2012; 10.1073/pnas.1209746109 (*Proc. Natl. Acad. Sci. U.S.A.* **109**, 15197 15200).

The editors are retracting this article and note that Simonsohn, Simmons, and Nelson (http://datacolada.org/98) have provided evidence to question the validity of the data in the article.

May R. Berenbaum
Editor in Chief

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RETRACTION

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Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end

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Many written forms required by businesses and governments rely on honest reporting. Proof of honest intent is typically provided through signature at the end of, e.g., tax returns or insurance policy forms. Still, people sometimes cheat to advance their financial self-interests—at great costs to society. We test an easy-to-implement method to discourage dishonesty: signing at the beginning rather than at the end of a self-report, thereby reversing the order of the current practice. Using laboratory and field experiments, we find that signing before–rather than after–the opportunity to cheat makes ethics salient when they are needed most and significantly reduces dishonesty.

morality | nudge | policy making | fraud

The annual tax gap between actual and claimed taxes due in the United States amounts to roughly $345 billion. The Internal Revenue Service estimates more than half this amount is due to individuals misrepresenting their income and deductions (1). Insurance is another domain burdened by the staggering cost of individual dishonesty; the Coalition Against Insurance Fraud estimated that the overall magnitude of insurance fraud in the United States totaled $80 billion in 2006 (2). The problem with curbing dishonesty in behaviors such as filing tax returns, submitting insurance claims, claiming business expenses or reporting billable hours is that they primarily rely on self monitoring in lieu of external policing. The current paper proposes and tests an efficient and simple measure to reduce such dishonesty.

Whereas recent findings have successfully identified an intervention to curtail dishonesty through introducing a code of conduct in contexts where previously there was none (3, 4), many important transactions already require signatures to confirm compliance to an expected standard of honesty. Nevertheless, as significant economic losses demonstrate (1, 2), the current practice appears insufficient in countering self interested motivations to falsify numbers. We propose that a simple change of the signature location could lead to significant improvements in compliance.

Even subtle cues that direct attention toward oneself can lead to surprisingly powerful effects on subsequent moral behavior (5 7). Signing is one way to activate attention to the self (8). However, typically, a signature is requested at the end. Building on Duval and Wicklund's theory of objective self awareness (9), we propose and test that signing one's name before reporting information (rather than at the end) makes morality accessible right before it is most needed, which will consequently promote honest reporting. We propose that with the current practice of signing after reporting information, the "damage" has already been done: immediately after lying, individuals quickly engage in various mental justifications, reinterpretations, and other "tricks" such as suppressing thoughts about their moral standards that allow them to maintain a positive self image despite having lied (3, 10, 11). That is, once an individual has lied, it is too late to direct their focus toward ethics through requiring a signature.

In court cases, witnesses *verbally* declare their pledge to honesty *before* giving their testimonies not after, perhaps for a reason. To the extent that written reports feel more distant and make it easier to disengage internal moral control than verbal reports, written reports are likely to be more prone to dishonest conduct (3, 10, 11). However, for both types of reports (verbal or written) we hypothesize a pledge to honesty to be more effective before rather than after self reporting. Thus, in this work, we test an easy to implement method of curtailing fraud in *written* reports: signing a statement of honesty at the beginning rather than at the end of a self report that people know from the outset will require a signature.

Results and Discussion

Experiment 1 tested this intervention in the laboratory, using two different measures of cheating: self reported earnings (income) on a math puzzles task wherein participants could cheat for financial gain (3), and travel expenses to the laboratory (deductions) claimed on a tax return form on research earnings. On the one page form where participants reported their income and deductions, we varied whether participant signature was required at the top of the form or at the end. We also included a control condition wherein no signature was required on the form.

We measured the extent to which participants overstated their income from the math puzzles task and the amount of deductions they claimed. All materials were coded with unique identifiers that were imperceptible to participants, yet allowed us to track each participant's true performance on the math puzzles against the performance underlying their income reported on the tax forms. The percentage of participants who cheated by overclaiming income for math puzzles they purportedly solved differed significantly across conditions: fewer cheated in the signature at the top condition (37%) than in the signature at the bottom and no signature conditions (79 and 64%, respectively), $\chi^2(2, n = 101) = 12.58$, $P = 0.002$, with no differences between the latter two conditions ($P = 0.17$). The results also hold when analyzing the average magnitude of cheating by condition; Fig. 1 depicts the reported and actual performance, as measured by the number of math puzzles solved, for each condition, $F(2, 98) = 9.21$, $P < 0.001$. Finally, claims of travel expenses followed that same pattern and differed by condition, $F(2, 98) = 5.63$, $P < 0.01$, $\eta 2 = 0.10$. Participants claimed fewer expenses in the signature at the top condition ($M = \$5.27$, $SD = 4.43$) compared with signature at the bottom ($M = \$9.62$, $SD = 6.20$; $P < 0.01$) and the no signature condition ($M = \$8.45$, $SD = 5.92$; $P < 0.05$), with no differences between the latter two conditions ($P = 0.39$). Thus, signing before reporting

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The authors declare no conflict of interest.

*This Direct Submission article had a prearranged editor.

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PSYCHOLOGICAL AND COGNITIVE SCIENCES

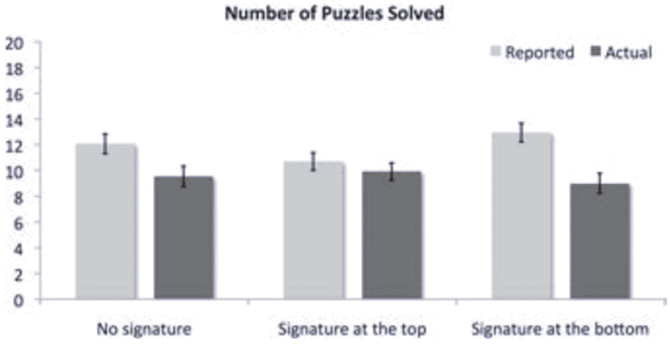

Fig. 1. Reported and actual number of math puzzles solved by condition, experiment 1 (n = 101). Error bars represent SEM.

promoted honesty, whereas signing afterward was the same as not signing at all.

Experiment 2 investigated the potential mechanism underlying the effect through a word completion task (12, 13) serving as an implicit measure of mental access to ethics related concepts (4). Sixty university participants were randomly assigned to one of two conditions: signature at the top or signature at the bottom. Experiment 2 used the same math puzzles and tax form procedure as in experiment 1, but varied the incentives for performance on the math puzzles task and the tax rate. Finally, the one page tax forms were modified to mimic the flow of actual tax reporting practices in the United States, and as in experiment 1, all materials were imperceptibly coded with unique identifiers.

After filling out the tax forms, all participants received a list of six word fragments with missing letters. They were instructed to complete them with meaningful words. Three fragments (_ _ R A L, _ I _ _ _ E, and E _ _ _ C _ _) could potentially be completed with words related to ethics (moral, virtue, and ethical) or neutral words. We used the number of times these fragments were completed with ethics related words as our measure of access to moral concepts.

Similar to experiment 1, the percentage of participants who cheated by overstating their performance on the math puzzles task was lower in the signature at the top condition (37%, 11 of 30) than in the signature at the bottom condition (63%, 19 of 30), $\chi^2(1, n = 60) = 4.27$, $P < 0.04$. The same pattern of results held when analyzing the magnitude of cheating (Fig. 2), $t(58) = -2.07$, $P < 0.05$, as well as the travel expenses that participants claimed on the tax return form, $F(1, 58) = 7.76$, $P < 0.01$, $\eta^2 = 0.12$: they were lower in the signature at the top condition ($M = 3.23$, SD = 2.73) than in the signature at the bottom condition ($M = 7.06$, SD = 7.02).

In the word completion task, participants who signed before filling out the form generated more ethics related words ($M = 1.40$, SD = 1.04) than those who signed after ($M = 0.87$, SD = 0.97), $F(1, 58) = 4.22$, $P < 0.05$, $\eta^2 = 0.07$; this greater access to ethics related concepts (our proxy for saliency of morality) significantly mediated the effect of assigned condition (signature at the top or signature at the bottom) on cheating on the tax forms [bootstrapping with 10,000 iterations (14): 95% confidence interval −1.85, −0.04].

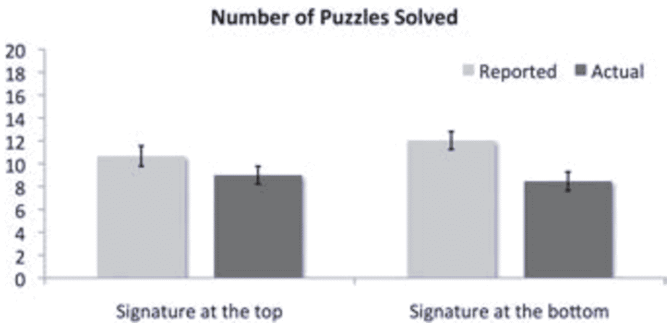

Fig. 2. Reported and actual number of math puzzles solved by condition, experiment 2 (n = 60). Error bars represent SEM.

Experiment 3 tested the effect of the signature location in a naturalistic setting. Partnering with an automobile insurance company in the southeastern United States, we manipulated the policy review form, which asked customers to report the current odometer mileage of all cars insured by the company. Customers were randomly assigned to one of two forms, both of which required their signature following the statement: "I promise that the information I am providing is true." Half the customers received the original forms used by the insurance company, where their signature was required at the end of the form; the other half received our treatment forms, where they were required to sign at the beginning. The forms were identical in every other respect. Reporting lower odometer mileage indicated less driving, lower risk of accident occurrence, and therefore lower insurance premiums. We expected customers who signed at the beginning of the form to be more truthful and reveal higher use than those who signed at the end.

We compared the reported current odometer mileage on 13,488 completed policy forms for 20,741 cars to the latest records of each car's odometer mileage to calculate its use (number of miles driven). Customers who signed at the beginning on average revealed higher use ($M = 26{,}098.4$, SD = 12,253.4) than those who signed at the end [$M = 23{,}670.6$, SD = 12,621.4; $F(1, 13{,}485) = 128.63$, $P < 0.001$]. The difference was 2,427.8 miles per car. That is, asking customers to sign at the beginning of the form led to a 10.25% increase in implied miles driven (based on reported odometer readings) over the current practice of asking for a signature at the end. Follow up analyses suggested that the higher use in the signature at the top condition was not due to more detailed reporting (down to the last digit) in comparison with customers who may have relied on simply rounding their odometer mileage in the signature at the bottom condition. Thus, the simple change in signature location likely reduced the extent to which customers falsified mileage information in their own financial self interest at cost to the insurance company who must pass this expense on to all its policyholders, including honest customers who bear the ultimate burden of paying for the dishonesty of others.

According to data from the US Department of Transportation Office of Highway Policy Information, the average annual amount of travel per vehicle in the United States was roughly 12,500 miles in 2005 (15). This suggests that the average driver in our field experiment had been a customer with the insurance company for 2 y. We estimated the annual per mile cost of automobile insurance in the United States to range from 4 to 10 cents, suggesting a minimum average difference of $48 in annual insurance premium per car between customers in the two conditions. The range of 4 10 cents was determined from comparing usage based insurance also known as PAYD, or pay as you drive and calculating the premiums for different scenarios of car brand, model, mileage, and buyer demographic on two automobile insurance policy sites.

The current practice of signing after reporting is insufficient. It is important to make morality salient, right before it is needed most, so that it can remain active during the most tempting moments. When signing comes after reporting, the morality train has already left the station. The power of our intervention is precisely due to the fact that it is such a gentle nudge (16): it does not impose on the freedom of individuals, it does not require the passage of new legislation, and it can profoundly influence behaviors of ethical and economic significance. In fact, because most self reports already require signing a pledge to honesty albeit not in the most effective location the cost of implementing our intervention is minimal. Given the immense financial resources devoted to prevention, detection, and punishment of fraudulent

behavior, a truly minimal intervention like the one used in our research seems costly not to implement even if its effectiveness might wane over time as signing before reporting becomes prevalent and individuals may find new "tricks" to disengage from morality.

Materials and Methods

Informed consent was obtained from all participants, and the Institutional Review Boards of Harvard University and University of North Carolina reviewed and approved all materials and procedures in Experiments 1 and 2.

Experiment 1: Participants and Procedure. A total of 101 students and employees at local universities in the southeastern United States (M_{age} = 22.10, SD = 4.98; 45% male; 82% students) completed the experiment for pay. They received a $2 show up fee and had the opportunity to earn additional money throughout the experiment.

Participants were randomly assigned to one of three conditions: (*i*) signature at the top of the tax return form (before filling it out); (*ii*) signature at the bottom (after filling it out); or (*iii*) no signature (control). The statement that participants had to sign asked them to declare that they carefully examined the return and that to the best of their knowledge and belief it was correct and complete.

At the beginning of each session, participants were given instructions in which they were informed that they would first complete a problem solving task under time pressure (i.e., they would have 5 min to complete the task). In addition, the instructions included the following information, "For the problem solving task, you will be paid a higher amount than what we usually pay participants because you will be taxed on your earnings. You will receive more details after the problem solving task."

Problem solving task. For this task (3), participants received a worksheet with 20 math puzzles, each consisting of 12 three digit numbers (e.g., 4.78) and a collection slip on which participants later reported their performance in this part of the experiment. Participants were told that they would have 5 min to find two numbers in each puzzle that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. Once the 5 min were over, the experimenter asked participants to count the number of correctly solved puzzles, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter. We assume respondents had no problems adding 2 numbers to 10, which means they should have been able to identify how many math puzzles they had solved correctly without requiring a solution sheet. Neither of the two forms (math puzzles test sheet and collection slip) had any information on it that could identify the participants. The sole purpose of the collection slip was for the participants themselves to learn how many puzzles in total they had solved correctly.

Tax return form. After the problem solving task, participants went to a second room to fill out a research study tax return form (based on IRS Form 1040). The one page form we used was based on a typical tax return form. We varied whether participants were asked to sign the form and if so, whether at the top or bottom of the page (Figs. S1 S3). Participants filled out the form by self reporting their income (i.e., their performance on the math puzzles task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their cost of commute. These expenses were "credited" to their posttax earnings from the problem solving task to compute their final payment. The instructions read: "We would like to compensate participants for extra expenses they have incurred to participate in this session." We reimbursed the time to travel to the laboratory at $0.10 per minute (up to 2 h or $12) and the cost of participants' commute (up to $12). All of the instructions and dependent measures appeared on one page to ensure that participants knew from the outset that a signature would be required. Thus, any differences in reporting could be attributed to the location of the signature.

Payment structure. Given the features of the experiment, participants could make a total of $42 an amount which breaks down as follows: $2 show up fee, $20 on math puzzles task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Opportunity to cheat on the tax return form. The experiment was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem solving task and by inflating the travel expenses they incurred to participate in the experiment. When participants completed the first part of the experiment (problem solving task), the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments. The tax return form included a one digit identifier (one digit in the top right of the form, in the code OMB no. 1555 0111) that was identical to the digit of one number of one math puzzle of each individual's worksheet (which was unique to each individual's work station). This difference was completely imperceptible to participants but allowed us to link the worksheet and the tax return form that belonged to the same participant. As a result, at the end of each session, we were able to compare actual performance on the problem solving task and reported performance on the tax return form. If those numbers differed for any individual, this difference represented one measure of the individual's level of cheating.

First, we examined the percentage of participants who cheated by overstating their performance on the problem solving task when asked to report it on the tax return form. This percentage varied across conditions, $\chi^2(2, n = 101) = 12.58$, $P = 0.002$: The number of cheaters was lowest in the signature at the top condition (37%, 13 of 35), higher in the signature at the bottom condition (79%, 26 of 33), and somewhat in between those two but closer to the latter for the no signature condition (64%, 21 of 33).

Both actual and reported mean performances on the math puzzles task are shown in Fig. 1. As depicted, the number of math puzzles overreported in the tax return forms varied by condition, $F(2, 98) = 9.21$, $P < 0.001$, $\eta^2 = 0.16$: It was lowest in the signature at the top condition ($M = 0.77$, SD = 1.44) and higher in the signature at the bottom condition ($M = 3.94$, SD = 4.07; $P < 0.001$) and in the no signature condition ($M = 2.52$, SD = 3.12; $P < 0.05$). The difference between these two latter conditions was only marginally significant ($P < 0.07$).

The credits for travel expenses (travel time and costs of commute) that participants claimed in the tax return forms also varied by condition, $F(2, 98) = 5.63$, $P < 0.01$, $\eta^2 = 0.10$ and followed the same pattern: Participants claimed fewer expenses in the signature at the top condition ($M = 5.27$, SD = 4.43) than in the signature at the bottom ($M = 9.62$, SD = 6.20; $P < 0.01$) and the no signature (control) conditions ($M = 8.45$, SD = 5.92; $P < 0.05$). The difference between these two latter conditions was not significant ($P = 0.39$). These results suggest that the effect of the signature location is driven by the signing at the top condition: Signing before a self reporting task promoted honest reporting. Signing afterward did not promote cheating. In effect, signing afterward was the same as having no signature at all.

Experiment 2: Participants and Procedure. Sixty students and employees at local universities in the southeastern United States (M_{age} = 21.50, SD = 2.27; 48% male; 90% students) completed the experiment for pay. They received a $2 show up fee and had the opportunity to earn additional money throughout the experiment.

Experiment 2 used one between subjects factor with two levels: signature at the top and signature at the bottom. The experiment used the same task and procedure of experiment 1 but varied the incentives for the problem solving task, the tax rate, and the tax return forms participants completed. Namely, participants in this experiment were paid $2 (rather than $1) for each math puzzle successfully solved and were taxed at a higher rate of 50%. Finally, the tax forms were modified such that they mimicked the flow of actual tax reporting practices in the United States: deductions (commuting time and costs) were first subtracted from gross income (earnings from math puzzles task) to compute taxable income, and then taxes were paid on this total adjusted amount (Fig. S4 shows an example of the forms used).

After filling out the tax return forms, participants were asked to complete a word completion task. Participants received a list of six word fragments with letters missing and were asked to fill in the blanks to make complete words by using the first word that came to mind. Following prior research measuring implicit cognitive processes (12, 13), we used this word completion task to measure accessibility of moral concepts. Three of the word fragments (R A L, I E, and E C) could potentially be completed by words related to ethics (moral, virtue, and ethical); these were our measures of access to moral concepts.

Level of cheating. We first examined the percentage of participants who cheated by overstating their performance on the math puzzles task when filling out the tax return form. This percentage was lower in the signature at the top condition (37%, 11 of 30) than in the signature at the bottom condition (63%, 19 of 30), $\chi^2(1, n = 60) = 4.27$, $P < 0.04$.

Fig. 2 depicts actual performance on the math puzzles task and reported performance on the tax return form, by condition. This difference (a measure for cheating) was lower in the signature at the top condition ($M = 1.67$, SD = 2.78) than in the signature at the bottom condition ($M = 3.57$, SD = 4.19), $t(58) = 2.07$, $P < 0.05$.

The deductions participants reported on the tax return form followed the same pattern and varied significantly by condition, $F(1, 58) = 7.76$, $P < 0.01$, $\eta^2 = 0.12$: they were lower in the signature at the top condition ($M = 3.23$, SD = 2.73) than in the signature at the bottom condition ($M = 7.06$, SD = 7.02).

Word fragment task. Participants who signed before filling out the tax form generated more ethics related words ($M = 1.40$, SD = 1.04) than those who

signed after filling out the form ($M = 0.87$, SD = 0.97), $F(1, 58) = 4.22$, $P < 0.05$, $\eta^2 = 0.07$, suggesting that ethics are more salient when participants signed before rather than after the temptation to cheat.

Mediation analyses. We also tested whether ethics related concepts (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating. Both condition and the number of ethics related concepts were entered into a linear regression model predicting extent of cheating measured by the level of overreporting of income. The mediation analysis revealed that the effect of condition was significantly reduced (from $\beta =$ 0.262, $P < 0.05$ to $\beta =$ 0.143, $P = 0.23$), and that the number of ethics related concepts was a significant predictor of cheating ($\beta =$ 0.456, $P <$ 0.001). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (4), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics related concepts. The 95% confidence interval for the indirect effect did not include zero (1.85, 0.04), suggesting significant mediation.

Additionally, we computed the *z* score measure for both the deductions claimed and the magnitude of cheating on the math puzzles for each participant. We averaged the two measures to form an index for each individual's extent of cheating. Both condition and the number of ethics related concepts were entered into a linear regression model predicting extent of cheating measured by this composite index. The mediation analysis revealed that the effect of treatment condition was significantly reduced (from $\beta =$ 0.424, $P = 0.001$ to $\beta =$ 0.344, $P = 0.005$), and that the number of ethics related concepts was a significant predictor of cheating ($\beta =$ 0.308, $P = 0.011$). Using the bootstrapping method with 10,000 iterations (4), we found that the 95% confidence interval for the indirect effect did not include zero (0.29, 0.01), suggesting significant mediation.

Using an implicit measure of ethical saliency, this experiment shows that signing before the opportunity to cheat increases the saliency of moral standards compared with signing after having had the opportunity to cheat; subsequently, this discourages cheating.

Experiment 3: Participants and Procedure. We conducted a field experiment with an insurance company in the southeastern United States asking some of their existing customers to report their odometer reading.

When a new policy is issued, each customer submits information about the exact current odometer mileage of all cars insured under their policy, along with other information. For our audit experiment, we sent out automobile policy review forms to policyholders, randomly assigning them to either the original form used by the insurance company or to our redesigned form. The original form asked customers to sign the statement: "I promise that the information I am providing is true," which appeared at the bottom of the form (i.e., after having completed it; control condition), whereas our redesigned form asked customers to sign that same statement but at the top of the form (i.e., before filling it out; treatment condition). Otherwise, the forms were identical.

The data file that we received from the insurance company included a random identifier for each policy, an indication of the experimental condition, and two odometer readings for each car covered (a maximum of four per policy). The first odometer reading was based on the mileage information the insurance company previously had on file, whereas the second was the current odometer reading that customers reported. The data file did not have the date of the first odometer reading (it also did not have any of the other information requested on the policy review forms). Consequently, our measure of use was somewhat noisy, as the miles driven per car have been accumulated over varying unknown time periods. However, because we randomly assigned customers to one of our two conditions, such noise should be evenly represented in both conditions. To calculate each car's use or number of miles driven (our main dependent variable), we subtracted the odometer reading that was in the insurance company's database from the self reported current odometer reading we received from our audit forms.

Although there was no explicit statement on the policy review forms linking car use to insurance premiums, policyholders had an incentive to report lower use: the fewer miles driven, the lower the accident risk, and the lower their insurance premium. Thus, when filling out the automobile policy review form, customers likely faced a dilemma between honestly indicating the current odometer mileage, and dishonestly indicating lower odometer mileage to reduce their insurance premium. We hypothesized that signing before self reporting makes ethics salient right when it is needed most. Therefore, we expected that customers who signed the policy review form first, before filling it out, would more likely be truthful, and reveal higher use, compared with those who signed at the end, after filling it out.

Completed forms were received from 13,488 policies for a total of 20,741 cars. A single policy could cover up to four cars; 52% of policies had one car, 42% had two cars, 5% had three cars, and less than 0.3% had four cars. If a customer's policy had more than one car, we averaged the reported odometer mileages for all cars on the same policy. As hypothesized, controlling for the number of cars per policy [$F(1, 13,485) = 2.184$, $P = 0.14$], the calculated use (based on reported odometer readings) was significantly higher among customers who signed at the beginning of the form ($M =$ 26,098.4, SD = 12,253.4) than among those who signed at the end of the form [$M = 23,670.6$, SD = 12,621.4; $F(1, 13,485) = 128.631$, $P < 0.001$]. The average difference between the two conditions was 2,427.8 miles. The results also hold for the use of the first car only [signature at the top: $M = 26,204.8$ miles, SD = 14,226.3 miles and signature at the bottom: $M = 23,622.5$ miles, SD = 14,505.8 miles; $t(13,486) = 10.438$, $P < 0.001$].

Asking customers to sign at the beginning of the form led to a 10.25% increase in the calculated miles driven over the current practice of asking for a signature at the end. An alternative explanation for our findings could be that this difference is due to extra diligence of customers in the treatment condition relative to customers in the control condition, rather than higher rates of deliberate falsification of information among customers in the control condition. That is, perhaps those who signed at the top of the form were actually checking their odometers, whereas those who signed at the bottom of the form simply estimated their mileage without actually checking their cars. To address this possibility, we compared the last digits of the odometer mileage that customers in the two conditions reported. Specifically, we ran analyses examining whether the two conditions differed in the number of instances wherein reported odometer mileages ended with 0, 5, 00, 50, 000, or 500. Numbers that end with these digits indicate a higher likelihood that customers simply estimated their mileage. We detected no statistically significant differences between our two conditions in the instances in which these endings appeared (pooled measure: treatment, 19.9% vs. control, 20.8%; $\chi^2 = 2.5$, $P = 0.12$).

An important consequence of false reporting of this type is that the costs extend beyond the insurer to its entire customer base including the honest policyholders who bear the ultimate burden of paying for others' dishonesty. Using a field experiment, we demonstrate that a simple change in the location of a signature request can significantly influence the extent to which people on average will misreport information to advance their own self interest.

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Appendix C

HBS Interim Policy and Procedures for Responding to Allegations of Research Misconduct

HARVARD | BUSINESS | SCHOOL

Interim Policy and Procedures for Responding to Allegations of Research Misconduct

August 2021

I. Basis for Policy

Integrity in scholarship and research is one of Harvard University's—and Harvard Business School's—fundamental values. Allegations of misconduct in scholarship and research must be treated with the utmost seriousness, and examined carefully and responsibly in a timely and effective manner.

Toward that end, HBS has established this **Policy and Procedures for Responding to Allegations of Research Misconduct**[1] to guide its efforts in reviewing, investigating, and reporting allegations of research misconduct.[2]

II. Scope

This Policy applies to allegations of research misconduct—including fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results—involving any person who, at the time of the alleged research misconduct, was employed by, was an agent of, or was affiliated by contract or agreement with HBS, including without limitation tenured and non-tenured faculty, teaching and support staff, researchers and research associates, research coordinators, post-doctoral and other fellows, students, volunteers, officials, technicians. The Policy may be applied to any individual no longer affiliated with HBS if the alleged misconduct occurred while the person was employed by, an agent of, or affiliated with the School. This Policy does not apply to authorship or collaboration disputes. It applies only to allegations of research misconduct that occurred within six years of the date HBS received the allegation, unless: the respondent has continued or renewed an incident of alleged research misconduct through the citation, republication, or other use for the potential benefit of the respondent of the research record in question; or HBS determines that the alleged misconduct would possibly have a substantial adverse effect on the health or safety of the public.

III. General Policies and Principles

A. Research Misconduct Prohibited, Standard of Proof

HBS prohibits research misconduct and investigates and responds to allegations of research misconduct in accordance with this Policy. Throughout the research misconduct process, which begins at the time an allegation is made, all participants shall bear in mind the importance, both in fact and in appearance, of thoroughness, fairness, and objectivity.

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[1] See Appendix 1 for a glossary of terms and definitions.

[2] See Appendix, here and throughout, for additional specifications and requirements when researchers have received federal or other external funding for their research.

A finding of research misconduct requires that:

- There be a significant departure from accepted practices of the relevant research community;
- The respondent committed the research misconduct intentionally, knowingly, or recklessly; and
- The allegation be proven by preponderance of the evidence.

The destruction of research records, absence of research records, or respondent's failure to provide research records adequately documenting the questioned research is evidence of research misconduct where the institution establishes by a preponderance of the evidence that the respondent intentionally, knowingly, or recklessly had research records and destroyed them, had the opportunity to maintain the records but did not do so, or maintained the records and failed to produce them in a timely manner and that the respondent's conduct constitutes a significant departure from accepted practices of the relevant research community.

HBS bears the burden of proof for making a finding of research misconduct. A respondent has the burden of proving, by a preponderance of the evidence, any and all affirmative defenses raised (such as honest error).

Individuals subject to this policy found to have committed research misconduct may be subject to sanctions up to and including termination.

B. Responsibility to Report Misconduct

All individuals subject to this Policy will report observed, suspected, or apparent research misconduct to the Research Integrity Officer (RIO).[3] If an individual is unsure whether a suspected incident falls within the definition of research misconduct, that individual may meet with or contact the RIO to discuss the suspected research misconduct informally, which may include discussing it anonymously and/or hypothetically. If the circumstances described by the individual do not meet the definition of research misconduct, then the RIO may refer the individual or allegation to other offices or officials, where appropriate.

C. Cooperation with Research Misconduct Proceedings

All individuals subject to this Policy shall cooperate with the RIO and other institutional officials in the review of allegations and the conduct of inquiries and investigations. All individuals subject to this Policy, including respondents, have an obligation to provide evidence relevant to research misconduct allegations to the RIO or other institutional officials.

D. Duty to Maintain Confidentiality

Because of the potential jeopardy to the reputation and rights of a respondent, the RIO and all Committee members (as defined in this Policy) as well as all others at HBS who may be involved in the research misconduct proceeding shall to the extent possible: (1) limit disclosure of the identity of respondents and complainants to those who need to know in order to carry out a thorough, competent, objective, and fair research misconduct proceeding; and (2) except as otherwise prescribed by law, limit

[3] For the 2021-2022 academic year, the Research Integrity Officer is Alain Bonacossa ([redacted]

the disclosure of any records or evidence from which research subjects might be identified to those who need to know in order to carry out a research misconduct proceeding. Where communications about research misconduct proceedings may be considered necessary or advisable, University officials should be guided by the Guiding Principles for Communication in Research Misconduct Proceedings.[4] Inappropriate dissemination of information may result in sanctions up to and including termination.

E. Rights and Responsibilities of Complainant

The complainant is responsible for making allegations in good faith, maintaining confidentiality, and cooperating with the inquiry and investigation. If the inquiry committee deems it necessary, the complainant may be interviewed at the inquiry stage and, if so, will be given the transcript or recording of the interview for correction. The complainant ordinarily will be interviewed during the investigation phase, and given the transcript or recording of the interview for correction. After making an allegation of research misconduct, the complainant is responsible for providing evidence and information in connection with the research misconduct process but is not entitled to receive information about the status or outcome of that process.

F. Rights and Responsibilities of Respondent

The respondent is responsible for maintaining confidentiality and cooperating with the conduct of an inquiry and investigation. The respondent is entitled to the procedural rights and protections set forth in this Policy. Respondents may choose up to two personal advisors for support during the process. Personal advisors may be attorneys; they may not be principals or witnesses in the research misconduct matter. Personal advisors may be present at any proceedings or interviews that the respondent attends but may not question witnesses or otherwise take part in the research misconduct proceedings.

The respondent should be given the opportunity to admit that research misconduct occurred and that they committed the research misconduct. With the advice of the RIO and/or other institutional officials, the Dean or their designee may end HBS's review of an allegation that has been admitted.

G. Protecting Complainants, Witnesses, the RIO, and Committee Members

HBS community members may not retaliate in any way against complainants, witnesses, the RIO, or committee members. Any alleged or apparent retaliation against complainants, witnesses, the RIO, or committee members should be reported immediately to the
RIO (or to the Dean's Office, as applicable), who shall review the matter and, as necessary, make all reasonable and practical efforts to counter any potential or actual retaliation and protect and restore the position and reputation of the person against whom the retaliation is directed.

IV. Preliminary Assessment of Allegations

Upon receiving an allegation of research misconduct, the RIO immediately will assess the allegation to determine whether the allegation:

[4] https://files.vpr.harvard.edu/files/vpr-documents/files/guiding_principles_for_communication_in_research_misconduct_proceedings.pdf

- Falls within the definition of research misconduct, and
- Is sufficiently credible and specific so that potential evidence of research misconduct may be identified.

An inquiry must be conducted if these criteria are met.

If, upon receipt on the allegation, it appears that the RIO has any unresolved personal, professional, or financial conflicts of interest with those involved in the allegations, then another qualified individual shall be appointed by the Dean or their designee to serve as Interim RIO with respect to reviewing the allegation and conducting any research misconduct proceeding.

The assessment period should be brief, preferably concluded within a week. Where it is not feasible to conclude the assessment within a week, the process should proceed expeditiously. In conducting the assessment, it is not necessary to interview the complainant, respondent, or other witnesses, or to gather data beyond any that may have been submitted with the allegation, except as necessary to determine whether the allegation is sufficiently credible and specific so that potential evidence of research misconduct may be identified. The preliminary assessment shall be documented and all records pertaining to the review of allegations will be retained by the RIO for a period of seven (7) years following the completion of the proceeding.

V. Sequestration of Research Records and Notice to Respondent

A. Sequestration of Research Records

This Policy governs access to research records, including without limitation email records, for purposes of conducting research misconduct proceedings.[5] Those engaged in administering this Policy have all rights necessary to access research records created or maintained by individuals subject to this Policy.[6]

As to timing, on or before the date on which the respondent is notified, or the inquiry begins, whichever is earlier, the RIO must take all reasonable and practical steps to obtain custody of all the research records and evidence needed to conduct the research misconduct proceeding. The RIO also shall sequester any additional research records that become pertinent to an inquiry or investigation after the initial sequestration.

The RIO is responsible for inventorying the records and evidence and sequestering them in a secure manner.[7] Where appropriate, HBS shall give the respondent copies of, or reasonable supervised access to, the research records.

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[5] For clarification, Harvard's Policy on Access to Electronic Information specifically states that it does not apply to reviews of research misconduct allegations. Section I, Internal Investigations of Misconduct, p. 4.

[6] Harvard's Research Data Ownership Policy makes clear that "the University asserts ownership over research data for all projects conducted at the University, under the auspices of the University, or with University resources," and further states that "[w]hen it is necessary to secure access (e.g. during a research misconduct proceeding) the University may take custody of research data." Policy and Procedures, Section 1.B, p. 2.

[7] However, where the research records or evidence encompass scientific instruments shared by a number of users, custody may be limited to copies of the data or evidence on such instruments, so long as those copies are

B. Notice to Respondent

At the time of or before beginning an inquiry, the RIO must make a good faith effort to notify the respondent in writing, if the respondent is known. If the inquiry subsequently identifies additional respondents, they must be notified in writing.

VI. The Inquiry

A. Initiation and Purpose of the Inquiry

The purpose of the inquiry is to conduct an initial review of the available evidence to determine whether to conduct an investigation. An inquiry does not require a full review of all the evidence related to the allegation.

B. Appointment of the Inquiry Committee

The inquiry committee will be appointed by the Dean or their designee, in consultation with other institutional officials as appropriate, and will consist of one or more individuals who do not have unresolved personal, professional, or financial conflicts of interest with those involved with the research misconduct proceeding. The inquiry committee should include individuals with the appropriate subject-matter expertise to: evaluate the evidence and issues related to the allegation; interview the principals and key witnesses; and conduct the inquiry. When necessary to secure the necessary expertise or to avoid conflicts of interest, the Dean or their designee may select committee members from outside the institution.

Prior to the initiation of the Inquiry, the respondent will be notified in writing of the inquiry committee's membership and shall be afforded five (5) calendar days to lodge objections based upon a committee member's alleged personal, professional, or financial conflict of interest. The Dean or their designee will make the final determination of whether a conflict exists.

C. Charge to the Committee and First Meeting

The RIO will prepare a charge for the inquiry committee that sets forth the purpose of the inquiry and the expected timeframe, the committee's responsibilities, the allegations, and any related issues identified during the preliminary assessment. The charge also shall inform the committee that an investigation is warranted if the committee determines, based on its review during the inquiry, that: (1) there is a reasonable basis for concluding that the allegation falls within the definition of research misconduct; and (2) the preliminary information-gathering and preliminary fact-finding from the inquiry indicates that the allegation may have substance.

At the committee's first meeting, the RIO will review the charge with the committee, discuss the allegations, any related issues, and the appropriate procedures for conducting the inquiry, assist the committee with organizing plans for the inquiry, and answer any questions raised by the committee. The RIO will be present or available throughout the inquiry to advise the committee as needed.

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substantially equivalent to the evidentiary value of the instruments.

D. Inquiry Process

The inquiry committee ordinarily will interview the complainant, if any, the respondent, and key witnesses as well as examine relevant research records and materials. Any interviews will be recorded or transcribed, with recordings or transcripts provided to the interviewee for correction. Then the inquiry committee will evaluate the evidence, including the testimony obtained during the inquiry. In consultation with the RIO, the committee members will decide whether an investigation is warranted based on the criteria in this Policy.

The scope of the inquiry is not required to and does not normally include deciding whether misconduct definitely occurred, determining definitely who committed the research misconduct, or conducting exhaustive interviews and analyses.[8] However, if a legally sufficient admission of research misconduct is made by the respondent, misconduct may be determined at the inquiry stage if all relevant issues are resolved.

E. The Inquiry Report

A written inquiry report must be prepared that includes the following information: (1) the name and position of the respondent; (2) a description of the allegations of research misconduct; (3) the funding support, including without limitation any grant numbers, grant applications, contracts and publications listing all support; (4) the basis for recommending or not recommending that the allegations warrant an investigation; (5) any comments on the draft report by the respondent.

The Office of General Counsel shall be available to advise the inquiry committee and the RIO with respect to the report. Modifications should be made as appropriate in consultation with the RIO and the inquiry committee.

F. Notification of the Results of the Inquiry; Opportunity to Comment

The RIO shall notify the respondent as to whether the inquiry found an investigation to be warranted, include a copy of the draft inquiry report for comment within 10 business days, and include a copy of or link to this Policy.

Based on the comments, the inquiry committee may revise the draft report as appropriate and prepare it in final form. Any comments that are submitted by the respondent will be attached to the final inquiry report. The committee will deliver the final report to the RIO.

G. Institutional Decision and Notification

1. *Decision by Deciding Official* – The RIO will transmit the final inquiry report and any comments to the Dean or their designee, who will make a written determination as to whether an investigation is warranted. The inquiry is completed when this determination is made. The RIO will notify institutional officials who have a need to know of the decision.

[8] As noted above, an investigation is warranted if the committee determines, based on its review during the inquiry,that: (1) there is a reasonable basis for concluding that the allegation falls within the definition of research misconduct; and (2) the preliminary information-gathering and preliminary fact-finding from the inquiry indicates that the allegation may have substance.

2. *Documentation of Decision Not to Investigate* – If an investigation is not warranted, the RIO shall secure and maintain for 7 years after the termination of the inquiry sufficiently detailed documentation of the inquiry to permit a later assessment of the reasons why an investigation was not conducted.

H. Time for Completion

The inquiry, including preparation of the final inquiry report and the decision on whether an investigation is warranted, must be completed within 60 calendar days of initiation of the inquiry, unless the RIO determines that circumstances clearly warrant a longer period. If an extension is approved, the inquiry record must include documentation of the reasons for exceeding the 60-day period.

VII. Conducting the Investigation

A. Initiation and Purpose

The investigation ordinarily should begin shortly after completion of the inquiry and no later than 30 calendar days after the determination that an investigation is warranted. On or before the date on which the investigation begins, the RIO must notify the respondent in writing of the allegations to be investigated.

The purpose of the investigation is to develop a factual record by exploring the allegations in detail and examining the evidence in depth, leading to recommended findings on whether research misconduct has been committed, by whom, and to what extent. The investigation committee shall pursue diligently all significant issues and leads discovered that are determined relevant to the investigation, including any evidence of additional instances of possible research misconduct, and continue the investigation to completion. If new allegations are identified, the RIO must also give the respondent written notice of such allegations within a reasonable amount of time of deciding to pursue allegations not addressed during the inquiry or in the initial notice of the investigation.

B. Sequestration of Research Records

On or before the date on which the respondent is notified, or the investigation begins, whichever is earlier, the RIO must take all reasonable and practical steps to obtain custody of and sequester in a secure manner all the research records and evidence needed to conduct the research misconduct proceeding that were not previously sequestered during the inquiry. The need for additional sequestration of records may occur for any number of reasons, including the institution's decision to investigate additional allegations not considered during the inquiry stage or identification of records during the inquiry process that had not been previously secured. The procedures to be followed for sequestration during the investigation are the same procedures that apply during the inquiry.

C. Appointment of the Investigation Committee

The Dean or their designee, in consultation with other institutional officials as appropriate, will appoint an ad hoc investigation committee and committee chair. The investigation committee must consist of individuals who do not have unresolved personal, professional, or financial conflicts of interest with those involved with the investigation and should include individuals with the appropriate subject-matter

expertise to: evaluate the evidence and issues related to the allegation; interview the respondent and complainant; and conduct the investigation. Individuals appointed to the investigation committee also may have served on the inquiry committee. When necessary to secure the necessary expertise or to avoid conflicts of interest, the Dean or their designee may select investigation committee members from outside the institution.

Prior to the initiation of the Investigation, the respondent will be notified of the investigation committee's membership and shall be afforded five (5) calendar days to lodge objections based upon a committee member's alleged personal, professional, or financial conflict of interest. The Dean or their designee will make the final determination of whether a conflict exists.

D. Charge to the Committee and the First Meeting

1. Charge to the Committee – The RIO will define the subject matter of the investigation in a written charge to the committee that describes the allegations and related issues identified during the inquiry; identifies the respondent; informs the committee that it must conduct the investigation as prescribed by this Policy; defines research misconduct; and instructs the investigation committee on the burden of proof. The charge shall state that the committee is to evaluate the evidence and testimony of the respondent, complainant, and key witnesses to determine whether, based on a preponderance of the evidence, research misconduct occurred and, if so, to what extent, who was responsible, and its seriousness. Finally, the charge shall inform the committee that it must prepare a written investigation report that meets the requirements of this Policy.

2. First Meeting – At the committee's first meeting, the RIO will review the charge, the inquiry report, and the prescribed procedures and standards for the conduct of the investigation, including the necessity for confidentiality and for developing a specific investigation plan. The investigation committee will be provided with a copy of this Policy and, if applicable, federal regulations. The RIO will be present and available throughout the investigation to advise the committee as needed.

E. Investigation Process

The investigation committee and the RIO must:

- Use diligent efforts to ensure that the investigation is thorough and sufficiently documented and includes examination of all research records and evidence relevant to reaching a decision on the merits of each allegation;

- Take reasonable steps to ensure an impartial and unbiased investigation to the maximum extent practical;

- Offer each respondent, complainant, and any other available person who has been reasonably identified as having information regarding any relevant aspects of the investigation, including witnesses identified by the respondent, the opportunity to be interviewed; record or transcribe each interview; provide the recording or transcript to the interviewee for correction; and include the recording or transcript in the record of the investigation; and

- Pursue diligently all significant issues and leads discovered that are determined relevant to the investigation, including any evidence of any additional instances of possible research misconduct, and continue the investigation to completion.

F. The Investigation Report

The investigation committee and the RIO are responsible for preparing a written draft report of the investigation that:

- Describes the nature of the allegation of research misconduct, including identification of the respondent.

- Describes and documents financial support for the research subject to the allegations, including without limitation the numbers of any grants that are involved, grant applications, contracts, and publications listing support;

- Describes the specific allegations of research misconduct considered in the investigation;

- Includes the institutional policies and procedures under which the investigation was conducted;

- Identifies and summarizes the research records and evidence reviewed and identifies any evidence taken into custody but not reviewed; and

- Includes a statement of findings for each allegation of research misconduct identified during the investigation. Each statement of findings must: (1) identify whether the research misconduct was falsification, fabrication, or plagiarism, and whether it was committed intentionally, knowingly, or recklessly; (2) summarize the facts and the analysis that support the conclusion and consider the merits of any reasonable explanation by the respondent, including any effort by respondent to establish by a preponderance of the evidence that they did not engage in research misconduct because of honest error or a difference of opinion; (3) identify the specific funding support (if any); (4) identify whether any publications need correction or retraction; (5) identify the person(s) responsible for the misconduct; and (6) list any current support or known applications or proposals for support that the respondent has pending with federal agencies or external funders.

- Includes recommended institutional actions.

The Office of General Counsel shall be available to advise the investigation committee and the RIO with respect to the report. Modifications should be made as appropriate in consultation with the RIO and the investigation committee.

G. Comments on the Draft Report and Access to Evidence

1. Respondent – The RIO will give the respondent a copy of the draft investigation report and exhibits for comment and, concurrently, a copy of or supervised access to the evidence on which the report is based. The respondent will be allowed 30 days from receipt of the draft report to submit comments to the RIO. The respondent's comments must be included and considered in the final report.

2. Confidentiality – In distributing the draft report to the respondent for comment, the RIO will remind the respondent of the confidentiality under which the draft report is made available and may establish reasonable conditions to ensure such confidentiality.

H. Decision by Deciding Official

The final investigation report will be submitted to the Dean, who will make a written determination as to: (1) whether the institution accepts the investigation report, its findings, and the recommended institutional actions; and (2) the appropriate institutional actions in response to the accepted findings of research misconduct. If this determination varies from the findings of the investigation committee, the Dean will explain in detail the basis for rendering a decision different from the findings of the investigation committee. Alternatively, the Dean may return the report to the investigation committee with a request for further fact-finding or analysis.

When a final decision on the case has been reached, the respondent will be notified in writing. The Dean, in consultation with institutional officials as needed, also will determine whether relevant parties should be notified of the outcome of the case, including professional societies, editors of journals in which falsified reports may have been published, collaborators of the respondent in the work, professional licensing boards, or law enforcement agencies, .

I. Institutional Actions

After a determination of research misconduct is made, the Dean may decide on appropriate actions to be taken, in consultation with others at the University as appropriate. Sanctions for research misconduct shall be based on the seriousness of the misconduct, including but not limited to, the degree to which the misconduct: a) was intentional, knowing, or reckless; b) was an isolated event or part of a pattern; and c) had significant impact on the research record, research subjects, other researchers, institutions, or the public welfare. The range of administrative actions includes, but is not limited to, the correction of the public record including the withdrawal or correction of all pending or published abstracts and papers emanating from the research where misconduct was found; removal of the responsible person from the particular project, special monitoring of future work, probation, suspension, leave without pay, salary reduction, or initiation of steps leading to rank reduction or termination of employment; restitution of funds as appropriate; suspension or termination of an active award; and other action appropriate to the research misconduct. For cases involving research misconduct by students, sanctions shall be determined by the appropriate student disciplinary board.

J. Time for Completion

The investigation ordinarily shall be completed within 120 days of beginning it, including conducting the investigation, preparing the draft report of findings, providing it for comment, finalizing the report, and making necessary notifications. However, if the RIO determines that the investigation will not be completed within this 120-day period, the rationale for the delay will be documented.

IX. Interim Institutional Actions

Throughout the research misconduct proceeding, the RIO will review the situation to determine if there is any threat of harm to the integrity of the research process. In the event of such a threat, the RIO will,

in consultation with institutional and other officials, as necessary, take appropriate interim actions to protect against any such threat.

Interim action might include: additional monitoring of the research process; reassignment of personnel; additional review of research data and results; or delaying publication.

X. Completion of Cases

Generally, all inquiries and investigations will be carried through to completion and all significant issues will be pursued diligently.

XI. Other Considerations

A. Termination or Resignation Prior to Completing Inquiry or Investigation

The termination of the respondent's HBS employment, by resignation or otherwise, before or after an allegation of possible research misconduct has been reported, will not preclude or terminate the research misconduct proceeding or otherwise limit any of HBS's responsibilities to pursue allegations.

If the respondent, without admitting to the misconduct, elects to resign the respondent's position after HBS receives an allegation of research misconduct, the assessment of the allegation will proceed, as well as the inquiry and investigation, as appropriate based on the outcome of the preceding steps. If the respondent refuses to participate in the process after resignation, the RIO and any inquiry or investigation committee will use their best efforts to reach a conclusion concerning the allegations, noting in the report the respondent's failure to cooperate and its effect on the evidence.

B. Restoration of the Respondent's Reputation

Following a final finding of no research misconduct, the RIO must, at the request of the respondent, undertake all reasonable and practical efforts to restore the respondent's reputation.

C. Allegations Not Made in Good Faith

If relevant, the Dean or their designee will determine whether the complainant's allegations of research misconduct were made in good faith, or whether a witness or committee member acted in good faith. If the Dean or their designee determines that there was an absence of good faith, the Dean or their designee will determine whether any administrative action should be taken against the person who failed to act in good faith.

D. Maintaining Records

HBS shall maintain the records of a research misconduct proceeding in a secure manner during its pendency and for seven (7) years after completion of the proceeding or completion of any agency oversight proceeding, or as required by any applicable record retention provision, whichever is later.

Appendix 1: Glossary of Terms and Definitions

Allegation: a disclosure of possible research misconduct through any means of communication.

Committee member: a member of any ad hoc committee appointed to conduct all or a portion of the research misconduct process under this Policy.

Complainant: a person who in good faith makes an allegation of research misconduct.

Conflict of interest: financial, personal, or professional relationships that may compromise, or appear to compromise a person's decisions.

Deciding Official (DO): the institutional official who makes final determinations about allegations of research misconduct and any institutional actions, ordinarily the Dean of HBS. The Deciding Official does not serve as the Research Integrity Officer and is not directly involved in the institution's preliminary assessment, inquiry, or investigation. The Deciding Official's involvement in the appointment of individuals to assess allegations of research misconduct, or to serve on an inquiry or investigation committee, is not considered to be direct involvement.

Evidence: any document or other record, tangible item, or testimony offered or obtained during a research misconduct proceeding that tends to prove or disprove the existence of an alleged fact.

Fabrication: making up data or results and recording or reporting them.

Falsification: manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

Good faith

As applied to a complainant or witness: having a belief in the truth of one's allegation or testimony that a reasonable person in the same position could have, based on the information known to the person at the time. An allegation or cooperation with a research misconduct proceeding is not in good faith if made with knowing or reckless disregard for information that would negate the allegation or testimony.

As applied to a committee member: cooperating with the research misconduct proceeding by carrying out the duties assigned impartially for the purpose of helping the institution meet its responsibilities under the Policy. A committee member does not act in good faith if the committee member's acts or omissions on the committee are dishonest or influenced by personal, professional, or financial conflicts of interest with those involved in the research misconduct proceeding.

Inquiry: preliminary information-gathering and preliminary fact-finding in accordance with the Policy to determine whether an allegation of research misconduct warrants investigation.

Investigation: the formal development of a factual record and the examination of that record leading to a decision about whether to recommend a finding of research misconduct, which may include a recommendation for other appropriate actions, including institutional actions.

Plagiarism: the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

Preponderance of the evidence: proof by information that, compared with that opposing it, leads to the conclusion that the fact at issue is more probably true than not.

Research: a systematic experiment, study, evaluation, demonstration, or survey designed to develop or contribute to general knowledge or specific knowledge by establishing, discovering, developing, elucidating, or confirming information about, or the underlying mechanism relating to, the matters to be studied.

Research Integrity Officer (RIO): the institutional official responsible for: (1) reviewing allegations of research misconduct to determine if they fall within the definition of research misconduct and warrant an inquiry; and (2) overseeing inquiries and investigations.

Research misconduct: fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. Research misconduct does not include honest error or differences of opinion.

Research record: the record of data or results that embody the facts resulting from scientific inquiry or other scholarly endeavors, including but not limited to research proposals, laboratory records (physical and electronic), progress reports, abstracts, theses, oral presentations, internal reports, journal articles, correspondence, and any documents and materials provided to an institutional official in the course of a research misconduct proceeding.

Respondent: the person against whom an allegation of research misconduct is directed or who is the subject of a research misconduct proceeding.

Retaliation: an adverse action taken against a complainant, witness, or committee member by an institution or one of its members in response to a good faith allegation of research misconduct or good faith cooperation with a research misconduct proceeding.

Appendix 2: Additional Procedures for Allegations Involving Federal Funding

Scope

This Policy is intended to comply with institutional responsibilities under the Public Health Service (PHS) Policies on Research Misconduct, 42 CFR Part 93. Other federal agencies have published their own research misconduct regulations; to the extent those regulations apply to an allegation of research misconduct and are inconsistent with this Policy, HBS shall comply with the applicable regulatory requirements.

This Policy does not apply to authorship or collaboration disputes and applies only to allegations of research misconduct that occurred within six years of the date HBS received the allegation, subject to the subsequent use, health or safety of the public, and grandfather exceptions articulated in 42 C.F.R. § 93.105(b).

With respect to students involved in allegations of research misconduct that involve federal funding, the appropriate student disciplinary board will be notified of the initiation of any inquiries and/or investigations and will be informed of the findings of any such inquiries and/or investigations, including receiving copies of all inquiry and/or investigation reports. For allegations of research misconduct against students that do not involve federal funding, HBS may, at its discretion, either refer them to the appropriate student disciplinary board, or review them under this Policy and notify the appropriate student disciplinary board as described above.

Inquiry Process

If a legally sufficient admission of research misconduct is made by the respondent, misconduct may be determined at the inquiry stage if all relevant issues are resolved. In that case, HBS should promptly consult with the relevant federal agency to determine next steps. Acceptance of the admission and any proposed settlement must be approved by the relevant federal agency.

Notification to Respondent of the Results of the Inquiry

The RIO will provide the respondent with a link to or copy of 42 C.F.R. Part 93 (or other applicable federal regulations).

Notification to Federal Agencies of the Results of the Inquiry

Within 30 calendar days of the decision whether an investigation is warranted, the RIO will provide the Office of Research Integrity ("ORI")[9] (or the relevant federal agency) with the written decision and a copy of the final inquiry report (or comply with any other notice obligation to a government agency or other funder).

Time for Completion

If an investigation cannot be completed within 120 days of beginning it, the RIO will document the

[9] The Office of Research Integrity (ORI) in the U.S. Department of Health and Human Services (DHHS) is responsible for the scientific misconduct and research integrity activities of the U.S. Public Health Service (PHS).

rationale for the delay and notify federal agencies as required and in accordance with federal regulations. The RIO will ensure that periodic progress reports are filed with federal agencies and in accordance with federal regulations.

Notice of Institutional Findings and Actions

When the Dean reaches a final decision on the case, the investigation is complete, and the RIO will transmit to the applicable funding agency: (1) a copy of the final investigation report with all attachments; (2) a statement of whether the institution accepts the findings of the investigation report; (3) a statement of whether the institution found misconduct and, if so, who committed the misconduct; and (4) a description of any pending or completed institutional actions against the respondent.

Interim Institutional Actions and Notifying Federal Agencies of Special Circumstances

Throughout the research misconduct proceeding, the RIO will review the situation to determine if there is any threat of harm to public health or to federal funds and equipment. In the event of such a threat, the RIO will, in consultation with other institutional officials, and ORI, as necessary, take appropriate interim actions to protect against any such threat. Interim action might include: additional monitoring of the handling of federal funds and equipment and/or reassignment of personnel or of the responsibility for the handling of federal funds and equipment.

HBS shall, at any time during a research misconduct proceeding, notify ORI (or the relevant federal agency) immediately if there is reason to believe that any of the following conditions exist:

- Health or safety of the public is at risk, including an immediate need to protect human or animal subjects;
- Federal resources or interests are threatened;
- Research activities should be suspended;
- There is a reasonable indication of possible violations of civil or criminal law;
- Federal action is required to protect the interests of those involved in the research misconduct proceeding;
- The research misconduct proceeding may be made public prematurely and federal action may be necessary to safeguard evidence and protect the rights of those involved; or
- The research community or public should be informed.

Completion of Cases

For allegations that include PHS funded research, HBS must notify ORI in advance if there are plans to close a case at the inquiry or investigation stage on the basis that respondent has admitted guilt, a settlement with the respondent has been reached, or for any other reason, except: (1) closing of a case at the inquiry stage on the basis that an investigation is not warranted; or (2) a finding of no misconduct at the investigation stage, which must be reported to ORI, as prescribed in this Policy and 42 CFR § 93.315. For allegations that include non-PHS funded research, HBS must comply with any other notice obligation to a government agency or other funder.

Restoration of the Respondent's Reputation

Following a final finding of no research misconduct, including ORI concurrence where required by 42 CFR Part 93 (or, for non-PHS funded research, other applicable federal agency requirements), the RIO must,

at the request of the respondent, undertake all reasonable and practical efforts to restore the respondent's reputation.

Maintaining Records for Review by ORI

Unless HBS has transferred custody of the records of research misconduct proceedings (as defined by 42 C.F.R. § 93.317) to the funding agency in accordance with applicable law, HBS shall maintain the records of a research misconduct proceeding in a secure manner during its pendency and for seven (7) years after completion of the proceeding or completion of any agency oversight proceeding, or as required by any applicable record retention provision, whichever is later.

Exhibit 5
Respondent's Written Responses to Investigation Committee - May-July 2022

Chronology for papers included in the Allegations and Contact Information

Paper #1: 2012 PNAS Paper

Lisa Shu, Nina Mazar, Francesca Gino, Dan Ariely, and Max Bazerman, 2012, "Signing at the Beginning Makes Ethics Salient and Decreases Dishonest Self-reports in Comparison to Signing at the End."

- *Corresponding author*: Nina Mazar

Chronology

- July 2008-June 2010: I joined the UNC Kenan Flagler Business School faculty as an assistant professor in July 2008, and was on the faculty for 2 years. I moved to HBS as an associate professor in July 2010. I spent part of that summer doing research in Glendale, CA with Disney (an opportunity [redacted] created) but traveled to Harvard and to UNC as needed
- July 2008-June 2010: During my time at UNC, I created a behavioral lab to conduct experiments on a regular basis. I hired [redacted] as the main lab manager. When I moved to HBS in July 2010, [redacted] continued running studies for me, and was hired by me (through HBS) as a contractor. [redacted] continued working as a contractor through 2012.
- June 2010: The laboratory study received IRB approval from UNC
- June-July 2010: The data from the laboratory studies (conducted on paper) was collected at the behavioral laboratory at UNC Kenan Flagler Business School
  - [redacted] was the research assistant helping with data collection
  - As indicated in the acknowledgments of the 2012 PNAS paper, [redacted] also helped with data collection. [redacted] was an undergraduate at UNC at that time. I am not sure whether other RAs / undergraduates helped with data collection.
- June-July 2010: [redacted] entered the data for the study
  - I am not sure whether [redacted] (or other RAs) helped with data entry
- **Data for Study 1 was collected in June-July 2010**
- June 2019: I shared the data from the lab studies with [redacted] so that they could be posted publicly on the OSF. [redacted] has led a research effort that led to this published paper: https://www.pnas.org/content/117/13/7103

Contact information

[redacted] (who has now left the field): [redacted]
Phone number I have for her: [redacted] (she moved to LBS after graduating so I am not sure this number is still valid)

[redacted]: [redacted]
Phone number: [redacted]

[redacted]

[redacted]
Google tells me she is now a PhD student [redacted]

Paper #2: 2014 Psychological Science Paper
Francesca Gino, and Scott Wiltermuth, 2014, "Evil Genius? How Dishonesty Can Lead to Greater Creativity"

- *Corresponding author*: Francesca Gino

Chronology

- August 1 2013: We submitted the paper to Psych Science. It was accepted for publication after revisions on December 28 2013
- **Data for Study 4 was collected in 2012**
- To create the experimental materials needed for the studies, I reached out to two individuals with programming knowledge:
  - [redacted] – who, at the time, was working as Research Computing Specialist at the Decision Science Laboratory at the Harvard Kennedy School
  - [redacted] – who, at the time, helped another now HBS colleague ([redacted] develop programs to use in her work
- The data from Experiment 4 in the published paper (i.e., the study allegation #3 is about) was collected on MTurk using a program developed, I believe, by [redacted] since the study involved a virtual coin-toss task
  - [redacted] created links to use to download the data, and also links to use to erase the data once downloaded so that the program could be used again
- I believe [redacted] conducted the study and received IRB approval at UNC since I am unable to find the IRB application for the study in my HBS records

Contact information
[redacted] (see above)

[redacted]
(I think [redacted] left HKS)

[redacted]

[redacted]
Phone number: [redacted]

Paper #3: 2015 Psychological Science Paper
Francesca Gino, Maryam Kouchaki, and Adam Galinsky, 2015, "The Moral Virtue of Authenticity: How Inauthenticity Produces Feelings of Immorality and Impurity"

- *Corresponding author*: Maryam Kouchaki

Chronology

- August 2010: We submitted the paper to Psych Science, subsequently revised it and resubmitted it in Sept 2010. We were then rejected
- In June 2011: We submitted the paper to JPSP, and then rejected in October 2011

- In June 2013: We submitted a greatly revised version to Psych Science, and after a few rounds of revisions, the paper was accepted in January 2015
- **Data for Study 4 was collected in 2014**
- 8/8/12 through 5/27/16: [redacted] was working as a research associate for about 50% of her time for me
    - [redacted] received extra help in conducting studies by other undergraduates when needed, as well as temporary RAs
- The OSF website indicates I or somebody using my account (e.g., an RA) posted the data on OSF

Contact information

[redacted]
Phone number [redacted]

[redacted]

Paper #4: 2020 JPSP Paper
Francesca Gino, Maryam Kouchaki, and Tiziana Casciaro, 2020, "Why Connect? Moral Consequences of Networking with a Promotion or Prevention Focus"

- *Corresponding author*: Maryam Kouchaki

Chronology

- January 2016: We submitted the paper to AMJ, and were rejected in April 2016
- December 2017: We resubmitted a substantially revised version of the paper to AMJ again, and were, once again, rejected
- February 2018: We submitted a further revised version to Org Science, and we were then rejected
- August 2018: We submitted a further revised version to JAP, and we were then rejected (all rejections were mainly about the size of theoretical contributions)
- September 2019: We submitted a revised paper to JPSP, went through a few rounds of revisions and finally had the paper accepted for publication in May 2020
- **Data for Study 3A was collected in 2020**
- 7/1/18 through 6/30/21: [redacted] was working as a research associate for 100% of his time (and 75% of his time 7/12/20-6/30/21)
    - [redacted] received extra help in conducting studies by other undergraduates when needed, as well as temporary RAs
- I believe [redacted] posted the data on OSF, but I am unable to tell from the OSF website (it mentions "anonymous contributors")

Contact information

[redacted]
Phone number: [redacted]

[redacted] I don't think his HBS email address works anymore

2. Produce a list of RAs and doctoral students that worked with you over the years
The Committee would appreciate a comprehensive list, knowing they it may not be 100% accurate or complete - it's to the best of your abilities.

Doctoral Students

Below, you'll find the list of doctoral students I advised, worked with and whose dissertation committee I was on. I am a co-author on research with each of them, though in some cases the joint work we've done together did not end up being published. Generally, students who work with me have access to the data of joint projects as they are likely leading the efforts of data collection and data analyses, under my supervision.

To compile the list below, I reached out to the Doctoral Office at HBS and at other schools where I was on the Faculty as an assistant professor (Kenan Flagler at UNC) or post-doc (Carnegie Mellon University). Unfortunately, some of the people I had contacts for (e.g., the faculty coordinator of the OB unit at UNC) have moved on, either leaving the University or retiring, making the effort of tracking down this information a bit more challenging. The summer is also a time when faculty and staff are taking time off, especially after the pandemic, it seems, making these search efforts a bit slower than I had anticipated.

I feel fortunate to be working with doctoral students. At CMU, I also collaborated with post-doctoral fellows like me (that was my position at CMU when I was on the faculty there in 2006-2008), especially [redacted] (who is now a Professor at INSEAD) and [redacted] (who is now a Professor at Olin, Wash U).

- [redacted] OB (chair; expected 2024)
- [redacted] OB (expected 2023)
- [redacted] OB (expected 2023)
- [redacted] OB (co-chair, expected 2023)
- [redacted] Harvard Business School, OB (expected 2023)
- [redacted] Harvard Business School, OB (chair; expected 2023)
- [redacted] Harvard Business School, OB (expected 2023)
- [redacted] Harvard Business School, OB (chair; 2022)
- [redacted] Harvard Business School, OB (chair; 2020)
- [redacted] Harvard Business School, OB (2020)
- [redacted] Harvard Business School, OB (chair; 2019)
- [redacted] Harvard Business School, Management DBA (chair; 2018)
- [redacted] Columbia University, OB (2018)
- [redacted] Harvard Business School, OB (2017)
- [redacted] Harvard Business School, OB (co-chair; 2017)
- [redacted] Harvard Business School, OB (2017)
- [redacted] Harvard Business School, OB (2017)
- [redacted] Harvard Business School, OB (2016)
- [redacted] Harvard Business School, OB (chair; 2015)
- [redacted] Kennedy School of Government, Harvard University (chair; 2014)

- [redacted] Harvard Business School, marketing (2015)
- [redacted] Economics Department, Harvard University (2013)
- [redacted] Harvard Business School, OB (2013)
- [redacted] Cornell University, Management and Organizations (2013)
- [redacted] Duke University (2013)
- [redacted] Carnegie Mellon University Heinz College (2012)
- [redacted] University of Utah, Organizational Behavior (2012)
- [redacted] Harvard Business School, OB/Soc. Psych (2012)
- [redacted] Carnegie Mellon University (2012)
- [redacted] Harvard Business School, Marketing (2011)
- [redacted] UNC School of Journalism (2011)
- [redacted] Carnegie Mellon University (2011)
- [redacted] UNC Organizational Behavior (co-chair; 2010)
- [redacted] Carnegie Mellon University Organizational Behavior (2009)

Research Assistants

When I joined HBS in the summer of 2010 as an Associate Professor in NOM, I co-led with [redacted] (also in NOM at HBS) what used to be call [redacted]'s non-lab and then BIG Lab. The lab is listed as a college course at Harvard (I believe the name has always been PSY 2553R, but I was unable to confirm this), a course students can take for credit.

Over the years I took over as [redacted] felt too distant from the publication process. I believe I took over in 2013, as I learned in reviewing my emails. As part of the lab, undergraduates at Harvard could sign up for credit and work on research, helping faculty and graduate students, on every part of the research process (literature reviews, coding, data collection, creating surveys on Qualtrics, running studies, etc). Their role, in other words, was similar to the tasks research assistants often engage in to help doctoral students and faculty in their research. I worked closely with a few in particular, but given that interactions occurred in person most of the time, I don't remember the name of specific students I worked with.

I reached out to the psych department to compile the list, as the class rosters available online, if I am accessing the system in the right away, are only available starting from the Fall of 2019. I was finally able to obtain the comprehensive list on 7/19/2022. See attached excel file called PSY 2553R Student Rosters. I received the file from Raiyan Huq [redacted], Business Systems Analyst at the Office of the Registrar (Faculty of Arts and Sciences, Harvard University). When I received the file, I was told that "Our database only houses data going back to 2011. If you require data prior to 2011, please reach out to the Office of Institutional Research at oir@harvard.edu." I did not contact the office, to see if data from 2010 is available.

I also benefitted from the help of research assistants associated to the Harvard Kennedy School lab, when it was still open. One such person was [redacted] who was hired as a full-time technician for the lab, so he was paid by the Kennedy School. The same goes for the lab manager ([redacted] back then) and the RAs associated with the lab, who were mostly students the lab hired part-time. I reached out to [redacted], who was a doctoral student at HKS I worked with to learn more about the HKS lab setup, since I could not remember the details. As she told me, the

lab was initially set up with [redacted]'s NSF grant, but she did not know the details of the arrangement with HKS (who paid for what resources).

Finally, I received support from a variety of research associates over the years. I reached out to Beth Hall at HBS for information about research support I received over the years since it is hard for me to remember the details of everyone who helped me over the years. As Beth also noted, their records indicate dates when the appointment became official. In a few cases, the person may have been working for a while with me but not on record at the exact time because of the time required for appointments (As an example, a doctoral students who helped me read and summarize themes of reflections submitted by MBA students in my course, finished her work by the time she was officially in the system, and recorded her hours after completion of the role she had as temporary RA).

A few of the RAs only worked as temporary associates, helping on studies that needed fast data collection or that were more involved, coding or other tasks involved in the research process.

I organized the list by year and type of role:

2010, 2011	[redacted]	RA at HBS
2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022	[redacted]	RA (helping with editing papers and literature reviews only)
2011, 2012	[redacted]	RA physically at UNC, hired as contractor by HBS
2011	[redacted]	Temporary RA
2012	[redacted]	HU student hired as temporary RA
2012	[redacted]	hired as contractor by HBS
2012	[redacted]	HU student hired as temporary RA
2012	[redacted]	HU student hired as temporary RA
2013	[redacted]	Temporary RA
2012, 2013, 2014, 2015, 2016	[redacted]	RA at HBS
2013, 2014	[redacted]	RA at HBS
2013	[redacted]	Temporary RA
2013	[redacted]	HU student hired as temporary RA
2014	[redacted]	HU student hired as temporary RA
2015	[redacted]	Temporary RA
2014	[redacted]	Temporary RA
2014	[redacted]	HU student hired as temporary RA
2014	[redacted]	Temporary RA
2014	[redacted]	Temporary RA
2014	[redacted]	Temporary RA
2014	[redacted]	Temporary RA
2014	[redacted]	Temporary RA
2014, 2015	[redacted]	Temporary RA
2014	[redacted]	Temporary RA
2014	[redacted]	Temporary RA

2014	[redacted]	Temporary RA
2015	[redacted]	HU student hired as temporary RA
2015	[redacted]	Temporary RA
2015	[redacted]	Temporary RA
2015, 2016	[redacted]	HU student hired as temporary RA
2015	[redacted]	HU student hired as temporary RA
2015	[redacted]	HU student hired as temporary RA
2015	[redacted]	Temporary RA
2015	[redacted]	Temporary RA
2015	[redacted]	Temporary RA
2015	[redacted]	Temporary RA
2016	[redacted]	Temporary RA
2015	[redacted]	Temporary RA
2015	[redacted]	Temporary RA
2016, 2017	[redacted]	RA at HBS
2017	[redacted]	HU student hired as temporary RA
2017	[redacted]	Temporary RA
2018	[redacted]	Temporary RA
2017	[redacted]	Temporary RA
2018	[redacted]	Temporary RA
2017	[redacted]	Temporary RA
2017	[redacted]	Temporary RA
2017	[redacted]	Temporary RA
2017	[redacted]	Temporary RA
2018	[redacted]	HU student hired as temporary RA
2017	[redacted]	Temporary RA
2018, 2019, 2020, 2021	[redacted]	RA at HBS
2018, 2019	[redacted]	Temporary RA
2019	[redacted]	HU student hired as temporary RA
2019, 2020	[redacted]	HU student hired as temporary RA
2019	[redacted]	Temporary RA
2020	[redacted]	Temporary RA
2019, 2020	[redacted]	HU student hired as temporary RA
2020, 2021	[redacted]	HU student hired as temporary RA
2019	[redacted]	HU student hired as temporary RA
2020	[redacted]	HU student hired as temporary RA
2021	[redacted]	Temporary RA
2021	[redacted]	Temporary RA
2021	[redacted]	HU student hired as temporary RA
2021, 2022	[redacted]	RA at HBS
2021	[redacted]	Temporary RA
2021	[redacted]	HU student hired as temporary RA

3. For each of the studies in question in each paper, could you please articulate whether your coauthors had access to the data in any way (e.g. access to the data in Qualtrics or if the data was otherwise shared with them)?

In reviewing hundreds of emails, I am unable to answer this question with full confidence. To answer this question, I also looked back at my calendar (for the years I can see appointments on it) to see if I could reconstruct as many details as possible for each of the papers.

Over the years, I've shared my login information and password to my Qualtrics account and accounts used to post studies (MTurk, Prolific, etc) with some co-authors, students and RAs, to make sure I was not slowing down the research process during busy times – including teaching, traveling, administrative responsibilities at HBS, editorial work or being not as responsive for personal reasons. For instance, at times when my children were born, [redacted]

Most of my research interactions, before the pandemic, took place in person and exchanges of files and data occurred through USB keys or the sharing of my computer as a co-author and I, or an RA and I, sat in my office or at a conference together.

In talking to Qualtrics support, I've learned that data could be modified during data collection – something I was not aware of. In light of this, and out of my desire to establish new lab practices for research, I'll be sure not to share my account information for Qualtrics with collaborators or RAs in the future.

Here is more information for each of the studies in question:

- **Allegation 4a:** The study was conducted on paper. I don't believe the co-authors had access to the data until it was posted on OSF by [redacted] (in 2019) who led a research effort that resulted in this published paper: https://www.pnas.org/content/117/13/7103

- **Allegation 3:** I don't think [redacted] had access to the survey we used to collect the data. [redacted] and I worked on a few projects together where generally the person who is running the study is also responsible for writing it up, with the support of their RA(s). I believe this was a study [redacted] helped on, and I don't believe [redacted] has met [redacted], nor interacted with him. [redacted] did have access to the data once the paper was published as I shared it with him when other researchers asked for it (he was cc-ed on the emails).

- **Allegation 2:** [redacted] was a post-doc at Harvard between 2012-2014, after graduating from the University of Utah. We met when she was a doctoral student and started collaborating then. I worked on several projects with her over the years (and still do). [redacted], in the research he's done with us (or with me), did not run studies, nor he ran analyses on data. He is also not the type of researcher that looks at details in

Qualtrics surveys or in other materials used for studies (e.g., paper surveys) – at least not in the collaborations I've had with him. I don't believe he had access to Qualtrics or the raw data that was used for the analyses. I am not sure about [redacted]. However, everyone on the team had access to the data that was publicly posted, since it is available on the OSF.

- **Allegation 1:** In my work with [redacted], she is the collaborator who is close to the field data in projects we've worked on. She was the one with the relationship with the law firm (for the field data), and the person who collected that data and analyzed it. I don't believe she shared it with us. [redacted] and I collected the data for the lab studies. I don't believe [redacted] had access to the Qualtrics survey; I am not sure about [redacted] given how we tend to work together on projects. However, everyone on the team had access to the data that was publicly posted, since it is available on the OSF.

1. For allegation 4a, can you provide information about when a write-up of Study 1 was first drafted, by whom, and who reviewed that write-up?

I am unable to answer this question with certainty. This happened back in 2010, about 12 years ago, making it difficult for me to remember specific details about this study. If I followed the process that I use most commonly, then I was likely the one who drafted the write-up for Study 1 – but again, I am unable to state this with certainty.

The date of the word document with both the methods and the results suggests that the write up was drafted on July 28 2010. I also found a document titled "task study design" dated June 4 2010. Though the properties on both files indicate that the word document was created while at UNC and my name appears as author, I can't be sure I was the one drafting the procedures. [redacted] used my computer at times, as other RAs have done over the years. Also, I sometimes gave her through a USB key or sent her excel files asking for her to add data she had collected, or doc files asking her to write up procedures for the studies she conducted.

I contacted an expert of Microsoft word to better understand what I can and cannot learn from file properties of documents created in Word or Excel. What I learned from this expert is that if I copied information received by email or other ways onto a file that I created then the author name showing in the metafile would be mine but that does not mean that I actually wrote the text or entered the data. Or, if I were to send a doc to an RA saying "add the study information", then again I would be the author according to the metafile when in fact I was not the one writing up the information. Or, if an RA wrote it up from my laptop, again the name would be mine and not theirs since I owned the laptop. In a world where most interactions happened via USBs rather than emails and, as in this case, I don't have email records to support my memory.

In the summer of 2010, when the data was collected, I moved from UNC Kenan-Flagler in Chapel Hill to HBS in Boston. In between the move, I also spent time working as a research advisor at Disney in Glendale CA for about a month (from June 18 to July 18 [as stated in an email I found that confirms car reservations]), for projects in collaboration with [redacted] of Duke. I do not have access to emails from the time I was on the faculty at Kenan-Flagler. I believe I traveled from Chapel Hill to Glendale, and then back to Chapel Hill to then move to Boston.

I reached out to the IT department at Kenan-Flagler asking whether I could get permission to receive my emails from the time I was there and I was told that the emails do not exist anymore and that, even if they did, I would not be able to access them given that I am not an employee there any longer. (I did not mention this process, nor anything else related to the allegations.)

I also reached out to the IRB at UNC (again, I did not mention this process, nor anything else related to the allegations), to see if I could access the IRB application for the study or any information related to modifications for it. The contact person reminded me that applications at the time were submitted on paper and that the IRB has no record of them.

As for the question of who reviewed the write-up of Study 1, I am not sure. I likely reached out to [redacted] first and then to [redacted] to share the draft at some point, but I can't confirm when. I also do not know how closely they reviewed the write up when they received it.

I reached out to [redacted] to see if she had any emails from that time that she could share (again, I did not mention this process, nor anything else related to the allegations). Unfortunately, she does not have any records from that time either. My recollection, and based on the emails exchanges is that I shared the write up and results with [redacted] and [redacted] The first email I have in my [redacted]'s folder is from August 12 2010 (unrelated to this project), and the first email I have in my [redacted]'s folder is from August 29 2010 (unrelated to this project). And the first email I see in my "sent" folder is from April 2011.

It appears we joined forces with [redacted] and [redacted] in early 2021 (see email below):

> From: Gino, Francesca
> Sent: Thursday, January 20, 2011 6:20 AM
> To: [redacted]
> Subject: tax data
>
> Hi [redacted] and [redacted],
>
> Following up on [redacted]'s suggestion, I wrote to [redacted] to see what he ended up
> doing with his data from the field study with the insurance company. As [redacted]
> suspected, he never published it but he is interested in publishing it. [redacted]
[redacted] helped him collect the data. So I suggest we add them as co-authors
> and write up the paper for a top tier journal. Would this plan work with
> both of you?
>
> We can then work on extensions of the paper with [redacted] or [redacted]
>
> francesca

[redacted] raised issues about the procedure when we shared the draft of the study with her (as stated in the email from March 9 2011). I believe at that point I checked in with [redacted] to clarify the details of the procedure that she used when running the study. [redacted] and I had regular meetings even after I left UNC: I traveled there often and we spoke regularly since she kept working for me when I joined HBS, running studies at Kenan Flagler that would be difficult to run at HBS (e.g., because of the use of deception) or that were in collaboration with local co-authors (e.g., [redacted] of Duke).

2. Can you please provide a chronology of the publication process of this paper like you provided for the other papers?

Here is the chronology of the publication process of this paper. I gathered this data from the Submissions folder and also from email exchanges with [redacted] (in my emails, in the [redacted] folder):

- I believe the lab data for this project was collected in 2010 (the data for Study 1 was collected in July-July 2010). At the time, [redacted], [redacted] and I were the only authors on the project
- We had a few conversation with [redacted] to see if we could work with the IRS on a field experiment, but that did not come to fruition
- [redacted], [redacted] and I believed the projects would be much stronger if we had field data. We learned that [redacted] may have such data and reached out to him to see if he'd be interested in joining forces.
    - [redacted] was a co-author and collaborator of mine on multiple projects. We realized we were both interested in unethical behavior when he gave a talk at CMU and I was a post doc there (in 2009) and we started various projects when I moved to UNC, as an Assistant Professor.
    - We joined forces in early 2011 and started working on a paper to submit to a top jounrnal.
- We first submitted the paper to OBHDP on May 9 2011. We were rejected on August 15 2011
- We submitted the paper to Science on Nov 21 2011. We were desk rejected soon after
- We submitted the paper to PNAS on June 11 2012. We received an R&R on July 12 2012, resubmitted a revised version of the paper on July 19 2012 and received notice that the paper was accepted for publication on July 30 2012.

Career	Term	Last	First Name
Graduate Arts & Sciences	2011 Fall	[redacted]	[redacted]
Graduate Arts & Sciences	2011 Fall	[redacted]	[redacted]
Graduate Arts & Sciences	2011 Fall	[redacted]	[redacted]
Graduate Arts & Sciences	2011 Spring	[redacted]	[redacted]
Graduate Arts & Sciences	2011 Spring	[redacted]	[redacted]
Graduate Arts & Sciences	2011 Spring	[redacted]	[redacted]
Harvard College	2012 Fall	[redacted]	[redacted]
Graduate Arts & Sciences	2012 Fall	[redacted]	[redacted]
Harvard College	2012 Fall	[redacted]	[redacted]
Graduate Arts & Sciences	2012 Fall	[redacted]	[redacted]
Harvard College	2012 Fall	[redacted]	[redacted]
Graduate Arts & Sciences	2012 Fall	[redacted]	[redacted]
Graduate Arts & Sciences	2012 Spring	[redacted]	[redacted]
Graduate Arts & Sciences	2012 Spring	[redacted]	[redacted]
Graduate Arts & Sciences	2012 Spring	[redacted]	[redacted]
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Graduate Arts & Sciences	2013 Fall	[redacted]	[redacted]
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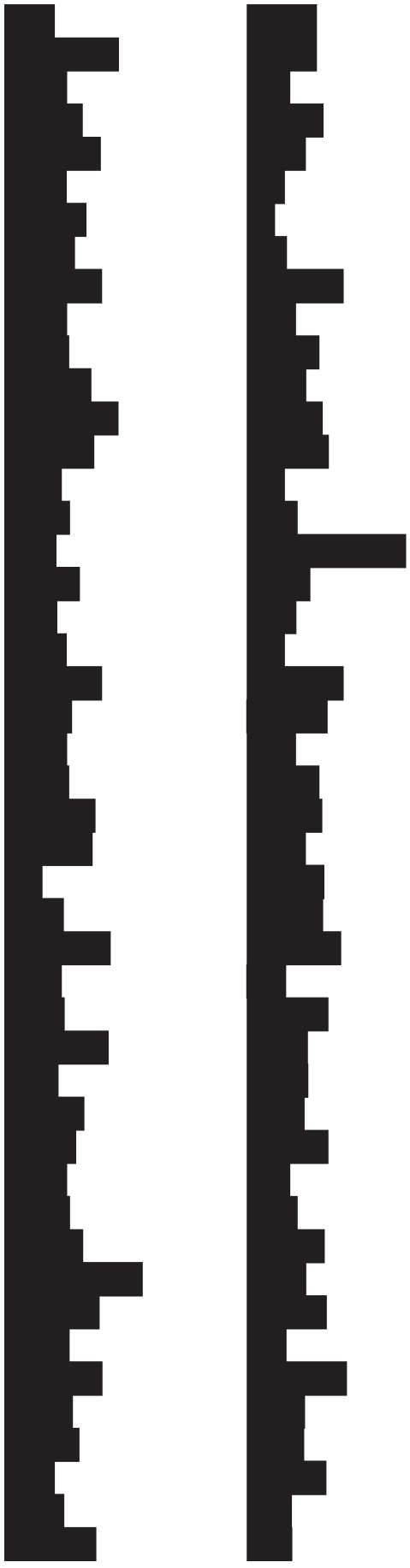

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Exhibit 6
Transcript of Witness Interview with Professor [redacted] on June 2, 2022

[redacted] Interview

June 2, 2022

[0:00] ALAIN BONACOSSA: My name is Alain Bonacossa and I'm the Research Integrity Officer at Harvard Business School. First, let me thank Professor [redacted] for being here today and for being willing to be interviewed by the investigation committee. I will now make a brief announcement before handing it over to the Chair of the committee. First, a reminder that the interview will be recorded and transcribed. And [redacted], you will be given a copy of the transcript for correction.

[0:25] so, let me start by introducing everyone on Zoom today, starting with the investigation committee. Professor Teresa Amabile, the Chair of the committee; Professor Bob Kaplan; and Professor Shawn Cole. The witness, of course, in today's interview is Professor [redacted], [redacted]. We also have, in addition to myself, a couple of staff members, Heather Quay, who is a university attorney with Harvard's Office of the General Counsel, and Alma Castro, Assistant Director in Research Administration at the Business School.

[1:00] Next, I wanted to provide a brief explanation of the interview process. As I mentioned to you, [redacted] this is a faculty review of a faculty matter. So the interview will be a conversation between the committee and yourself. It will entail a series of questions and answers. And [redacted] you should feel free to elaborate on any answer if you think that it could be helpful to the process.

[1:23] Some basic rules of the road for the interview for everyone-- to make sure the transcription is clear, only one person can speak at a time. At the end of my introduction, I will ask the staff to turn their cameras off and mute themselves. And [redacted], for you specifically, please answer questions truthfully. All answers need to be audible so that they can appear on the record, so nodding is not sufficient. If you do not understand the question, just ask for the question to be rephrased. And if you don't know an answer, just say so. If you need a break, just ask for one.

[2:01] Some important reminders-- HBS has an obligation to keep this matter confidential. So even the fact that this interview occurred or that there's an ongoing investigation into allegations of research misconduct is confidential. So [redacted] we're going to ask you to keep all of this information confidential. Also per HBS policy, HBS community members may not retaliate in any way, again, against complainant, witnesses, the research integrity officer, or committee members. [redacted], do you have any questions about the process? You're muted, but--

[2:39] [redacted]: Well, no, I'm good.

[2:40] ALAIN BONACOSSA: OK, so I will hand it off to Teresa. And Heather and Alma and I will mute ourselves and turn our cameras off now.

[2:51] TERESA AMABILE: Hi, [redacted], it's nice to meet you face to face after we've been emailing so much over the last several weeks. I am Teresa Amabile. I've been at Harvard Business School for about 27 years now. I'm a Baker Foundation Professor and my appointment is in the Entrepreneurial Management unit.

[3:13] I'm the Chair of this committee and I have two colleagues with me. I guess that's all I want to say about myself. Let me just hand it off to Bob Kaplan, who you might not be familiar with. And then Bob will hand it off to Shawn.

[3:31] BOB KAPLAN: Hi, [redacted]. So I'm Bob Kaplan. And I'm a professor emeritus at this stage, but definitely not retired. So those are very distinct categories-- often overlap, but not in my case. And I came to Harvard Business School in 1984 and had been at Carnegie Mellon Business School prior to that time. I work in the Accounting unit, but more management accounting, trying to create information useful for decision making and control and so familiar with measurement. I guess that's how I ended up on the committee.

[4:16] SHAWN COLE: And I'm Shawn Cole. I'm on the Finance faculty. I have an economics PhD and I have done and continue to do a lot of experiments. And I guess I'm not retired or Baker Foundation. I'm still a working stiff here at HBS but really appreciate your time. Thanks so much.

[4:33] [INTERPOSING VOICES]

[4:35] TERESA AMABILE: [redacted] we're all really grateful to you for spending this time with us. And Shawn and Bob, is it OK if you both mute yourselves except when you might have a follow-up question? Or if you notice me skipping something that I had planned to ask about, please feel free to break in, just so that we have minimized background interference. So, [redacted] is it OK for me to go ahead and get started with the questions that we have for you?

[5:08] [redacted]: Yes.

[5:09] TERESA AMABILE: OK, great, thank you. And I think it's probably OK, [redacted], for you and me to remain unmuted if we-- if that's more comfortable. I don't know if you have background noise. It looks like you're in your office.

[5:24] [redacted]: Yes, so if there is background noise, I could. But, yeah, I'll leave it open.

[5:30] TERESA AMABILE: OK, that sounds great. So I'm going to start with questions that we have on the 2020 JPSP paper that you published with Francesca and [redacted] on moral consequences of networking with a promotion or prevention focus. OK, so first, it's sort of a general background question. I guess this is a little bit of a warm-up question. Can you tell us how you came to be at Harvard for the postdoc that you did there and then how you got to know Francesca and how you came to be involved in this particular research project with her?

[6:11] [redacted]: Sure, so my advisor, Art Brief, is a good friend of [redacted]. So I got to know [redacted] and Francesca early on in my PhD program. And I met her as a PhD student while she was at UNC. And we started talking about just doing research.

[6:38] I think then she moved to Harvard. And so I completed my PhD. And I had-- I decided to do a postdoc afterwards. And I had a couple of options. One was the Ethics Center at Harvard, SAFRA, had a fellowship, which is officially under the law school or was under the law school. So I think that I was a fellow in the Harvard SAFRA Ethics Center. And I kept working with Francesca when I was a fellow there. And then after finishing and coming here to Kellogg, we continued working together.

[7:20] For this particular project-- so I have published with her extensively in multiple projects. This particular project, Francesca, [redacted] and I, we have an earlier 2014 or '15 ASQ that we published on instrumental networking and how it feels dirty. So we started this project. I think, like, the project's on instrumental networking that--

[7:47] TERESA AMABILE: [redacted] I'm sorry, I didn't quite understand. You said the earlier project was on what?

[7:52] [redacted]: On instrumental networking.

[7:55] TERESA AMABILE: OK.

[7:55] [redacted]: Broadly, yeah, how instrumental networking could feel morally dirty. We started that project, I'd say 2012 or '13, something like that. And we had started with that empirical paper. And along the way, the first year or two, when we haven't published that work, we had started the second-- and, again, even a third project that didn't end up anywhere, but the second project as well. So the two projects had been going on for a couple of years. We published the first paper in 2015, I think-- again, '15 or '14. And this one took us longer. And it ended up in JPSP in 2020.

[8:40] [redacted]: OK, that's helpful. So you first came to know her back-- I guess you were working with Art Brief. And he was at the University of Utah then. Is that correct?

[8:49] [redacted]: Yes, yeah.

[8:49] TERESA AMABILE: So that's where you did your PhD and where you first got to acquainted-- when you first got acquainted--

[8:55] [redacted]: Yes.

[8:55] TERESA AMABILE: --with Francesca. OK, and it sounds like you and she had been talking about this area of research for quite some time.

[9:03] [redacted]: Yes, so the three of us-- me, Francesca, and [redacted] we-- I think I'd say the first conversation we had about networking was, let's say, 2012. I think that that's probably close. I could look and find the first whatever email. But that was, yeah, the first time that we discussed this particular idea and then the two papers that came out of the collaboration.

[9:28] [redacted]: OK, Bob or Shawn, does either of you have a follow-up question on any of that background? OK, great. Thanks. So, [redacted] it's important for our committee to understand how this paper came about. I think you've already filled in much of this for us. But if you could try to, if possible, remember a little bit more specifically the chronology of your involvement in the research reported in this paper. I think that there are six-- I believe there are six studies in this paper-- and in the paper itself, your involvement in the paper itself.

[10:10] [redacted]: So this particular paper, the second paper, I think after we got most of the data for the first paper that, as I mentioned, published earlier, I'd say after a year or two into that particular-- into the investigation for the other project, we talked about, like, the idea that how we can actually overcome this feeling, the discomfort that people feel about instrumental networking. And one

of the things that the two of us discussed was that maybe more like a motivational perspective could be important and something that could help us. So basically this idea that, is it possible to help people reframe their networking activities or networking mindset they have?

[10:57] And, obviously, going to a large body of work on regulatory focus, that was one of the things that early on we decided to try. If I remember it correctly, the first ever study on this project was a study run in Italy. Because at that point, [redacted] was visiting Bocconi. So we put together a study to be run in Italy, and [redacted] coordinated to get the data for it. And Francesca and [redacted] translated it in Italian and all that.

[11:29] So I didn't have access to the survey or data. Again, it was in Italian. So that's the first-- I think, if I'm right-- study. And at the same time, if I remember it, Francesca did collect a different study in US to really see if the data in Italy is similar to the US or not.

[11:49] If I'm right, it's a study two in the paper where there are two samples. One is Italian sample. Another is the US students or US sample. So Francesca collected this study too. So the paper started in a study two, if I'm right. Then we collected--

[12:04] TERESA AMABILE: Okay, just one second. Do you remember the year or years approximately of the data collection?

[12:10] [redacted]: I could definitely figure it out if you want me and you send it later. But I'd say 2014, for example, something like that. But, again, I could get that.

[12:20] TERESA AMABILE: OK, well, if we decide we'd like it, we'll just send-- ask Alain to get in touch with you and--

[12:26] [INTERPOSING VOICES]

[12:27] [redacted]: Yes, so I should have the record of the emails, everything. So, yeah, email me if you need the exact date. It was summer time or something like that if I'm right. But, again, she was visiting Italy, Bocconi, visiting that year.

[12:38] TERESA AMABILE: And both of those studies-- the one run in Italy and the companion study in the States-- those both ended up in the paper?

[12:46] [redacted]: Yes.

[12:47] TERESA AMABILE: OK, in the published paper, correct?

[12:48] [redacted]: Yes, in the published paper if I'm right. Then the rest of the studies-- so in the-- in like-- the correlational data comes from a law firm. [redacted] collected that data. The MTurk studies are the ones that Francesca ran. And the field experiment with working adults is something that the three of us worked together, meaning that we contacted Survey Signal, which is the company. We put together a survey. But Francesca was the contact person who collected the data and put everything together.

[13:25] TERESA AMABILE: OK.

[13:26] [redacted]: Anything. I don't know--

[13:27] [INTERPOSING VOICES]

[13:27] TERESA AMABILE: And so one thing that you said there, which I think went be a little fast, but I just want to make sure I heard it right, was that all of the MTurk studies were run by Francesca?

[13:38] [redacted]: Yes.

[13:38] TERESA AMABILE: Yes, OK, OK.

[13:41] [redacted]: So I went back to look at this particular paper and all the data sets and anything. And, yeah, I didn't collect any of the data personally.

[13:52] TERESA AMABILE: OK, so for none of the six studies did you collect the data? OK. OK. That's helpful. Bob, Shawn, any follow-ups?

[14:05] SHAWN COLE: I assume you're going to drill in on study 3A?

[14:07] TERESA AMABILE: Yeah, yeah, I'm about to move to that. Thanks. OK, so I do want to focus in now on study 3A. Do you need me to give you a little reminder about which one that is?

[14:18] [redacted]: Let me-- I just opened up the paper. This is the one that we manipulate on MTurk, and we have the full model. And we did two studies because I think the second one was-- I'm trying to see what is the second.

[14:35] TERESA AMABILE: So in study 3A, participants read a story about instrumental networking and were asked to imagine that they were the protagonist. And study 3B was essentially identical, same conditions, same three conditions. Except the participants were actually-- they actually engaged in instrumental networking through MTurk. I think they were asked to send an email to someone--

[15:01] [redacted]: I see. Yeah, I saw it.

[15:02] TERESA AMABILE: --in their network, in their professional network, asking them for a connection of some sort.

[15:07] [redacted]: Yes.

[15:08] TERESA AMABILE: Something like that.

[15:08] [redacted]: Yes.

[15:09] TERESA AMABILE: So the one that we're interested in is the first one in which they read a scenario and were asked to imagine themselves in the place of the protagonist of the story. OK, so I'm going to go through each stage of the research for that particular study. And I'm going to ask you to tell us to the best of your knowledge when it occurred, who was involved in supervising the activity that I'll mention, and who was involved in carrying out the activity.

[15:44] [redacted]: OK.

[15:45] TERESA AMABILE: So, first, the conceptualization and design of the study.

[15:51] [redacted]: So these studies, a lot of them, if you look, are similar and similar to the other paper we had as well. So I'd say the design, all three of us were involved, meaning that we talked about which manipulation, for example, prevention or promotion we want to use and deciding whether we want to use like the story that we drafted or created early on for the other paper. So I'd say all three of us were involved in terms of designing and teaching through the design.

[16:23] TERESA AMABILE: OK, can you approximately place that in time, when that design, the conceptualization and design conversations might have happened?

[16:38] [redacted]: These are newer studies, meaning that I'd say these were earlier-- I don't know, 2017 or '18, honestly, these studies, or even later. Or maybe one of them is even later. Because I think one of them we may have added because of the review process.

[16:58] So, again, I can look back and see like if I have in any of my emails the exact time. But I'd say definitely there was a gap of two or three years from the early Italy, Italian sample, or even the law firm data and these. Both the correlation study, I remember, for example, study 1, correlational study, this is a rerun that we reported here. She ran an earlier study. And this is a rerun that we added later. So I say time-wise, this is later, 2018 or so.

[17:31] TERESA AMABILE: OK, and, [redacted] again, it sounds like if we wanted to follow up and ask you to look for emails if you could place it more specifically in time and even share those emails with us where the study was being designed, that's something you'd be willing to look for?

[17:48] [redacted]: Probably. Again, I think one challenge is that, as you could imagine, we have different versions of this paper. And study 3A or 3B, whether-- right now it's called 3A and 3B. It's possible we have a version-- because, obviously, getting to JPSP. But I remember we sent it to AMJ, got rejected, and to Org Science.

[18:05] So it's possible it was called a different study then. So I, again, have to very much really look to make sure it's the same study. But the ideas, I'm sure-- yeah, I mean, I'll be more than happy to look more into it if you have a specific question.

[18:21] TERESA AMABILE: But it sounds like, as far as you can remember, this was added after the review process had started, after it had initially been submitted to whatever journal--

[18:30] [redacted]: I'm not sure. For JPSP, I'm not sure. It's possible that this was before even initial submission to JPSP, which I could easily figure out because I have the file for initial submission, if you want to.

[18:41] TERESA AMABILE: You have the file for the initial submission to JPSP, but not the very first one, which may have been like AMJ or something?

[18:47] [redacted]: I do have those.

[18:48] [INTERPOSING VOICES]

[18:48] TERESA AMABILE: Oh, you do have those as well?

[18:49] [redacted]: I do.

[18:50] TERESA AMABILE: OK.

[18:50] [redacted]: If you actually are interested, I could look and see when I-- we submitted to AMJ, whether this particular study is part or not. But, yeah, I could look into it. If I am right, I could actually just confirm that I most often, when I submit or do an initial submission, I try to at least save the draft that we submitted.

[19:10] This one, I think it's Francesca who led. So usually, at least that's my common practice, that we share the final draft we send to the co-authors. So I imagine that I should have a copy of like the submissions.

[19:25] TERESA AMABILE: OK, OK, and can you say-- I guess I should have followed up on the earlier question with this. How were you involved in the writing, the drafting of the paper and the revision? It sounds like the paper went through many revisions with perhaps studies being added along the way. Can you describe how you were involved in the writing, drafting of the paper, revisions of the paper?

[19:55] [redacted]: So both, like this paper and the other paper, all of us, in a sense, contributed equally, which means that any of the papers, with both papers, we say the order of the authorship is-- I don't know-- based on last name or first name, which means that we were all closely, you know, collaborating and like revising the write-up or whatever, the theory part, all of them, I mean, all of us, honestly, the three of us. So I say, again, going back even in the paper, it says it's really authors contributed equality for sure. For writing and all that, we did it, yeah.

[20:34] TERESA AMABILE: OK. And now, I'm assuming that would have involved conversations about the paper, conversations about the different studies, the order in which to present them in the paper, the story you're going to tell--

[20:48] [redacted]: Yeah.

[20:48] TERESA AMABILE: --conversations and then actually drafting. Different people might have been responsible for drafting different pieces of the paper? Is that how you would work as a collaborative team?

[20:59] [redacted]: Yes.

[21:01] TERESA AMABILE: Thank you.

[21:02] [redacted]: OK, so the next stage of the research is data collection. Again, for study 3A, can you tell us to the best of your knowledge when that might have happened and who would have supervised it and who would have actually carried out the data collection activity?

[21:22] [redacted]: So in study 3A, I actually went back, and I don't have the Qualtrics survey shared with me. So Francesca collected that data, supervised the data collection, collected the data, analyzed the data, and wrote up this study. So I didn't have access to the Qualtrics survey. I could-- based on the drafts of the paper, I could figure out what time, which year it was collected, obviously. But that would be something that I have to look and find what data set it is and like, based on my email records, in a sense, find the year.

[22:01] But I don't have access. I double checked my Qualtrics account. I don't have access to the Qualtrics survey or the data. I only have-- after paper got published or maybe before, I can't remember, but sometime we put everything on OSF-- I think Francesca did-- which is the data set that is there.

[22:19] So I don't have a separate record of the data beyond what is on OSF. I checked my folder to see if I have the data set. And the only data set that I found was-- if I'm right, for a different study like that I analyzed. She asked me to double check, I think, the numbers or something like that. But this one I didn't have access to.

[22:42] TERESA AMABILE: OK, thanks. What about-- and so it sounds like you said she supervised the collection of the Qualtrics data. Do you have any idea who was involved in actually carrying out the data collection?

[22:59] [redacted]: So it's an MTurk study. You mean who posted it online?

[23:02] TERESA AMABILE: Yeah, who posted it online?

[23:07] [redacted]: I don't know. I don't necessarily know. Because I know Francesca, sometimes she has RAs, sometimes not, or things like that. So, honestly, I don't know if she had an RA that was responsible in managing.

[23:21] I did not communicate with anyone. Because there are, for example, even like right now faculty at HBS that I'm working with that I know they have a full-time RA, and their RA is cc'd in the emails, and we communicate. These data collections, if she was asking an RA to do it, she did it on her end. I don't have anyone else involved as far as I know.

[23:44] TERESA AMABILE: OK, it sounds like you were not in that email loop.

[23:46] [redacted]: I wasn't. No, I wasn't.

[23:49] TERESA AMABILE: What about data cleaning?

[23:51] [redacted]: Nothing. So as I said, I didn't have access to the data at all. My recollection is that she ran the study, and then, for example, she said it worked out. We found support. And then she wrote up the study and shared with us the draft or something like that. So I didn't have access to it.

[24:12] Obviously, the data is on OSF. I could check and see if-- I mean, if anything, like I didn't have anything separate in my own folder, so which means that probably-- I wasn't-- I didn't have, like, the data shared with me really in advance. So I have the final say, which is this data that's on OSF, so which is-- I mean, that's like what I have.

[24:39] TERESA AMABILE: OK, OK. And data analysis, I believe I heard you say earlier that Francesca did the data analysis.

[24:47] [redacted]: Yes, I think this particular project, if I'm right, there is only one study at some point that, like, the data was shared. And maybe two studies, actually, it looks like I have the data from the law firm, at least part of it or maybe an earlier version of it that I basically like had access to.

[25:14] TERESA AMABILE: OK, but not 3A, not study 3A?

[25:18] [redacted]: Not 3A. Not the Italian. I actually checked. I don't have any of the other data sets, no. I mean, the only thing is that the Survey Signal data, apparently, it looks like I have the data for that study, like study-- what's it called-- 5 or 6-- if I'm right.

[25:33] TERESA AMABILE: OK.

[25:34] [redacted]: That's when I have a separate record. And that's-- I don't know if that's online available or not as well, honestly. But this is the only data that I have, yeah.

[25:42] TERESA AMABILE: OK. And in terms of reporting the data in this, for 3A in the submitted and then, subsequently, the published versions of the paper, I think I heard you say that Francesca would have drafted-- done the first draft of the write-up of 3A and shared it with you and [redacted]. Is that correct?

[26:02] [redacted]: Yes.

[26:03] TERESA AMABILE: OK. And data posting on OSF?

[26:08] [redacted]: So if I'm right, I think she managed it. She basically posted or asked someone to post but--

[26:16] TERESA AMABILE: She being Francesca?

[26:17] [redacted]: Yes, Francesca.

[26:19] TERESA AMABILE: OK, and again, a sense of the time frame in which that would have happened?

[26:25] [redacted]: I think that there should be a timestamp on the upload, correct? I can--

[26:32] TERESA AMABILE: There probably is. Yeah, there probably is.

[26:34] [redacted]: Yeah, yeah, I think there is.

[26:36] TERESA AMABILE: It must be. And my guess is that-- I think that typically would happen either when the paper is submitted or when the paper is published.

[26:45] [redacted]: So right now the date created is on April 13, 2020, which I imagine is-- it looks like it's after the paper got conditionally accept or accept. That's like my recollection. I have to say-- and maybe I should-- I mean, I don't know if I have to say, but like as you guys probably know, like we,

over the years, we have changed our practices, meaning that right now I-- like we, even for initial review, like the first submission of the paper to any journal before even rejections, right now like the past three or four years, every paper I submit, I already upload the data. So I think this is an older project, which means that when the paper got conditionally accepted or something like that, we went ahead on a public-- and, like, uploaded the data.

[27:35] TERESA AMABILE: Yeah, and we within the committee have talked about how practices in these particular journals--

[27:39] [redacted]: Exactly.

[27:40] TERESA AMABILE: --which I'm more familiar with than Shawn or Bob. We've talked about how those practices have changed in recent years.

[27:46] [redacted]: Yes, exactly. So my point is that, yeah, I think this is probably, really a final round where we uploaded the data.

[27:55] TERESA AMABILE: OK, OK. So I've just done question 3 with all its sub-parts. Bob and Shawn, did I miss anything? Or did you have any follow-ups on any of that?

[28:08] BOB KAPLAN: I'm good. Good set of answers. It's clear.

[28:11] SHAWN COLE: Just checking-- so when you submitted papers back then, the journals did not require you to submit copies of the data, no?

[28:17] [redacted]: No.

[28:19] TERESA AMABILE: Bob, I think you may have put on your headset, but not changed your audio source. Because when you spoke a minute ago-- oh, your microphone was on top of your head. That's it. OK, thank you.

[28:31] OK, so [redacted] could you please tell us who, if anyone, might have had access to the data and the ability to modify it at each of those stages of the research that I went through, besides the individuals you have mentioned? And I guess, if I remember right, the only individual you've mentioned is Francesca for this study 3A.

[28:58] [redacted]: For study 3A, yes, I don't think it was shared with [redacted] as well. Because I imagine it would have been shared with both of us. And I don't think-- yeah, I don't think it was shared with either one of us.

[29:12] TERESA AMABILE: OK, and is it true that you simply don't know about the extent to which the data might have been shared with RAs or doctoral students or others in Francesca's lab at the time?

[29:24] [redacted]: For sure, I have no-- yeah, I have no idea who helped her like-- yeah, it's possible she have had full-time RAs or others that helped her either post the study, like cleaned the data, or even write up the initial draft, frankly. I don't know.

[29:42] TERESA AMABILE: OK, thanks. Follow-ups, Bob or Shawn? You can just shake your head or-- OK, it looks like they're both saying no, no follow-ups. OK, thank you.

[29:52] And now, [redacted] could you please tell us to the best of your knowledge whether and how the data set for the study was modified at any point or points between initial data collection and final posting of the data set on OSF?

[30:12] [redacted]: So, I don't have access to the Qualtrics survey, which, presumably if that's the raw data, correct? So I don't have access to it. And I never had access to, again, raw data or any other version of it. The only thing that I actually even had access is the OSF file. Of course, I don't know if there is any difference between presumably an earlier version compared to the last version, which is the OSF file. So to best of my knowledge, there shouldn't be any difference, correct? So I don't-- I mean, I haven't seen any other version of this, as I've said, that I've seen.

[30:56] TERESA AMABILE: Thank you. It looks like Bob has a follow-up.

[30:58] BOB KAPLAN: Yeah, it's just to corroborate really what you've said, but implied that there was no discussion, email, or chatter among the three co-authors that there were some issues with the original data that needed to be somehow worked on?

[31:19] [redacted]: No. The only thing I remember, generally, we may have had a discussion. Like the field data collection was a big one that we had discussion about generally how to collect that data, honestly. This study, I can't-- I don't think there was a discussion.

[31:37] TERESA AMABILE: So, [redacted] if-- it sounds like you don't recall any discussion of, you know, maybe problems, some of the MTurk participants were not responding in the way that was intended or something like that? Is it the case that you don't recall, or you're confident there weren't any such issues?

[32:10] [redacted]: Good question. So I don't recall, I mean, honestly that there was a discussion. Having said that, again, I can't say 100%, meaning that-- yeah, so, again, to the best of my knowledge like with high, whatever, I don't-- again, I can't be 100% certain. But I don't think we had a discussion about anything.

[32:49] And if anything, generally, like the standard is if there were presumably filters in the study or manipulation checks or exclusions, I imagine it should have been reported in the paper. And that's like the standard practice. If you have to like really just say some people didn't respond to the prompt and they were excluded, I imagine it's in the write-up.

[33:12] TERESA AMABILE: So when you say filter, you mean, for example, an attention filter--

[33:15] [redacted]: Attention check, yeah.

[33:16] TERESA AMABILE: Where there's a check like, you know, how many cars are in this photo or something like that?

[33:22] [redacted]: Exactly. Those, anything like that, again, if it's in the beginning of surveys, sometimes people don't report because it's just not-- it's not letting people to get in. But if it's later and

you are excluding, like the standard practice says now you report all that. So my assumption is that if there was a filter like that probably we had, we already-- like we reported it in the text.

[33:44] TERESA AMABILE: OK, thank you. If you did have any discussions like that, on the order of, oh, gosh, should we toss out participants who did this thing or that thing, would those discussions have been by email most likely or would you and your co-authors or you and Francesca have hopped on the phone?

[34:05] [redacted]: No, I mean, we didn't have phone conversation, if I'm right, about this one or even other projects often. I think we usually do them through email. And my sense is, again, this is an older project, which makes it a bit difficult, meaning that things have changed really. As I said, like the past couple of years, now for me, any data collection I'm involved, I make sure that I have a copy of the Qualtrics survey and a lot of things, correct? But, again, this is older.

[34:34] But I feel like often what we do, if there are serious issues with a study, we rerun a study. Yeah, I think that's-- unless we report something that's been excluded or something. But, often, we rerun a study if there are issues and we have to really fix those issues.

[34:53] TERESA AMABILE: OK, that's helpful. Thank you. Shawn, Bob, any follow-ups now? No? OK, it looks like they have no follow-ups.

[35:03] All right, so at this point, [redacted] we're going to have Alain do a little screen sharing so that we can show you some of what we've seen in the data. And I'll want to ask you some questions about that, OK? So we'd like to show you some discrepancies specifically that we discovered between the data set on Francesca's computer and the data set that was posted on OSF. And the latter, of course, underlies the analysis included in the published paper.

[35:39] [redacted]: Sure.

[35:40] TERESA AMABILE: So first, in this table that I think is going to be labeled Table 1, Alain, if you could do a screenshare of that and pull it up. OK, so this is a comparison, [redacted] between the data set from Francesca's research records on her computer and the data set that was posted on OSF. And you can see that the OSF data set, which is essentially underlying the analyses that are reported in the paper, has the means in the expected and reported direction for study 3A, that is, prevention focused being notably, by far, the highest, and the promotion focused condition being notably and largely lowest. And this is, as you'll remember, the dependent measure here is feelings of impurity.

[36:54] [redacted]: OK.

[36:55] TERESA AMABILE: OK? When we computed means for these conditions from the data set on her computer, as you can see, they're directionally flipped. The lowest is now the prevention focus condition. And the highest is now the promotion focus condition. So that's one discrepancy.

[37:20] I would like to show you some other discrepancies that we noted. And then I'll ask you to comment. But Bob, did you want to clarify something here?

[37:35] BOB KAPLAN: Yeah, what you're about to show is not another discrepancy, but to understand the source of this discrepancy.

[37:42] TERESA AMABILE: We're not positive, Bob, that it's the source or the sole source of this discrepancy. It likely contributed to this discrepancy. Would you say that that's fair to say?

[37:56] BOB KAPLAN: Well, these are means of underlying observations. And so if the means are different, there are underlying observations that are different.

[38:04] TERESA AMABILE: Right. What we're going to show you next is some observations that don't match, that should match but don't match between Francesca's data set and the OSF data set.

[38:15] [redacted]: So just a clarification question, when you say her data set, is it the Qualtrics survey you downloaded, or it's like she had a file with these?

[38:26] TERESA AMABILE: There's a data set that was on her computer that she identified as the data for this study.

[38:35] [redacted]: OK.

[38:36] TERESA AMABILE: And Alain--

[38:37] [redacted]: And she had those files on it, so she had the OSF file as well as this other file?

[38:44] TERESA AMABILE: You know, I don't know how to answer that last question as to whether she had the OSF data set on her computer. I don't even know if we asked her about that.

[38:55] [redacted]: OK.

[38:55] TERESA AMABILE: Alain, I'm going to ask you to put thumbs up or thumbs down, if you could, if I'm correct in saying that this is the data set that Francesca identified as the raw data for this study, what we're calling author's data set here?

[39:13] ALAIN BONACOSSA: Yes, I can answer both questions, actually.

[39:16] TERESA AMABILE: Yes, please.

[39:16] ALAIN BONACOSSA: She pointed us to both. So the raw data set is what is the OSF on her local machine, the author's data set being the data set from Qualtrics. So we-- she pointed us to the survey in Qualtrics where we then downloaded the data.

[39:37] [redacted]: I see. So, basically, the OSF data set is-- yeah, author data is Qualtrics survey. Good, thanks.

[39:43] ALAIN BONACOSSA: Correct.

[39:44] TERESA AMABILE: Thank you, Alain. My memory had blipped out on that. OK, so [redacted] what we're going to show you now are two additional tables where there are certain lines of data in the two conditions that seem like they should match between the two data sets, but they don't.

[40:08] So these are three pairs of observations. And they're paired on the basis of the verbiage that you see in the essay column, the first one, “Speaking of career aspiration…” and so on. The next row-- the first row is from the OSF data set. The next row is from Francesca's data set, Francesca's Qualtrics.

[40:40] And you can see that the qualitative responses match exactly. And if you look at the two right-hand columns, those qualitative responses also match exactly. But as you can see, this is the promotion condition. The numerical responses for the dependent variable measures are very different on each one of the measures. And in Francesca's data set, for each of these three pairs of rows, you can see that the numbers, the ratings on moral impurity, are much higher.

[41:31] [redacted]: Sorry, Alain, like if you have access to her survey, you could see if she had shared this with us or not, correct? Can you confirm that? Because I checked. And I didn't have access to it, like to any of these surveys. But I want to just-- you can on your end check, correct?

[41:50] ALAIN BONACOSSA: That is technically correct. We did not check if any of the surveys were shared. We only downloaded the data as instructed by the-- sorry, by Francesca.

[42:03] TERESA AMABILE: Alain, it strikes me that that question [redacted] just asked is a good question for us, the committee. I think if it is possible to do that, it could be useful for us, very useful for us to know with whom the Qualtrics data were shared, if they were shared with anyone. Should that be possible, Alain?

[42:25] ALAIN BONACOSSA: Yes.

[42:26] TERESA AMABILE: OK, great, thank you. So [redacted] would you like to spend it a little bit more time studying this table?

[42:34] [redacted]: No.

[42:35] TERESA AMABILE: No? OK, now we're going to show you a similar table. By the way, this was not based on an exhaustive search. It was based on one member of our committee trying to just kind of match up lines of data to see what might underlie the flipping of the means that we saw earlier.

[42:55] OK, so this was the promotion focus condition. And you're going to see three other pairs of data from the prevention focus in this Table 3 here. And I think you know how to look at this now.

[43:12] [redacted]: Yeah.

[43:13] TERESA AMABILE: I'll give you a minute to study it. But as you can see, the numbers for these three pairs, the quantitative numbers in Francesca's data set, are all-- I believe they're all ones. Yes, they're all ones. And except for that very first row of the OSF data--

[43:51] [redacted]: I was going to say maybe the wrong coding, but apparently the numbers aren't just flipped. It depends on the number.

[43:58] TERESA AMABILE: Right. They're not just-- they're not just flipped.

[44:00] [redacted]: Yep.

[44:01] TERESA AMABILE: And I think in the previous table, we saw many that did look like they could possibly be completely flipped.

[44:07] [redacted]: Yeah, it's a different coding or something.

[44:09] TERESA AMABILE: Yeah, but not all of them, not all of them, yeah. We looked into that to see if that could explain it. OK, so I do have a question here. And that is simply, can you explain how such discrepancies could have arisen? And Alain, I think you can stop the screenshare now.

[44:34] [redacted]: Honestly, no, because I think like it's not that, like, let's say, there are people who are add-- like deleted, in a sense, correct, or excluded for a reason, which could be one explanation, as you said. Based on the writing, it's the same person. So, honestly, I can't really, I don't know.

[45:02] TERESA AMABILE: OK. Bob, Shawn, any follow-up? Looks like no. OK, I'm mindful of the time. It's almost 4:20. So I'm going to move on to the question in our guide that's question 7. So, [redacted] please understand that we feel we must ask this direct question to everyone we speak to who was involved in this research. Did you change the data in a way that could have led to these or other discrepancies?

[45:35] [redacted]: No.

[45:38] TERESA AMABILE: OK, thank you. And we're trying to understand the atmosphere in the lab in which the data for this study were collected. And that clearly is Francesca's lab. Specifically, we're trying to understand the extent to which people in the lab might have felt pressured or highly motivated to produce certain outcomes in a study. Can you give us your views on the atmosphere in this lab at the time the data were collected?

[46:19] [redacted]: So I don't know, as I said, like exactly when the data was collected. But my very strong suspicion is that it was collected, again, after 2017 or '18, but I was already at Kellogg and [redacted] at Toronto. And none of our-- none of us are students, so we were faculty. So then, so this question, if you want me to answer, it really goes back to when I was a postdoc or something like that. Is that what you're asking, broadly or about this particular study?

[46:54] TERESA AMABILE: Well, I was-- we, as a committee, are most interested in at the time that this study was conducted. But I guess I know-- I mean, I've run a lab since I started as an assistant professor many, many, many years ago. And I would say that the atmosphere in my lab-- my doctoral students, my RAs, my undergrads who were working in the research-- was probably pretty consistent throughout.

[47:25] So I guess I would like you to give us your impression of the lab and specifically around whether you think that those working in the lab might have felt either highly pressured or highly motivated to produce outcomes of a certain sort, whether or not they were directly instructed to do so. Could you give us your impression of the lab from-- you were a postdoc, is it, 2012 to 2014? Or is that right?

[47:59] [redacted]: Yes, so, first, I want to say that as far as I understand it, at least the time I was at Harvard, she did not have an independent lab, meaning that when I was at Harvard, [redacted] and

Francesca, and at that point-- who else was there? There were like a couple of other faculty. [redacted] joined the program, whatever, the faculty.

[48:25] So there was more of what they called-- what was it called-- not-- what was it called? NON-Lab or something like that. So, basically, this was more of we would get together every week or every other week, and we would present earlier stage ideas. And [redacted] and Francesca and, I think-- as I said, [redacted] at that point just joined the program. She was there.

[48:50] It wasn't a separate lab she was running, meaning that because right now I run a lab, which means I have all the postdocs, PhD students, RAs that are working with me. We meet regularly and all that. What she had at that point, I wouldn't -- I won't call it a lab. Because the lab--

[49:06] TERESA AMABILE: It was a joint-- it was a joint research...

[49:09] [redacted]: Yeah, it was a joint research presentation type meeting. So that's one. I haven't really worked with her PhD students ever. I have worked with project with her, with PhD students. But, again, not-- I feel like I can't speak about her interaction with her PhD students much.

[49:34] I mean, that's the other thing I was going to say. Generally, my personal experience, frankly, I-- like I-- it's hard. Honestly, I like-- the idea that there would be some like-- I'm not aware someone else has an RA or a PhD or someone else was collecting the data or not. I wasn't given that impression.

[50:02] So, again, honestly, I can't speak of that, that someone else had access or was motivated to do this. I just can't speak of that. Because I wasn't under the impression that someone else necessarily directly involved like, oh, it's a lab manager. The person is just being on the emails, and he-- whatever, he or she-- is managing these things. So I don't know if it's really answering your question but--

[50:30] TERESA AMABILE: I think much of what you said has gotten at my question. I guess one quick follow-up I have is: Did you ever see her interacting-- it sounds like you did not see her interacting with her PhD students around specifics of how research was being conducted or a particular project. But I just wanted to make sure I understand that correctly. And I'd like to know also the same thing about RAs, if you ever saw her interacting with RAs or postdocs who were working on her research.

[51:07] [redacted] RAs, no, I can just-- over the years, and I've done a lot of projects with her, I can think of one, let's say, data collection, where I was in touch with an RA. The rest, I assume that she is running the MTurk studies or things like that. If she had an RA or assistant, I'm not aware, honestly, which I think probably she does. Given how busy she is, I'd be surprised. But I wasn't in touch with anyone or I'm not aware of that, correct?

[51:38] For PhD students, I think there are two people, like Andrew Brodsky and right now one of her newer students, Bushra, and maybe I could just look back and maybe there are a couple of other students that at least I've been on projects with her as well. And generally, I feel like, even in my case, I don't think we were-- I never got the impression or, if anything, when I was a postdoc or PhD student that like any pressure to produce honestly. So I feel like at least my personal experience, I don't think that's been the case really, that I feel like, yeah, things have to work or anything like that. No.

[52:24] TERESA AMABILE: OK.

[52:24] [redacted]: We have had tons of-- like Francesca and I, we've done so many studies, a lot of them as part of the CLER lab, the behavioral lab at Harvard. And I'd say 80% of them never worked out, really, the data, like the studies I ran and all of that. So I feel like this is just very common when the studies don't work out, so, yeah.

[52:48] TERESA AMABILE: OK, thank you. Bob, Shawn, any follow-up? No. OK. We're getting to the end here.

[52:57] [redacted]: Sorry.

[52:57] TERESA AMABILE: Close to the end. On this one, on this study--

[53:00] [redacted]: Yes, [redacted]

[53:01] [redacted]: Sorry, and I think maybe Alain-- because I want honestly, now that you shared this-- I want to double check everything. Alain, can you check and see-- at least send me the name of the Qualtrics survey you are, you are referring to, which is the data downloaded so I'll check all my records as well as my-- anywhere to see if I had ever access to that Qualtrics survey?

[53:22] Because I'm just curious. I mean, at least to my knowledge, when I check my account, when I checked her name, all the Qualtrics surveys she has shared with me, I didn't find anything about this project. But I want to just make sure. Just if you send me the name, that would be helpful so I could check my emails and see if I ever, besides the OSF, ever this data file was shared with me or not.

[53:46] ALAIN BONACOSSA: Yes.

[53:47] [redacted]: Thanks.

[53:48] TERESA AMABILE: Thanks, Alain. OK, [redacted] are you familiar with [redacted] who was Francesca's research assistant at the time that the data were collected? The first name is [redacted] And the last name is [redacted].

[54:12] [redacted]: Not really. So there-- I feel like, if I'm right, like maybe for a different project we were doing some-- I don't know, so like-- so I remember like over the years, there has been a couple of times that I've been in touch with her RAs and maybe like for data coding. So that's the only-- and I don't know.

[54:48] Now that you've said the name, I can't even recognize the name. But my point is that I knew that I had some interactions with different RAs when we did some coding for different projects. So it's possible I had interaction with him at some point. But, I mean, when you said, I can't even recognize the name right now on top of my head.

[55:06] TERESA AMABILE: OK. So we might ask you to just kind of do a search in your emails at some point if you--

[55:14] [redacted]: If you send me...

[55:14] TERESA AMABILE: Pardon me?

[55:15] [redacted]: If you send me the, whatever, what's like-- it's the ID, I could do it right now. Is it [redacted]-- or what's the--

[55:24] TERESA AMABILE: No, it would be [redacted].

[55:27] [redacted]: H-E, oh.

[55:29] [INTERPOSING VOICES]

[55:31] TERESA AMABILE: Just first initial, last name. And the last name-- the first initial is [redacted]. And the last name is spelled [redacted].

[55:40] [redacted]: [redacted]

[55:44] TERESA AMABILE: Oh, you're doing the search right now?

[55:46] [redacted]: Yeah. Sorry, at HBS, correct?

[55:49] TERESA AMABILE: Yes.

[55:52] [redacted]: Yes, I have a first email from 2018 where we made an IRB application, and she put me in touch to do for a code of conduct paper. Then we had some coding for a project on our [inaudible] of Shark Tank that he did help us with coding.

[56:09] TERESA AMABILE: On what? On what?

[56:10] [redacted]: We were coding Shark Tank videos for something. And [redacted] helped us with that. Two projects and then-- it looks like these are the only two projects. So I have a bunch of emails, but I did put IRB or the titles are "code of conduct IRB" and the rest of the emails are from 2019. This is 2018. 2019 and all the emails are Shark Tank coding, video coding, done, yeah.

[56:42] TERESA AMABILE: Shark Tank video coding, OK.

[56:44] [redacted]: And the last email on that is from 2020. Like it looks like November 2020-- oh, no, sorry-- yeah.

[56:55] TERESA AMABILE: November 2020, but that was on the video coding.

[56:58] [redacted]: No, sorry, I'm wrong. The last email from him is November 2019, yes. [redacted] shared with us the coding of the data set.

[57:11] TERESA AMABILE: OK, all right, thank you. So we're wanting to know-- and we have to ask this question-- if you think anyone-- anyone who might have had access to the data to your knowledge, is there any reason to believe that anyone would have changed the data of their own accord or at the direction of Francesca in a way that would have produced the anomalies that we've shown you?

[57:39] [redacted]: No, I-- again, as I said, I didn't know if anyone had access or-- yeah, no.

[57:46] TERESA AMABILE: OK, so second to last question I have-- and Bob and Shawn, I'm not seeing you raise your hand or anything for follow-up, so I'm going to go on. At any time during or after the research in this paper was being done, written up, or published, did you have concerns about the integrity of the data? And if so, of course, we'd like to hear about those concerns and how they arose.

[58:17] [redacted]: No. I wasn't, yeah, I think-- yeah, I think the first-- Alain, he emailed me. And I had the conversation. He mentioned something about this particular paper. Before that, no.

[58:31] TERESA AMABILE: OK.

[58:33] [redacted]: And I have to say maybe it's not, but, again, for the purpose of this, like given that for this project we collected over the years, multiple sources of data, I feel like it's just strange because like we have the data from law firms. They have the experiments, MTurks, and we have the field data. So my point is that we had so much evidence that I'm-- yeah, I just felt very confident about the paper, which is now I don't know how to feel about it, but--

[59:06] TERESA AMABILE: OK. You've told us a lot. But is there anything else we should know as we try to determine whether research misconduct occurred with respect to study 3A in this paper and, if it did, who might have been responsible?

[59:24] [redacted]: No, I don't have much information. But I can do it, if Alain shares that survey, to see if I have any record of discussion about that particular study somewhere, correct? I mean, if you want to, I could just look at different versions of the paper to see when-- like what's our communication about that particular study. I'd be happy to do that but--

[59:52] TERESA AMABILE: OK, well, thank you. Thank you for your willingness to look and to share more about this study with us. Was there something you were about to say when I started speaking just now?

[60:03] [redacted]: Oh, no, I was going to say that, I mean, this is more of like curiosity, but like did you guys randomly select this study? Not honestly, as you know, like I'm worried about this paper and everything. Like is it just a random selection of this particular study or should just feel awful about all the data, which I'm just now feeling that way?

[60:26] TERESA AMABILE: Oh, I could understand how I would be feeling if I were in your position [redacted] I don't know that I'm at liberty to share that information with you. But I'll check on that in the break that we're about to have. And I'll let you know when we come back. So let's call break of between 5 and 10 minutes and the length of the-- oh, let me first of all ask, Bob, Shawn, at this point, do you have any follow-ups? No?

[60:57] BOB KAPLAN: No, I think-- I think we should give [redacted] and ourselves a little break.

[61:01] TERESA AMABILE: Yeah, well, that's what I was just doing. So let's say 5 to 10 minutes. [redacted] Alma is going to put you into a breakout room, and she'll put the rest of us into another breakout room. And I'm sure everybody needs a bio break at this point.

[61:18] But then we, the committee, will just have a very brief conversation to see if there's anything else we'd like to talk about study 3A and the 2020 paper. And then we will go to the other paper that

Alain told you we'd want to talk about. [redacted] let me just ask you about your schedule. I know that we scheduled this unti-- I guess it's 4:00 PM your time in Chicago, is the scheduled end of this. Do you have any flexibility?

[61:48] [redacted]: So there is like a Kellogg PhD student reception. So I could stay probably 10, 15 minutes more. But then I have to get there because it's a ceremony and I'm the PhD Director, so-- but, yeah, 10, 15 minutes could be fine.

[62:02] BOB KAPLAN: Yeah, that's understandable. And you should go there.

[62:05] TERESA AMABILE: Thank you. OK, we'll see you in 5 to 10 minutes. Thank you. Yeah, I'll stay on until we're in the breakout room.

[BREAK]

[62:50] TERESA AMABILE: Hi [redacted] Are you at least slightly refreshed?

[62:54] [redacted]: Yes, I was just checking my emails, yes.

[62:57] TERESA AMABILE: OK, so we're going to talk now about the 2015 Psychological Science paper that you published with Francesca and [redacted], OK? So you will see that my questions are almost identical to the questions that I marched through on the other study. And I'm going to abbreviate the questions in the interest of time. But if you want me to elaborate the full question, by all means. So first of all, could you tell us how you came to be involved in this research project that resulted in this publication?

[63:37] [redacted]: So this is actually a project that's a bit different from other projects, meaning that a lot of work I've done with her has been like ideas or with people that we started like the project from day one together. This is really, again, maybe one of-- I can't remember if there is any other project, maybe one other, that I-- when I was at Harvard as a postdoc or right before joining, she said that they had like-- because I was interested in authenticity. [redacted] and her have a project that I think they even had submitted an earlier version to Psych Science that got either reject re-submit or rejected or revised that they wanted to just really like-- they wanted to just basically work on.

[64:31] And they asked me if I'd be willing to join. So when I started, part of the data was already there and a draft of their write-up and all that. We ran-- or like she ran a couple of studies afterwards. And I think I may have helped. I have to look. But, generally, again, this study, the project was already-- I don't know-- let's say half done when I joined.

[64:56] TERESA AMABILE: OK, so do you remember the year or years? I'm interested in, again, in the chronology of your involvement in the research reported in this paper. It sounds like maybe-- I think there are five studies in this paper, something like that. Maybe half of those, maybe two or three of those studies you think were done--

[65:18] [INTERPOSING VOICES]

[65:20] [redacted]: I think I could look into it and I obviously should have because I assume they shared with me a draft of what they already had so I could really look and see how many papers

they already had. But my sense is that I think it started apparently 2013, at least what I have here. Is it-- sorry, let me show if it's correct project. Yes, so I think it looks like my involvement is really somehow somewhere in 2013 that it started.

[66:01] TERESA AMABILE: Your involvement in it?

[66:03] [redacted]: Yes, my involvement.

[66:04] TERESA AMABILE: OK.

[66:05] [redacted]: And-- am I right? Sorry, I think I may be actually wrong now that I look at it. I have an older version-- no, so my--

[66:29] TERESA AMABILE: You know, rather than having you trying to puzzle this out in your files right now, I think I will ask Alain if he could follow up with you. When you've got more time, you can--

[66:39] [redacted]: OK, so what I can say is that I probably joined 2012. I have versions of the paper that is only [redacted] and Francesca which are from 2010, where they had drafts submitted to Psych Science with a response from editor, which is from 2010 and all that. So, basically, like, for example, a letter from September 20, 2010, which is the response letter that [redacted] and Francesca sent them. So my point is that I joined the project when there was already an older version of studies. And then, obviously, as part of the review process, I think we collected some additional data. But the idea, a lot of the studies were already there.

[67:24] TERESA AMABILE: OK, so the basic concepts for the paper predated your involvement?

[67:29] [redacted]: Yes, yes.

[67:30] TERESA AMABILE: OK.

[67:30] [redacted]: So any follow-ups Bob, Shawn? I'm just going to press on.

[67:34] BOB KAPLAN: No, just keep going.

[67:35] TERESA AMABILE: OK. So we're interested particularly in study 4 in this paper. And that is the one-- this is the study with Harvard undergrads who were asked to write an essay about the inclusion of difficulty ratings in the Q Guide, which is a guide to courses that the students themselves publish. This study showed that, quote, "inauthenticity is not dissonance, in addition to showing that inauthenticity leads to a greater desire for cleanliness." Does that refresh your memory about--

[68:12] [redacted]: Yes, this is a study that we ran for the revision. So I think I was already part of the team when we ran this study.

[68:22] TERESA AMABILE: Thank you. OK, so for this particular study, study 4 in this paper, I'll go through each stage of the research and ask you to tell us to the best of your knowledge, as I did in the first study we talked about, when it occurred, who was involved in supervising that part of it, and who was involved in carrying it out. And if you don't know, just say you don't know. The conceptualization and design of the study?

[68:50] [redacted]: This particular study-- it was mostly Francesca, but I think we all had discussion about, whatever, the cognitive dissonance manipulation or something like that. So, again, we had conversation how we can create these manipulations.

[69:05] TERESA AMABILE: OK, and am I correct in assuming that when you say conversations you mean exclusively email or almost exclusively?

[69:13] [redacted]: I say mostly emails. Maybe there were some conversation that was phone, or, like, I think it's the time that-- I'm not sure if this is a study I was actually-- like really at Harvard. The reason-- I remember this study, that I think Francesca took the lead and did most of it. Because for the Q Guide, like even though I was a postdoc, I have no idea what Q Guide was.

[69:37] So the design of the study, it's a lot her because, I mean, the context, if you look at it, is very much undergraduate at Harvard, which the person has to have knowledge about it, correct? So I think she took the lead to do like the study design, most of it, again, the more details of this study. The whole idea that if you do a three condition, one could be like a dissonance condition that we show is different from the inauthenticity is something that the two of us discussed. But I think the design and how-- what prompt people are going to see and everything, it was things that she did.

[70:13] TERESA AMABILE: OK, what about data collection?

[70:16] [redacted]: Like she did all the data collection as well.

[70:19] TERESA AMABILE: OK, and you don't know who else might have been involved in that?

[70:22] [redacted]: No, again, I looked. I didn't have access to the survey. I don't have access to the survey. And I didn't have access to the data. And I don't really have, honestly, even a record of the data. Apparently, I haven't even downloaded it from OSF. So I don't even have the data. Because I know part of the data are on OSF. But I don't have it in my document folder for the paper.

[70:46] TERESA AMABILE: OK, could you estimate approximately what year, months this happened? The data collection happened?

[70:53] [redacted]: I don't know why I feel like it was summer, just recollection. I can actually look my emails and try to identify--

[71:02] TERESA AMABILE: You know, let's skip that part for now.

[71:05] [redacted]: Yeah, sure.

[71:06] TERESA AMABILE: Yeah, data cleaning and data analysis, time frame or who would have supervised it, who would have done it?

[71:16] [redacted]: I actually have it. So I think in August 2014, she sent us a document that is the design says, oh, we could run this, and I'll submit an IRB. And then in August-- like whatever. By, again, 2014 apparently in September, she said she's just, whatever, starts working on it and collecting data analysis. It should be in 2014.

[71:42] TERESA AMABILE: OK, it sounds like that was about the time that you moved from Harvard to Northwestern?

[71:47] [redacted]: So I moved-- so I moved earlier. And my last year at SAFRA in, whatever, 2013-14, I was more of like-- my husband was in Florida. So I was really -- I spent '12 - '13, like the full year, I was-- I had a condo, and I was at Harvard all the time.

[72:07] But 2013 and '14, I was mostly in Florida. So I would just come-- I don't know-- every other month, few months or-- so I wasn't really that involved. And in June, I actually moved to Chicago. So I wasn't-- yeah.

[72:23] TERESA AMABILE: OK, thank you. And reporting the data in the submitted and published versions of the paper?

[72:30] [redacted]: She collected the data, wrote up the study, and all that.

[72:37] TERESA AMABILE: OK, and data posting --

[72:37] SHAWN COLE: When you, when you --

[72:38] TERESA AMABILE: I'm sorry, Shawn, go ahead. Yes, please.

[72:41] SHAWN COLE: Can I follow up and just say, when you say "she," do you mean that you think it was just her, or do you imagine that she was--

[72:48] [redacted]: I don't know.

[72:48] [INTERPOSING VOICES]

[72:48] SHAWN COLE: --working with RA's and others? You don't know.

[72:50] [redacted]: I don't know. I assume, honestly, any of these projects, that there is a chance that there was an RA or someone that was helping, but we weren't-- like, for example, [redacted], I looked. Like for this project, I wasn't in touch with someone. I told you, for example, for the coding, if I was ever in touch with someone, I have an email record. But for this one, even like she says, oh, I'll just send it, like submit the IRB. So if there was an RA, I was-- she or he wasn't part of our communication, so I don't know.

[73:21] TERESA AMABILE: Does that get at your question, Shawn? OK, great. And what about data posting on OSF?

[73:28] [redacted]: Same. I think she did like all the data posting herself.

[73:34] TERESA AMABILE: OK. So I-- this is a question about who, if anyone, besides Francesca, to your knowledge, might have had access to the data and the ability to modify it at each of those points in time, from data collection until data posting on OSF?

[73:55] [redacted]: I don't know.

[73:58] TERESA AMABILE: You don't know of anyone, is that correct?

[74:01] [redacted]: Yes, I don't know of anyone.

[74:02] TERESA AMABILE: OK. So please tell us to the best of your knowledge whether and how the data set for the study was modified at any point or points between initial data collection and final posting of the data set on OSF?

[74:18] [redacted]: Again, I'm not aware of any version in between, basically.

[74:25] TERESA AMABILE: OK, OK, to go on, Bob and Shawn? OK, we want to show you again some anomalies in the data. Oh, and by the way, [redacted] I can let you know that these studies that I'm asking you about, allegations about research misconduct or possible research misconduct in them, were brought to HBS. And Bob and Shawn and I were the senior faculty committee appointed to look into them. The university has to look into any allegations that are brought forward. So it wasn't a search that the university did or that we did.

[75:03] [redacted]: So particular studies were flagged and you are only looking at those studies.

[75:07] TERESA AMABILE: Exactly.

[75:08] [redacted]: Not like other data sets than these, necessarily.

[75:11] TERESA AMABILE: Exactly, exactly, OK. So Alain is going to again screen share a table that I'm going to describe in just a minute. So there are some apparent anomalies in the data set posted on OSF. So that's what we're going to be looking at is the data set posted on OSF. So Alain, could you bring up that table 1 for this study? This is allegation two as we call it.

[75:42] OK, could you make it just a tiny bit bigger without obscuring-- you may not be able to do that. OK, thank you. Thank you. So in this table, all 20 of the subjects in the yellow highlighted rows gave the incorrect answer of "Harvard" to the background question about year in school. And note those are, they're all highlighted.

[76:13] And in this data set, which has 491 subjects, these 20 rows all appear quite close together, basically within 34 or 35 rows of the data out of 491 rows. These peculiar Harvard responses all appear closely clustered together. A further anomaly is that all of these same 20 subjects gave a non-Harvard email address, while virtually all other subjects gave a Harvard email address. And finally--

[76:52] [redacted]: Sorry, this isn't on OSF because the OSF doesn't have email. So the data you downloaded again--

[76:59] TERESA AMABILE: Ah, yes, the data we, the data we downloaded from Francesca's computer. That's where we discovered the email thing.

[77:05] [redacted]: OK.

[77:05] TERESA AMABILE: Yes, you're right. Thank you for that. Because, of course, the OSF data has to be--

[77:09] [redacted]: Yeah, I was going to say—you couldn't know that…

[77:10] [INTERPOSING VOICES]

[77:13] TERESA AMABILE: It's de-identified. Yeah, yeah, thank you. And, finally-- and this is the most important part-- it has been determined that these particular 20 data points heavily favor the hypothesized and reported effects. You see some are in--

[77:32] BOB KAPLAN: Well, I think if you look at the--

[77:34] TERESA AMABILE: Bob, one second. Some are in one condition. Some are in another condition. But a--

[77:41] [redacted]: But they are--

[77:41] [INTERPOSING VOICES]

[77:41] TERESA AMABILE: A significance test was done on only-- only-- these 20 data points. And it was highly, highly significant in the predicted and reported direction of the results reported in the paper. And that's something like p less than 0.000001, I think, so just 20 data points.

[78:04] [redacted]: If you exclude them, there is no effect?

[78:08] TERESA AMABILE: We don't know the answer to that question, but we are working on getting the answer to that question.

[78:13] [redacted]: OK. And now, Bob, you wanted to interject something?

[78:16] BOB KAPLAN: Yeah, just quickly, if you look under the column, you know, StrongOp, which I think is the summary statistic on use of cleanliness projects, you see almost all the responses are sevens. I mean there's an occasional-- one of them is a five. But, you know, it's--

[78:37] [redacted]: But they are different condition, correct? So it depends on -- meaning that, again, I think--

[78:43] TERESA AMABILE: Yeah, they're different conditions, Bob. We'd have to go into more detail.

[78:48] [redacted]: I think if you exclude easily, you could see what's the -- what's the effect without these 20 people, correct?

[78:54] TERESA AMABILE: Yeah, yeah. OK, so can you explain how these apparent anomalies or other irregularities that might be in the data set could have arisen?

[79:08] [redacted]: No.

[79:12] TERESA AMABILE: OK, here's that question. Please understand that we feel we have to ask this direct question to everyone we speak to who is involved in this research. Did you change the data in a way that could have led to these or other anomalies?

[79:28] [redacted]: So you mean I going and completing a survey pretending to be a participant, correct?

[79:36] TERESA AMABILE: In any way, in any way at all?

[79:38] [redacted]: No, or any way, honestly. But my point is that it looks like this one, someone presumably went and completed the survey, correct, presumably again. And, no. And anyway, as I said, I didn't have access to the Qualtrics survey or the link that was posted for the data to be collected.

[80:00] So I didn't even-- if I'm right, I could double check. But I don't think I ever had a link to the actual survey to go ahead and even check. And I haven't-- I didn't have access to the data in any point in time except when it was posted on OSF like anyone else, so no.

[80:18] TERESA AMABILE: Thank you. And again, we're trying to understand the atmosphere in the lab and whether someone might have felt highly pressured or highly motivated to produce an outcome that was in favor of the hypothesized effect. Do you have any sense of what the lab was like?

[80:40] Now this was during the time that you were a postdoc at the Kennedy School. And you've told us about not really being in residence so much in 2013-2014. But did you get a sense of the lab at that time, the way in which she interacted with doctoral students or RAs?

[81:02] [redacted]: Yeah, so, again, honestly, my personal experience I never felt in a way pressure to produce or like this study should work out or anything. As I said, I have a-- with her, even-- like a very long track record of studies that never worked out. Even this project, if I look, I just look, open that, and I see that there are a couple of studies, two or three that we tried, in the CLER Lab or MTurk with different versions and things worked out or didn't work at each in the paper. But my point is that -- the study, basically what I said in the emails or they said is, oh, the study didn't work. So I wasn't under pressure of that myself really, in any under pressure that we have to just, whatever, produce or things should work out, no.

[81:50] TERESA AMABILE: OK. Are you familiar with [redacted]? [redacted] was apparently Francesca's research assistant at this time.

[82:00] [redacted]: Wasn't she like part of the CLER Lab a postdoc or maybe I'm mixing up--

[82:06] TERESA AMABILE: I believe she actually was part of the CLER Lab. I believe that she was. But it seems that she may have worked, at least for part of her appointment, as an RA to Francesca.

[82:18] [redacted]: Oh, so I know her. I honestly, I don't know if I met her in person or not. Because as I said, even when I was at Harvard, I was in the SAFRA Center located-- my office, everything was there, so I wasn't really-- but I remember her name because I think she was the CLER Lab, behavioral lab manager, or RA, or someone like that.

[82:43] And I ran a ton of studies through CLER lab. And for that, obviously, you had to be in touch, complete a form, be in touch, share the survey with the behavioral lab and all that. So her name I retained because I had been in contact with her about many studies or a lot of studies at that point in time when she was there.

[83:06] TERESA AMABILE: OK, is there any reason to believe that [redacted] would have changed or altered the data of her own accord or at the direction of Francesca in a manner that would produce these anomalies? Or would she have had any incentive to do so?

[83:28] [redacted]: To my knowledge, I wasn't aware. So she may have collected other studies for project through CLER Lab. But my recollection, I didn't even know honestly, now that she said that she was even an RA to her separately, meaning that if I'm right-- I may be wrong-- But my recollection is that she was-- the way I worked with her was mostly in her capacity as the CLER Lab, behavioral lab, manager or RA.

[83:56] So I didn't even know that she collected this data. Because, I mean, Francesca collected this data outside of the CLER Lab. It wasn't part of the whole whatever studies that would be submitted through the lab. So if she was involved, then I was never at least--

[84:15] TERESA AMABILE: OK.

[84:16] [redacted]: --my recollection is that all my interaction with her with project for Francesca were the CLER Lab, whatever, the lab, yeah.

[84:26] TERESA AMABILE: That's helpful. These questions that I just asked about [redacted] could this have been true of anyone else who had access to the data, who might have had access to the data, and that is changing or altering the data or--

[84:38] [INTERPOSING VOICES]

[84:38] [redacted]: As I said, I wasn't aware of anyone else, which I think probably someone helped her to collect the data with undergraduates and all that, honestly. But I don't know if there was anyone involved and if any way, how, or anything like that. So I'm not aware of anything like that.

[84:58] TERESA AMABILE: You referred to a lab earlier when we were talking about the other study. And you were trying to think of the name of it, the lab that Francesca had with [redacted] And you said [redacted] I assume that's [redacted] joined the lab later on.

[85:13] [redacted]: Yes.

[85:14] TERESA AMABILE: Was the other person involved maybe [redacted]?

[85:18] [redacted]: No, [redacted] actually, wouldn't come to that lab. So, again, it was called NON-Lab If I'm right.

[85:23] TERESA AMABILE: If I remember right, it's N-O-N--

[85:26] [redacted]: Yeah, NON-Lab.

[85:28] TERESA AMABILE: The whole point that none of them have a lab. And it's just PhD students and postdocs. I mean, few people-- like we would just present ideas as studies and all that. And most sessions, both [redacted] Francesca, and [redacted] were there. And I think like 2012 to '13, I was going more often because I was more in residence. '13 - '14 I think I maybe have attended only one session when I was in town.

[85:53] But '12 - '13, I was more regularly going to those. And I can't remember if it was weekly or every other week event. And it was NON Lab. And it wasn't, again, a lab that like-- there weren't-- if I'm right, there weren't RAs there. No, it was just PhD students and maybe postdocs.

[86:09] TERESA AMABILE: Just PhD students and you as a postdoc and a few faculty?

[86:13] [redacted]: Yeah, there was no RA in the lab. I'm 100% sure.

[86:16] TERESA AMABILE: OK. So at any time during or after the research in this paper was being done or written up or published, did you have concerns about the integrity of the data? And if so, we hope you can tell us about those concerns and how they arose.

[86:34] [redacted]: No, I wasn't aware of any concern or anything.

[86:38] TERESA AMABILE: OK, and is there anything else, [redacted] that you think we should know as we try to determine whether research misconduct occurred with respect to study 4 in this 2015 paper and, if it did, who might have been responsible.

[86:54] [redacted]: That's really, again, you already talked about it, just excluding the participants and see what happens is-- you know, it helps again. Given that this particular one, like there are different conditions and the numbers look similar. So it's possible that-- but, again, it doesn't really-- again, it's hard to really say what's the source of that 20 people, correct? So I don't know. But probably IP address, again, there is a lot of things you can look into I imagine you are doing.

[87:26] TERESA AMABILE: Looking into the IP address, for example, that those rows of data came from.

[87:30] [redacted]: Yeah, things like that or timing, IP addresses or things like that. Because it's just-- yeah, anything like that, obviously.

[87:38] TERESA AMABILE: Thank you. Bob, Shawn, any follow-ups on this particular study?

[87:47] BOB KAPLAN: I don't have any. I appreciate the answers.

[87:50] SHAWN COLE: Really appreciate your time and recognize you've got to get going to reception.

[87:54] [redacted]: Thank you.

[87:54] TERESA AMABILE: Yeah, you're in charge of the doctoral program. You should probably go to the doctoral reception.

[87:59] [redacted]: No, I'm good. I have time.

[88:00] TERESA AMABILE: [redacted] yeah, thank you so much. Let me just, since you have some time, I'm going to see if Alain or Heather, could you raise your hand electronically? Or Alma, if you think that there's something we didn't do right here or something that we haven't done that we were planning on doing?

[88:22] ALAIN BONACOSSA: Nothing for me.

[88:25] TERESA AMABILE: And I'm not hearing anything or seeing anything from Heather or Alma. So I think we're good. [redacted] again, thank you so much--

[88:34] BOB KAPLAN: Yeah, thank you.

[88:34] TERESA AMABILE: --so much for spending all this time with us and being so straightforward.

[88:38] [redacted]: Thank you and--

[88:40] TERESA AMABILE: And for being willing to look into your email records and your documents further, really appreciate that.

[88:46] [redacted]: Of course, I think if I can-- like, if you have any other questions, again, I could obviously look into things. And I imagine hopefully, at some point, you are going to give me sort of an update. As you could imagine, again, except my husband, I haven't had any conversation with anyone, which-- but it's very hard, honestly seeing this on-- so, yeah, anything you can share with me later, I'd very much appreciate it. Because, I mean--

[89:13] TERESA AMABILE: We're in the same boat, you are, in terms of not being able to talk to anyone but each other about this. And it's hard. But [redacted] I'm afraid that we cannot ourselves give you an update. I don't believe that we are going to be empowered to do that. And Alain--

[89:33] BOB KAPLAN: Yeah, Alain would be the channel of what is admissible--

[89:37] [INTERPOSING VOICES]

[89:37] [redacted]: No, I know, but Alain, is there like an expectation that-- but, honestly, I don't know what's-- I know that Alain said that it's a sort of internal investigation whether HBS and Harvard. And I don't know what really that means. Is it like-- I don't know, like something is going to-- if something is going to happen, I hear about it or-- I don't know. As you could imagine, especially the first study, that's just-- I don't know-- very hard to even see, frankly.

[90:11] ALAIN BONACOSSA: [redacted] and the committee, I think these are questions about the process that I am happy to follow up, [redacted] with you directly and answer any questions you may have about process, outcomes, options. So I'm happy to do that outside of the committee meeting.

[90:26] [redacted]: For sure. No, that would be helpful to just know a bit like so I can actually sleep.

[90:32] TERESA AMABILE: And then you sent [redacted] a copy of our policy?

[90:35] ALAIN BONACOSSA: Yes.

[90:36] TERESA AMABILE: Yes. OK, so that lays it out kind of the basics. But Alain can answer those questions for you.

[90:44] [redacted]: Sure, thank you.

[90:44] TERESA AMABILE: OK, again, thank you so much for your time. We really appreciate it.

[90:49] [redacted]: Of course.

[90:50] TERESA AMABILE: Bye bye.

[90:51] [redacted]: Thank you. Great seeing you all. Bye bye.

Exhibit 7
Transcript of Witness Interview with Professor [redacted] on June 9, 2022

[redacted] Interview

June 9, 2022

[00:00:00.51] ALAIN BONACOSSA: Good afternoon, everyone. My name is Alain Bonacossa. I'm the Research Integrity Officer at Harvard Business School. I wanted to thank Professor [redacted] for being here today and for being willing to be interviewed by the Investigation Committee.

[00:00:13.98] I will now make a brief announcement before handing you over to the chair of the committee. First, as a reminder, this interview will be recorded and transcribed. And [redacted] you will be given a copy of the transcript for correction.

[00:00:26.43] Let me start by introducing everyone on Zoom here today, starting with the Investigation Committee. We have Professor Teresa Amabile, the Chair of the committee, Professor Bob Kaplan, and Professor Shawn Cole. Of course, the witness in today's interview is Professor [redacted], who's an associate professor at the University of Southern California, Marshall School of Business.

[00:00:47.25] And finally, in addition to myself, we have a couple of other staff members on the call. Heather Quay, who's a university attorney with Harvard's Office of the General Counsel, and Alma Castro, who's an Assistant Director in Research Administration at Harvard Business School.

[00:01:02.58] Next, I wanted to provide a brief explanation of the interview process. [redacted] this is a faculty review of faculty matters. So the interview will essentially be a conversation between you and the committee. It will entail a series of questions and answers. And [redacted] you should feel free to elaborate on any answer that you think could be helpful to the process.

[00:01:23.64] Some basic rules of the road for the interview for everyone. To make sure that the transcription is clear, only one person can speak at a time. At the end of my introduction, I would ask Heather and Alma to turn off their cameras and mute ourselves.

[00:01:39.57] And [redacted] for you specifically, please answer the committee's question truthfully. All answers need to be audible so they appear in the transcript. So nodding head is not sufficient. If you don't understand a question, just ask for that to be rephrased. And if you don't know the answer to a question, please just say so. If you need a break, of course, just ask for one.

[00:02:02.91] A couple of important reminders. HBS has an obligation to keep this matter confidential. So even the fact that this interview occurred or that there's an ongoing investigation into allegations of research misconduct is confidential. So [redacted] we're going to ask you to keep all of this information confidential. And lastly, per HBS policy, HBS community members may not retaliate in any way against complainants, witnesses, the research integrity officer, and of course, committee members.

[00:02:32.61] [redacted] do you have any questions about the process?

[00:02:36.24] [redacted]: I do not.

[00:02:37.38] ALAIN BONACOSSA: OK, so I'll hand it off to Teresa, and Heather and Alma and I will turn off our cameras and mute ourselves.

[00:02:47.08] TERESA AMABILE: Hi, [redacted] it's good to meet you.

[00:02:50.05] [redacted]: Good to meet you. I've admired your research for years.

[00:02:53.05] TERESA AMABILE: Thank you. And I've admired yours. I don't believe we've ever met in person, have we?

[00:02:57.56] [redacted]: We haven't, no.

[00:02:58.54] TERESA AMABILE: No. I just will say a few words about myself and then I'll ask Bob and Shawn to do the same. I'm a social psychologist. As I think you probably know, I spent the first-- approximately the first third of my career at Brandeis University in the psych department. And I've been at Harvard Business School since 1995 as a professor in the Entrepreneurial Management unit there. And now I'm going to ask my colleague Bob to introduce himself.

[00:03:34.22] BOB: Hi, [redacted] Bob Kaplan. So I've been a professor at HBS since 1984, working in the accounting area, helping develop concepts such as activity based costing and balanced scorecard, which you may have come across. And before that I was at Carnegie Mellon and was Dean of the business school there for five and a half years. So I'm kind of the measurement guy.

[00:04:00.60] [redacted]: OK, nice to meet you.

[00:04:02.86] SHAWN COLE: And I'm Shawn Cole. I'm on the finance faculty at Harvard Business School. I've been here since 2005. I have a PhD in economics and I do a lot of field experiments. But I just want to say thank you very much for your time. I appreciate your joining us.

[00:04:16.88] [redacted] Of course. Nice to meet you.

[00:04:18.78] TERESA AMABILE: Yeah, [redacted] we're really grateful to you for spending this time with us. I'm going to be the primary person asking questions and follow ups if I have any, but of course, Bob and Shawn will be chiming in as the conversation proceeds. And as Alain said, feel free to ask me for clarification if any of this isn't clear for you.

[00:04:46.01] OK, first of all, this is kind of a background question. Can you tell us how you got to know Francesca and came to be involved in this particular research project with her? And of course, the project that we're talking about is the 2014 Psychological Science paper, where the title is "Evil Genius? How Dishonesty Can Lead to Greater Creativity." And we're going to be talking specifically about study four, which is the experiment in which participants guessed the outcome of a coin toss, on which they could cheat, and later completed a creativity task by giving as many uses as they could think of for a newspaper.

[00:05:35.69] OK, so did that remind you of which particular experiment we're talking about? But we'd like to just in general how you first got to know Francesca and how it was that you came to be involved in this project that led to this paper.

[00:05:51.54] [redacted]: Sure, so I met Francesca when I gave a job talk coming out of grad school at Chapel Hill, UNC Chapel Hill. She was sort of my faculty host. She and her husband and I all

went to dinner and we had a one-on-one meeting. We got along really well, had a lot of the same interests. And then we started collaborating on various projects.

[00:06:16.23] The first project was one where we showed that splitting things into categories made people want to get one of each of the categories of the rewards. And that made them more motivated. And then we subsequently collaborated on this creativity research.

[00:06:35.85] And the way that that collaboration started, it was at AOM. She was giving a talk on her work with [redacted], showing that dishonest people are-- or creative people are more dishonest, because they can better justify the rationalizations and excuses that they provide for themselves. So therefore they're more OK with it.

[00:06:58.66] And I asked the question, could this work the other way? Could getting out of this rule breaking mindset make people creative, so that there's a reverse causality. And she said, that's really interesting, let's talk after the session. So we spoke after the session. And it turned out that we had two different things in mind, two different ways of testing it.

[00:07:28.11] Her idea is that we have people cheat or put them in situations where they'd be very much more likely to cheat than they would be in other conditions. And that act of cheating would make them more creative in subsequent activities. My idea was related, but slightly different, in that I wanted to see if exposing people to rules, to a duty-based or rule-based approach to morality, or just having them think about moral constraints, moral rules, would make them less creative. And we agreed to essentially research both topics in tandem and be co-authors on that.

[00:08:15.19] My idea didn't work out. I couldn't get robust results. I tried, I don't know, three experiments. I could be wrong on that number. But got it for one but not the other two, so we just abandoned that. This project provided much more promising results, or at least I thought it did. And hopefully, it did. And so she ran those experiments at Harvard. I don't know if she ran some of them at UNC or somewhere else, but that's how we started collaborating on that project.

[00:08:50.54] And then there was another-- actually there was a third author, [redacted], who was going to be involved, and she's at Syracuse now. At the time, I think she was at Vanderbilt. And we had basically three or four ideas between ourselves. [redacted] I don't know if she was having a baby, but she just went missing. So she didn't collaborate with us on this first paper. We were almost ready to submit another paper, which was a 2000-- I forget the year, but it's an OBHDP with [redacted], and Francesca, and me.

[00:09:34.07] And we decided to let her participate in that, even though she'd been absent. And she ran one of the experiments for that. Francesca ran one of the experiments for that. I ran like four of the experiments that ultimately made it into the paper. So I really took the lead on that project.

[00:09:56.61] Francesca took the lead on the "Evil Genius" paper. And [redacted] was going to take the lead on another paper, which was not sufficient quality for us to submit.

[00:10:11.30] TERESA AMABILE: OK, wow, that's really great comprehensive background. I so appreciate that. You know, I just wanted to ask, I'm not familiar with [redacted]. Is her first name spelled [redacted] or [redacted], do you happen to remember?

[00:10:28.28] [redacted]: I think there is an E on the end.

[00:10:29.59] TERESA AMABILE: Don't bother looking it up or anything. We can easily find it by many means.

[00:10:36.74] [redacted]: There is an E.

[00:10:38.12] TERESA AMABILE: There is an E at the end of [redacted] OK. And [redacted] is [redacted]?

[00:10:42.00] [redacted]: Yeah.

[00:10:42.65] TERESA AMABILE: OK, and you said that-- was she on the faculty at Vanderbilt at the time that…?

[00:10:46.53] [redacted]: She was-- I'm sorry, she was there on a post-doctorate.

[00:10:48.36] TERESA AMABILE: No, that you were-- I'm sorry-- that you were working on this "Evil Genius" work.

[00:10:54.91] [redacted]: So, she didn't actually work on the "Evil Genius" part of it. She was supposed to, but I don't know if it was a baby, or stress, or it could be any number of things. So she didn't actually participate on that paper. She participated on the creative team paper at OBHDP. And at the time, she was working as a post-doc at Vanderbilt, working with [redacted], I believe. And then--

[00:11:23.68] TERESA AMABILE: I'm sorry, in the business school at Vanderbilt?

[00:11:25.88] [redacted]: Yeah, at the business school, at Owen School of Management or something like that. And it's possible by the time that was published, she had moved to Syracuse, but I don't remember the timeline.

[00:11:36.40] TERESA AMABILE: OK, thanks.

[00:11:37.18] [redacted]: Her first faculty position was at Syracuse.

[00:11:40.67] TERESA AMABILE: Syracuse, OK, thanks. And so you mentioned her I think in connection with the research that ended up in the "Evil Genius" paper, but was that just very early stage discussions? And then you described-- you said she, quote, "went missing," I think.

[00:12:00.90] [redacted]: Yeah, we just didn't-- we'd send her an email like, what do you think of this study? And she didn't reply for a long time. So the initial plan was for her to be on that paper, but then she didn't communicate with us for about a year and a half or so.

[00:12:17.48] TERESA AMABILE: OK, and it sounds like it was only in the initial conversations--

[00:12:21.01] [redacted]: Right.

[00:12:21.95] TERESA AMABILE: --about what the studies could be that she would--

[00:12:25.31] [redacted]: Exactly. It was very much Francesca's idea and my ideas that were discussed for those papers that did come out.

[00:12:35.22] TERESA AMABILE: OK, thanks. Bob, Shawn, do you have any follow ups on any of that background? You can just--

[00:12:43.11] SHAWN COLE: No.

[00:12:44.01] TERESA AMABILE: OK. You know what, we are asking for audible responses, but when I ask Bob and Shawn if they have follow ups, they can do head shaking or head nodding, and I'll just try to note audibly what they've indicated as their responses.

[00:13:01.71] OK, so [redacted] it's important for our committee to understand how this paper came about. So I've got a few more very specific questions.

[00:13:15.13] [redacted]: Sure.

[00:13:15.94] TERESA AMABILE: Could you please give us the chronology of your involvement in the research reported in this paper and in the paper itself. So as well as you can remember, years, even months if you could recall, you know, starting from initial discussions through the actual writing of the paper and getting the paper published.

[00:13:38.44] [redacted]: OK. I think we probably started working on this in 2011 or 2012, maybe. And as I said, it started at an Academy talk-- Academy of Management talk, that's our big annual meeting. I want to say it's in Boston, but all the hotel rooms start to look alike, with the conference rooms.

[00:14:04.97] And so I guess she was presenting that work with [redacted], which I think came out in 2012. And I think that was-- that's when it probably was, 2012. And we discussed the collaborating right after her talk at Academy, which would have been in August, probably August 2012, possibly 2011. And then we likely had a phone call to work out who would be doing what and whether we would pursue her idea, which became the "Evil Genius" one, or my idea that, just being exposed to things like rules and the Ten Commandments, and these sorts of things would inhibit creativity. We decided to do both.

[00:15:01.94] And then probably-- I'm guessing here, but I would say later in 2012, during the fall of 2012 and 2013, we'd work on it. She'd bounce some experiment ideas off of me and I'd give feedback. And she'd run them. And apparently or ostensibly got robust results.

[00:15:33.67] She wrote a first draft of the paper. I edited that one rather extensively, the writing in the front end, but I didn't do any of the analysis of the data for that paper. And I don't even think I received the data for that paper, which in retrospect looks like-- looks irresponsible, I realize, but-- yeah, at the time I was an assistant professor at USC and Francesca was obviously at Harvard.

[00:16:10.63] And we submitted it to Psych Science. I don't know if it was late 2013 or early 2014. It went through the review process pretty quickly, as a lot of papers at Psych Science do. I don't remember if we ran additional experiments at the R&R stage or not.

[00:16:31.62] TERESA AMABILE: OK, so [redacted] I just have one quick follow up. I think I heard you say that you didn't run any of the five studies reported in this paper, is that correct?

[00:16:43.93] [redacted]: That's correct. I was running the ones on my related ideas, which is what led to that split.

[00:16:51.38] TERESA AMABILE: OK.

[00:16:52.36] [redacted]: The two related ideas, the creative cheating idea and the one that exposure to moral rules would have negative effects on creativity.

[00:17:02.08] TERESA AMABILE: OK, thank you. Bob, Shawn, any follow ups? They're both shaking their head no. OK.

[00:17:10.64] So in part, [redacted] you've already answered this question, but only part of it, so I'm going to walk through all of it. And just if I think you've already answered it, I'll tell you what I believe I heard from you.

[00:17:25.47] So for study 4 specifically in this paper, that's the coin toss, the cheat, the creativity measure being unusual uses for a newspaper, and that's specifically what we're interested in. For that study I'll go through each stage of the research and ask you to tell us to the best of your knowledge when it occurred, who was involved in supervising that particular activity, and who was involved in carrying out the activity, including, of course, yourself.

[00:18:00.35] [redacted]: OK.

[00:18:02.23] TERESA AMABILE: So the first one is conceptualization and design of the study.

[00:18:08.52] [redacted]: Both of us were involved in that. Both Francesca and I were involved in designing the studies.

[00:18:14.16] TERESA AMABILE: OK, do you remember approximately when that would have been?

[00:18:19.02] [redacted]: Give me one second and I'll be able to give you a pretty informed answer.

[00:18:23.43] TERESA AMABILE: OK, so I'm going to say it looks like [redacted] is consulting files on his--

[00:18:28.05] [redacted]: Yes.

[00:18:28.77] TERESA AMABILE: --computer.

[00:18:44.49] [redacted]: So I can confirm that it was 2012 that we really started-- wait, no, maybe I can't. Let's see. 2012 we submitted something to SESP, which is another conference. So maybe some of this work was done in 2011. And…sorry.

[00:19:20.42] TERESA AMABILE: That's OK.

[00:19:53.59] [redacted]: OK. So it was-- [redacted] Francesca, and I started talking-- let's see. Sorry.

[00:20:18.10] TERESA AMABILE: That's OK.

[00:20:37.80] [redacted]: 2011, we were working on this.

[00:20:44.53] TERESA AMABILE: And are you consulting an email right now?

[00:20:47.47] [redacted]: Yes, I am.

[00:20:48.67] TERESA AMABILE: An email chain, OK. And do you see the month?

[00:20:53.50] [redacted]: The date of the email that I'm looking at is July 16, 2011, at 4:05 PM.

[00:21:00.07] TERESA AMABILE: OK. Thank you very much for that. [redacted] let me ask you, if after we finish our conversation with you, if we, the committee, feel like we'd like to actually look at one or more of those emails or possibly different drafts of the paper or something, you'd be willing to share?

[00:21:22.00] [redacted]: Absolutely.

[00:21:23.05] TERESA AMABILE: Thank you very much. OK, so the next stage that I'd like to ask you about, in terms of when it occurred, who was involved in supervising the activity, and who was involved in carrying out the activity, data collection.

[00:21:38.89] [redacted]: Francesca and-- Francesca's operation at Harvard is kind of a mystery to me. I'm sure she has a lab manager. I can't imagine being as productive as she is without having at the very least a lab manager. I imagine that she has RAs. And I know that there's some sort of centralized data collection in the Harvard labs, as well. So it's those people and Francesca who collected the data for that "Evil Genius" paper.

[00:22:16.60] TERESA AMABILE: OK, thank you. And given the chronology that you've already given us, it sounds like the data collection would have happened in 2011, 2012.

[00:22:29.99] [redacted]: Yeah.

[00:22:30.92] TERESA AMABILE: And/or possibly 2013.

[00:22:35.11] [redacted]: Yeah, I think if it were 2013, it was probably additional experiments that we ran as part of a response to reviewer's comments.

[00:22:45.06] TERESA AMABILE: OK.

[00:22:45.29] [redacted]: I'm guessing about that.

[00:22:46.84] TERESA AMABILE: OK. The next stage is data cleaning.

[00:22:53.19] [redacted]: The same set of people who were involved in data collection. I did not clean that data. I don't even think I saw the raw data.

[00:23:03.80] TERESA AMABILE: OK, so, let me just confirm-- you referred to this earlier, and you seem to be indicating this again-- you don't recall that you ever had any form of data file for this study 4?

[00:23:21.09] [redacted]: Right. And I've looked through my emails on this. It's possible that-- I don't think I did. It's-- I'll check my email more, but I searched for Francesca and "Evil Genius." The problem with just searching for Francesca Gino is she's been on hundreds of emails before. But I don't-- I don't think I saw the data.

[00:23:48.31] TERESA AMABILE: OK. If we asked you to, would you be willing to search your computer, hard drive, or hard drives for--

[00:23:59.02] [redacted]: Yes. I searched the hard drives too for the data and didn't see the data, so I already did that, in fact. I went back one computer to see that. I can go back two computers to see if there's anything there, but I doubt it.

[00:24:19.54] TERESA AMABILE: OK, you know what, let me just ask you right now, if you would, please make a note to-- after this conversation--

[00:24:28.28] [redacted]: Yeah.

[00:24:29.08] TERESA AMABILE: You could go back two computers to that time frame--

[00:24:33.88] [redacted]: Sure.

[00:24:34.54] TERESA AMABILE: Just to check. And if you find any data files that you think are related to the study or could be related to the study, if you could share them with Alain Bonacossa, and he'll then make sure that we, the committee, have access to those. Thank you so much.

[00:24:51.88] [redacted]: Of course.

[00:24:53.05] TERESA AMABILE: OK. And so the next stage is data analysis. I believe you said that you were not involved in analyzing the data for any of the experiments.

[00:25:04.78] [redacted]: Yeah, I don't believe that I was.

[00:25:06.02] TERESA AMABILE: You were not.

[00:25:08.29] [redacted]: Again, I believe that I was not involved.

[00:25:10.55] TERESA AMABILE: OK. And who do you believe did do the analyses, or was involved in the analyses, or supervised the analyses?

[00:25:19.94] [redacted]: I would imagine Francesca supervised the analyses. I don't know if you did the analyses or if she had an RA. I don't-- I don't know what sort of research support she has.

[00:25:33.50] TERESA AMABILE: OK. To your knowledge, might any doctoral student or postdoc have been involved in any of these-- well, in this particular study?

[00:25:44.95] [redacted]: It's possible, but I didn't know of anyone. And she didn't mention having that. And she's-- I know she's collaborated a lot with doctoral students. And I know from other work that her default policy is generosity when it comes to co-authoring. And I don't remember her bringing somebody up. It's possible that she helped train a doctoral student with this data or something. I don't know.

[00:26:14.46] TERESA AMABILE: OK, thank you. And finally, last stage, reporting the data, the data analyses, the findings for this experiment in the submitted and published versions of the paper.

[00:26:28.95] [redacted]: So the analyses came from her and her side. I don't remember if I modified writing in the results. I probably did in the methods section, to try to just sharpen things and edit them. But I don't think I did any of the analyses.

[00:26:52.49] TERESA AMABILE: Do you remember doing any part of the write up of the analyses of study four?

[00:26:57.80] [redacted]: No. And I couldn't find any record of having done so.

[00:27:01.40] TERESA AMABILE: OK. And it sounds like you think that you may have-- in the section of the method that describes how the analyses were done, you might have done some editing in versions of the paper.

[00:27:15.18] [redacted]: It's possible. I think it's more likely that I edited the description of the procedure. Because just looking at Psych Science, as you know, is a short format journal. So I probably edited both results and the procedural or methods section for the length and clarity.

[00:27:41.99] TERESA AMABILE: OK. OK, thank you.

[00:27:43.67] [redacted]: And then edited the front end the paper a ton.

[00:27:47.62] TERESA AMABILE: OK, thank you. Bob and Shawn, I believe I've gone through everything in our question three for [redacted] Do you have any follow ups? They're shaking their heads no. OK.

[00:28:02.16] [redacted] this next question is fairly similar. And I think we can go through it pretty quickly, probably. Please tell us who, if anyone, might have had access to the data and the ability to modify it at each stage, besides the people you've already mentioned, including, of course, yourself-- data collection, data cleaning, data analysis, reporting the data.

[00:28:30.78] [redacted]: I would have had access to-- I could have changed numbers in the results section. I have no idea why I would have done that. But yes, technically I had access to that. I don't think I had access to the data, but certainly in the reporting of things, I could have done something. Anybody employed by Francesca or Harvard who had access to the data sets could have adjusted things there. But yeah, I don't think [redacted] ever had access to anything for this paper.

[00:29:15.98] TERESA AMABILE: Did you just say I never had access to anything but the paper?

[00:29:20.35] [redacted]: No, I said I don't think [redacted] had access to anything.

[00:29:24.00] TERESA AMABILE: Oh, OK.

[00:29:25.00] [redacted]: I had access to the drafts. Let me pull up the file right now to see if there's anything. So under the category of "Evil Genius," I have some study designs. I have R&R letters, something Qualtrics..., acceptance, I don't know what that is.

[00:29:48.34] TERESA AMABILE: I'm sorry, you said you have something in Qualtrics?

[00:29:51.94] [redacted]: I have a file called Qualtrics comments. And I can put that in the chat.

[00:30:05.67] SHAWN COLE: That's efficient.

[00:30:07.32] [redacted] Yeah, it's super useful. It's not copying. In any case, I don't see any Qualtrics files. It's just like what the file consists of are things like, at the bottom of the die roll screen, it reads click one-- click right, choice one, click right, choice two, et cetera. If we made the question something other than multiple choice, we should be able to get rid of these.

[00:30:31.91] TERESA AMABILE: OK, so [redacted] it sounds like you were commenting on some earlier version of the Qualtrics--

[00:30:39.32] [redacted]: The question, yeah.

[00:30:40.46] TERESA AMABILE: --question that was used to collect data. Are you referring specifically to study four?

[00:30:45.71] [redacted]: I don't know which study it is. I'd have to look.

[00:30:48.00] TERESA AMABILE: You don't know which study, OK. We may want to follow up with you on that file, getting access to it. Thank you very much.

[00:30:55.43] [redacted]: Of course.

[00:30:56.51] TERESA AMABILE: OK, so aside from the people-- you've mentioned Francesca, of course, you've mentioned [redacted] you've mentioned your own involvement, can you think of anyone else? And you said, of course, there could have been people in her lab--

[00:31:10.92] [redacted]: Yeah.

[00:31:11.66] TERESA AMABILE: --who had access to the data and ability to modify it. And you're nodding your head yes.

[00:31:16.23] [redacted]: Yes, I am nodding my head yes. That group of people could have done. I don't know their names.

[00:31:21.27] TERESA AMABILE: OK, thank you. Bob, Shawn, any follow ups? None, OK.

[00:31:29.20] Next question. So [redacted] if you could please tell us to the best of your knowledge whether and how the data set for this study was modified at any point or points between initial data collection and publication of the paper.

[00:31:46.73] [redacted]: I imagine there was some cleaning, as there generally is, because some people will stop taking the survey or they'll-- I don't know if this was a stage of pre-registration, but often I'll pre-register that we'll exclude results more than three standard deviations away from the mean. It gets rid of some of the nonsense or people not using decimal points. But I am not aware of what cleaning went on. I'm sure there was some sort of cleaning that went on, but I don't know what it is.

[00:32:21.35] TERESA AMABILE: OK, thank you. Bob, Shawn, any follow ups on that?

[00:32:26.15] SHAWN COLE: I had a follow up on a question, two questions ago, which I think I know the answer to, but I just-- you said something like theoretically I could have changed the numbers in the table. By that, you meant the table reporting the results that was part of the document?

[00:32:39.20] [redacted]: Yeah, like the table or even a number within the draft.

[00:32:45.18] SHAWN COLE: OK.

[00:32:45.62] [redacted]: Like change the mean or standard deviation or something like that.

[00:32:48.41] SHAWN COLE: Thanks.

[00:32:49.37] TERESA AMABILE: And [redacted] can you say what would have motivated you to make such a change?

[00:32:53.00] [redacted]: I don't believe that I did.

[00:32:55.31] TERESA AMABILE: I know.

[00:32:56.03] [redacted]: I don't know what would have motivated me to do that.

[00:33:02.74] TERESA AMABILE: OK, all right, thanks.

[00:33:08.70] [redacted]: I can't remember ever modifying-- like in the past, when co-authors have sent something and something looked strange to me, there's no way I would have just changed the number. I'd put a comment, saying, are you sure this is right? And I've done that more with grad students than I have with faculty collaborators.

[00:33:27.65] TERESA AMABILE: OK, so it sounds like as a general practice, you would not modify anything in the reporting of findings where you, yourself, had not done the analyses.

[00:33:41.36] [redacted]: Right.

[00:33:42.11] TERESA AMABILE: Unless something looked strange, in which case, you would have asked the person responsible about that. And then, is it fair to say, is it accurate that you would then have changed a number only at the direction of that person who actually did the analyses?

[00:34:00.80] [redacted]: Yes. Yes, that is accurate to say, the more likely case is-- no, that's a likely case. Yeah, that shouldn't have been 4.95, that's a duplicate from the previous one. It should be 4.32, whatever it is. Or I could imagine changing the analysis section by adding a comment, saying I'm not sure that this is the best test, could we look at simple effect or something like that. But I wouldn't change a number.

[00:34:29.61] TERESA AMABILE: OK, so you're saying in versions of drafts of the paper, you might say, gee, I don't think this is the best analysis to show this or to test this, how about trying this analysis?

[00:34:42.06] [redacted]: Exactly.

[00:34:43.88] TERESA AMABILE: OK. Bob, Shawn, follow ups? No, OK.

[00:34:49.33] So [redacted] this section of questions is about some data anomalies.

[00:34:57.77] [redacted]: Yeah.

[00:34:58.75] TERESA AMABILE: And we'd like to now show you some apparent anomalies discovered in the data set for this study-- again study four, experiment four-- that was on Francesca's computer. So this is from the data set that we got off Francesca's computer--

[00:35:17.68] [redacted]: OK.

[00:35:18.16] TERESA AMABILE: --for this study. OK, it will take me a few minutes to go through this. So please, be patient.

[00:35:25.31] [redacted]: No worries.

[00:35:26.39] TERESA AMABILE: And then I'll ask our specific question about the apparent anomalies. But please, break in at any time if something I say isn't clear to you or if you just want to make a comment at some point. You don't have to wait until I pose my formal question.

[00:35:46.19] [redacted]: OK.

[00:35:46.60] TERESA AMABILE: OK? OK, great. So Alain, could you please screen share table 1 for us? Alain, we don't see it yet. All we see is Alain Bonacossa has started screen sharing, but we're not actually seeing anything. Alain, could you indicate if you would like me to do the screen share? Alain, are you there? Can you say something?

[00:36:41.02] SHAWN COLE: We seem to have lost him. Maybe you should go ahead.

[00:36:42.95] TERESA AMABILE: I think we've lost Alain temporarily.

[00:36:45.04] SHAWN COLE: Do you want me to see if I can find the table, Teresa?

[00:36:47.36] TERESA AMABILE: Yeah, but I have to make him stop-- Alma, do you have the-- the power to make him stop?

[00:36:54.17] SHAWN COLE: I can just start. I have that power. So--

[00:36:57.65] TERESA AMABILE: You're just going to start screen sharing, Shawn?

[00:36:59.87] SHAWN COLE: If you remind me the table I need to pull up.

[00:37:01.85] TERESA AMABILE: OK, so let me do it, please.

[00:37:03.95] SHAWN COLE: OK.

[00:37:04.82] TERESA AMABILE: OK, so Alma, can you make him stop screen sharing or is that something I need to do?

[00:37:16.13] SHAWN COLE: Just when you press Start Share, it--

[00:37:18.38] TERESA AMABILE: All right, got it.

[00:37:18.77] SHAWN COLE: I think you just did it.

[00:37:20.09] TERESA AMABILE: Got it.

[00:37:27.74] ALAIN BONACOSSA: I'm sorry, I'm back.

[00:37:29.76] TERESA AMABILE: That's OK, I'm doing the screen-- I'm going to--

[00:37:34.66] ALAIN BONACOSSA: Would you like me to do it?

[00:37:36.04] TERESA AMABILE: Yeah, Alain, I'd prefer it if you could do it, if you're able.

[00:37:46.12] SHAWN COLE: I can see it. Can you see it, [redacted]

[00:37:49.33] [redacted]: I can, yes. OK.

[00:38:00.18] SHAWN COLE: Now it looks like Teresa may be frozen. Teresa, are you there?

[00:38:33.73] TERESA AMABILE: I'm back. All right, can you see and hear me?

[00:38:39.50] SHAWN COLE: Yes, we can.

[00:38:40.64] TERESA AMABILE: Thank you, sorry about that. OK. Whoo.

[00:38:46.31] Table one, [redacted] shows data for the first 40 non-cheaters in the data set.

[00:38:53.15] [redacted]: OK.

[00:38:53.81] TERESA AMABILE: As you can see, they're all perfectly ordered by the number of responses on the uses task. That's the far right column.

[00:39:03.62] [redacted]: OK.

[00:39:05.31] TERESA AMABILE: Number of uses for a newspaper that the subject generated, starting with the value of 2 responses-- 2 unusual uses. And that's the dependent variable of interest here.

[00:39:18.63] [redacted]: OK.

[00:39:19.92] TERESA AMABILE: Alain, could you make that a little bit bigger, please, without making the bottom rows disappear? That may not be possible. Yeah, that's good, that's good, thank you.

[00:39:31.64] And nothing seems anomalous about these rows of data. We just wanted to start with this.

[00:39:35.97] [redacted]: OK.

[00:39:36.30] TERESA AMABILE: OK, so now we're going to ask Alain to screen share table 2. OK, great. And these are data for the first several cheaters in the data set. Although most of these are also ordered by the number of responses, that far right column, the highlighted cells, indicate 13 rows that are out of sequence on this key dependent variable. We cannot find a way to sort the data that produces this particular ordering. And this suggests the possibility that the data may have been manually altered.

[00:40:24.96] So I'm going to give you a minute to look at that, [redacted] Alain, just for my eyes, if it's possible to maybe scroll down slightly, so that we don't see the-- I don't think we need to see the title of the table. There we go. OK, so let's just give [redacted] a few seconds to study this.

[00:40:50.96] [redacted]: And you don't have the original Qualtrics files that you can just-- like the raw data from Qualtrics?

[00:40:57.86] TERESA AMABILE: These are the data from the Qualtrics file that have the data for this--

[00:41:08.18] [redacted]: From--

[00:41:09.92] TERESA AMABILE: You know what, this is from Francesca's computer. Alain, I'm sorry, I just get confused about when and how, and what this is that we're looking at.

[00:41:23.15] ALAIN BONACOSSA: This is a data set from Francesca's research records on her machine, computer. So this is not-- this is not the Qualtrics raw data file. It's a data file that she pointed us to on her computer.

[00:41:38.75] [redacted]: Do you have the Qualtrics data file?

[00:41:42.09] ALAIN BONACOSSA: This is what we have.

[00:41:43.25] TERESA AMABILE: This is what we have. And yeah, this file was supplied by Francesca.

[00:41:52.56] [redacted]: OK. And--

[00:41:56.48] TERESA AMABILE: And I haven't gotten to my question yet. There's something more that we'd like to show you.

[00:42:02.11] [redacted]: OK.

[00:42:03.19] TERESA AMABILE: OK. But let me-- while we're screen sharing this-- while we're screen sharing this, let me just point out to you that for the cheaters in this data set-- we're only looking at a subset of the cheaters here, but these are all of the observations-- these 13 are all the observations that are not in a perfect monotonic sequence.

[00:42:26.06] [redacted]: OK.

[00:42:27.26] TERESA AMABILE: So for the cheaters, all the cheaters in this data set, the mean of the in sequence observations is 7.5 uses, while the mean of the out of sequence observations is much higher, 10.1. So that's 7.5 for the ones that don't seem out of order, they're not anomalous. And 10.1 for the ones that are anomalous in terms of the sorting.

[00:42:58.33] [redacted]: I understand.

[00:42:59.23] TERESA AMABILE: Yeah, and this further suggests to us that the data may have been manually altered to favor the hypothesized effect specifically. So it seems reasonable to us to hypothesize that if the data were manually altered--

[00:43:17.59] [redacted]: Yeah.

[00:43:18.13] TERESA AMABILE: If they were, the true data values were, in fact, in monotonic sequence before they were changed.

[00:43:27.04] [redacted]: OK.

[00:43:28.15] TERESA AMABILE: Under that hypothesis, we could impute a true value somewhere between the value in the closest in-sequence row before the changed observation, and the value of the closest in sequence row after the changed observation. You following?

[00:43:46.24] [redacted]: I'm following, yes.

[00:43:47.21] TERESA AMABILE: OK. For an example that I'll walk us through, let's take a look at table 3. So Alain's going to pull that up now. So as shown in this table 3, that first out of sequence observation, which is a 13 in the number of responses column, can be imputed to have originally been either a 4, and that's the in-sequence observation just above it, which appears in the imputed one column here, or a 5, and that's the in-sequence observation just below it, which appears in the imputed two column here. So you get what's happening in this table.

[00:44:36.24] [redacted]: Yeah, I understand that perfectly.

[00:44:37.77] TERESA AMABILE: OK. Thus, if these imputations are made for all of the out of sequence observations, both imputed one and imputed two would now preserve the monotonicity of the dependent variable. And you can see that if you just scan down--

[00:44:59.19] [redacted]: Yeah.

[00:44:59.85] TERESA AMABILE: --the column called imputed one and the column called imputed two. OK.

[00:45:04.53] So here we go. If the dependent variable is reconstructed in this way, the p value of the difference between cheaters and non-cheaters changes from minus 0.0001, which is the p value reported in the paper, to 0.292. And that's using the imputed one as the dependent variable. Or if we use imputed two as the dependent variable, the p value changes to 0.181.

[00:45:43.88] [redacted]: OK.

[00:45:44.18] TERESA AMABILE: In other words, using either of these methods to impute what the true dependent measures might have been, the reported effect becomes statistically insignificant. So here's our question. Can you explain how these apparent anomalies or other irregularities that might be in the data set could have arisen?

[00:46:12.13] [redacted]: These are the number of counts of-- of the uses, like the creative uses for a paper or whatever it was, right?

[00:46:21.41] TERESA AMABILE: It was a newspaper in this case. Yeah, the number of uses that they could think of for a newspaper, yes.

[00:46:31.04] [redacted]: It's hard to explain why it would go up, the number of responses would go up. I can understand the number of responses going down for some rows. Because if you were-- I don't need to tell you this, but if you're looking for novelty-- for the record, not to explain to you personally, Professor Amabile.

[00:46:53.45] TERESA AMABILE: That's OK, but Bob and Shawn aren't familiar with the creativity literature.

[00:46:57.47] [redacted]: Yeah. OK, so you could imagine looking for unique uses of that. And if they say it could be used as a fly swatter, a bee swatter, that sort of thing, a wasp swatter, that's the same idea. And so you might reduce them downward. It's harder to-- for me to understand why they would go up. I don't have a ready explanation of why they would go up. Unless-- I don't know how the number of responses were counted within Excel.

[00:47:44.67] Is it-- so there has to be more than this, where it actually shows you what the uses are, right? Like the responses, and is the suspicion that--

[00:47:58.29] TERESA AMABILE: This is what we have, [redacted] We don't have the underlying Qualtrics surveys.

[00:48:07.02] [redacted]: I know, but even if you don't have the underlying Qualtrics surveys, which do seem massively important to this argument, you could still have a spreadsheet where you have a column that says count A, parentheses, and then all the uses listed. And I would think Francesca would have that.

[00:48:31.22] TERESA AMABILE: We don't at this point have that. But we're working with Francesca to get access to as many relevant files as possible. Bob, I recognize that you have a question. Let me just allow [redacted] to finish thinking through how something like this might have happened. And of course, what seems so anomalous to us, [redacted] is that these rows-- these particular rows are out of sequence.

[00:48:58.52] [redacted]: Right.

[00:49:00.60] TERESA AMABILE: And we can't figure out a way that the data can be resorted automatically--

[00:49:06.09] [redacted]: Yeah.

[00:49:06.78] TERESA AMABILE: --in Excel or something to end up with this particular ordering.

[00:49:12.57] [redacted]: I guess I could imagine somehow if there-- if there's a return or something that people enter into the Qualtrics, so that their data is coming across in two lines or something like that, potentially. You might add the two lines if you have the same participant ID and it's clear that they're doing it in one session. That would explain why the numbers only go up instead of corrections downward.

[00:49:49.56] TERESA AMABILE: You mean within a given Qualtrics survey?

[00:49:53.46] [redacted]: Yeah, so sometimes people will, like, get kicked out. And they'll start something right after. And you see, oh, they were only on it for two minutes and it's the same MTurk ID. So it's possible it could be a situation like that-- unlikely, but possible.

[00:50:15.08] TERESA AMABILE: OK. And that would mean that those two Qualtrics responses would have to be aggregated.

[00:50:21.87] [redacted]: Exactly.

[00:50:22.70] TERESA AMABILE: And assigned to that particular participant.

[00:50:26.36] [redacted]: Right.

[00:50:26.66] TERESA AMABILE: And that could mean that the numbers would go higher--

[00:50:31.88] [redacted]: Exactly.

[00:50:32.57] TERESA AMABILE: --than they might have initially been entered into a spreadsheet or something.

[00:50:36.38] [redacted]: Yeah, and that's why you wouldn't see any adjustments downward, because it wouldn't make sense.

[00:50:42.17] TERESA AMABILE: OK. Thank you, [redacted] And you may think of something else as we continue the conversation and you can, of course, break in with that. [redacted] shall we stop the screen share now or would you like to leave this up?

[00:50:55.52] BOB KAPLAN: No.

[00:50:57.17] TERESA AMABILE: Oh, Bob, do you want to leave the screen share up right now for your question?

[00:51:00.80] BOB KAPLAN: Yes.

[00:51:01.25] TERESA AMABILE: Yes, let's leave it up. OK, Bob, go ahead.

[00:51:04.26] BOB KAPLAN: Yeah, so [redacted], what I found curious is that we had 136 consecutive observations on the non-cheaters condition that were in this perfect monotonic sequence.

[00:51:17.21] [redacted]: Yeah.

[00:51:17.76] BOB KAPLAN: If in your hypothesized alternative world there was some other column in which this was sorted, it had to be perfectly the same for 136-- actually 139 consecutive observations.

[00:51:31.82] [redacted]: Yeah.

[00:51:32.40] BOB KAPLAN: And then all of a sudden on the 140th one, we start encountering this going up. So, it's not an issue if it's going up or going down. If it went down, and it really was being sorted on the number of responses, then it would have fallen into the natural monotonic sequence. It's how do you go through-- admittedly, with the limited data, a portion of the whole data, 139 observations that are perfectly sorted on this column and then all of a sudden we start hitting observations that aren't?

[00:52:05.12] [redacted]: Yeah. That's a good question.

[00:52:06.87] BOB KAPLAN: It could happen, but it seems like unlikely to me.

[00:52:08.63] [redacted]: Yeah, it seems unlikely to me, too.

[00:52:13.71] TERESA AMABILE: And I would just add to Bob's observation that these 13 are very closely clustered together in this data file, among all of the many, many observations in the two conditions. Shawn, did you have any follow up on this?

[00:52:36.19] SHAWN COLE: No.

[00:52:36.67] TERESA AMABILE: No. OK.

[00:52:39.61] [redacted]: Sorry, I have--

[00:52:40.63] TERESA AMABILE: Go ahead.

[00:52:41.04] [redacted]: I have a question. So I'm seeing row 137. Are there-- the previous 136 are all cheaters in the cheaters condition as well?

[00:52:52.52] TERESA AMABILE: No, I believe--

[00:52:54.74] BOB KAPLAN: If you go to table 2--

[00:52:56.09] TERESA AMABILE: I believe table 2--

[00:52:56.84] BOB KAPLAN: --you'll see the transition.

[00:52:58.04] TERESA AMABILE: Yeah, table 2 shows us--

[00:53:00.53] BOB KAPLAN: There are four non-cheaters at the top.

[00:53:03.98] TERESA AMABILE: Yeah, so this data set is organized so that all the non-cheaters are first.

[00:53:11.67] [redacted]: Yeah.

[00:53:12.74] TERESA AMABILE: In that cheated column it's zero. And then the cheaters start.

[00:53:17.54] [redacted]: OK.

[00:53:19.85] BOB KAPLAN: I'm sorry, so it looked like the data sort is first on the cheated column. So all the zeroes are first. And then the secondary data sort is on the number of responses column.

[00:53:30.50] [redacted]: OK. So with that in mind, we don't really need to think about why the first 131 are the same. Because the way people create Qualtrics surveys is they'll have two different conditions. So it could be two different blocks. You could have a bit of wrong syntax or something that

isn't exactly the same in the two conditions, which is why you start-- why you'd start sometime around 132. And now, if this goes to 240 something, and there's nothing after 164, I've got zero explanation for that, unless something were adjusted in the Qualtrics. Does that makes sense?

[00:54:09.36] TERESA AMABILE: It does make sense. And I can tell you that after this data row, after row 164, all of the other number of responses are in the monotonically increasing sequence.

[00:54:24.74] [redacted]: OK. If you were to-- so I suspect if you sorted this by time, and it's not that they're just clustered in one time period, it's just-- like toward the beginning of the survey or something, like the beginning of the survey administration.

[00:54:41.42] TERESA AMABILE: As far as we can tell-- I don't know that we've investigated that, whether they could have been sorted on the time. We've got to start date and end date here. And as you know, Qualtrics does stamp the specific time--

[00:54:57.66] [redacted]: Yeah.

[00:54:58.35] TERESA AMABILE: --that each survey was submitted. So I don't know about a time sort. As far as we know, the sort was, as Bob said, first on the condition, the cheated column, and then on the number of responses column. We don't believe that there was a time sort involved. But [redacted] we can look into that.

[00:55:21.03] [redacted]: Yeah, I would recommend that. Because I've had cases where I've had just a flat out error, like I'm using the wrong text or I have two boxes where I should have one.

[00:55:36.00] TERESA AMABILE: You mean an error in the Qualtrics survey that you set up.

[00:55:39.54] [redacted]: Exactly. Yeah, not on this project, but you might have a correction after-- like, oh, we see a problem with the first 20 observations. It's unlikely, but worth looking at it by time.

[00:55:55.26] TERESA AMABILE: OK, we will do that. And Alain has, I'm sure, already made a note of that. Thank you. So while we've still got this up, let me ask-- Bob, Shawn, any additional follow ups for [redacted] None from Bob, none from Shawn. OK. And I did want to-- so you can stop the screen share, Alain. Thank you very much.

[00:56:17.48] And I do want to note, [redacted] that we are almost at the hour. And we even, I think, maybe started a minute or so before the hour. We know you're in the Pacific time zone, but it's almost 2:00 PM here. And I know that Heather has to leave at 2:00. So Heather, we know you're going to be disappearing very soon. Thank you very much for being on as long as you were able to be on.

[00:56:44.71] [redacted] do you have the ability-- we all do-- do you have the ability to stay on a little bit longer?

[00:56:51.41] [redacted]: I do.

[00:56:52.35] TERESA AMABILE: OK, great. I don't have too many more questions, but if you have to go, if any of us has to go, and we haven't gotten to the end, we'll try to find a time to do a follow up just to finish up the last few questions. OK. So Bob and Shawn, I'm about to move on to what is my question seven.

[00:57:14.91] [redacted] please understand that we feel we must ask this direct question to everyone we speak to who was involved in this research. Did you change the data in a way that could have led to these or other discrepancies?

[00:57:30.33] [redacted]: No.

[00:57:31.54] TERESA AMABILE: OK. Thank you.

[00:57:32.61] [redacted]: I really don't believe so.

[00:57:35.57] TERESA AMABILE: OK. Next question. We're trying to understand the atmosphere in the lab in which the data for the study were collected. Specifically, the extent to which people in the lab might have felt either pressured or highly motivated to produce certain outcomes in the study. Can you give us your views on the atmosphere in this lab at the time the data were collected?

[00:58:04.30] [redacted]: I can speak to my motivation and Francesca's motivation. As to her lab, I'm 3,000 miles away from her lab and don't really know who's working in it. I was an assistant professor. I certainly want things to work out. One thing that-- and this isn't a direct answer to your question, but I will directly answer the question.

[00:58:31.06] It seems so strange to me, with Harvard's capabilities, if she's got an experiment, and p equals-- I forgot what the first p value is-- 0.29 or 0.18, or something like that, if you do the monotonic scales-- why not just run a larger replication experiment, if the data seemed supportive of it? So, it seems-- it seems like a strange kind of cheat. I guess maybe one would feel more justified in doing so because the data is already supportive. So maybe that provides motivation.

[00:59:14.90] But it seems like-- it seems strange, because it wasn't the biggest study we've ever done, so it could be easily replicated.

[00:59:28.03] But I imagine Francesca's intrinsic motivation is high, given her record. But I really don't know the lab-- I don't know what the environment in the lab is. I don't know. I think you're on mute.

[00:59:51.24] TERESA AMABILE: I muted because there was noise outside my window. That answers the question to my satisfaction. Bob, Shawn, do you have any follow up on that? No follow up, OK.

[01:00:02.78] So [redacted], are you familiar with [redacted], [redacted], or [redacted]?

[01:00:10.97] [redacted]: I've heard of [redacted] and the name [redacted] vaguely familiar to me.

[01:00:19.92] TERESA AMABILE: You said the name [redacted] is vaguely familiar to you?

[01:00:23.19] [redacted]: Yeah.

[01:00:24.24] TERESA AMABILE: Not [redacted]?

[01:00:26.01] [redacted]: [redacted], is he-- no, that's [redacted] that I'm thinking of.

[01:00:32.34] TERESA AMABILE: It's [redacted], [redacted].

[01:00:36.06] [redacted]: I'm not familiar with [redacted].

[01:00:37.80] TERESA AMABILE: OK, so you said [redacted], that name was familiar to you. Can you say in--

[01:00:42.57] [redacted]: I think so.

[01:00:42.96] TERESA AMABILE: --what connection? What connection?

[01:00:47.90] [redacted]: I thought it was someone in academia, which is the obvious guess, given our context, but that's about all I know. I'm not sure.

[01:00:57.94] TERESA AMABILE: OK, do you have any associations to the name [redacted] That's [redacted]? You said that sounded a little familiar?

[01:01:07.20] [redacted]: It sounded familiar, but in my head when you said it, I spelled it [redacted] so it can't be somebody I know very well.

[01:01:16.65] TERESA AMABILE: OK. So I asked the question because it's possible that one or more of them had access to the data for this study.

[01:01:25.05] [redacted]: OK.

[01:01:25.77] TERESA AMABILE: Is there any-- I think I know what your answer is, but I need to ask the question-- is there any reason to believe that any of them would have changed the data of their own accord or at the direction of Francesca in a way that would have produced these anomalies? And would they have had any incentive to do so?

[01:01:46.80] [redacted]: I imagine there would be some sort of incentive. People are happier if we-- if they get significant results. I can't speak to what incentives were used and what the opportunities for promotion or recommendation letters are. But I don't-- it doesn't seem like common practice to me to reward RAs for producing significant results. You reward them for not having errors in their work and for understanding and showing-- showing how to design experiments and analyze data. But it seems strange that there would be strong extrinsic incentives to change data.

[01:02:34.53] TERESA AMABILE: OK. Follow ups, Shawn or Bob? None. OK.

[01:02:45.54] This is basically a follow up to that previous question. Could this have been true in terms of altering data on their own or at Francesca's direction? Could this have been true of anyone else who had access to the data?

[01:03:06.28] [redacted]: It could be. I have no insight into who that would be. If someone had an opportunity, I don't know about motive.

[01:03:16.75] TERESA AMABILE: OK, thank you. Thank you. Follow ups, guys? No, none. OK. All right, we're down to our last two questions.

[01:03:25.39] [redacted]: Great.

[01:03:29.02] TERESA AMABILE: So this is a general question. At any time during or after the research in this paper was being done, written up, or published, did you have concerns about the integrity of the data?

[01:03:43.85] [redacted]: No.

[01:03:44.77] TERESA AMABILE: None?

[01:03:45.19] [redacted]: None.

[01:03:47.54] TERESA AMABILE: OK. And last question, [redacted] is there anything else we should know as we try to determine whether research misconduct occurred with respect to study four in this paper? And if it did, who might have been responsible?

[01:04:07.16] [redacted]: Not that I know of. I don't have anything beyond what I've already said. I'll certainly look at my-- look at the computer I used-- two computers, ago, to see if it has anything. And I'll take another look at Qualtrics. I've got to think that they'll have records of this sort of thing, which would clear things up.

[01:04:34.01] TERESA AMABILE: You mean Qualtrics should have--

[01:04:35.80] [redacted]: Itself, like the organization, right?

[01:04:38.21] TERESA AMABILE: You think the organization should have records. Honestly, I don't know.

[01:04:43.49] [redacted]: That would be the first-- if I were presented with this scenario, that would be the first place I'd go to check the raw data.

[01:04:56.32] TERESA AMABILE: OK, thank you. Thank you for that. And we-- I believe we have pursued that. We are pursuing it, trying to get as much information as we can, as you might imagine.

[01:05:06.31] [redacted]: I figured.

[01:05:07.30] TERESA AMABILE: Yeah, so Bob and Shawn, let me ask you, if you have any follow ups on [redacted]'s answers to these last couple of questions or anything else that you've thought of?

[01:05:22.14] SHAWN COLE: Nothing from my side.

[01:05:23.82] TERESA AMABILE: Nothing from Shawn.

[01:05:25.14] BOB KAPLAN: No, I'm good.

[01:05:27.02] TERESA AMABILE: OK. All right--

[01:05:28.52] [redacted]: Can I ask one question?

[01:05:29.75] TERESA AMABILE: Sure.

[01:05:30.59] [redacted]: Do you have a sense of what the timeline of all this investigation will be?

[01:05:37.80] TERESA AMABILE: It's super hard to predict that. We're working as expeditiously as we can. It will be at least weeks. My best guess, [redacted] is that it will be months. And unfortunately, we are not going to be able to tell you the outcome of this investigation.

[01:06:07.14] [redacted] OK. The reason I ask is I'm going up for full. And of course, have kept everything confidential. I haven't spoken a word of this, and I was just wondering about the timeline and whether I should be modifying my statement-- research statement, for example, to not feature this project.

[01:06:27.02] TERESA AMABILE: You said you're wondering if you should be modifying your research statement to not mention--

[01:06:30.77] [redacted]: That I don't mention this project at all.

[01:06:34.34] TERESA AMABILE: So [redacted] can you tell us-- so I assume your tenure case is going to be evaluated over this summer, is that the case?

[01:06:45.71] SHAWN COLE: He has tenure, he's going up for full.

[01:06:47.57] [redacted]: Exactly.

[01:06:48.35] TERESA AMABILE: I'm, sorry your full case.

[01:06:50.19] [redacted]: Right. Yeah, I believe the department votes on it in late July. And then sometime in the next six months it'll go to the school level and then to the university level.

[01:07:01.95] TERESA AMABILE: I see, I see. Well, I am going to tell you that at this point, I don't-- I can't tell you that you should modify your research statement.

[01:07:15.35] [redacted]: OK

[01:07:15.96] TERESA AMABILE: I don't have that authority. Of course, you understand that the one possible outcome of university research misconduct inquiries and investigations is that eventually a paper might end up getting retracted by a journal.

[01:07:36.98] [redacted]: Retracted. Sure.

[01:07:38.36] TERESA AMABILE: Because the university, if there is a negative finding-- if there is a finding of research misconduct in connection with a paper that's been published, the university is obligated to notify the journal.

[01:07:51.17] [redacted]: Of course.

[01:07:51.89] TERESA AMABILE: And then the journal does what it does. But my understanding of the process for all the journals that I know about, and you know about, and that Bob and Shawn know about, is that they would then immediately contact the authors about the finding. And they'd probably recommend that the-- or request that the paper be retracted.

[01:08:13.19] [redacted]: Of course.

[01:08:13.88] TERESA AMABILE: So that's a process that-- again, I understand why you asked the time frame question, given that you're up for this promotion.

[01:08:24.80] [redacted]: But I also understand the inability to do advise at this point.

[01:08:27.86] TERESA AMABILE: Yeah, exactly, exactly. And honestly, that whole process, as I've just spun it out as a total hypothetical, could, of course, take many months. So--

[01:08:45.10] [redacted]: No problem. It's a pre-tenure paper, so it's not the biggest deal probably, but still.

[01:08:50.90] TERESA AMABILE: But I appreciate your asking that question. It suggests to me that you're careful and that you want to be careful.

[01:08:58.30] [redacted]: Of course.

[01:09:00.13] TERESA AMABILE: Yeah. Bob, Shawn, anything else? I thought I saw a gesture on your part, Bob. No? OK. [redacted], is there anything else that you'd like to ask at this point or tell?

[01:09:12.48] [redacted]: No, I think I'm good.

[01:09:17.16] TERESA AMABILE: OK.

[01:09:18.40] [redacted]: The question that I want to ask, I imagine that you won't be able to say anything about it. Is it just this one paper where there is suspicion, or is it a more widespread problem? But I can't imagine that you'd be able to speak to that.

[01:09:33.18] TERESA AMABILE: And your imagination is correct.

[01:09:35.23] [redacted]: Yeah.

[01:09:36.39] TERESA AMABILE: Yeah. So [redacted] thank you. Thank you, thank you so much for being so forthcoming with us, for answering the questions as completely as you could. Really appreciate that. Please, if you think of anything else relevant to anything I've asked about, get in touch with Alain and he'll arrange for us to speak again. We'll figure out a way to get that information from you.

[01:10:05.29] [redacted]: OK.

[01:10:05.49] TERESA AMABILE: OK? Thank you, thank you, thank you so much again. And Bob and Shawn, thank you very much. And you're going to stay on now, correct? When [redacted] leaves, OK? Thanks [redacted]

[01:10:19.42] BOB KAPLAN: Nice meeting you, [redacted]

[01:10:20.25] [redacted]: Nice meeting you. I wish it were under different circumstances, of course.

[01:10:23.52] TERESA AMABILE: Yes, we do too. Thanks, bye-bye.

[01:10:31.21] Alma, he's off?

Exhibit 8
Transcript of Witness Interview with [redacted] on June 16, 2022

[redacted]

June 16, 2022

[00:00:00.09] ALAIN BONACOSSA: Hello everyone, my name is Alain Bonacossa, and I'm the Research Integrity Officer at Harvard Business School. I want to thank [redacted] for being here today and for being willing to be interviewed by our investigation committee. I will just make a brief announcement now before handing it off to the chair of the committee. First, as a reminder, this interview is recorded and will be transcribed and, [redacted] you will be given a copy of the transcript for correction.

[00:00:26.73] Let me start by introducing who's on Zoom today, starting with the investigation committee. We have Professor Theresa Amabile, the Chair of the committee, and Professor Bob Kaplan. And, hopefully, another committee member will join us soon. We also have another staff member on the call, Alma Castro, Assistant Director in Research Administration at the Business School.

[00:00:52.38] Next, I wanted to provide a brief explanation of the interview process. I think [redacted] I mentioned to you that this is a faculty review of a faculty matter. So the interview will be a conversation between you as a witness and the committee. It will just entail a series of questions and answers and, of course, [redacted] you should feel free to elaborate on any answer that you think would be helpful to the process.

[00:01:14.70] Some basic rules of the road for the interview for everyone-- just to make sure that the transcription is clear, only one person should speak at a time. At the end of my introduction, I and Alma will turn our cameras off and mute ourselves so that it's really just a conversation between you and the committee.

[00:01:32.82] [redacted] for you specifically, please, answer the committee's questions truthfully. All answers need to be audible so they can appear in the transcript, so nodding head is not sufficient. If you do not understand a question, just ask for that to be rephrased. And if you don't know the answer to a question, just please say so. If you need a break, of course, ask for one.

[00:01:56.91] A couple of last important reminders-- HBS has an obligation to keep this matter confidential. So even the fact that this interview occurred or that there's an ongoing investigation into allegations of research misconduct is confidential. So [redacted] we're going to ask you to keep all of this information confidential.

[00:02:14.52] Lastly, per HBS policy, HBS community members may not retaliate in any way against complainants, witnesses, the research integrity officer, or other committee members. [redacted] before we get started, do you have any questions for me about the process?

[00:02:31.21] [redacted]: I don't.

[00:02:32.10] ALAIN BONACOSSA: OK. Teresa, we'll turn off our cameras, so I'll hand it off to you. Thank you.

[00:02:40.32] TERESA AMABILE: Thanks, Alain. Hi, [redacted] It is so good to see you.

[00:02:44.85] [redacted]: Likewise. Good to see you too.

[00:02:47.62] TERESA AMABILE: You know I'm Teresa Amabile, a professor at Harvard Business School, Baker Foundation Professor. And I know that you don't need an introduction to me or my research because you worked as my RA full-time. I believe it was 2017-'18, and then part time 2018-'19, when you were also part time in Francesca's lab.

[00:03:13.56] [redacted]: That's correct.

[00:03:14.01] TERESA AMABILE: And you also worked on my research starting as an undergrad at Harvard. I don't remember. Was that your sophomore year when you were a PRIMO fellow?

[00:03:25.14] [redacted]: I believe it was my junior year. Yes.

[00:03:27.54] TERESA AMABILE: OK, Great. And I gave Bob already a little bit of that background, so he's familiar with the way we worked together. And now I'll let Bob introduce himself.

[00:03:39.71] BOB KAPLAN: Hi, [redacted] and just reiterating our appreciation for your willingness to speak with us today. So I'm Bob Kaplan, and I'm Professor in the Accounting and Management unit. I don't do laboratory studies, so our paths didn't cross during the term of service there. I work on measurement issues, costing, performance measurement of organizations. Thanks.

[00:04:06.84] TERESA AMABILE: And, [redacted] if our third-- we're hoping that our third committee member, who seems to be delayed, will join us at some point. And then I'll ask that person to introduce themselves really briefly, and then we'll get back to what we were doing. OK. Are you ready to go?

[00:04:27.01] [redacted]: Yes.

[00:04:28.15] TERESA AMABILE: OK. So, first of all, just a general background question, [redacted] -- can you tell us how you got to know Francesca and came to be involved in this particular research project with her?

[00:04:41.62] [redacted]: Of course. So I came to know Francesca through one of my colleagues and a mentor, [redacted], who was and may currently be a doctoral student at Harvard Business School. So [redacted] introduced me to Francesca. And after a few discussions with her, she said that she would like to hire me as her research associate.

[00:05:04.90] I'm trying to piece together the timeline but I believe this was a few years into-- or it was sometime into our working relationship between Fran-- Professor Gino and I that I came to work on the study. So she sent me an email saying we have a project that requires your help. I need help putting together the Qualtrics survey, and I need help launching this on MTurk.

[00:05:33.22] And so that was the extent of my involvement in the study. It was really essentially the background work of making sure that the survey was working properly, and that we were able to field this and recruit the participants that we needed. Yeah. So that's how I came to know Professor Gino.

[00:05:51.58] TERESA AMABILE: OK. Bob, did you want to follow up on anything [redacted] said there?

[00:05:58.97] BOB KAPLAN: Well, this may come later but, if you were involved in the front end of the study, helping to set it up, was there someone else, another research assistant or a doctoral student,

that may have been working once the study was underway, the data had been collected to screen and clean up the data for Francesca to analyze?

[00:06:27.87] [redacted]: I believe there must have been someone else working on the data. I am aware of the fact that Professor [redacted] and Professor [redacted] also worked on the project. I do not recall if there were any graduate students involved in the project. So if the committee hasn't already done so, I certainly hope that they will have the opportunity to review my email records and those electronic documentation of my conversations with the team. But, yeah, I'm sorry. To answer your question clearly, Bob, I believe that there were other people involved in the data analysis for this project at the back end.

[00:07:03.90] BOB KAPLAN: OK. Thank you.

[00:07:05.22] [redacted]: Of course.

[00:07:05.55] TERESA AMABILE: And, [redacted] just one quick follow up before I ask Professor Shawn Cole to introduce himself. Let me just quickly follow up, before it flies out of my head, on Bob's question. Do you have any of the email records from the time that you were working for Francesca?

[00:07:31.44] [redacted]: I do not.

[00:07:32.57] [INTERPOSING VOICES]

[00:07:34.53] [redacted]: Just to ensure that I didn't have anything confidential after I left HBS, I have gotten rid of all of those records. They all remain, I believe, at HBS.

[00:07:48.56] TERESA AMABILE: OK. Were you exclusively using an HBS computer--

[00:07:55.01] [redacted]: Yes.

[00:07:55.37] TERESA AMABILE: --for your work with Francesca?

[00:07:57.92] [redacted]: That's correct.

[00:07:59.76] TERESA AMABILE: OK. So you didn't have anything on a personal computer.

[00:08:04.20] [redacted]: No. I did not.

[00:08:05.49] TERESA AMABILE: OK. Great. Thank you for that clarification. And, Shawn, we're glad that you're able to get on so quickly. We've just been talking with [redacted] for just a few minutes, about five minutes after Alain's introduction. So would you like to introduce yourself?

[00:08:24.96] SHAWN COLE: I really apologize for being late. I had the time blocked and just got deeply engrossed in something. So, Alain, thanks for texting me. I'm on the faculty in the Finance Unit at Harvard Business School. I did an Economics PhD at MIT, finished in 2005 and came to Harvard, and have been working there since then. I do a lot of field experiments as part of my research. And so, we really appreciate your taking the time to meet with us.

[00:08:54.52] [redacted]: Of course.

[00:08:55.81] TERESA AMABILE: And, Shawn, one thing that I talked with Bob about a little bit before [redacted] came on was the fact that [redacted] worked for me as an RA at HBS. Part of the time he was a Harvard undergrad, and then full-time 2017-'18, and part-time 2018-'19, when he was also part-time working for Francesca. OK. Just so that you have that background. OK. [redacted] would you like me to review just a couple of sentences on what this particular study was about? The study that we're interested in is study 3A in the paper.

[00:09:45.13] [redacted]: I would really appreciate that. I did have the opportunity to review the paper before, but just some cues would be great.

[00:09:54.55] TERESA AMABILE: Sure. So as you already noted, this is the paper where Francesca is the first author, and the second author is [redacted] and the third author is [redacted]. Right? And it was published in 2020 in JPSP. So study 3A is the first of two online experiments examining the independent effects of promotion and prevention focus on feelings of impurity and networking intentions after instrumental networking. So in study 3A, participants read a story about instrumental networking and were asked to imagine that they were the protagonist of that story.

[00:10:42.15] Study 3B was identical, except the participants actually engaged in instrumental networking, while they were in the study. And participants in study 3A and 3B were randomly assigned to either the prevention focus, the promotion focus, or a control condition. So does that refresh the memory trace of the study?

[00:11:09.66] [redacted]: It does. Thank you.

[00:11:10.98] TERESA AMABILE: OK. So it's really important for our committee to understand how this paper came about. You've already told us a little bit about how you first heard about this study idea, but could you just to the best of your ability give us the chronology of your involvement in study 3A in this paper? And also, say whether you were involved in the preparation of the paper itself. And if you could try to place it in time as best you can, that would be helpful.

[00:11:50.84] [redacted]: Certainly. So in terms of the chronology, I do apologize if I'm unable to get the dates quite right. Again, I do wish I had my email records to help me put that together, but I believe that I was contacted by Professor Gino with her asking me to help with this study in 2019. And, as was the case with many projects where I worked with Professor Gino, she would explain the theory behind the project or her hypotheses later.

[00:12:26.58] But as I was helping with the-- essentially, just setting up the survey and working with MTurk, I wasn't really filled in on the details of the project and how they came to develop the study design. And my apologies, Teresa, what was the second half of your question? So it was about chronology, that she reached out to me in 2019.

[00:12:51.77] TERESA AMABILE: She reached out to you in 2019. She did-- we believe that the study itself, the data collection itself, happened in 2020, so if that helps to jog your memory a little bit.

[00:13:06.68] And you've told us, I believe-- this is what I heard-- that your involvement was to get an email from her that she wanted you to set up a Qualtrics study-- Qualtrics survey for a study that she

needed to conduct. And wanted you to get that set up and get it put onto MTurk for MTurk workers to be the participants in the study. Did I hear that right?

[00:13:36.05] [redacted]: That's correct.

[00:13:37.10] TERESA AMABILE: OK. And the second part of that earlier question I asked was: were you involved at all in the preparation of the paper describing this study, for example, drafting part of the method, or in any way?

[00:13:53.94] [redacted]: I do not believe so. I am 99% sure that I did not have any involvement in the writing of this paper. And if I did, it would have been not in the context of the full paper. But I believe Professor Gino might have asked me to provide a summary of the method, but I believe that's the extent of it. So I have actually never read the-- I hadn't read the rest of this paper until Alain sent it to me.

[00:14:23.53] TERESA AMABILE: OK. Thank you. Any follow ups? Bob and Shawn, you can just nod your head or shake your head. OK. No follow ups, it looks like. OK. So you've more or less already answered this, I think. But I am just going to try to go through it quickly. And you could just give simple answers, of course, elaborating if you've got more information that would be helpful to us.

[00:14:52.41] So, again, we're focusing solely on study 3A in this paper. I'm going to go through each stage of the research and ask you to tell us to the best of your knowledge when it occurred, who was involved in supervising the activity, and who was involved in carrying out the activity. OK. So, study conceptualization and design.

[00:15:19.36] [redacted]: I believe study conceptual-- well, I will first say that I actually do not know how long Professor Gino was working on the study conceptualization. Knowing her work style, she could have been considering running a study like this for years, or she could have come up with the idea a few months before running it. So, I apologize, but I'm not entirely sure of that timeline.

[00:15:42.97] In terms of the design, though, of study 3A, that occurred either in late 2019 or sometime in early 2020, I believe. Again, I do apologize for not having my email records. But that's my recollection of events.

[00:16:01.62] TERESA AMABILE: And in terms of who did that activity, it sounds like you believe it was her but--

[00:16:10.36] [redacted]: I believe it was-- I recall seeing Professor [redacted] on the email chains. I do not believe that I had any in-depth interactions with Professor-- I apologize for mispronouncing this-- [redacted] So in my mind, I believe the people who were most involved were Professor Gino and Professor [redacted] That's what I recall from the email threads.

[00:16:38.75] TERESA AMABILE: OK. Thank you, and I will just ask Bob and Shawn to throw their hands up, if they have anything that they'd like to follow up on. By the way, [redacted] however you feel comfortable, but you can refer to Professor Gino as Francesca, if you'd like. That's how we are referring to her, so whatever you're comfortable with, though. And about data collection, if you could, try to remember when it occurred, who supervised it, and who carried it out.

[00:17:12.79] [redacted]: I believe data collection occurred-- I cannot say exactly when it happened in 2020, but I am pretty confident that it happened in 2020. And in terms of supervision, I do recall discussing some aspects of the study with Behavioral Research Services, because I wanted to get a better understanding of how to properly run this on MTurk. There are a number of different approaches that people take, whether it's leveraging third-party resources that integrate with MTurk or simply interfacing with MTurk itself. So I needed to get advice from BRS on that front. And in terms of data collection supervision, it really was just Professor Gino and me working on that.

[00:18:00.07] TERESA AMABILE: OK. So would you-- is it fair to say that she supervised the activity and you implemented it?

[00:18:08.41] [redacted]: Yes.

[00:18:10.21] TERESA AMABILE: Do you remember who you spoke with at Behavioral Research Services?

[00:18:14.26] [redacted]: I believe it would have been [redacted] and [redacted]. And I and I also believe that this conversation probably would have been a brief one, in that it would have just been confirming details as to how to launch this on MTurk.

[00:18:31.01] TERESA AMABILE: Do you recall, [redacted] if you had previously put together Qualtrics surveys for Francesca's research and other studies?

[00:18:40.64] [redacted]: Yes. I believe I put together perhaps maybe 80 surveys over my time at HBS just in Qualtrics. So I had put together a few for Francesca before this study.

[00:18:55.27] TERESA AMABILE: Before this one. And had you put any on MTurk previously, any of her studies on MTurk?

[00:19:02.58] [redacted]: I don't believe so. I believe, for the most part, we were using Qualtrics surveys in the context of in-person lab work. Or I would design a survey and someone else would launch it on MTurk. This was the first instance in which I was asked to launch the study on MTurk myself.

[00:19:22.02] TERESA AMABILE: OK. Thank you. Data cleaning.

[00:19:28.10] [redacted]: I was not involved in late-stage data cleaning. If I recall correctly, I cleaned some responses earlier in the process, just based on verbatim. Though, again, I really would hope that the committee could look into my email records to see which files I sent to Francesca and whether or not any data cleaning did happen earlier on.

[00:19:52.72] But it was-- if data cleaning did occur, I know that it would have been the case that it would have been reviewing verbatim to see if anything seemed bot-like, and then confirming with Francesca that, OK, this seems like a bot because the response is nonsensical, we should remove it. I believe that's the extent of the data cleaning that I was involved in.

[00:20:14.69] TERESA AMABILE: OK. I'm not quite sure I caught all of it. Partly, I think the audio blipped out a little bit, but could you say what-- it sounds like you're speaking from your general experience in cleaning data from Qualtrics services, from Qualtrics for Francesca's research. Is that true?

[00:20:33.74] [redacted]: That's true. Yes. But also, in terms of this study, my memory is that I wasn't involved in any late-stage data cleaning. And I want the committee to know that I wasn't involved in the data analysis for this project or any data cleaning beyond very, very simple work toward the beginning to ensure that we weren't including bots in the sample.

[00:20:57.06] TERESA AMABILE: So it sounds like your initial data cleaning, the very earliest stage of data cleaning, would have been making sure that you didn't have any robots, trying to make money for somebody on MTurk by just robotically responding in ways that-- you're nodding your head. Is that correct?

[00:21:21.82] [redacted]: Yes. That is correct.

[00:21:25.21] TERESA AMABILE: And it sounds like the way that you would determine if a response-- if a survey should be deleted from the data set would be to-- you referred to verbatims. Could you say a little bit more about how you would do that?

[00:21:42.88] [redacted]: I do want to apologize to the committee for my lack of recollection. I've worked on so many studies at HBS that it can be difficult to separate them in my mind. Across all of the projects that I worked with Professor Gino on, I was never involved in, essentially, statistical data cleaning, where we would look for irregularities in the data and to say, oh, this can't be right. Sorry. Very early in the morning here, difficult to articulate.

[00:22:14.95] But essentially, I wasn't looking at numeric responses, if I recall correctly. Honestly, if I did clean data on this study, it would have been reviewing open-ended responses. And if there weren't open-ended responses involved, then I actually don't believe that I cleaned any of the data for this study.

[00:22:34.83] TERESA AMABILE: OK. And in terms of open-ended responses, I think I understood, from what you said earlier, that you would look to see if there were any-- you would just skim through them to see if any of the open-ended responses were nonsense.

[00:22:52.89] [redacted]: That's correct.

[00:22:53.82] TERESA AMABILE: That's correct?

[00:22:54.97] [redacted]: Mm-hmm. Yes.

[00:22:55.95] TERESA AMABILE: OK. OK. Shawn, Bob, any follow ups? OK. So I think the answer to the next question is data analysis. When it occurred, who supervised it, who carried it out? It sounds like you don't know.

[00:23:13.34] [redacted]: I do not know.

[00:23:14.15] TERESA AMABILE: OK.

[00:23:14.54] [redacted]: That's correct.

[00:23:16.22] TERESA AMABILE: I also think you have the same answer to reporting the data in the submitted and published versions of the paper.

[00:23:23.12] [redacted]: That's correct. I was not involved in the study at that point.

[00:23:26.24] TERESA AMABILE: And data posting on Open Science Framework, which is OSF.

[00:23:32.27] [redacted]: I was not involved in the OSF post either.

[00:23:34.82] TERESA AMABILE: OK. All right. Thank you. And, [redacted] please tell us who if anyone, that you're aware of, might have had access to the data and the ability to modify it at each of the-- at each of those stages of study 3A, in addition to anybody you already mentioned. And as far as I can recall-- but you correct me if I'm wrong here-- it seems that you've mentioned, in terms of people who had access to the data and the ability to modify it in some way, at any point, from data collection through posting of the data publicly, were yourself, Francesca, and possibly [redacted] and/or [redacted]. But it sounds like for those other two, those two co-authors, you're unsure about that.

[00:24:33.67] [redacted]: That's correct. I didn't have really-- I didn't have insight into what the faculty collaborators were doing with the data after I handed it off to them.

[00:24:44.16] TERESA AMABILE: OK. And is it true that you can't think of anyone else in the lab who might have had access to the data or ability to modify it in the lab or at HBS or anywhere?

[00:24:57.63] [redacted]: I can't confirm with certainty. It is possible that Behavioral Research Services had access to the Qualtrics survey. At the same time, they have access to countless Qualtrics surveys, and I can't think of a reason as to why they would edit the data in a systematic way. And it is possible that a doctoral student was involved in this project, given the fact that Francesca was very determined to get doctoral student-- pardon me-- determined to get doctoral students involved in research for their benefit. But if there was a doctoral student involved, I don't know who it was.

[00:25:36.72] TERESA AMABILE: OK. Thank you. Thank you. It seems like you don't recall seeing the names of any other individuals on any of the emails about this particular study. Is that true?

[00:25:50.61] [redacted]: That's correct.

[00:25:51.78] TERESA AMABILE: OK. And, [redacted] could you please tell us to the best of your knowledge whether and how the data set for this study was modified at any point or points between initial data collection and final posting of the data set on OSF.

[00:26:10.63] [redacted]: Yeah. To be honest, I'm very hesitant to comment on that because I didn't have insight into the study after I finished working on the MTurk portion and after field, honestly. As was the case with many projects, we were so busy that I would handle sort of the “dirty” work of managing the survey and handling fielding, while other collaborators would work on data analysis. And then-- pardon me-- Professor Gino would help me understand the process and the data analysis later on for my own benefit and education. But, in this case, I wasn't involved in anything beyond some data collection and perhaps a small amount of initial data cleaning.

[00:26:58.42] TERESA AMABILE: OK. That's helpful. Thank you. It sounds like you don't recall any conversations about how the study turned out or even what it was all about after-- at any point. It seems that you honestly-- it seems like you didn't really know what they were looking at or looking for in this study at any point. Is that true? Did I understand that correctly?

[00:27:25.24] [redacted]: I'd like to clarify just a bit. I believe Professor Gino-- it is very early in the morning here, so I'm stuttering a bit. My apologies. I believe that Professor Gino might have given me a brief theoretical overview of prevention versus promotion focus and explaining the study design to me initially. But I never got an in-depth understanding of what the hypotheses were or what the goals of the study were and how they expected the results to turn out.

[00:27:57.31] TERESA AMABILE: That's helpful. Thank you. Do you recall any conversations about any of the others-- I don't even know if you looked at any of the other studies in this paper, but do you recall conversations about any of those other studies?

[00:28:10.72] [redacted]: I recall Professor Gino mentioning study 3B. But that's really the extent of my involvement after running or helping run study 3A. She mentioned that they had follow up studies. And I believe that's the extent of our conversations about the other papers.

[00:28:31.29] TERESA AMABILE: OK. Do you recall if you were involved in study 3B in any way?

[00:28:36.22] [redacted]: I have the study open. I may, if it's OK, just take a quick look at it and see if I recall any of the details.

[00:28:42.57] TERESA AMABILE: I can tell you it was identical to 3A--

[00:28:45.42] [redacted]: Identical?

[00:28:46.17] TERESA AMABILE: --except that as people were-- as participants were-- after the prevention or promotion focus was instantiated, one of the dependent measures was that they were-- rather than reading a story-- I'm sorry. I'm babbling here.

[00:29:08.57] They actually were asked to send an email to someone from their network from a while ago-- someone that they hadn't had contact with recently but they thought might be helpful to them in networking. I believe that they actually sent an email, behaviorally, rather than just reading a scenario and asking to identify with the protagonist.

[00:29:32.69] [redacted]: Now that you explained the study, I do recall Professor Gino mentioning it and discussing it with me. But, to the best of my knowledge, I wasn't involved in running study 3B.

[00:29:42.59] TERESA AMABILE: OK. Thanks. Bob and Shawn, I'm about to go to the section on data anomalies. OK. No follow ups. All right.

[00:29:51.74] So, [redacted] what we're going to do is screen share with you a few different tables of analyses that have been done on two data sets that I'm going to describe right now. One is what I'll keep referring to as the OSF data set, and that is the data set that was publicly posted as, you know, when the study was published, here are the data for this study, study 3A. And those are the data that we're-- those are the analyses that appear in the published paper.

[00:30:33.52] The other data set is the one that was downloaded from Francesca's Qualtrics account. OK? So it's what I will refer to as the Qualtrics data or Francesca's data set. OK? So you've got those two data sets in mind. So comparisons have been made between those two and some discrepancies, actually quite a few discrepancies, have been discovered. OK?

[00:31:01.94] [redacted]: Yeah.

[00:31:02.71] TERESA AMABILE: I'm going to go through this. It's going to take a while. There are six tables, and I'll talk through them. Just stop me at any point if you have a question about what you're looking at, or if we're going through them too fast or something. Is that OK?

[00:31:19.84] [redacted]: Sure. Thank you.

[00:31:21.10] TERESA AMABILE: OK, great. And, Bob and Shawn, I'm going to ask you guys-- if I misspeak about anything please just break in and correct me, or if I forget something important. OK. So first, Alain, if you could screen share Table 1, we're just going to be looking at the means here, [redacted] the means of the experimental conditions in the two data sets. And you'll see that they're pretty different. Alain, your screen share is not showing up. We do see Alain Bonacossa has started screen sharing. Could you somehow signal to us if you're still online, because I think this--

[00:32:04.44] [INTERPOSING VOICES]

[00:32:05.26] TERESA AMABILE: --may indicate that you're frozen.

[00:32:08.06] [redacted]: Here we are.

[00:32:11.79] TERESA AMABILE: It looks like he's here.

[00:32:14.05] SHAWN COLE: Yeah. We got it.

[00:32:15.10] TERESA AMABILE: Yeah. Yeah. We see the screen share now. [redacted] are you seeing the screen share?

[00:32:20.85] [redacted]: I am.

[00:32:21.42] TERESA AMABILE: 2020 paper, Table 1? OK. So what we've got are the three conditions-- promotion, prevention, and control. Author's data set is Francesca's data set, of course, and OSF is the publicly-posted data set. And, as you can see, the means for the control condition are very close. But they're actually flipped around in order for the two experimental conditions.

[00:32:57.08] [redacted]: Yes. That's correct.

[00:32:58.82] TERESA AMABILE: OK. Do you have a question about this or shall we go on?

[00:33:04.25] [redacted]: Just very-- I apologize for my facial expressions. I'm just very concerned seeing this. That's very strange.

[00:33:14.07] TERESA AMABILE: Yeah. Yeah. OK. And Table 2 is next. And let me just tell you, what you're going to see in Tables 2 and 3, [redacted] are small samples of very specific discrepancies between the two data sets on the moral impurity measures. OK?

[00:33:37.64] So these are just the moral impurity measures. And what you're seeing here is three pairs, which appear to be the same surveys. If you look under the essay column-- and this is condition one which is the promotion focus condition. If you look in the essay column, these really do seem to be the same subject--

[00:34:06.06] [redacted]: That's correct. Yeah.

[00:34:07.47] TERESA AMABILE: --in the pair. And, also, the two right-hand columns, they're also open-ended responses, written responses by the participants. And those are identical.

[00:34:20.31] [redacted]: Yes.

[00:34:20.48] TERESA AMABILE: But if you look at the numbers for the several moral impurity measures, you can see that they're very different. So that first pair, which was row 448 in the public data set and row 451 in Francesca's data set, you can see that the average of the numbers that were publicly posted is 1.3. And in Francesca's data set, very different, 5.6.

[00:34:56.87] [redacted]: Yeah. Yes.

[00:34:58.40] TERESA AMABILE: Yeah. And for the other two pairs of rows the differences are even a little bit more extreme in the two data sets.

[00:35:05.69] [redacted]: Yes.

[00:35:06.62] TERESA AMABILE: So the quantitative data change-- yeah. Go ahead, [redacted] Yes.

[00:35:11.00] [redacted]: Yeah. This is-- I'd never seen this, but I do recall these verbatim now, now that I see the essays and-- because I reviewed responses like this. So that's the only comment I have at this time. And also, I just do want to note that I'm also seeing the discrepancies that you're describing, and I'm both confused and concerned seeing them.

[00:35:42.51] TERESA AMABILE: OK. Do you have any other comments? The next table is going to be, essentially, the same kind of table but with condition two, which is the prevention focus. But is there anything else that you'd like to say in terms of your reaction to this or comment on this before we move to Table 3?

[00:36:02.47] [redacted]: If I can have just another 30 seconds to take a look at it--

[00:36:05.38] TERESA AMABILE: Of course.

[00:36:17.93] [redacted]: I can't think of a way in which the data would have been accidentally changed in this way, since the patterns-- they're not consistent in terms of what is and isn't changing. That's all I have to say, aside from the fact that I'm concerned by seeing these results. Because we shouldn't be

seeing discrepancies like this between your original data set and the clean OSF data set. That's really all I have to say at this point.

[00:36:53.35] TERESA AMABILE: OK, [redacted] So you were looking for something that might explain-- something that might have happened automatically with the data. Is that what you were looking for?

[00:37:04.84] [redacted]: That's correct. I think-- I mean, in my experience, I was always paranoid about data quality. I would always have multiple copies of files to ensure, if I did have to do some initial data cleaning based on verbatim or if we were doing data analysis, I would always make sure that the data set that I was working off of was good and correct and was-- contained the same data that we had initially collected. So I can't think of a way in which-- I have no idea as to how the data changed from the original Qualtrics data set and the OSF data set. I don't know how this happened. And I can't think of, like, an accidental way in which this could have happened.

[00:37:51.02] TERESA AMABILE: I do recall from your work with me that you were an absolute hound with precision when it came to our data sets. So, OK.

[00:38:01.43] [redacted]: Thank you.

[00:38:01.91] TERESA AMABILE: So could we see Table 3, please? And, as I said, this is condition two, [redacted] prevention focus. And it's the same kind of table, where you're going to see pairs of rows that are matched on the open-ended qualitative responses, but very different in the quantitative. And I'll give you a little bit to look at that, and then I'll ask you to comment.

[00:38:42.82] [redacted]: I can see, for the second and third examples, it seems that the scale was flipped for them or their responses [inaudible] must have been flipped. But when we consider the first example and how the original set just had responses of 1 to all of those impurity statements and that it changes to be-- it seems to be in the OSF data in row five, we see variation across those responses, whereas the original row one, I don't know how that could have happened through just your typical manipulation of the data set in order to clean it or in order to arrange it such that you can analyze it. I can't think of how that could have happened row five.

[00:39:33.95] TERESA AMABILE: OK. Would you like more time on this one?

[00:39:43.88] [redacted]: I think I'm OK with seeing it for this amount of time. I think I've seen what I need to see if that's OK.

[00:39:51.58] TERESA AMABILE: OK, thanks. And now, before we show the next set of tables, I'm going to just give you a little preview of what you're going to be looking at, [redacted] So we have three tables to show you next. The first two are going to be similar to each other, in terms of the kind of table they are.

[00:40:14.07] These three tables are going to show the extent of the discrepancies. So these are-- what you've seen in Tables 2 and 3, are samples of discrepancies at kind of the microscopic level of particular rows of data that we can look at. These next tables will show you the extent of discrepancies, and not just on the moral impurity ratings-- which are the ones that we've been looking at-- but on both the moral impurity ratings and the other dependent variable, which is networking intentions. OK?

[00:40:54.56] And these tables were created by matching surveys based on the exact words in the qualitative data, just as you saw in these two, Tables 2 and 3. OK?

[00:41:05.53] [redacted]: OK.

[00:41:05.90] TERESA AMABILE: OK. But these next tables are going to show you what we see when that kind of matching is done for all of the surveys in the entire data set. OK?

[00:41:18.95] [redacted]: Mm-hmm.

[00:41:20.18] TERESA AMABILE: OK. All right. So Table 4-- Alain has just put that up-- shows that 40 observations or 40 surveys in the promotion focus condition-- so this is just that condition one-- 40 observations have discrepancies in the quantitative data for the moral impurity measures or the network intention measures or both. Blue indicates that the public data set has values that are lower, and red indicates that it has values that are higher than the matching survey in the Qualtrics data set on Francesca's computer.

[00:42:06.25] [redacted]: I see.

[00:42:10.46] TERESA AMABILE: As you might recall, the hypothesized and reported in the paper effect is that under promotion focus-- that's this condition-- people will feel lower levels of moral impurity after networking and will have higher intentions of networking in the near future.

[00:42:34.43] [redacted] Yes.

[00:42:36.13] TERESA AMABILE: So every one of these discrepancies is in the direction of the hypothesized effect.

[00:42:40.75] [redacted]: Precisely. I agree. My only comment at this point-- and I imagine that we'll discuss this later-- gosh. I think-- Yeah. It's clear to me, seeing these results, that the only way that this could have happened is if the data were intentionally changed to, essentially, get significant results. That's what I think from seeing this, and that's my perspective at this point.

[00:43:20.61] TERESA AMABILE: Thanks for that, [redacted] Do you want any more time to look at this? The next table is going to show you the condition two, same kind of-- this is called a heat map, same kind of heat map.

[00:43:33.77] [redacted] I think I've seen enough of Table 4. Thank you.

[00:43:36.17] TERESA AMABILE: OK. So we'll go to Table 5, which is condition two, prevention focus. And here, many more surveys show discrepancies. Actually, only about a third of them would fit on this page. And we don't have tables showing you the other 2/3, but 43 observations out of 128 in this condition have discrepant values.

[00:44:09.22] And, again, you can see that all of the discrepancies are in the direction of the hypothesized and reported effect. That is, under prevention focus, people will feel higher levels of moral impurity after networking and will have lower intentions of networking in the near future.

[00:44:31.65] [redacted]: The part that concerns me most about this table-- and perhaps, in a second, we can go back to the previous table. But it's not-- one of my initial thoughts is, OK, perhaps someone-- and this doesn't even align with the approach that I think [redacted] would take. But if we had a script in R or something that was meant to help in data cleaning, something went horribly wrong. Perhaps you would see systematic differences that could be accounted for, and then, oh, we made a mistake in the script.

[00:45:01.79] But the thing is that the differences vary across responses or like we see in the heat map, that it's not like a consistent pattern of, oh, these numbers are higher here. But rather it varies across responses, which tells me it's not an issue with a script in R or something along those lines. But rather the most likely explanation is that someone manually edited this data to produce this sort of result.

[00:45:29.01] TERESA AMABILE: I hear you.

[00:45:32.68] [redacted]: And I think that's the extent of it. Oh, sorry. Please, go ahead.

[00:45:35.01] TERESA AMABILE: No. It sounded like you would like to take a quick look at Table 4 again.

[00:45:38.82] [redacted]: Yeah, if I may.

[00:45:40.53] TERESA AMABILE: Sure. We can scroll back to that one.

[00:45:47.75] [redacted]: And we're seeing essentially the same-- from my perspective, the same sort of issue where in the heat map areas it's not a systematic issue where we're seeing one item is consistently higher or something along those lines. If that were the case, then I would think perhaps there was-- perhaps someone made a mistake in data analysis.

[00:46:05.26] And we can go into the R script-- I don't know which software they used to conduct the analysis-- but we could go back to the software and see how exactly we ran the analyses and see if someone made a mistake that could lead to a systematic issue. But clearly, these differences are all over the place. And the heat map varies across items and respondents. So it's the same issue, where I think someone must have edited this. That's my hunch. That's my best guess.

[00:46:33.37] TERESA AMABILE: OK. Thank you. It sounds like you have familiarity with heat maps. Do you?

[00:46:41.68] [redacted] Only slightly, and due to my current job.

[00:46:44.74] TERESA AMABILE: Your current job, OK. All right, thanks. And, finally, we've got Table 6, and it sums up the survey-by-survey comparisons between the two data sets for all three conditions. As you can see, there were discrepancies in 20% of the surveys in condition one, that's the promotion focus condition. And 65% of the surveys in the prevention focus condition. But no discrepancies at all in the control condition, and that's condition three.

[00:47:24.89] [redacted]: And, again, that suggests to me that it's the same-- I don't have access to the scripts that they used to run the analyses or to clean the data. But seeing that condition three doesn't have any discrepancies, again, suggests to me that it's not a systematic mistake in someone cleaning the data with software. It seems to be that if someone had made a mistake in some sort of automated process, I think we would be seeing issues across all three conditions. But the fact that we're not seeing

any issues in condition three suggests to me, again, that someone manually edited these responses. That's just my perspective. I could be wrong, but that's my initial impression seeing this.

[00:48:16.88] TERESA AMABILE: OK. Thank you, [redacted] So I believe what I've heard you saying, as you've been looking at these tables, is that you can't explain how such discrepancies could have arisen through what could be considered innocent error.

[00:48:37.19] [redacted]: I cannot. I'm sorry to say it, but-- and I realize that HBS may not be able to do this. But I'd be happy to take a look at other materials to see if I can try to figure out what has happened here, if there are scripts. If there's anything else that they used in the data analysis that could help explain this. But honestly, from what I'm seeing here, the parsimonious explanation is that someone edited the data manually to get certain pattern of results.

[00:49:14.15] TERESA AMABILE: OK. Thanks. Thanks for giving us your views on that, [redacted] Really appreciate it. Bob, Shawn, any follow ups from you? OK.

[00:49:24.84] BOB KAPLAN: Yeah. Just to-- just to say--

[00:49:27.12] TERESA AMABILE: Go ahead, Bob. I'm sorry.

[00:49:29.73] BOB KAPLAN: --that I really appreciated [redacted]'s willingness to think in real time and react to the data in a very honest and candid way. So thank you for that.

[00:49:42.03] [redacted]: Of course. It's my pleasure.

[00:49:43.65] TERESA AMABILE: Yeah. Thank you very much, [redacted] And even offering to try to help us out in other ways offline. Alain, I think you can stop the screen share now. Thank you. OK. So we've got a few remaining questions, [redacted] We'll try to wrap up as quickly as we can. We know that you start work in about 40 minutes from now, I guess.

[00:50:08.84] So we'd appreciate it if you could describe the way Francesca's lab was run during the time you worked for her. I have a few specific questions. But maybe you could make a few general comments about how it felt to work for her in her lab in terms of the work environment.

[00:50:32.82] BOB KAPLAN: Teresa--

[00:50:34.18] TERESA AMABILE: Go ahead, Bob. Yes?

[00:50:36.01] BOB KAPLAN: I don't know whether you consciously skipped the question that we just--

[00:50:39.95] TERESA AMABILE: Ah. I did not consciously skip it, Bob. Could you ask it please? It was a very important question, [redacted] that I missed.

[00:50:50.17] BOB KAPLAN: I think we-- well, you've in a way explained it. But we do have to ask this question of every person that we interview. Did you personally change the data in any way that could have led to the discrepancies that we have just shown you?

[00:51:09.06] [redacted]: I did not change the data in any way that could have led to those discrepancies. If I had changed the data, it would have been at the early stages, based on those verbatim, in order to remove certain responses. But I never edited the data before sending it to Francesca.

[00:51:25.89] BOB KAPLAN: OK. Thank you.

[00:51:27.18] [redacted]: In the sense of-- and for clarification-- I never edited the data in the terms of changing scale responses, in terms of changing numbers. If I edited the data, it was identifying responses that we should delete and then confirming with Fran that we should, in fact, delete them.

[00:51:43.35] TERESA AMABILE: Thank you. Thank you, [redacted]

[00:51:45.12] [redacted]: Of course.

[00:51:45.76] TERESA AMABILE: And thank you, Bob, for rescuing me by noticing that omission. So do you want to say a few words about the work environment in Francesca's lab?

[00:51:59.92] [redacted]: Of course. So, with Francesca, she had her hands in a lot of projects. She was extremely busy and liked to keep busy. And, as a result, she would delegate a lot. And so her projects would frequently involve many, many collaborators working in tandem and, of course, keeping her informed about progress. But her role was more so in developing the theories, developing hypotheses, developing the study design. But there were many times where she was rather hands-off.

[00:52:33.46] I didn't mind it. She trusted me, and I know that she trusted her collaborators. But that was frequently the case, where she was just too busy, and then she would come in at various points to check in. But for the most part, she was juggling so much between life, and executive education, and teaching, and of course, running so many studies simultaneously that she wasn't as hands-on as other professors, I think, in my experience of work.

[00:53:03.20] TERESA AMABILE: OK. So a few specifics-- can you tell us about how you and Francesca typically communicated about her research during the time?

[00:53:14.03] BOB KAPLAN: No, just--

[00:53:15.05] TERESA AMABILE: Oh, yeah, Bob, go ahead.

[00:53:16.37] BOB KAPLAN: Just to follow up on that, because it was a very interesting response, is delegated to you, [redacted] the initial setup of the experiment, make sure the survey ran, and make sure from a qualitative point of view, as you have explained, that anomalous responses were identified and perhaps excluded. And so we're trying to identify who she might have delegated the next stage of the work to. Given that you just stated how busy she was in many things and her style of delegation. If you could help us understand who might have been the delegatee for looking at the data initially and doing initial calculations of the means and this and other analysis like that.

[00:54:13.24] [redacted]: Of course. My best guess would be it would have been one of the other faculty collaborators. I know Professor [redacted] was involved in data analysis for a few projects. I do not

mean to accuse them, of course, of doing this manipulation. But I'm just trying to name the people who could have been involved in data analysis.

[00:54:31.63] It could have been one of the other faculty collaborators. It could be a doctoral student that I didn't have contact with or someone who might have been just on the edges of my awareness in terms of running this project, or the first parts of this project.

[00:54:47.59] So, yeah, I think it could have been a doctoral student. I think it could have been a faculty collaborator. There's a very slight chance it could have been Research Computing Services, though that doesn't apply in my mind. I don't think they would ever edit the data in this way. Those are the only people that I think would have had hands on the data in the later stages, during data analysis.

[00:55:07.09] TERESA AMABILE: Bob, any more?

[00:55:07.97] BOB KAPLAN: I'm done.

[00:55:09.19] TERESA AMABILE: And, [redacted] undergrads-- were there undergrads working in her lab at that time who might have been working on data in some way?

[00:55:20.36] [redacted]: I don't believe so. If I recall correctly, I don't believe so. There were undergrads involved through-- I apologize. I don't remember the name of the fellowship, but there were a few undergrads who worked on a different project. But I don't believe there were undergrads working on this one. No.

[00:55:40.82] TERESA AMABILE: OK. Shawn, you didn't have anything, did you? No? OK. So can you tell us how you and Francesca typically communicated about her research?

[00:55:53.83] [redacted]: Yeah. So Francesca and I typically communicated through a few means. We would have in-person meetings from time to time, but the majority of our communication was electronic. Most of it occurred via email.

[00:56:07.47] TERESA AMABILE: I'm sorry. Most of it occurred via--

[00:56:09.80] [redacted]: It occurred via emails.

[00:56:11.46] TERESA AMABILE: OK. OK. About how frequently would you meet in person? Do you remember?

[00:56:16.88] [redacted]: It's difficult to say, because it varied throughout the year, depending on her schedule. We did try to have one-on-ones once or twice a month, at the very least, if I recall correctly. But we weren't meeting very, very frequently. It was usually we would touch base earlier in the week, perhaps earlier in the month, even. And then I would have my marching orders and would continue to work on research in the meantime.

[00:56:44.54] SHAWN COLE: Did you ever do any work using her office computer or her personal computers, or did you--

[00:56:50.06] [redacted]: No. I will say, Shawn, there were a handful of instances where Francesca would show me data on her computer in her office. And I believe there was only one instance where she asked me -- for a completely separate project, this was for a case study -- where she asked me to take a look at one thing on her computer while she was present. But, if I recall correctly, I never had access to her personal computer or her work computer in relation to this study.

[00:57:22.40] SHAWN COLE: OK. Thank you.

[00:57:23.89] [redacted]: Of course.

[00:57:24.83] TERESA AMABILE: [redacted] can you tell us where your office was during that time that you were working? I think when you were part-time for me and part-time for her, you were 75% for her and 25% for me. And then-- you're nodding, yes. And then the following year, after that, you were 100% time--

[00:57:44.45] [redacted]: That's correct.

[00:57:45.14] ALAIN BONACOSSA: --working for her. Correct?

[00:57:47.60] [redacted]: That's correct.

[00:57:48.56] TERESA AMABILE: OK. And did you work for her in total-- counting that part-time year-- for was it three academic years or two?

[00:58:00.70] [redacted]: That's correct, Teresa. It was three academic years. The first year was full-time with Professor Gino. The second year was I believe-- my apologies. I also hope that you can reach out to--

[00:58:16.58] TERESA AMABILE: Oh, of course, we can reach out to the Research Support Services people--

[00:58:20.34] [redacted]: Yes.

[00:58:20.72] TERESA AMABILE: --and find out for sure. So was your office there? I know that there's a suite in the floor of Baker/Bloomberg, where Francesca's faculty office is. Was your office up in there, so you kind of saw the people who were working with her or saw her?

[00:58:43.14] [redacted]: Yes. Mm-hmm, to some extent. I was not located right next to Francesca's office. I was located a bit further down the hall. And I was working right next to one of the lead FSS's who was [redacted] So my desk was right next to hers, close to the doors on that fourth floor.

[00:59:04.80] TERESA AMABILE: OK. Close to the doors on the fourth floor. OK. I can picture that. All right. Is that [redacted]?

[00:59:13.31] [redacted]: Yes.

[00:59:14.15] TERESA AMABILE: OK. So can you describe-- let me see. I don't know if we need this one. Can you describe the details of how you would typically work with data for Francesca's studies with

respect to collecting it, cleaning it, modifying it, analyzing it, sharing it with other researchers at HBS, or elsewhere, posting it, and so on? So I think you've covered most of that, if not all of that. Is there anything you would want to add?

[00:59:45.46] [redacted]: Sure. And just to recap, my involvement in-- my involvement in the research varied from project to project. For example, I was involved in data analysis for a project involving [redacted], where we were analyzing reactions to open office plans. So that's an instance of a study where I was involved in data analysis.

[01:00:07.63] For this study, I wasn't. I really was only involved in the design of the Qualtrics survey, and fielding this on MTurk, and a bit of initial data cleaning. And that's the extent of my involvement in handling the data for this study.

[01:00:24.83] TERESA AMABILE: OK. I'm OK with that. Anybody have follow ups?

[01:00:31.06] BOB KAPLAN: It's consistent with what [redacted] said earlier.

[01:00:34.01] TERESA AMABILE: Right. And I think you've already answered this question. Can you say who else in Francesca's lab, during that time-- specifically the time that this study 3A was done-- worked with data in her studies, including other HBS RA's, student RA's, undergrad student RA's, doctoral students, postdocs, other faculty, anyone else that you can remember?

[01:01:02.60] [redacted]: I think the only collaborators that I can name specifically would be the professor's names in the paper and, of course, those are non-HBS researchers. And in terms of HBS researchers, it was me-- Behavioral Research Services might have helped me to some extent with this project, though they help me with so many projects that it's hard to say if they did. But I think they might have.

[01:01:27.20] There may have been a doctoral student involved in some way, because Francesca wanted them to get exposure to this process. But, in this case, I honestly just don't know. I don't know. And that's the extent of my knowledge of the collaborators involved.

[01:01:42.12] TERESA AMABILE: OK. Great. Did you use Francesca's Qualtrics account?

[01:01:48.60] [redacted]: I used my Qualtrics account.

[01:01:53.52] TERESA AMABILE: OK. So you had a separate account from Francesca's Qualtrics account?

[01:01:59.13] [redacted]: That is correct.

[01:02:00.12] TERESA AMABILE: How did she get the Qualtrics data from you?

[01:02:04.44] [redacted]: To be honest, I don't recall. I believe it would have been done via one of two ways. Within Qualtrics it's possible to share surveys. So it's possible that I shared-- that I gave Francesca access to the survey within Qualtrics, and then she downloaded it.

[01:02:20.34] Or there is a chance that I downloaded the data and sent it to her. I believe it was the former, rather than the latter, that I shared the survey with her, and then she handled it from there. But

I do certainly-- I really hope that the faculty has the opportunity to look into my email records to figure out and to see that I sent the raw data to Francesca without edits. I know that that's the case.

[01:02:43.75] TERESA AMABILE: Thank you.

[01:02:45.51] [redacted]: Or if I did send it, it was something that we discussed in the context of initial data cleaning.

[01:02:51.37] TERESA AMABILE: Did you just say in the context of initial data cleaning? Did I hear that?

[01:02:54.49] [redacted]: That's correct.

[01:02:54.92] TERESA AMABILE: Yes. OK.

[01:02:55.46] [redacted] Yes.

[01:02:57.56] TERESA AMABILE: Did other people in the lab use Francesca's Qualtrics account to your knowledge.

[01:03:02.48] [redacted]: To my knowledge, no. But I don't know. I honestly can't say either way. I just didn't see that happening.

[01:03:14.94] TERESA AMABILE: To your knowledge, did you or others in the lab have access to any other accounts of Francesca's, any other electronic accounts?

[01:03:28.49] [redacted]: I'm just thinking very hard about this, because I think I'm trying to recall if I had access to any of her accounts. I don't believe so, no.

[01:03:41.88] TERESA AMABILE: And, to your knowledge, no one else did?

[01:03:45.24] [redacted]: I don't believe so.

[01:03:46.95] TERESA AMABILE: OK.

[01:03:48.78] [redacted]: There were times that-- For the sake of complete transparency, there were times due to teaching, that Francesca gave me her keys to her office. I never had her login information, however, so I was never able to and nor did I ever want to access her laptops.

[01:04:08.16] I do think it is possible-- I don't know, but it is possible that she gave similar access to someone else. It's something that I think Francesca would have to comment on herself, but I think that's something the committee should know. This is the sort of thing where Francesca would say, [redacted] I need x papers or x books to be brought from my office, so we can teach this or so so-and-so can receive those books or another material for her class. But that was the extent of my access to her office.

[01:04:38.19] TERESA AMABILE: OK. Thanks. Can you describe the work environment of Francesca's lab as you experienced it? We're particularly interested in-- well, go ahead. Yeah. Go ahead and answer it, and then I'll ask something more specific.

[01:04:52.53] [redacted]: Sure. I would describe the general work environment as being very friendly, very supportive, Francesca always trying to take on a role of-- actually, my apologies. Can I return in just one minute? I need to handle one thing.

[01:05:05.82] TERESA AMABILE: Oh, of course.

[01:05:06.57] [redacted]: Sorry.

[01:05:06.84] TERESA AMABILE: Absolutely. Yes.

[01:05:08.16] [redacted]: I'll be right back. Sorry about that. Someone was banging on my door. So I wanted to check on it.

[01:05:36.54] TERESA AMABILE: OK. Is there anything you have to take care of right now? Because we can take a short break. No?

[01:05:40.83] [redacted]: No problem at all. I'm all set.

[01:05:42.03] TERESA AMABILE: OK. OK. Was there something else that you wanted to add? It seemed like you were kind of in the middle of something.

[01:05:50.34] [redacted]: Yeah. So in terms of the work environment, I will say that Francesca was very friendly, very supportive, always took my goals into account, and tried to give me projects that would help me advance my career. She knew pretty early on that I wasn't interested in getting a doctoral-- in pursuing a doctoral program or getting a PhD. And so she would give me opportunities that would help me go into industry. That was her goal.

[01:06:17.41] So, with that said, she also-- as I mentioned before-- was so busy and essentially was, from my perspective, stretched thin, that she didn't always have the time to really go in depth and review certain things that I think-- I do think that she did her best to do her due diligence. But I think when you have so many things on your plate, it's possible for things to slip through the-- pardon me, through the cracks.

[01:06:45.88] And I think that's my perspective of the lab. She was an excellent researcher, from everything that I saw. And I never got any indication that she would be someone who would commit academic fraud. It doesn't seem like her, from knowing her. And, yeah, that's really all I have to say about the work environment.

[01:07:08.99] TERESA AMABILE: OK. Now, here's that very specific question I had about it. We're particularly interested in knowing whether you might have felt pressured or incentivized in any direct or indirect way by Francesca to produce certain outcomes in the study.

[01:07:26.27] [redacted]: That never occurred during any of the projects that we worked on together. There were many times that we saw results that weren't significant and her response was, well, darn, we'll run another one. There will be something else.

[01:07:38.40] So she never pressured me to get results. She never pressured me to get significant results on anything. It was just a matter of running the study and seeing how it came out. So this all comes as a surprise to me.

[01:07:54.25] TERESA AMABILE: Do you believe that anyone else in her lab was being pressured or incentivized to produce certain outcomes in a study?

[01:08:01.72] [redacted]: I never saw Francesca pressure anyone that we worked with to get certain outcomes, not from my perspective. I never saw her pressuring other people. I do think it's possible that other people could have motivations that could lead them to edit the data, though I don't have any insight to that and I hesitate to speculate.

[01:08:25.27] TERESA AMABILE: OK. Thanks. Is there anything else about the atmosphere in Francesca's lab or the way she ran her research or supervised her lab personnel that you think could be helpful to us?

[01:08:38.81] [redacted]: I think-- I hope I have summarized it well. And, again, just to recap-- very friendly, very open, very-- she relied on delegation a lot in order to manage her projects because of how many there were. And I never had any indication that she was pressuring people to get results. And she never pressured me to get results.

[01:09:02.29] TERESA AMABILE: OK. Great. Thanks. Good summary. Shawn, Bob, before I get to the last two questions, anything? Any follow ups?

[01:09:11.62] BOB KAPLAN: No. I'm good.

[01:09:14.23] TERESA AMABILE: So, [redacted] at any time during or after the research in this paper was being done or written up or published, did you have any concerns about the integrity of the data?

[01:09:28.05] [redacted]: I did not have concerns, but only because I didn't have insight into what was happening with the data. I hope that answers the question. But I didn't have concerns, because I trusted-- I trusted Francesca. And I figured that after I handed off the data to her and the rest of the faculty that it was going to be managed well. That was my perspective.

[01:09:57.64] TERESA AMABILE: Thank you.

[01:09:58.84] [redacted]: Of course.

[01:10:01.11] TERESA AMABILE: All right, last question. [redacted] is there anything else we should know, as we try to determine whether research misconduct occurred with respect to study 3A in this paper, and if it did, who might have been responsible for it?

[01:10:17.44] [redacted]: I think-- this is something that I'm sure the committee has discussed. I don't know what HBS's policies are in relation to what I'm about to propose. But if I still had my laptop and this came up, I would be going through every single email chain and every single attachment in those emails to see where the discrepancy was introduced.

[01:10:40.57] Because, of course, we can compare the OSF data to the Qualtrics data. But the question is there were clearly-- there are multiple iterations of this data that had to have existed throughout the process of running 3A. And so the only thing that I would want to chase would be, like, looking through the email chains and figuring out, OK, when exactly did these discrepancies get introduced. That's really the only comment I have on that topic.

[01:11:08.61] TERESA AMABILE: OK. So it sounds like you would look for emails that had data files attached to them.

[01:11:14.11] [redacted]: Precisely. I do also know that Francesca sometimes exchanged data via Dropbox, via box.com. There was another website that I think you could potentially ask her about that allowed you to send files for temporary downloads, which would make it more difficult to track because the file would have been deleted by now. Because it was a temporary file sending device.

[01:11:35.26] TERESA AMABILE: Are you referring to the Secure File Transfer system?

[01:11:39.83] [redacted]: So I did introduce Francesca to SFT, and I believe she used it from time to time. But there was another file transfer system. It's been so long that I don't recall exactly what it was, but it's something that you could potentially ask her about in relation to this, as well. If she ever sent-- essentially figuring out which means did she use to share the data with her collaborators, that's what I'd be curious about to figure out. And we could probably even figure out who edited the data, if we were to track that chain. That's my best recommendation.

[01:12:10.64] TERESA AMABILE: OK. Great. Thank you. Anything else that you'd like to comment on or say before we let you go?

[01:12:18.59] [redacted]: Yeah. Just a couple of things are-- that I've always been committed to academic integrity. I was raised by a professor or, essentially, my father was a teacher for a while. And it was instilled in me early on in life. And then I think I've demonstrated, over the course of my career and my academic career at Harvard, academic honesty. In working with both you and Professor [redacted] I never tried to falsify results, and I never had any desire to, and I think it's profoundly wrong.

[01:12:50.11] At the same time, it just doesn't seem like Francesca. Knowing her, working with her, this really does come as a surprise to me. Her response to every study that came back is-- every time we got results that weren't significant, it was never an angry response.

[01:13:05.23] There was disappointment. But it was just, given how well established she was, it doesn't make sense. And it doesn't align with her previous responses for her to say I'm going to edit the data to get significant results. It just doesn't seem like her, and I think that's the extent of my comments.

[01:13:23.09] TERESA AMABILE: Thank you. Did I hear you refer to a Professor [redacted]

[01:13:27.49] [redacted]: Yeah. I worked for Professor [redacted] during my last year at HBS.

[01:13:32.95] TERESA AMABILE: OK. OK. Thank you. All right. Bob or Shawn, anything else for [redacted] besides our profound thanks?

[01:13:43.72] SHAWN COLE: Only thanks. Thank you, [redacted]

[01:13:45.77] [redacted]: Of course.

[01:13:46.24] BOB KAPLAN: Thank you. It was an excellent interview, and we appreciated, I guess, your responses.

[01:13:55.67] TERESA AMABILE: Yeah. You were very clear, [redacted] and clearly very careful and really thinking through your answers to us. And we can't tell you how much we appreciate it. This is super difficult work, and you've been very helpful to us. So thank you. Thank you so much. And if you have any follow-up questions you could, of course, be in touch with Alain.

[01:14:18.34] [redacted]: Of course. It's my pleasure to help. And also, if the committee has any follow-up questions. I am doing my very best to relay the truth as I recall it. But if you do need me to weigh in again, I'm always here to help. I'm committed to making sure that we have academic honesty.

[01:14:37.22] I would never want-- this is so disappointing to me, personally. It really does bother me to see this, and I want to get to the bottom of it. I know I wasn't involved in this occurring, but it really does bother me to see this. So let me know if I can help. I'm here to help in any way I can.

[01:14:56.07] TERESA AMABILE: Thank you so much, [redacted] Really appreciate it. All right. Take care. The rest of us are going to stay on for a few minutes, but thank you so much.

[01:15:03.26] [redacted]: All right. Of course. Take care.

[01:15:04.10] TERESA AMABILE: Bye-bye.

[01:15:04.58] [redacted]: Bye.

Exhibit 9
Transcript of Witness Interview with Professor [redacted] on June 24, 2022

[redacted] Interview
June 24, 2022

[00:00:00.27] ALAIN BONACOSSA: Good morning, everyone. My name is Alain Bonacossa, and I'm the research integrity officer at Harvard Business School. I wanted to thank [redacted] for being here today and for being willing to be interviewed by the Investigation Committee.

[00:00:16.65] I will now make a brief announcement before handing it off to the chair of the committee. First, a reminder, the interview will be recorded and transcribed, and [redacted] you will be given a copy of the transcript for correction. Let me start by introducing everyone on Zoom today, starting with the Investigation Committee. We have Professor Teresa Amabile, the chair of the Committee, Professor Bob Kaplan, and Professor Shawn Cole.

[00:00:40.82] The witness in today's interview is [redacted]. And in addition to myself, I'd like to introduce two staff members on the call-- Heather Quay, University Attorney with Harvard's Office of the General Counsel, and Alma Castro, Assistant Director in Research Administration at the Business School.

[00:01:01.45] Next, I wanted to provide a brief overview of the process-- of the interview process. This is a faculty review of a faculty matter, so the interview will be a conversation between the committee and you, [redacted] It will entail a series of questions and answers. And [redacted] you should feel free to elaborate on any answers if you think that it could be helpful to the process.

[00:01:22.51] Some basic rules of the road for everyone. To make sure that the transcription is clear, only one person can speak at a time. At the end of my introduction, I would ask the staff on the call to turn their cameras off and mute themselves.

[00:01:37.15] And [redacted], for you, specifically, please answer the committee's questions truthfully. All answers need to be audible so that they can appear on the transcript, so nodding your head is not sufficient. If you don't understand the question, ask for that to be rephrased. And if you don't know the answer to a question, just please say so. If you need a break, of course, ask for one.

[00:02:00.16] A couple of last important reminders. HBS has an obligation to keep this matter confidential, so even the fact that this interview occurred or that there's an ongoing investigation into allegations of research misconduct is confidential. So [redacted] we're going to ask you to keep all of this information confidential. Lastly, per HBS policy, HBS community members may not retaliate in any way against complainants, witnesses, the research integrity officer, or committee members. [redacted] do you have any questions for me about the process?

[00:02:32.49] [redacted]: I do not.

[00:02:34.03] ALAIN BONACOSSA: OK, Teresa, off to you. And we're going to turn our cameras off now.

[00:02:42.37] TERESA AMABILE: Hi, [redacted]

[00:02:42.67] [redacted]: Hi.

[00:02:42.76] TERESA AMABILE: It's nice to meet you.

[00:02:44.50] [redacted]: Nice to meet you too.

[00:02:45.70] TERESA AMABILE: I don't actually remember that we've ever met in person.

[00:02:49.84] [redacted]: I don't think we have.

[00:02:51.48] TERESA AMABILE: Yeah, but it's I feel that I know you because we have so many professional colleagues and students and former students in common. And, of course, I know your work. Thank you so much for being with us today.

[00:03:04.67] I'm the chair of this investigation committee, this three-person senior faculty committee. And as you know, I'm a social psychologist. I've been at HBS since 1995, and I'm in the Entrepreneurial Management Unit. And I'm going to ask my colleague Bob Kaplan to introduce himself now.

[00:03:27.89] ROBERT KAPLAN: Hi, [redacted] We haven't crossed paths since I work out of the accounting area, and primarily managerial accounting. And very pleased to meet you-- though not under these circumstances.

[00:03:42.61] [redacted]: Yes, of course.

[00:03:44.97] SHAWN COLE: And I'm Shawn Cole. I'm in the Finance Faculty at Harvard Business School. But I have an Econ PhD, and I do a lot of field experiments.

[00:03:56.81] TERESA AMABILE: OK, so I think that we can jump right into our questions for you, [redacted] If you need any clarification on anything we're asking or when we get to showing you things, if you need any clarification, of course, just speak up. And I think Alain said this but if you need a break at any point--

[00:04:18.32] [redacted]: Sure, absolutely.

[00:04:19.20] TERESA AMABILE: --speak up about that. OK, thanks. First of all, [redacted] can you tell us how you got to know Francesca and came to be involved in this particular research project? And let me just review for all of us, we're talking about specifically Study 4 in the 2015 Psychological Science paper "The Moral Virtue of Authenticity." This Study 4 is the study with Harvard undergrads who were asked to write an essay about the inclusion of difficulty ratings in the Q Guide. It showed that, quote, "inauthenticity is not dissonance," in addition to showing that inauthenticity leads to a greater desire for cleanliness.

[00:05:02.21] OK, so if you could give us a little background on how you got to know Francesca and how you came to be involved in this particular project?

[00:05:08.99] [redacted]: Sure. I first met Francesca at one of the International Association of Conflict Management conferences. I believe at the time, she was a postdoctoral fellow at Carnegie Mellon. And one of my closest friends, [redacted], was also-- was, I think, one of her advisors at Carnegie Mellon. And then, Francesca got a job at UNC-Chapel Hill, and I'm from Chapel Hill. My parents were both professors at UNC in the Psychology Departments and Social Work Departments.

[00:05:41.30] And so I would see Francesca when I would go down to North Carolina. Probably the most prominent time I went down to North Carolina was over Thanksgiving and the December holidays. And so we would often meet for coffee and discuss ideas. I spent a lot of time with Francesca when she decided to go back on the job market, and I worked with her on her job talk, for example, and spent just a lot of time helping her think about how to present herself on the market.

[00:06:13.68] There's a side funny story, which is that when she gave-- I spent 2008 and 2009 at Berkeley when they were trying to recruit me, and also [redacted], and [redacted] ended up going, and I ended up going back to Northwestern at the time. But when Francesca gave a talk at Berkeley, one of the doctoral students said, that's the exact type of talk that I, [redacted] would give. And she was like, well, actually, [redacted] helped me on the talk.

[00:06:38.18] So we were very close, and I was a huge supporter of hers. And during those visits, we would, of course, inevitably talk about ideas and stuff. And at some point, I think that the concept of inauthenticity being linked to immorality-- or at least the psychological experience of being immoral-- came up.

[00:07:00.33] And at some point, I think she-- I can't remember the exact year she came to HBS. Was it 2011, 2010? But it was some time. But there have been a number of years where we had been hanging out and talked about a number of different projects that this was one of the ones that came to fruition. We had lots of other ideas that didn't get to the execution stage or got to the execution stage and didn't really work, and this was one of the ones that had promise.

[00:07:31.29] TERESA AMABILE: You know, it occurs to me it could be helpful to us to know your acquaintance with [redacted] as well, who's the second author on this paper-- Francesca being the first and you being third author.

[00:07:43.53] [redacted]: Yeah, It's almost entirely through Francesca. So Francesca, I think [redacted] was doing a postdoc or some type of fellowship at Harvard, and Francesca emailed me and said, I really admire this doctoral student, [redacted] We had this project. It wasn't completed yet. And I said, great. If any one of you have ever looked at my CV, you see that I have lots of collaborators, and I'm always a strong proponent of inclusive collaboration.

[00:08:15.85] So when she suggested, I said immediately, that sounds great. This is the only project I've worked on with [redacted] And I didn't have a ton of interaction with her on this project because it was mostly through Francesca.

[00:08:29.04] TERESA AMABILE: So it sounds like you and Francesca had already begun the research for this project at the time that [redacted] joined?

[00:08:37.20] [redacted]: Absolutely, yes.

[00:08:38.64] TERESA AMABILE: OK, thanks. All right, any follow-ups, Shawn or Bob? OK, and this is the second question I'll ask you. And then I'm going to hand it over to Bob, who's going to take the lead in most of the questions, OK?

[00:08:54.84] [redacted]: OK.

[00:08:56.52] TERESA AMABILE: So [redacted] it's important for our committee to understand how this paper came about. You've already given us a little general background. Could you please give us the chronology, as well as you can remember it, of your involvement in the research reported in this paper and in the paper itself? And if you could try to place it in time-- years, months, even?

[00:09:21.09] [redacted]: Yeah, that will probably be impossible in terms of any type of timing. I mean, this project, my involvement fits my pattern of involvement at this stage of my career. At this stage, I personally don't have even a statistical package on my computer. I haven't personally analyzed data in well over a decade. And so my involvement is at the idea stage, at the research design stage, at the interpretation of results stage.

[00:09:49.41] So I would say that's true here. And I know that, let's say, study one, whatever-- and the problem is, I can't remember which study was run when, because sometimes the last study you run becomes study 1 because it makes sense from a framing perspective. But Francesca and I would meet frequently enough about the project that I was involved in.

[00:10:15.15] OK, we ran a study. These are the results. And what should our next steps be? What's the next study that we need to run? What do we need to do?

[00:10:26.11] And so I do have a little bit of background in dissonance. So my master's thesis when I was at Princeton was actually on dissonance. And so I can imagine that I was probably a strong proponent of distinguishing this from dissonance, which relates to study 4, just because I have a background in dissonance.

[00:10:51.39] TERESA AMABILE: It sounds to me-- but please correct me if I'm wrong-- I'm getting the impression, [redacted] that you don't have a super clear memory of this study 4 and how it evolved and what conversations you had with whom when about what aspects of it?

[00:11:10.42] [redacted]: No. No, I mean--

[00:11:11.68] TERESA AMABILE: And you were shaking your head as I was speaking, so--

[00:11:14.03] [redacted]: Yeah, I don't have a clear memory. And part of it is that I'm working on anywhere between 30 and 50 projects at a time. And so I think if you ask my coauthors and collaborators, they would say that I am an incredibly involved collaborator and wanting to understand the design of the study, wanting to understand the study, wanting to interpret the results.

[00:11:37.00] I do a substantial amount of writing. I'm actively involved in the-- if we get an R&R, on the letter to the editor. But I'm at the higher level.

[00:11:50.29] TERESA AMABILE: Thank you, OK. Any follow-ups on that, Bob or Shawn? OK, so now I'm going to hand it over to Bob. And then I'll come on for the last couple of questions.

[00:12:00.97] [redacted]: Sure.

[00:12:01.42] TERESA AMABILE: Oh, [redacted] could you just tell us, do you have a hard stop at 11:15? I know we scheduled you-- you do not?

[00:12:10.00] [redacted]: I do not.

[00:12:11.02] TERESA AMABILE: OK, thank you. Go ahead, Bob.

[00:12:15.64] ROBERT KAPLAN: So I think you may have already set the stage for the answers to the questions that I am going to be asking you. But for completeness and thoroughness, we do have to go through this particular drill here. So just to be clear, Experiment 4 was a study done with Harvard undergraduates who had to write an essay after-- all about the difficulty of-- the difficulty ratings in the undergraduate Q Guide, and then followed up with questions for preferences of use of different kinds of consumer products, 50% of which had to do with cleanliness. So it was correlating their responses on how they felt about the essay, as I understand it, to-- potentially-- their desire for these products.

[00:13:15.78] So the first question is conceptualization and design of the study. And you say in general, this was a stage that you were involved in. So just to confirm that you did play a role in helping the other coauthors in this aspect of the study?

[00:13:33.71] [redacted]: I certainly-- I'm sure I played some role in the design. Now, whether I played a role in the specific content of the study-- let's say the Q Guide-- I imagine I probably didn't. But in terms of thinking about what would be the conditions that we would want in the study, how would we be able to effectively distinguish this from dissonance, I am absolutely certain that I was involved in that type of high-level approach to the study. Whether I was involved in the specific measures, and even what the content was of, let's say, the writing task, as you noted, I don't know if I was.

[00:14:16.98] In looking at the DVs, I'm sure that I was a big proponent of including perceived choice as a measure, because that's such an important component of dissonance if you go back to the early stage. And given my background in dissonance, I imagine that I was a proponent of that. And I've also published on self-affirmation theory and self-affirmation studies, and so I'm sure that thinking just about these processes, I was involved, probably, in thinking about the questions. But I think the specific cleansing products, I'd probably defer to Francesca's authority, or [redacted]'s if [redacted] was involved in the study. I can't even remember if [redacted] was involved in the study or not.

[00:15:03.61] ROBERT KAPLAN: OK, well, so let's move forward, then. When we get to, now, the study has been framed, and we now want to get to the data collection, can you recall who was involved in implementing and executing on that?

[00:15:18.07] [redacted]: I can't.

[00:15:19.97] ROBERT KAPLAN: OK, and data cleaning?

[00:15:24.29] SHAWN COLE: You were not-- but just to be clear, you were not involved in the data collection?

[00:15:27.96] [redacted]: I was not involved in the data collection. I was not involved in the data analysis. I was not involved in-- I never saw the data. The data were never sent to me. I never looked at the data. I never analyzed the data.

[00:15:42.11] I certainly played a role in, if they told me what the results were, in interpreting the data. Or when they wrote it up, I would make edits to the methods and results sections for sure.

[00:15:52.89] ROBERT KAPLAN: OK, that's a clearer answer, and really anticipating the next stage, which was reporting the data in the submitted and published paper and writing about that before submission.

[00:16:11.30] [redacted]: Right, yes. So--

[00:16:13.61] ROBERT KAPLAN: OK.

[00:16:13.88] [redacted]: Yeah.

[00:16:15.01] ROBERT KAPLAN: OK, and then the final part of the data is posting--

[00:16:18.46] TERESA AMABILE: Hey, I'm sorry, "yes" what?

[00:16:21.26] [redacted]: Sorry, yes I was involved in the writing of the paper, but not in the analysis of the paper.

[00:16:26.39] TERESA AMABILE: Thanks, thanks.

[00:16:27.71] ROBERT KAPLAN: And then, the final stage paper is accepted, about to be published, and data get posted on the OSF?

[00:16:34.91] [redacted]: Yes, I was not involved in that at all.

[00:16:37.46] ROBERT KAPLAN: Not involved in that? OK.

[00:16:42.29] [redacted]: I've never personally posted data in my life because my coauthors do that. So I've never actually-- I don't have an OSF account, even. So I just-- I guess at this stage of my career, I rely on other people for-- I'm very good at the design stage and the interpretation stage and the writing stage, as you can probably tell from my CV. But--

[00:17:05.98] ROBERT KAPLAN: Well, Teresa and Shawn, I'm about to move to the next question. All right. OK, so you've mentioned that the people who might-- would have been involved with the data would have been Francesca and, perhaps, [redacted]. Can you think of anybody else who could have been involved in all these details-- the data collection, data cleaning, data analysis? This would have been research assistants or doctoral students, potentially.

[00:17:35.91] [redacted] I wouldn't know. Again, once we discuss the design of the study, and once the results were presented to me, I had no involvement.

[00:17:48.57] ROBERT KAPLAN: OK. Teresa, Shawn, do we have to probe further in this set of questions? No, I didn't think so. OK.

[00:17:59.91] And again, we have to ask these questions.

[00:18:03.42] [redacted]: I understand.

[00:18:04.08] ROBERT KAPLAN: Would you have been-- to the best of your knowledge, were you aware whether the data set could have been modified at any point from initial collection until its final posting on the OSF?

[00:18:20.50] [redacted]: I am not aware.

[00:18:23.17] ROBERT KAPLAN: OK, no knowledge of that. Can you confirm?

[00:18:25.26] [redacted]: No knowledge.

[00:18:27.39] ROBERT KAPLAN: OK, so moving from our questions of you, we now want to show you what we were looking at, or we have been looking at. And Alain, do you have access to the table? I forgot to check with you in advance of this going live with [redacted] whether you did, to post?

[00:18:47.99] TERESA AMABILE: Yeah, I think we can assume he has the tables ready.

[00:18:50.39] ROBERT KAPLAN: No, I mean, I teach risk management, so I put up my own version of this. [LAUGHS] But I'd rather Alain posted it. OK, could you-- let's see, can we make that larger?

[00:19:05.23] [redacted]: I can see it well.

[00:19:06.15] ROBERT KAPLAN: OK, so let me describe what you're looking at here. So this is a portion of the data set that was posted on OSF. And this data set had 491 subjects. And this is a subject subset of probably around 40, 45. And we've highlighted 20 subjects, and we're looking in this column-- year in school.

[00:19:41.53] Now, in all of the entries other than these that are highlighted, the participant named a year-- a year of graduation, freshman, junior, senior, as you can see here-- but there are 20 rows here. And you can see they're clustered together. That's how we can get them on one table, one window here, in this screen.

[00:20:07.93] And all of these 20 in this column responded "Harvard" as an email address, whereas everyone else--

[00:20:18.26] SHAWN COLE: Sorry, correction.

[00:20:18.91] ROBERT KAPLAN: No, I'm sorry. No, I've got ahead of myself. They give "Harvard" as the year in school.

[00:20:23.38] [redacted]: Right

[00:20:24.07] ROBERT KAPLAN: OK. Now, what we don't have shown here is that, while virtually all the other participants, when asked for an email address, gave one that had college.harvard.edu-- a standard email address-- none of these 20 used a Harvard email address. And finally, if you look at somewhere around the fifth column there, strong opinion, it starts with 7-7-6-7. And this represents the number of

cleaning products that the people said that they felt they'd like to use. And you can see there's a lot of 7s in these results-- an occasional 5.

[00:21:16.57] And as we analyze these, these particular 20 data points favor heavily the hypothesized and reported effects. So these would help to support the prior hypotheses that the authors were testing. And the question is, can you identify how these somewhat anomalous results or how these responses could have come into the data set?

[00:21:53.87] [redacted]: I cannot.

[00:21:59.81] ROBERT KAPLAN: All right. Any follow-up questions? Teresa, Shawn? OK, so we do have to ask this question-- just, again, to complete the record. Did you change the data in a way that could have led to these or other anomalies in the data set?

[00:22:24.39] [redacted]: I did not.

[00:22:26.80] ROBERT KAPLAN: OK. OK. I'm going to move on. Teresa, Shawn?

[00:22:34.81] TERESA AMABILE: That sounds good. We could probably stop the screen share, Bob. Do you think that's all right now?

[00:22:39.91] ROBERT KAPLAN: Sure. OK, so these are the specific anomalies that we had observed, had concern about. And I think you've given clear answers to the questions. Now, we're trying to understand, as best you can recall or know, the atmosphere in the lab in which the data for this study were collected-- specifically, the extent to which people in the lab might have felt pressured or highly motivated to produce certain outcomes that would support the hypotheses in the study. Can you give your views or impressions, as best you can recall, about the atmosphere in the lab in which this study was conducted?

[00:23:32.48] [redacted]: I cannot. I had no involvement in the lab.

[00:23:36.33] ROBERT KAPLAN: OK.

[00:23:39.24] TERESA AMABILE: Could I ask a follow-up, Bob?

[00:23:41.19] ROBERT KAPLAN: Absolutely.

[00:23:42.72] TERESA AMABILE: [redacted] did you have any experience ever visiting Francesca's lab, maybe at UNC? No?

[00:23:51.66] [redacted]: No. I mean, I would say-- and Francesca and I at UNC met always in a coffee shop, for example. And even when I had visited her at Harvard, I think-- I don't know if-- I've been to her office maybe once, and been to her house. And so yeah, so I have not-- I've never attended a lab meeting of hers. I've never-- I don't know if I've ever attended a lab meeting of anyone at Harvard, actually, to be honest with you.

[00:24:23.25] TERESA AMABILE: I wonder if you could tell us if you recall any conversations, any discussions, either over-the-phone conference calls or getting together at conferences, that included one of Francesca's-- that included you and Francesca and one of her doctoral students or research assistants? What I'm trying to understand is if you have any sense of how she interacted with people who were engaged in doing research with her or for her.

[00:25:07.61] [redacted]: What I'll say is I know people who have been her students who all seem to think very highly of her. One of her former students who worked with her on the Red Shoe Project is one of my colleagues at Columbia Business School, [redacted].

[00:25:26.27] And let me just say three things which I think are really important for me just to express, which is I really like Francesca a lot as a person and as a collaborator. I have never seen at any point Francesca put pressure on anyone to get results or to move forward. I've only found her to be enthusiastic about research and excited about the ideas.

[00:25:59.87] And so I would say that-- yeah, I would just say that I would never have-- and the last thing I just want to say is I've never had any suspicion whatsoever that any study that I've been involved with her would have any lack of integrity. I've always found Francesca to be of the highest integrity in my interactions with her.

[00:26:27.96] [redacted]: OK. [redacted] thank you for that response.

[00:26:29.21] TERESA AMABILE: That's really helpful. Thank you, that's really helpful. Just one follow-up before we move on. It looks like Shawn may have a question, and Bob as well.

[00:26:40.64] Can you-- you've collaborated with Francesca a lot, obviously. Can you tell us any memories of how she would react if a study was run that you had been involved in planning and the results were uninterpretable or nonpublishable or opposite to what you had expected to see?

[00:27:09.69] [redacted]: We've certainly had studies that didn't work, and I remember having conversations about them with her. And I just remember us retooling and thinking about, what's a better manipulation? And so I don't have anything in particular around that.

[00:27:25.05] I will say, I wanted to say one other thing for the record, which is I have had suspicions about the integrity of other projects I've been involved in and have removed my name from projects before or gently guided a project to sort of wither and die, because from my perspective, since 2006, I've been a tenured member of the faculty. The last thing I need is another paper. The worst thing I can experience is lack of integrity in a data project.

[00:28:02.35] And so I have, on multiple occasions, taken my name off projects or dropped projects or removed myself. And I had no reason ever to do that with Francesca.

[00:28:15.92] TERESA AMABILE: Thank you very much. Bob, do you want to call on Shawn next?

[00:28:19.77] ROBERT KAPLAN: Sure. Yeah, Shawn? I did have another question. So as best you can recall, for this particular study, the Experiment 4, so we know that Francesca was involved. Would you have knowledge whether [redacted] would have been involved in this study as well?

[00:28:38.87] [redacted]: I mean, I could. I should have probably done this. And I could go back to my old emails and see if I could figure out this. But I'll just say that my memory of this project is that it got put on the back burner at one point a little bit for-- I don't know, for a variety of reasons. And then, Francesca said, I'd like to involve [redacted] I think that we could move the project forward more effectively if she got involved. And I said, great.

[00:29:09.14] So I know for certain that there was a study run after she was involved. I do not know if this is Study 4. But my vague memory is that we had submitted the paper somewhere, and it didn't get in, and it went on the back burner because it clearly needed more data. And maybe it needed the dissonance study. I don't know.

[00:29:29.98] And if you really needed me to-- I probably should have done this, and I apologize in advance for not having-- you can imagine, this is a very anxiety-producing thing for me. So I just sort of like, OK, I'm going to just put it in the back of my mind, and then I'm going to go in and listen to the questions. And as you may know, this came in when I was finishing my yearlong sabbatical in Hawaii, and I was on vacation with my family. And so I did a good job of putting this out of my mind until I got back to New York.

[00:29:56.89] And so I do not know. I do know that [redacted] got involved in the paper at a point before data collection was complete. I do not know which study it was that she was involved in. But there's a high chance that I could figure out which study she was involved in by doing some of my own email analysis.

[00:30:26.74] ROBERT KAPLAN: Teresa?

[00:30:29.07] TERESA AMABILE: [redacted] should we at some point feel that we would like you to look through your emails to find correspondence concerning this study or maybe different versions of the paper, I don't know that we will want to ask you to do this, but is that something that, through Alain, we could come back to you, and you'd be willing to look over?

[00:30:53.76] [redacted]: Yeah. I mean, I'm certainly open to that, yeah.

[00:30:56.48] TERESA AMABILE: Thank you. That's it, Bob.

[00:30:59.62] ROBERT KAPLAN: OK. So again, are you familiar with [redacted], who was Francesca's research assistant at the time?

[00:31:09.32] [redacted]: I don't think I've ever heard the person's name before. I may have, but I don't know.

[00:31:13.07] ROBERT KAPLAN: OK, well, it seems to me, certainly, consistent with your prior answers on this. And therefore, you probably would not know of anyone else who might have had access to the data and potentially could have altered it in some form?

[00:31:33.20] [redacted]: I do not.

[00:31:34.40] ROBERT KAPLAN: OK. OK, we're really reaching the final set of questions, and I think at least one of them you've already answered. But just for completeness, at any time--

[00:31:48.86] TERESA AMABILE: Bob, Bob, could I take over with these two, last two questions?

[00:31:51.98] ROBERT KAPLAN: Oh, OK. I'm sorry, Teresa. Go ahead.

[00:31:53.43] TERESA AMABILE: OK, that's all right. But I did want to ask first, Shawn, did you have any follow-ups on anything [redacted]'s talked about to this point?

[00:32:01.94] SHAWN COLE: No. Did we get an answer to question number 8, before we move on to the final two questions?

[00:32:09.45] TERESA AMABILE: Yes. I believe that Bob asked-- wait, Bob, you're muted.

[00:32:18.23] ROBERT KAPLAN: So, [redacted] sorry this is a document that we had prepared that we're simultaneously looking at. And we asked people-- and I probably did not ask this question based on your prior answers, but for completeness, did you change--

[00:32:36.38] TERESA AMABILE: I thought you did ask it, Bob, but please go ahead.

[00:32:39.89] SHAWN COLE: If you did, I apologize.

[00:32:41.45] [redacted]: Happy to reanswer it.

[00:32:43.82] ROBERT KAPLAN: Did you change the data in this experiment in a way that could have led to these or other anomalies? As I'm asking it, I think I remember asking this earlier, but go ahead.

[00:32:53.06] [redacted]: You already asked. And if I were a lawyer, I would say asked and answered. But because I'm not a lawyer, I'll just say, I did not.

[00:32:59.01] SHAWN COLE: I apologize.

[00:33:02.29] ROBERT KAPLAN: Teresa, I'm going on mute.

[00:33:07.43] TERESA AMABILE: Thank you. As you can imagine, [redacted] this is an uncomfortable situation for all of us. OK, I do believe you have answered this in the course of answering other questions, but I'm going to ask it. At any time during or after the research in this paper was being done, written up, or published, did you have concerns about the integrity of the data?

[00:33:37.83] [redacted]: I did not.

[00:33:41.86] TERESA AMABILE: And this is our last question. Is there anything else we should know as we try to determine whether research misconduct occurred with respect to Study 4 in this paper and, if it did, who might have been responsible?

[00:34:00.21] [redacted]: I mean, I'll just reiterate the points I made before, which is I really like Francesca. I've never had suspicions before. I have had suspicions with other papers, and I have, like I said, taken my name off or removed myself from projects where I wasn't confident in the data. And that was not the case here.

[00:34:20.15] TERESA AMABILE: Thank you. Bob, Shawn, anything else that you can think of?

[00:34:26.68] ROBERT KAPLAN: Yeah, I'm done. I appreciate [redacted]'s responses.

[00:34:34.08] SHAWN COLE: Thank you. Thank you very much for your time, [redacted].

[00:34:36.20] [redacted]: Sure, can I ask a question? Or just-- and maybe this is—

[00:34:39.45] TERESA AMABILE: Sure --

[00:34:39.77] ROBERT KAPLAN: You may, but we may not--

[00:34:40.64] TERESA AMABILE: We may or may not be able to --

[00:34:41.30] [redacted]: Yeah, it's not a question at all about the content. It's just a question about the process, which is that-- and maybe Alain is a better person to bring in for this-- but I have followed Alain's charge to not communicate or contact Francesca in any way. Now, Francesca's a friend of mine. Like, we text frequently.

[00:35:06.18] I won a mentoring award, I let her know. She won a mentoring award, she let me know. At what point am I allowed to go back to communicating with my colleague and friend, I guess, is the question. And can I communicate with her outside of this?

[00:35:23.25] It's a little, I'll just say, unfair to me to completely handcuff me and restrict me from having communication. I also respect the integrity of this process. So I guess that's my question for you, is--

[00:35:38.04] TERESA AMABILE: That's a question, [redacted] that we, the Committee, can't answer. That's above our pay grade, as it were. But Alain could help you with that offline separately, unless Heather or Alain would like to enter into this conversation at this point. I suspect they won't, but if they do, I will ask them to turn on their videos and unmute themselves. Otherwise, I'll assume you'll follow up with--

[00:36:13.83] ALAIN BONACOSSA: [redacted] I'm happy to follow up with you about this. Let's have a conversation about it.

[00:36:19.05] [redacted]: OK. Yeah, that's great. And then, I guess related to that question is just like, what's the timeline? How will I be informed of the judgment, et cetera? Just because now, I'm essentially a witness or party to the process.

[00:36:38.12] ALAIN BONACOSSA: We can talk about-- we can talk about that, too. That is a good question. So I'll follow up with you on that as well.

[00:36:47.05] [redacted]: OK, thank you so much.

[00:36:50.69] TERESA AMABILE: OK, well, we are finished. [redacted] thank you very much for answering our questions and for spending this time with us. It looks like you're still a little bit in Hawaii mode with the shirt.

[00:37:04.76] [redacted]: Yes. I'm wearing both my Aloha shirt and my actual what's called an Aloha shirt. So--

[00:37:11.96] TERESA AMABILE: Yeah, no, I hope you can enjoy the summer still in your Aloha spirit.

[00:37:17.78] [redacted]: Yes.

[00:37:18.37] TERESA AMABILE: And again, thanks. Thanks so much for being willing to meet with us.

[00:37:20.48] [redacted]: And thanks for letting me delay. I'm glad that I didn't do it on my vacation. And we had a great last week in Kauai. And so that was really nice.

[00:37:28.22] TERESA AMABILE: Terrific.

[00:37:29.14] SHAWN COLE: Great. Thank you very much.

[00:37:30.35] TERESA AMABILE: OK, thank you. We're going to stay on for a bit after you leave.

[00:37:33.05] [redacted]: Yeah, OK.

[00:37:33.35] TERESA AMABILE: Thanks.

Exhibit 10
Transcript of Witness Interview with Professor [redacted] on July 22, 2022

[redacted] Interview
July 22, 2022

[00:00:04.60] ALAIN BONACOSSA: Good morning, everyone. My name is Alain Bonacossa, and I'm the Research Integrity Officer at Harvard Business School. I wanted to thank [redacted] for being here today and for being willing to be interviewed by the Investigation Committee.

[00:00:16.05] I will now make a brief announcement before handing it off to the chair of the committee. First, a reminder that the interview will be recorded and transcribed. And [redacted] you will be given a copy of the transcript for correction.

[00:00:29.67] Let me start by introducing everyone in Zoom here today, starting with the Investigation Committee-- Professor Teresa Amabile, the chair of the committee, Professor Bob Kaplan, and Professor Shawn Cole. Today's witness is [redacted], [redacted]. In addition to myself, there's another staff member on the call, Alma Castro, Assistant Director in Research Administration at HBS.

[00:00:57.43] Next, I wanted to provide a brief explanation of the interview process. As I mentioned to you, [redacted] when we first spoke, this is a faculty review of a faculty matter. So the interview will be a conversation between the committee and yourself. It will entail a series of questions and answers. And [redacted] you should feel free to elaborate on any answer if you think it could be helpful to the process.

[00:01:21.44] Some rules of the road for the interview for everyone-- to make sure that the transcription is clear, only one person can speak at a time. At the end of my introduction, myself and Alma will turn our cameras off and mute ourselves.

[00:01:37.26] [redacted] for you specifically, please answer the committee's questions truthfully. All answers need to be audible so that they can appear on the transcript. So nodding head is not sufficient. If you do not understand a question, please ask for the question to be rephrased. If you don't know the answer to a question, feel free to say so. And of course, if you need a break, ask for one.

[00:02:01.12] Some important reminders about the process-- HBS has an obligation to keep this matter confidential. Even the fact that this interview occurred or that there's an ongoing investigation into allegations of research misconduct is confidential. So [redacted] we're going to ask you to keep all of this information confidential.

[00:02:19.98] For HBS policy, HBS community members may not retaliate in any way against complainants, witnesses, the Research Integrity Officer, and committee members. [redacted] do you have any questions for me about the process before I hand it off to Teresa?

[00:02:35.55] [redacted]: No. It's very clear, Alain. Thank you.

[00:02:37.80] ALAIN BONACOSSA: Thank you so much. Teresa, off to you.

[00:02:41.47] TERESA AMABILE: Hi, [redacted] It's really good to see you again after so long. I'm sorry about the circumstances under which we're meeting.

[00:02:49.48] [redacted]: Likewise.

[00:02:51.91] TERESA AMABILE: As you know, I'm Teresa Amabile, a social psychologist. I've been at HBS since 1995. And I'm a member of the Entrepreneurial Management Unit. And I'm going to hand it off now to our colleague, Bob Kaplan.

[00:03:08.62] ROBERT KAPLAN: Hi, [redacted] It's been about, we checked, 15 years, but I do remember our acquaintance while you were at HBS. As you know, I am a professor, now emeritus, but not retired, definitely, in the Accounting and Management unit.

[00:03:26.47] [redacted]: Hi, Bob. Good to see you again.

[00:03:27.78] ROBERT KAPLAN: Yeah.

[00:03:29.94] TERESA AMABILE: And now Shawn.

[00:03:32.04] SHAWN COLE: Hi, I'm Shawn Cole. I'm on the Finance unit at HBS. I'm an economist by training, and I do a lot of experiments. And it's nice to make your acquaintance.

[00:03:40.98] [redacted] Likewise. Thank you, Shawn.

[00:03:43.99] TERESA AMABILE: So as Alain said earlier, [redacted] thank you so much for agreeing to spend some time with us. We really appreciate it. So, I'm going to, first of all, just to refresh all of our memories, we're going to be talking about Study 3A in your 2020 JPSP paper with Francesca and [redacted], "Why Connect? Moral Consequences of Networking with a Promotion or Prevention Focus."

[00:04:15.85] Study 3A is the first of the two online experiments examining the independent effects of promotion and prevention focus on feelings of impurity after instrumental networking. Now in Study 3A, participants read a story about instrumental networking and were asked to imagine that they were the protagonist. And as you recall, study 3B was identical, except the participants actually engaged in instrumental networking.

[00:04:43.06] So we're focusing on the first of those studies, where there was a story read and they were told to imagine they were the protagonists. Participants were randomly assigned to either the prevention focus, promotion focus, or control condition.

[00:05:00.20] So our first question is, can you tell us how you got to know Francesca and how you came to be involved in this research project with her?

[00:05:11.14] [redacted]: Certainly. I met Francesca at HBS, actually. I don't remember exactly the year. But she was there as a postdoc working with, I want to say Gary Pisano. But, you know, I didn't follow her work at that point in time.

[00:05:29.32] And then we did not really interact much at all until she came to give a talk at Rotman. The year might have been 2010, '11, '12, something like that. And she was already at HBS at that point, if I'm not incorrect.

[00:05:55.53] And she suggested that we try to work together on something that linked our respective competencies. Mine were in network research. And hers were in a variety of things, actually, including moral psychology as it applies to the workplace.

[00:06:11.33] And we came up with this idea of what we affectionately called dirty networking, and developed some theoretical insights around that intuition, that when people claim to feel uncomfortable about networking professionally, what they mean is more than just being anxious about the activity of creating professional relationships. There's something more morally upsetting about the process.

[00:06:45.39] And that was the beginning of the collaboration that led us to two publications, one that came out in ASQ in 2014 and the one in question now that came out many years later in JPSP.

[00:07:00.69] TERESA AMABILE: OK, thank you. Now it's important for our committee to understand how this paper came about. Could you please give us the chronology of your involvement in the research reported in this paper and in the paper itself?

[00:07:17.77] So you've already said that around the time that Francesca gave the talk at Rotman, which you think might have been somewhere around 2011 plus or minus a year--

[00:07:29.07] [redacted]: Yeah.

[00:07:30.27] TERESA AMABILE: --you began talking about combining your research interests. Can you remember the chronology of how the research developed? This particular study, I guess, we're interested in. But we're interested in the whole package of studies in the paper as well. So I guess if you could just talk about how the research evolved. And, to the extent that you can place it in time, that would be helpful to us.

[00:07:58.60] [redacted]: You know, I probably should look up when that visit to Rotman occurred. But what I do know for sure is that around that time, I had been talking with a law firm, a large business law firm that operates primarily in Canada but also in the US. And we were discussing allowing me to collect data on their networks that link these lawyers to each other within the firm and to their clients.

[00:08:31.88] And I remember that when Francesca came to Rotman and we started to talk about working on something together, I used that opportunity to collect the first set of data, really. I don't think she had any at that point. I'm not sure.

[00:08:51.44] I don't remember, to be honest. Because there were so many studies involved in both of the papers we have together. And we had a very clear division of labor around those studies.

[00:09:04.27] So I was in charge of this field data collection, because I had been working on it for a long time with this law firm. And it is always laborious to maintain the relationship with a company that puts the time of its high-achieving people on the line to allow people to collect data on them. So I was clearly focused on the empirics of the field. But Francesca was very much in charge of the experiments that we joined together with my field data.

[00:09:42.80] So I do remember that-- let me actually go back to when I collected eventually those data. Yeah, the data collection was-- the first one ended up being 2013. And then, and that's the one that ended up in the ASQ paper.

[00:09:57.61] TERESA AMABILE: And that ASQ paper was 2014. Is that right?

[00:10:01.45] [redacted]: Correct. That's right. So I collected the data on this law firm completely independently of Francesca or [redacted] They were my people, my contact.

[00:10:12.40] I collected the data. I analyzed the data. I contributed them to the paper. And in 2013, the data ended up in the ASQ paper. And then two years later, this law firm miraculously allowed me to collect data again.

[00:10:28.75] And at that point, we had developed this set of predictions around promotion and prevention focus. So in this second data collection of this law firm, I was able to add those variables to measure professional promotion focus in a couple of different ways. And I replicated the results of the first study, the ASQ field study, and also was able to support the predictions that we had for the JPSP, what became the JPSP publication.

[00:11:04.95] So what happened in the course of these years was that we had these theoretical developments that allowed us to create predictions that I tested in the field with the law firm. And Francesca and [redacted] tested experimentally, whether in the lab or with an online-- I think it was only MTurk at that point, even though we added the field experiment in the JPSP paper where we used SurveySignal which was, it's a company that creates samples of respondents and professionals, that kind of thing.

[00:11:46.01] So that is the convergence of contributions. We worked together on the theory. And empirically, we divided the tasks between the field data collection that I was in charge of and the experimental studies that [redacted] and Francesca were in charge of.

[00:12:08.00] TERESA AMABILE: OK. That's really clear and very, very helpful. I don't think I have any follow-ups on that at this time. But actually, could you remind me? I don't remember right now, in the paper-- there's the JPSP paper 2020, is there one study based on the law firm data? I think there is one study. Correct?

[00:12:34.04] [redacted]: Correct.

[00:12:38.75] TERESA AMABILE: And that is the one study where you are responsible for the data collection. And did you do the data analysis on that one as well?

[00:12:46.98] [redacted]: I did.

[00:12:47.93] TERESA AMABILE: OK.

[00:12:48.65] [redacted] And I-- because I have an NDA with the law firm, I never shared those data with either Francesca or [redacted] I was completely compartmentalizing the availability of the data.

[00:13:03.11] TERESA AMABILE: Understood.

[00:13:03.68] [redacted]: We did not share data with each other. I will mention one thing that is relevant to the JPSP, even though it's not the study in question. In Study 2, we had two samples, one in the US and one in Italy. And that is the one sample, the Italian sample, I personally collected. Of the experimental studies, that's the one study where I was in charge of running the lab in Milan at Bocconi where I was on sabbatical that year.

[00:13:38.11] And Francesca had the idea that I thought was really brilliant to take advantage of the behavioral lab of Bocconi to replicate the results of Study 2, that she had run originally in the US, with a population that was not American or America-based. And so I translated the instrument for that study into Italian. We took the reverse translation. We did the whole thing. And I ran the lab data collection in the behavioral lab of Bocconi.

[00:14:13.53] But then I transferred the data to-- I don't remember if it was [redacted] or Francesca, or both. And they analyzed those data too. Because again, I'm not an experimentalist. So I do not use the typical statistics that are used in experimental studies. And we just wanted to be consistent in how we analyze experimental data in our work. And so they dealt with the analysis of those data.

[00:14:43.23] But I just wanted you to know that there was one component of the data collection that was in the experimental side of the paper that I collected even though I did not analyze it.

[00:14:57.00] TERESA AMABILE: OK. Thank you for that clarification. So let me reiterate to make sure that I understand. You collected data, for the JPSP 2020 paper, you collected the field data in the law firm. And you analyzed that data.

[00:15:15.71] [redacted]: Correct.

[00:15:16.07] TERESA AMABILE: And you alone analyzed that data.

[00:15:18.81] [redacted]: Correct.

[00:15:19.68] TERESA AMABILE: OK. And did not share the data at all with Francesca or [redacted]

[00:15:25.14] [redacted]: Correct.

[00:15:25.62] TERESA AMABILE: OK.

[00:15:26.06] [redacted]: Or an RA, I was completely secretive about the data because of the NDA with the law firm.

[00:15:35.51] TERESA AMABILE: Understood. And the only other data that you interacted with in the 2020 paper was, you collected the data from the Italian sample in Study 2 of the 2020 paper.

[00:15:55.20] Yes. You're nodding your head, yes. Correct?

[00:15:56.97] [redacted]: I did. I did collect those data.

[00:15:58.88] TERESA AMABILE: OK. But you did not analyze. You did not analyze those data. You sent the data to either Francesca, or [redacted] or both of them.

[00:16:06.87] [redacted]: That's correct. I did not analyze them. I did not even open the data, because they came to me in SPSS. Sometimes very trivial matters drive our behavior. I do not use SPSS.

[00:16:23.46] The RA at Bocconi sent me the data in SPSS format. And I promptly forwarded them to Francesca or [redacted] I never touched them, never opened them, never even took a look.

[TC misspoke here; meant to say "This is the one aspect of my testimony that I stated incorrectly. I correctly remembered never opening the data from the Bocconi lab study. What I remembered incorrectly is that the Bocconi RA gave me the dataset in SPSS. I checked, and actually I don't have that dataset in my records at all. It is likely that I asked the Bocconi RA to send it directly to Francesca and/or [redacted] because they were going to analyze the data, and as a result I never had the data myself."

[00:16:35.10] TERESA AMABILE: Understood. And for all the other studies in that paper, you did not interact with data beyond the field study in the law firm, and the data collection at Bocconi. Correct?

[00:16:53.13] [redacted]: That is correct.

[00:16:53.70] TERESA AMABILE: OK.

[00:16:54.07] [redacted]: I did not participate in other data collection or data analysis of any of the other studies.

[00:17:00.90] TERESA AMABILE: Just one more thing, and then I'll see if Bob or Shawn has any follow-ups on these questions. And then Bob is going to take over the rest of the bulk of the questioning. And then I'll come in at the end.

[00:17:10.47] But, [redacted] I thought I heard you say a little bit earlier that you and they, your two co-authors, did not share data at all. Did I hear you say that? You did not share data at all except for the instance that you just mentioned with the data that were collected at the lab in Bocconi? Is that correct?

[00:17:35.33] [redacted]: Correct. That is correct.

[00:17:36.27] TERESA AMABILE: OK. OK, thank you. Bob, Shawn, any follow-ups?

[00:17:40.50] ROBERT KAPLAN: Yeah. I was just curious, when you have the NDA, does that mean the data do not get published on the OSF--

[00:17:49.32] [redacted]: Correct.

[00:17:49.68] ROBERT KAPLAN: --on the site?

[00:17:50.88] [redacted]: Correct.

[00:17:51.51] ROBERT KAPLAN: OK.

[00:17:52.11] [redacted]: And all of this, I mean those two data collections at the law firm occurred in 2013 and 2015. It's a time that predates the new norm to publish data at all, at least as far as I understand. It was my first interaction with experimental data through my coauthors. So it didn't even occur to me to publish those data. It wasn't even in my mental model of what one should do with such things.

[00:18:25.73] But the law firm, as you might imagine, was extremely concerned about confidentiality. They gave me pretty detailed data on their lawyers. And I don't think I could have published them anyway, given the legal arrangement with them.

[00:18:46.16] ROBERT KAPLAN: OK. No further questions at this stage.

[00:18:49.84] TERESA AMABILE: OK. Bob, will you take over now please?

[00:18:53.53] ROBERT KAPLAN: OK. So we're now going to go into more depth just in study 3A, and which we understand you had not a great deal of involvement in, but we'll want to sharpen up the answers.

[00:19:10.66] And just from documents that we've reviewed, that actually this study seems to have been designed-- data collected, executed, and analyzed-- in the January to April 2020 time period after the author team received a revise and resubmit request. And this was among the studies that were set up to respond to that request. Is that about consistent with your memory?

[00:19:42.27] [redacted]: To be honest, I do not remember that. I don't remember that that study in particular was conducted in response to the reviewer's request. It might have been. I would have to go back to the decision letters and the reviews. I don't remember.

[00:20:03.25] That paper evolved over so many years that I do not remember what study was conducted when, except for the Italian sample where I was involved and the law firm. I do not remember that it was 2020 that Study 3 was run.

[00:20:24.36] ROBERT KAPLAN: But we're clear about what this study is, the lab experiment on the prevention and promotion focus and feelings of moral impurity.

[00:20:36.57] [redacted]: I don't think it was a lab experiment, however. I think it was an online sample. Is that correct?

[00:20:42.58] ROBERT KAPLAN: Oh, OK.

[00:20:43.04] [redacted]: Yes. Yes. It was an online sample.

[00:20:45.83] ROBERT KAPLAN: OK. OK. Well, to the best of your knowledge and recollection, who specifically was involved in supervising this study and in carrying it out?

[00:21:01.01] [redacted]: So I think it was Francesca. But I qualify that statement because Francesca and [redacted] both contributed experimental studies to our joint work. And I did not always have direct knowledge of who was running which study.

[00:21:24.73] And in both the ASQ paper and the JPSP, there were multiple experimental studies that they ran. So this one probably was Francesca, but don't necessarily rely on my recollection.

[00:21:39.29] ROBERT KAPLAN: OK. And beyond the initial conceptualization and design, the data collection and the data cleaning would also have been done probably by Francesca, but perhaps not exclusively according to your memory. Is that right?

[00:21:57.95] [redacted]: I would imagine. I know she always has research assistants that work with her on this data collection. I believe that [redacted] does too. So that very well could have been either [redacted] or an RA participating in that work, but I wouldn't know.

[00:22:16.23] ROBERT KAPLAN: OK. And now for the data analysis after the data were collected, who do you recall was involved in that?

[00:22:26.52] [redacted]: Again-- [coughs] --apologies.

[00:22:32.48] I got one of those summer colds. It's not COVID, but it's a nasty piece of work. So apologies for all the tea drinking that I'm doing. I'm trying to spare you the cough.

[00:22:44.03] I think it was Francesca that was in charge of the study. I do not know if she analyzed the data personally. I do not know if she delegated that analysis to an RA or to [redacted]

[00:23:01.11] ROBERT KAPLAN: OK. Now in terms of writing up this particular experiment and reporting the data in the submitted and eventually published version of the paper, who would have been involved in that?

[00:23:17.56] [redacted]: Pretty sure that Francesca or her RA wrote up the results of the study. We had clear division of labor when it came to writing up the results of the studies. I was in charge of the field study, the law firm. And Francesca, [redacted] were in charge of the experiments. So, yeah.

[00:23:43.51] I think it was Francesca. It could have been an RA.

[00:23:47.06] TERESA AMABILE: [redacted] just want to break in for a second. If you feel you need a break at any time, like to get a cough drop, I can't give you--

[00:23:58.95] [redacted]: I just secured one. Thank you, Teresa.

[00:24:01.30] TERESA AMABILE: But we can honestly-- we can do a break for a few minutes if you feel you need a time to get that tickle taken care of.

[00:24:08.79] [redacted]: It's going to be like this. So unfortunately-- the cough drop will help because the tea was not doing its job or the honey. All right. Thank you, though.

[00:24:20.17] TERESA AMABILE: OK.

[00:24:21.37] ROBERT KAPLAN: And then the final step in the research process is posting the data on OSF, as we talked about before. And I presume your answer would be similar to those you've previously given us as to who was involved in this. Is that correct?

[00:24:35.62] [redacted]: The same answer. It probably is Francesca, but I have no knowledge of who was in charge of what on that end of-- yeah. We had a pretty, pretty strict division of labor.

[00:24:51.73] ROBERT KAPLAN: Yeah.

[00:24:52.24] [redacted]: The one thing where we overlapped was the theory, the front end of the paper, and the discussion section, really.

[00:25:00.20] ROBERT KAPLAN: OK. And we have another question, which I think you've given us the answer to, but it's on our list of questions. So is there anyone who would have had access to the data and the ability to modify the data at any of the stages of the research process?

[00:25:21.87] And you've already mentioned Francesca, perhaps [redacted] and an RA. Is there anyone beyond that group that you could identify?

[00:25:34.34] [redacted] No. It could be different RAs that participated in this project over time. Because as I mentioned, it extended over a few years. So I wouldn't know who in particular was working with Francesca at that point in time.

[00:25:49.46] But, yes. That's it.

[00:25:52.34] ROBERT KAPLAN: OK. And moving to kind of the heart of the matter here, could you tell us to the best of your knowledge whether and how the data set for this study was modified at any point between the initial collection of the data online and its final posting on OSF?

[00:26:18.81] [redacted]: That's where I am in complete disbelief. I had no reason to ever imagine changes to the data at any point in time.

[00:26:30.99] ROBERT KAPLAN: OK.

[00:26:31.38] [redacted]: No reason whatsoever.

[00:26:32.95] ROBERT KAPLAN: OK. So now we just want to share with you a number of discrepancies that have been detected between a data set that was on Francesca's computer and the data set that got posted on OSF, which was seeming the data set that was used in the analysis and implications in the published paper.

[00:27:01.93] And so this is going to be a series of six tables. And we'll just present it. There'll be a question at the end. But we just want to share this with you so you could be aware of what it is we have seen. OK?

[00:27:18.66] [redacted]: Very well.

[00:27:20.43] ROBERT KAPLAN: OK. So--

[00:27:21.09] TERESA AMABILE: And [redacted] if you have anything that you want to ask as you're looking at the tables or anything you want to tell us, of course, you don't have to wait until Bob has talked through all of this.

[00:27:30.69] ROBERT KAPLAN: Yeah. At any stage, ask to clarify what the source was, and whatever.

[00:27:37.29] [redacted]: I will do so.

[00:27:38.67] ROBERT KAPLAN: OK. So Alain is our loyal screen sharer. And we'll post what we'll call Table 1.

[00:27:52.36] ROBERT KAPLAN: OK. So let me make this larger on my monitor. Is this legible to you, [redacted]?

[00:28:02.21] [redacted]: Yes it is. Thank you.

[00:28:04.33] ROBERT KAPLAN: OK. So the first thing is just calculating the means in these three conditions between the data set on Francesca's computer and the data set that's published on the OSF site. And you can see--

[00:28:24.19] [redacted]: Sorry, Bob. I have a clarification question. When you say the data on Francesca's computer, you mean, what, the Qualtrics data set? What is it that that represents?

[00:28:37.25] ROBERT KAPLAN: All right. So I am not into experimental or survey research. That Qualtrics-- Teresa is nodding, at any rate...

[00:28:47.00] TERESA AMABILE: Yes. Yes, it's from Qualtrics.

[00:28:49.52] ROBERT KAPLAN: Qualtrics.

[00:28:50.41] [redacted]: OK. So basically what you have available, is raw Qualtrics survey responses, right? And then you're comparing those raw Qualtrics responses to the data set as posted on OSF. Is that--

[00:29:15.44] TERESA AMABILE: Alain, I believe that what [redacted] just said is correct. Could you just give us a thumbs up or thumbs down?

[00:29:22.92] ALAIN BONACOSSA: That is correct.

[00:29:25.01] TERESA AMABILE: Thank you.

[00:29:25.68] [redacted]: OK. And we are sure that those are supposed to be the same? I'm asking this question--

[00:29:34.99] ROBERT KAPLAN: Yes.

[00:29:35.37] [redacted]: --because- OK.

[00:29:36.53] ROBERT KAPLAN: Yeah. Well, you'll see some granularity on this.

[00:29:39.29] TERESA AMABILE: But let me just clarify. [redacted] so the way that this was done was when this allegation about various things with this data set were brought to Harvard, one of the first things that was done was that data that were on Francesca's computer, her various accounts, her Qualtrics account, and so on, were sequestered by the University. And then when she was informed about the allegation, she was asked to identify data from the study.

[00:30:27.14] And she identified this particular data set as the data set for this study. So she pointed us to this data set, which is what we're calling Author's Data Set here. Alain, again, could you please confirm if I said that correctly?

[00:30:46.88] ALAIN BONACOSSA: That is correct.

[00:30:49.21] [redacted]: OK.

[00:30:50.07] TERESA AMABILE: [redacted] other questions about it at this point?

[00:30:52.16] [redacted]: No. I am just-- I will articulate what is on my mind. And it refers back to your question earlier about my recollection when this data set was collected. And I did not remember it was collected in 2020. I thought it probably was earlier, because we collected other data earlier.

[00:31:16.55] That the discrepancy here is so large that I can't help but suspect that she might have made the wrong selection of data set here. She collects so many data sets, dozens, and dozens, and dozens every year, as far as I know, given all the people she works with and all the papers that she publishes.

[00:31:48.60] And all the studies which she ran for our work alone. I am wondering if there was an error. But, you know--

[00:31:57.55] ROBERT KAPLAN: Yeah.

[00:31:57.99] [redacted]: --it's not my job to make such a make such attributions. But let's continue and see the details--

[00:32:08.76] TERESA AMABILE: But we do appreciate your sharing those--

[00:32:11.06] ROBERT KAPLAN: Yeah. No, no. And we're about to share some other data coming from the two data sets with you.

[00:32:18.56] [redacted]: OK.

[00:32:19.23] ROBERT KAPLAN: And this may help to clarify, but please continue to comment exactly as you've done.

[00:32:26.97] [redacted]: OK.

[00:32:27.78] ROBERT KAPLAN: So the message from here is that the means shifted. That it looks like in the Author's Data Set that the conclusions were not consistent with the prior hypothesis, but the data that were published on OSF are consistent, as written up in the paper. So Alain, can you show Table 2?

[00:32:54.72] So as we got into the underlying records within each of the data sets, we're showing for condition one, which is the promotion condition, matched observations. And you see they're matched by the word statements that are in the essay.

[00:33:20.32] [redacted]: Bob, excuse me for interrupting. Could you make this slightly bigger? Because unfortunately, I couldn't go to the office for this call because I'm not in fabulous shape. OK, this is much better. Thank you.

[00:33:30.56] ROBERT KAPLAN: OK.

[00:33:31.36] [redacted]: My screen at home is a little bit cramped. OK, thank you.

[00:33:35.38] ROBERT KAPLAN: Fine. And so even though the observations were in different rows because some of the OSF [RK misspoke here; meant to say "some of the Author's Data Set] data may not have made it to the final paper for various reasons, but the essay statements are word for word the same, same promotion. And in the original data set, we're getting very low scores, almost all 1s.

[00:34:01.41] And in the published data-- oh, I'm sorry. I misspoke. In the published data set, it's all 1s, low. And in the original data set, up at the higher score. You can see the difference in means of those seven numbers, 1.3 versus 5.6.

[00:34:22.27] TERESA AMABILE: Alain, could you scroll up just a tiny bit to-- we don't need to see the title of the table.

[00:34:27.60] ROBERT KAPLAN: Yeah. And we saw this in two other observations.

[00:34:29.90] TERESA AMABILE: Thank you.

[00:34:32.28] ROBERT KAPLAN: This was not exhaustive. Tables 4 through 6 will give a more exhaustive summary of the comparisons. But again, essays matched the word statements. The published data set, all 1s, consistent with the hypothesis. In the original data set, 5s, 6s, and 7.

[00:34:57.60] And then the third observation, again matched by the essay text, all 1s in the published version, consistent with the hypothesis. 5s, 6s, and 7s in the original data set.

[00:35:15.02] So these are the underlying data that would have caused the kind of mean shift that we showed you in Table 1.

[00:35:26.23] [redacted]: Mhm.

[00:35:28.00] ROBERT KAPLAN: OK. So--

[00:35:29.46] [redacted]: OK.

[00:35:29.94] ROBERT KAPLAN: No comment necessary. But we're going to continue. This is the promotion--

[00:35:34.20] TERESA AMABILE: Bob, Bob, why don't we just give to [redacted] just a few moments to finish--

[00:35:37.74] [redacted]: Thank you. Thank you, Teresa. So I just-- I find it...interesting that-- when I deal with data myself, I'm always extremely suspicious of uniform answers to questions. And if somebody wanted to manipulate data, changing data that have variability to data that have none and are at the bottom of the scale is-- that seems...implausible that anybody would purposefully do such things.

[00:36:36.36] There's really no possibility that-- OK.

[00:36:40.75] ROBERT KAPLAN: Comment noted.

[00:36:45.51] TERESA AMABILE: Let me just point out, of course, in the first pair of rows that we see, there isn't complete uniformity in the OSF row.

[00:36:54.99] [redacted]: No, that's right. And I'm sure that there's many, many rows. Are you showing me all the rows in question, or just a--

[00:37:02.11] TERESA AMABILE: No. But, Bob--

[00:37:02.50] ROBERT KAPLAN: We will give you a--

[00:37:03.40] TERESA AMABILE: --will get to that.

[00:37:04.24] ROBERT KAPLAN: We will give you a summary of all the rows.

[00:37:06.34] [redacted]: OK. All right. Let me allow you to go through all the data, and we can talk about interpretations.

[00:37:14.35] ROBERT KAPLAN: These findings deserve study and reflection. So we don't want to rush this. But Alain, maybe could you show now Table 3? So Table 3 is similar to Table 2, except we're now looking at the other control condition, the prevention condition.

[00:37:34.66] TERESA AMABILE: This is not the control condition. This is the prevention.

[00:37:36.91] ROBERT KAPLAN: No. I mean, it's another treatment condition, I'm sorry. For prevention. So again, the word statements and essay, "Duty/Obligation," "Reflect on the Party," are identical. [NOTE: "Duty/Obligation" and "Reflect on the Party" are variable names in column headers in Table 3.] But now in the original data, all low scores, which are contrary to the hypothesis. And in the published data, high scores, which are consistent with the hypothesis.

[00:38:10.88] And there's almost more uniformity here in the rows in both the author and the OSF. But again, we see, again, a change between what appears to be what the original data set and the published data set and fairly dramatic shifts.

[00:38:39.56] [redacted]: And you are showing me all the rows out of the however many they are?

[00:38:44.03] ROBERT KAPLAN: No, no. We're showing you three samples from each treatment--

[00:38:49.57] [redacted]: From each condition.

[00:38:51.50] ROBERT KAPLAN: --as representative of how the shift in means occurred.

[00:38:57.30] [redacted]: Can you tell me how many shifts did you--

[00:38:59.31] ROBERT KAPLAN: OK. So now we'll go to a more complete analysis of all the rows. So Alain, can you put up Table 4?

[00:39:14.34] And so, again, these are rows, matched rows. So we know from the verbal responses--

[00:39:21.58] TERESA AMABILE: I'm sorry. I'm going to ask, because I'm aware [redacted] has a small screen. Alain, I know it'll obscure some of the rows down below, but could you make this a little larger?

[00:39:32.83] [redacted]: Thank you, Teresa, for looking out for my bad eyesight here and my small screen.

[00:39:40.91] TERESA AMABILE: I suffer the same. So, yeah.

[00:39:42.93] [redacted]: Yeah, that's right. Solidarity among the blind people, yes. Thank you.

[00:39:49.36] ROBERT KAPLAN: So here are 40 observations, and taking from one of the treatment conditions, I think this is the promotion treatment condition, where we found discrepancies. Oh, and what we see here is the magnitude of the difference between the original data set and the published data set. And there's an additional set of questions here on network intentions.

[00:40:20.15] So the previous tables were just looking at the moral impurity responses. And these are looking at the network intention responses. And the blue are shifts in the hypothesized-- get the data to be more consistent with the hypothesis. And what we see is there are no-- and reds are kind of going in the other direction, because the network intention had an opposite sign of an impact. And we don't see any changes that go against supporting the hypothesis in either set of columns.

[00:41:04.92] Alain, if you could just scroll down a little bit. In these 40 observations, and really all observations where we found discrepancies, there was only blue, which means changes in a specific direction, or only reds, which would be changes in the opposite direction.

[00:41:25.50] [redacted]: And this is all the rows in the promotion condition where you observed--

[00:41:31.07] ROBERT KAPLAN: I think there were more than 40 rows, 40 observations.

[00:41:33.62] TERESA AMABILE: No. No, Bob. Bob, there were-- of course there were more than 40 participants in the promotion condition.

[00:41:40.25] There were 40 rows. There were 40 participants' responses in the promotion condition that had discrepancies between the two data sets. And this is showing, I believe-- is this showing all 40 of them? Maybe it continues at another page. I don't remember. But there were 40--

[00:42:00.65] [redacted]: This would be 40.

[00:42:00.98] TERESA AMABILE: --in total. And the pattern is, as Bob said, absolutely consistent. Where there is a discrepancy, it's in the direction of lowering moral impurity scores in the OSF data set and increasing network intention scores.

[00:42:22.46] [redacted]: And this is--

[00:42:23.09] ROBERT KAPLAN: Yeah, OK. Yeah. Teresa, I stand corrected, as Teresa often does, that this was 40 and only 40 in the promotion condition. In the prevention condition, which we'll look at next, there were more than 40, but we're showing you just what would fit on one page.

[00:42:43.83] [redacted]: OK. And let me kind of remind myself of the sample in the study. We are talking about-- I'll go back to the paper-- 599, right-- respondents total in the study, correct?

[00:43:00.93] TERESA AMABILE: Yes.

[00:43:03.00] [redacted]: All right. And of these, there were about 200 in each condition and within condition, 40 instances of this in the promotion condition and a few more than 40 in the prevention. Correct?

[00:43:18.43] ROBERT KAPLAN: Yeah.

[00:43:19.66] TERESA AMABILE: A lot more than 40.

[00:43:21.16] [redacted]: A lot more than 40. OK, all right.

[00:43:25.27] ROBERT KAPLAN: OK. Alain, please show Table 5. It says stop at the top. So, this is, OK. So here we're showing 43 observations out of 128 where there was some difference between the OSF data and the data set from the author's Qualtrics research records. So this will be one third of the observations with discrepancies.

[00:43:58.49] And so Alain, now just scroll down to see if we can show the whole table. And again, the numbers that are in the table are not important. The color is telling the story here that again, on the left-hand side, the responses change and they get, to correspond or match better the hypothesized effect in both sets of columns.

[00:44:26.52] And as you've noticed, there's actually no discrepancies between them, no anomalies where things changed opposite to where the hypothesis would have taken them.

[00:44:41.64] TERESA AMABILE: And [redacted] let me just clarify. Bob may have said this. I apologize, Bob, if you did. The data were matched. These rows of data were matched in the same manner as that very first table that Bob shared just three pairs for each of the conditions. They were matched on the verbatims of the open ended responses.

[00:45:02.96] [redacted]: Yeah. That was my question, yes. Thank you for reading my mind.

[00:45:10.35] ROBERT KAPLAN: Good. And Table 6, just to give a summary of something that we have talked about-- so there were discrepancies in 20% of the surveys in the promotion focus. Those were the 40 that we saw. And in 65% of the surveys in the prevention focus, I think 128. And there were zero discrepancies for the control condition.

[00:45:45.79] TERESA AMABILE: Alain, just a little larger please.

[00:45:53.09] Thanks.

[00:45:57.53] ROBERT KAPLAN: So we can finally ask the question, based on the data that we've shown you-- do you have any further questions about the data before I ask the question?

[00:46:12.32] [redacted]: No. Just kind of confirming that you received some communication from somebody that pointed to these discrepancies. And so Harvard sequestered Francesca's computer hard drive with all the data so she could not alter anything. And when she was asked to provide the original Qualtrics data set that matched the data that she or whoever posted on OSF, this is the data set that she provided.

[00:46:59.32] ROBERT KAPLAN: Yeah. So I'm going to ask Alain to respond, because he was the one who handled that process.

[00:47:05.52] ALAIN BONACOSSA: That is all correct.

[00:47:07.80] [redacted]: OK. So we are talking here about a very-- it's so extensive, this discrepancy, that-- I'm a little stunned, to be honest. Because having collected field data on these research questions wherein I had one shot at collecting this data-- when you're in the field, you cannot rerun a study. It is what it is-- and having found support for our predictions in those data with no trouble, I'm having a hard time absorbing the notion that finding support for those predictions in an experimental sample would have required this kind of manipulation.

[00:48:19.72] I just-- I know what you showed me. I just cannot help but be in disbelief that Francesca or anyone would feel the need to do this kind of thing. We had a lot-- let me ask you another question.

[00:48:39.52] This is the only study of hers that was brought to your attention, or is there a pattern? Because I think it changes also how we understand this.

[00:48:52.61] TERESA AMABILE: [redacted] we can't--

[00:48:53.92] ROBERT KAPLAN: Yeah. I'm going to ask Alain to respond to that.

[00:48:56.08] TERESA AMABILE: We cannot-- we cannot-- I can respond. We cannot answer that question. I'm sorry.

[00:49:02.23] [redacted]: Ah, OK. Even though I know-- you will have to make your own assessment, obviously. And I'm sure you're making it. Because that makes a big difference. This JPSP paper had a total of, what, five studies, depending on how you count the different subsamples.

[00:49:22.48] TERESA AMABILE: Five or six, maybe.

[00:49:23.56] [redacted]: Yeah. Five or six, depending on how you--

[00:49:25.65] TERESA AMABILE: [redacted] do you need the tables, or can we stop the screen share?

[00:49:29.56] [redacted]: I do not need the tables. I'm sure you cannot share the tables for me to ponder them. But I see what you are--

[00:49:38.53] TERESA AMABILE: OK. You could take them down, Alain. And I'm sorry, [redacted] You were saying, this paper had five or six studies, depending on how you count 3A and 3B--

[00:49:46.56] [redacted]: Correct. And I can only speak for the one that I ran. And given the ease with which I found support for our predictions with data I collected-- which arguably is harder because I am dealing with professionals in the middle of the workday answering a survey, so it could very well be that I didn't even have a strong research design in many ways. I had a smaller sample too.

[00:50:30.55] I am absorbing the shock of needing to resort to such extreme measures and such extreme discrepancy, manipulation, whatever you want to call it, to obtain the results. Because I saw them with my own eyes, in my own data. And so this is more, I'm articulating my own disbelief.

[00:50:53.59] And I don't know. It's neither here nor there. It doesn't change the way in which you are analyzing the data. But…I'm rather stunned.

[00:51:04.91] ROBERT KAPLAN: Yeah. Well, just reflecting on this, I mean, can you explain how these discrepancies could have arisen?

[00:51:14.47] [redacted]: I mean, I would-- so my view, when you first approached me about this, was really that researchers like Francesca who work with many, many, many coauthors on many, many projects, and each project involves multiple data collections can make mistakes in data handling and data management. And sometimes it's a matter of rows being misaligned by error.

[00:51:55.15] I have myself made errors in analyzing data, because I'm not particularly good at such things. I'm not a very good-- I'm not a coder at all. And I have, in handling Excel spreadsheets, made mistakes that then I had to go back and correct. They were, how do you call it? Just kind of stupidity mistakes.

[00:52:18.61] And I thought that when a column gets-- due to data sets that are merged incorrectly, and then I have to go back and redo it. I thought that that could be a reason for what you observed. Now, the consistency in the pattern that you have just displayed makes that a less plausible explanation, obviously, especially since the control condition shows no discrepancy at all, and the other two conditions show them all in the same direction.

[00:52:54.17] So, yes. I do not know how to explain it except for being very surprised that we had to resort to this. Because my understanding from the work we have done over the years with Francesca and [redacted] was that we never had trouble finding support for our predictions.

[00:53:14.35] And I took the support that we received from the experimental studies at face value. I trust my coauthors. And I trusted myself, because I had collected my own data. And I had had zero trouble supporting our predictions with my own data. So I had no reason to believe that we had trouble with the experimental data.

[00:53:37.84] More than that, I don't know how to process this.

[00:53:40.81] ROBERT KAPLAN: Yeah. Well, thank you. And those were thoughtful reflections. And there's one final question that on this set of data that we are asking anyone who was involved in this study, and just to have it on the record.

[00:54:02.35] Did you, [redacted] change the data in any way that could have led to these or other discrepancies?

[00:54:10.87] [redacted] I did not. I never had access to the data.

[00:54:14.41] ROBERT KAPLAN: OK. Thank you.

[00:54:17.02] [redacted] You're welcome. May I ask a follow-up question?

[00:54:24.93] ROBERT KAPLAN: Sure.

[00:54:26.01] [redacted] So--

[00:54:26.60] ROBERT KAPLAN: If we can answer it, is another question.

[00:54:28.38] [redacted] Well, you may not be able to answer it. So, as you might imagine, I am a little concerned about the fate of this paper, especially given how very time consuming it was to collect the data I collected and how clear the results were in that field data set.

[00:54:55.58] Can you give me a sense of what next steps might look like in a situation of this kind? I know you probably cannot give me an overview of things that are not related to my paper with Francesca and [redacted]

[00:55:12.57] What happens typically should this discrepancy be attributed to willful manipulation as opposed to error or something else?

[00:55:24.46] ROBERT KAPLAN: Yeah.

[00:55:24.86] [redacted] What has to happen?

[00:55:26.06] ROBERT KAPLAN: Yeah. It's a very reasonable question, [redacted] I might suggest that you have a private conversation with Alain. He can either respond now, or perhaps without us being there, actually talk about this with you, about what the process is, and what people can know, and when they know it.

[00:55:47.63] TERESA AMABILE: I think the best thing to do, [redacted] would be for you to have a subsequent follow up with Alain. And he'll be happy to do that with you.

[00:55:56.27] [redacted] All right.

[00:55:57.23] TERESA AMABILE: OK, thank you.

[00:55:58.73] [redacted] Very well. May I--

[00:56:00.25] TERESA AMABILE: [redacted]

[00:56:00.47] [redacted]: --and I also imagine I cannot ask if others are being also interviewed regarding a particular case.

[00:56:11.82] ROBERT KAPLAN: Yeah. You can always ask. Yes. You can ask and should ask that question. And Alain is in the best position to give a response.

[00:56:20.22] [redacted]: All right.

[00:56:20.67] ROBERT KAPLAN: Because It's a very formal, structured process that may not make, that the lawyers, in some sense, are in charge of. And we have to work within the parameters that they have established. And therefore he's in the best position to explain what those parameters are.

[00:56:41.43] [redacted]: All right, thank you.

[00:56:42.53] TERESA AMABILE: Well said. Thank you, Bob. [redacted] I'm aware that you've committed one hour to us. And we're just about out of that hour. I believe that we could probably finish up in another 15 or 20 minutes, but do you have that time to give us?

[00:56:58.05] [redacted]: Yes, I do.

[00:56:59.19] TERESA AMABILE: Thank you. Go ahead, Bob.

[00:57:02.25] ROBERT KAPLAN: Good. Now we're shifting to a more general set of questions and trying to understand, as best you understand it or recall it, the atmosphere in the lab in which the data for this study were collected. Specifically, the extent to which people in the lab might have felt pressured or highly motivated to produce particular outcomes from the study.

[00:57:34.08] And can you give us your views on the atmosphere and culture in the lab at the time the data for study 3A were collected, which we have stated being January through April 2020?

[00:57:50.78] [redacted]: I cannot provide any insight. Because number one, I don't think they were collected in a lab. I believe it was an online study. And I believe MTurk was the platform that was used. And so I think people answer those questions wherever they are in that moment. Could be at home, could be at work.

[00:58:12.35] So I have no insight. Neither does Francesca, I believe, in a situation of that kind, unless I'm misunderstanding the question.

[00:58:24.49] TERESA AMABILE: [redacted] I think the question was less about pressures on the participants in the study and more about pressures on any RA who may have been involved in data collection, data cleaning, data analysis, or postdocs, doctoral students in the lab, in Francesca's lab or [redacted]'s lab at the time.

[00:58:47.57] [redacted] I have no information. I never dealt with anybody that was working with Francesca or [redacted] on the data collection. The most contact I ever had with an RA was perhaps in copy editing the paper for references, inserting references-- that kind of work. But I never interacted with personnel in either [redacted]'s or Francesca's lab, so I do not know.

[00:59:21.99] ROBERT KAPLAN: Yeah. Are you familiar with [redacted], who was Francesca's research assistant at the time?

[00:59:29.44] [redacted] What's the name again? Sorry.

[00:59:30.85] ROBERT KAPLAN: [redacted], [redacted].

[00:59:35.97] [redacted] I don't remember that name.

[00:59:39.33] ROBERT KAPLAN: OK. So Teresa, I'm going to skip the next part of the question, and actually the next question too, given what [redacted] has responded to us. And I think you will now finish up the interview.

[01:00:00.15] TERESA AMABILE: Yeah. We just have two more questions, [redacted] At any time-- I actually think you spoke to this very early on and one of your first remarks-- at any time during or after the research in this paper was being done, written up, or published, did you have concerns about the integrity of the data?

[01:00:27.82] [redacted]: Never. I had no reason to have concerns. I had no contact with the data. And so probably my bad, in a sense. But that's what you do with your coauthors. There is a reciprocal trust.

[01:00:51.16] TERESA AMABILE: And finally, [redacted] is there anything else we should know as we try to determine whether research misconduct occurred with respect to study 3A in this paper, and if it did, who might have been responsible?

[01:01:08.27] [redacted]: I have no other information to contribute except for a personal note that I am still having a difficult time processing what you just showed me. So something may occur to me later on. If so, I will certainly let Alain know and contribute any other information. But I doubt that I will have any.

[01:01:40.05] TERESA AMABILE: Thank you very much. [redacted] please, if you have any follow-up questions or any additional information that occurs to you, anything you think might be helpful, including any correspondence, documents, whatever, we would very much appreciate if you could share any of that with Alain if you think it would be helpful to us.

[01:02:01.14] [redacted]: Will do.

[01:02:02.48] TERESA AMABILE: And again, thank you so much--

[01:02:05.36] ROBERT KAPLAN: Yeah.

[01:02:05.66] TERESA AMABILE: --for spending this time with us.

[01:02:07.77] ROBERT KAPLAN: So I want to say thank you also, and just remind Alain to please reach out to [redacted] and set up a time when you can respond to the questions she's already raised and may think of in the future about the process, both how the data sets were acquired and what happens after these interviews.

[01:02:33.14] [redacted]: Very well. Thank you all for the time you're spending analyzing cases of this sort. It's not an easy job, be it substantively, or psychologically, as far as I can tell. And certainly, it has not been easy on me. That's for sure.

[01:02:52.39] All right. Thank you very much. Alain, you and I will communicate about a follow-up, because I do have those questions. And to the extent that you have any insight that you can share, I would appreciate it.

[01:03:03.79] ALAIN BONACOSSA: Sounds good. We'll be in touch.

[01:03:05.48] [redacted]: All right, very good.

[01:03:06.40] TERESA AMABILE: And [redacted] we're going to stay on--

[01:03:07.17] SHAWN COLE: Thank you very much.

[01:03:07.60] TERESA AMABILE: --for a few minutes after you get off. Shawn, did you want to add anything?

[01:03:12.23] SHAWN COLE: No. I was just saying thank you very much for your time as well.

[01:03:15.55] [redacted]: You bet.

[01:03:16.90] TERESA AMABILE: Bye-bye, [redacted]

[01:03:18.17] [redacted]: All right.

[01:03:18.53] ROBERT KAPLAN: Bye.

[01:03:18.74] [redacted]: Take care.

[01:03:19.39] TERESA AMABILE: Take care.

[01:03:19.70] [redacted]: All the best.

Exhibit 11
Transcript of Witness Interview with [redacted] on August 2, 2022

[redacted] Interview
August 2, 2022

[00:00:03.08] ALAIN BONACOSSA: Good morning, everyone. My name is Alain Bonacossa. I'm the Research Integrity Officer at Harvard Business School. I wanted to thank [redacted] for being here today and for being willing to be interviewed by the investigation committee.

[00:00:15.44] I will now make a brief announcement before handing it off to the chair of the committee. First as a reminder, this interview will be recorded and transcribed. And, [redacted] you will be given a copy of the transcript for correction after the interview.

[00:00:29.12] Let me start by introducing everyone on Zoom today, starting with the investigation committee. We have Professor Teresa Amabile, the chair of the committee, Professor Bob Kaplan, and Professor Shawn Cole.

[00:00:40.07] As I mentioned, the witness in today's interview is [redacted]. And in addition to myself, we have another staff member on the call, Alma Castro, Assistant Director in Research Administration at the Business School.

[00:00:51.86] Next, I wanted to provide a brief overview of the interview process. As I mentioned to you, [redacted] before, this is a faculty review of a faculty matter, so the interview will be a conversation between you and the committee. It will entail a series of questions and answers. And of course, [redacted] you should feel free to elaborate on any answer if you think that that could be helpful to the process.

[00:01:13.86] Some rules of the road for the interview. To make sure that the transcription is clear, only one person can speak at a time. At the end of my introduction, Alma and I will turn our cameras off and it will just be the committee and yourself, [redacted]

[00:01:27.62] And, [redacted] for you specifically, please answer the committee's questions truthfully. All answers need to be audible so that they can appear on the transcript, so nodding your head is not sufficient. If you don't understand a question, please ask for that to be rephrased. And if you don't know an answer to a question, just feel free to say so.

[00:01:47.51] We have a lot of ground to cover today, and we also want to be respectful of your request to use our 90 minutes efficiently. So for this reason, we have not planned a break in these 90 minutes. But of course, if you do need a break, please ask for one, and we'll be happy to take one.

[00:02:03.02] A couple of important reminders. HBS has an obligation to keep this matter confidential, so even the fact that the interview occurred or that there's an ongoing investigation into allegations of research misconduct is confidential. So, [redacted] we're going to ask you to keep all of this information confidential.

[00:02:20.09] Per HBS policy, HBS community members may not retaliate in any way against the complainants, witnesses, the research integrity officer, and committee members. [redacted] do you have any questions for me about the process before we hand it off to Teresa?

[00:02:35.12] [redacted]: No, I don't. Thank you.

[00:02:36.59] ALAIN BONACOSSA: Thank you. Teresa, off to you.

[00:02:40.14] TERESA AMABILE: Hi, [redacted] May I call you [redacted] or would you prefer [redacted]

[00:02:44.43] [redacted]: [redacted] is fine. Yes, Thanks.

[00:02:45.96] TERESA AMABILE: OK, [redacted] Thank you so much for being willing to spend some time with us to help us out with our process. I'm a social psychologist by training and I am in the Entrepreneurial Management Unit at Harvard Business School. I've been at HBS for about 27 years. And I'm now going to ask our colleague, Bob Kaplan, to introduce himself.

[00:03:12.69] ROBERT KAPLAN: Good morning, [redacted] Bob Kaplan. I'm a professor in the Accounting and Management area, and been at Harvard Business School even longer than Teresa.

[00:03:26.48] SHAWN COLE: And I'm Shawn Cole. I'm in the Finance unit. I'm an economist by training, and I do a lot of experiments in my research. I've been here about 12 years. 17 years. 17 years at HBS.

[00:03:44.64] TERESA AMABILE: Thank you. So one additional thing I wanted to thank you for, [redacted] is for sharing with us the many emails and attached files that you had on Experiment 1. That's been extremely helpful to us.

[00:04:03.79] I also just wanted to tell you and my colleagues here I'm having a little bit of issue with my asthma this morning, so, Shawn, if I get a coughing fit and I'm finding the tickling is keeping me out of commission a little bit, would you be willing to take over the--

[00:04:20.94] SHAWN COLE: Happy to.

[00:04:21.78] TERESA AMABILE: You've got the script in front of you, correct? OK, great. Great. So, [redacted] we'll start with a general question. Can you give us the dates of your appointment as an RA and/or lab manager for Francesca? And could you also tell us if you did any work for Francesca after those dates?

[00:04:45.50] [redacted]: Oof. This is a question I wasn't anticipating. So this one's drawing on my memory, so I'll have to give you a vague sense of the dates. I believe I started doing research for Francesca in 2008, the end of 2008 or maybe the beginning of 2009. Something like that.

[00:05:15.47] TERESA AMABILE: OK.

[00:05:16.34] [redacted]: At the time, I don't know if I ever just volunteered before I was an RA. I think I started as a paid research assistant, just part time around that time. And then I worked with her as an RA for a year or two until I became the official lab manager of the Center for Decision Research at UNC.

[00:05:47.71] So I was kind of unofficially doing it as a paid research assistant, and then I became the official lab manager. And I held that position until the summer of 2014. And then I also did independent work for Francesca while she was at Harvard from whatever time she left UNC, which I don't know when that was. Maybe you all know whenever she came to Harvard.

[00:06:26.15] TERESA AMABILE: It was 2010. It was the summer of 2010.

[00:06:28.06] [redacted]: OK. 2010 until also the summer, I think, of 2014. I wrapped up all of my research responsibilities at UNC because I got a job at Duke.

[00:06:43.44] TERESA AMABILE: OK. Wow. That's pretty good for feeling very vague about it. So, [redacted] do you happen to recall, the summer that Francesca moved to HBS, we think that you were running this experiment, Experiment 1, that we're going to be focusing on.

[00:07:08.21] Do you recall where Francesca was during that time while she was sort of in transit to Harvard? You were in communication with her that summer by email, certainly from the email records that you sent us. Do you remember where she was?

[00:07:27.52] [redacted]: I can't say for sure. A couple of things float in my mind, but the timeline could be really off here. I know before she accepted the position at Harvard, she had quite a few offers at different universities, so I know she was traveling a lot between multiple universities [AUDIO BLIP] doing [AUDIO BLIP] how close that was to when she accepted the offer at Harvard and then made the move.

[00:07:56.64] So in that case, she was traveling quite a few different places-- California, Pennsylvania, Boston, Chicago maybe, several places. I can't say for sure.

[00:08:12.28] And there also was a period of time-- I feel like it was around this time, but I really could be off on this—where her, I believe it was her grandfather passed away. Someone very important to her in Italy passed away. And she was spending a good amount of time in Italy, and that delayed her from coming back. That might have been around that period of time, but I'm not sure.

[00:08:37.34] TERESA AMABILE: OK. Thank you. Do you recall-- what's the name of the lab [that you] when you became lab manager? What was it called?

[00:08:45.37] [redacted]: The Center for Decision Research. It's basically the behavioral lab manager at UNC. So there was a behavioral lab at the Kenan-Flagler Business School that the-- I don't know why it was called this, but all the research that was conducted out of that lab went under this umbrella of the Center for Decision Research, which is a center that Francesca started, and it was in her name at UNC.

[00:09:19.22] TERESA AMABILE: It was in her what?

[00:09:20.54] [redacted]: It was in her name. Like, there was an IRB for the Center for Decision Research.

[00:09:25.20] TERESA AMABILE: OK. And her name was the principal investigator name associated with that?

[00:09:30.59] [redacted]: Yes.

[00:09:31.41] TERESA AMABILE: OK. And were there other faculty associated with that lab? I'm sorry, it looked like you said yes. You're blipping out. The audio's blipping out sometimes, but you said yes, correct?

[00:09:46.24] [redacted]: Yes. Yes.

[00:09:48.88] TERESA AMABILE: Do you remember who they were?

[00:09:50.62] [redacted]: Yes. So there's two different answers here. One is who was involved in overseeing the center, and then the second part is who did research there. So Francesca is the person who created the center, who's the first faculty oversight principal investigator for that center.

[00:10:16.32] TERESA AMABILE: That was Francesca?

[00:10:18.35] [redacted]: Francesca, yeah. And then when Francesca-- [AUDIO OUT] she transferred the oversight and principal investigation to [redacted], who was the oversight principal investigator for, I think, all of my time there so until 2014. And then around that time, I think 2014, it transitioned into [redacted] who's also at Kenan-Flagler Business School. And I don't know who runs it now.

[00:10:55.99] And then the second part is who does research at the Center for Decision Research. And anyone-- the way that it was written, anyone at the University was allowed to do research there, and I supported them in running their research through our lab, in effect. It usually was people who were coming from the Business School in multiple areas so any faculty member who was doing behavioral research at Kenan-Flagler. I could give you a list of names if that's helpful.

[00:11:32.03] And then when Francesca moved to Harvard, we ran some of her research from Harvard and also some research from Duke Center for Advanced Hindsight, [redacted]'s lab through the Center for Decision Research as well.

[00:11:51.16] TERESA AMABILE: OK, that's really helpful. And do you recall if you continued to run studies for Francesca through 2014 when you left your position?

[00:12:01.92] [redacted]: Yes.

[00:12:03.56] TERESA AMABILE: You did?

[00:12:04.53] [redacted]: Oh, no, not after I left. No.

[00:12:06.62] TERESA AMABILE: No, no. But through 2014, you were still running some studies for her.

[00:12:11.66] [redacted]: Yes.

[00:12:12.98] TERESA AMABILE: OK, thank you. Any follow-ups, Shawn or Bob? OK. So, [redacted] as a memory refresher, we're focusing on one particular study in the 2012 PNAS paper. OK? It's Experiment 1. That's the lab experiment in which participants solved math puzzles in one experimental room and signed a tax form at the top or the bottom in a second experimental room.

[00:12:47.03] Because participants reported their own math puzzle performance and they didn't think the experimenter had a way of knowing their true performance, they could cheat in reporting their score. That's the way the experiment was set up. The purpose of the experiment was to see if the placement of the signature on the tax form affected participants' cheating behavior. OK? Do you need any more details to help you recall the experiment?

[00:13:16.77] [redacted]: No. And I've reviewed the study design and all the emails before this call.

[00:13:22.44] TERESA AMABILE: Oh, you did? That's terrific. And, [redacted] did you happen to go through the paper itself, the 2012 PNAS paper?

[00:13:33.21] [redacted]: I skimmed it while I was out having a coffee with my baby, so I didn't get too far. But I did read it fairly recently when the controversy came out around the fraudulent claims around [redacted] [redacted]'s, the other study that was part of this. I read the paper when that came out a few months ago.

[00:13:54.79] TERESA AMABILE: It was about a year ago. Yeah. OK. Thank you. So one thing our committee needs to know is the approximate time frame of this experiment and this paper. To the best of your recollection, could you please give us the chronology, if possible the months and the year or years, of your involvement in Experiment 1 in this paper?

[00:14:23.37] And there's also another lab experiment in the paper, Experiment 2, which you might have some recollection of from having looked at the paper last year. But let me give you a reminder. The procedure in that other lab experiment, Experiment 2, was very similar to Experiment 1, except that a higher incentive for puzzle performance and a higher tax rate were used. And the tax form was a bit more like a real IRS tax form.

[00:14:56.85] Also, there was an additional measure in Experiment 2, and that was a word completion task. So in many respects-- in most respects, Experiment 1 and Experiment 2 were very similar. I'm just trying to help jog your memory a bit. But there were some small differences, and both experiments are reported in the paper.

[00:15:18.78] We are focusing on Experiment 1 here. But if you can at all recall the chronology of the months that you were working on Experiment 1 and, if possible, Experiment 2, that would be really helpful to us.

[00:15:36.91] [redacted]: And just to be clear, Experiment 1 and 2 were both run out of Center for Decision Research?

[00:15:43.72] TERESA AMABILE: Absolutely, yeah.

[00:15:46.20] [redacted]: OK. I'll just say one thing that comes up for me without having-- now I wish I would have read the paper in more detail. Well, I guess I'll rely on you. The information that I shared, the emails and all of the stuff that's in the tax study email folder that I sent, are we clear that that is Study 1 and not Study 2?

[00:16:13.15] TERESA AMABILE: Well, that's why I'm asking you this question because we're not clear. We're a little confused when we look at those because at one point in those weeks, there was-- Francesca sent you something called the new form.

[00:16:33.51] [redacted]: Yes.

[00:16:34.35] TERESA AMABILE: And I have more detailed questions about that later on. So that leads to confusion for us.

[00:16:42.15] [redacted]: Sure. Yeah. I understand. OK. So to go back to your first question, which is, can you tell me the month, I'll just start with the preface that without really looking more into the data and looking at the research paper to distinguish Study 1 from Study 2, I won't be able to say definitively that all of this is Study 1 or 2.

[00:17:13.82] TERESA AMABILE: We get that. Yeah.

[00:17:15.06] [redacted]: That's the preface. Also, in terms of timeline, again, I think I'd have to go back and really look through the emails to say for sure. One way I could guesstimate the timeline would just be to look at the timestamps of these emails. So the first one is July 2010, and the last one is—oh, these are out of order. And the last one is July 23.

[00:18:00.67] That's a couple of weeks. It wouldn't be uncommon for us to run a study from start to finish in a couple weeks once the IRB was done, so it could be that. It could certainly have been longer, especially if there was a second study that came before or after. But that would be my best guess with the data I have.

[00:18:37.35] TERESA AMABILE: OK, thank you. We actually have an email that you forwarded to us that was dated July 27, 2010. Do you see that one? Maybe not. It seems that the ones on your computer may be out of date order.

[00:18:55.11] [redacted]: They definitely are out of order.

[00:18:58.78] TERESA AMABILE: And it's not important for you right now to--

[00:19:02.02] [redacted]: Here it is. Yes. The numbers starting over at 1 are the new form. So the study would have been just concluding at that point, and I'm indicating here's how I coded it on the spreadsheet.

[00:19:18.09] TERESA AMABILE: OK, yeah. Great. Great. And I will ask a little bit more about that if we get a chance today, but yeah. We'll try to be able to follow up with you on that. OK. Were you involved in any way in the write-up of the paper itself for Experiment 1? Oh, you're muted-- yeah, OK.

[00:19:48.04] [redacted]: No. No. I was never involved in any data analysis or write-ups of papers. I often had to try to hound them down. Like, can I see what the conclusion was for this? So, yeah.

[00:20:02.42] TERESA AMABILE: So let me just make sure because you blipped out a little bit there. It sounds like you said when you were-- of all the studies you did for Francesca, you never did data analysis and you never did any write-up of even the procedure.

[00:20:22.02] [redacted]: That's correct. The part that I would have written up that was related to the procedure is I was involved in writing quite a few IRB applications, but I didn't generally, if ever, do anything post data collection.

[00:20:41.48] TERESA AMABILE: OK. That's really helpful. All right. Follow-ups, Bob, Shawn? OK. So, [redacted] now we're going to talk a little bit about the study materials of the procedure for this Experiment 1.

[00:21:01.03] So for Experiment 1 in this paper, I'm going to go through each stage of the research and ask you to tell us to the best of your knowledge and recollection who was involved in supervising the activity and who was involved in carrying out the activity, OK? So supervising and carrying it out.

[00:21:22.51] And of course, describe the extent of your own involvement in each stage as I bring it up. OK. So first, study conceptualization and design. Oh, you're muted again.

[00:21:42.64] [redacted]: Yes. Is that it?

[00:21:45.40] TERESA AMABILE: Yes. Study-- well, this is the first one, study conceptualization and design. So who supervised that to the best of your knowledge and who implemented the study conceptualization and design?

[00:22:04.20] [redacted]: I think if I went back to-- well, I guess these are all the emails that are related to it. What I would venture to say based on the emails that I have here and I sent to you is that the only person that I know of who was connected to the conceptualization and the design would have been Francesca because that's who I got it from. But if she was collaborating with people before she sent it to me, I wouldn't have known that, or if I heard about it or something, it's not something I recall.

[00:22:51.54] If I was involved in part of that, there would have been emails back and forth because I usually wrote up the IRB, and I often had lots of questions because generally the information that was shared was usually vague. So I would write up as much as I could and then say, OK, I have questions about this. So I don't think in this study that I would have had any part in the conceptualization or the design.

[00:23:20.99] TERESA AMABILE: OK, thanks. And data collection?

[00:23:26.09] [redacted]: The data collection would have been entirely me or research assistants that were working in the lab under me at that time. I don't know if there were, how many there were, or who would have been connected to that study, but it's very possible there could have been some RAs. But I would have either trained them, well, or I would be supervising. I would have also been there and been supervising the collection perhaps.

[00:24:03.39] TERESA AMABILE: OK. Can you tell us what sort of people would have been working in that lab as RAs in the 2010 timeframe? Would they have been part-time undergrads? Would they have been full-time RAs wholly supported by their job at the lab?

[00:24:23.17] [redacted]: Yes. Research assistants were either-- I don't know the timeline for this. This is a little bit of a tangent. There's another faculty member at UNC, [redacted], who in collaboration with him, we started a research seminar. So there were a handful or two handfuls of RAs that went through that research seminar each semester.

[00:24:58.73] And as part of the research seminar, they would participate as RAs in the lab. So every week they would read-- just like a seminar class. But they would also work in the lab. That could have been the same timeline. So those RAs were undergrad students in the business school who were interested in organizational behavior.

[00:25:26.79] So that would have been most of the RAs. There was one RA who worked in the lab who was a personal friend of mine. She was also an undergraduate student at UNC and interested in research. She worked there for a little while. I think that she might have been noted in this paper, so it's possible that she collected some of the data.

[00:25:57.52] TERESA AMABILE: What's her name?

[00:25:59.17] [redacted] [redacted].

[00:26:01.20] TERESA AMABILE: OK, yeah, I think that name is mentioned in the acknowledgments.

[00:26:08.98] [redacted] And sometimes the RAs would be actual doctoral students who were running their own research, but every now and again they might help out on another experiment for some reason or another. I think that that would be it.

[00:26:31.83] TERESA AMABILE: OK. If there were two experimenters in this particular Experiment 1-- it's a little unclear to us if there were. But if there were two experimenters, is it likely that you would have been one?

[00:26:51.74] [redacted] Can you explain what you mean by two experimenters?

[00:26:55.76] TERESA AMABILE: Well, do you remember when I was describing the study a few minutes ago, I mentioned that one thing that seems pretty clear from the materials we've looked at is that participants did that math task, the math puzzle task where they could cheat in the first room, in a lab room.

[00:27:23.69] And then they went to-- they were brought to a second lab room where they signed a tax form, and reported how much they earned for the puzzle task and filled out this form that looked like an IRS tax form. And they reported their expenses in coming to the lab that day. And that happened in a second experimental room. So if-- and you probably remember-- perhaps you remember running studies where there was more than one lab room involved in the session.

[00:28:02.63] [redacted]: Yes. So just to clarify, when you say experimenter, you mean the person facilitating the study.

[00:28:08.18] TERESA AMABILE: The person interacting with the participant, yeah.

[00:28:11.08] [redacted]: OK. So sometimes-- and maybe this might be helpful information about the behavioral lab at UNC. So there are two rooms like this.

[00:28:31.14] TERESA AMABILE: OK, [redacted]'s holding up-- I'm trying to get this on the transcript. [redacted]'s holding up her hands in kind of C shape and holding them about a foot apart. Two rooms. So--

[00:28:43.57] [redacted]: I'll explain it in words.

[00:28:45.30] TERESA AMABILE: Yeah.

[00:28:46.77] [redacted]: There are two rooms with a hallway in between, and the door to each room faces into the other room. So if I'm in one room and looking out the door across the hall, I can see into the door of the other room.

[00:29:07.47] TERESA AMABILE: Got it.

[00:29:08.53] [redacted]: So in this particular study or in any study where the participants needed to be not in the presence of any experimenter, research assistant, whoever, they would always be in one of the two rooms, and then the researcher, experimenter, or research assistant, they would be in the other room.

[00:29:38.39] And that's where we would collect payment or that's where-- they would come into that room if they needed to interact with us in any way. Or if they needed us, they could kind of raise their hand and we could see them through the door, so we would go into the other room and then come back.

[00:29:57.11] Sometimes a study didn't require that they were alone, and so sometimes they would take a study in both rooms while the experimenter was present in one of the rooms. It was very common for there to be multiple people in the second room where the participants were not.

[00:30:28.55] Because I was the manager of the lab, I didn't have my own office. That second room also was my office. So if I was running the study, then it would be just me in the one room. In the other room would be the participants. If there was just one experimenter and not me, they would be in the one room and the participants would be in the other room. And if there were two people, then we might both be in the one room with the participants in the other room.

[00:30:59.26] TERESA AMABILE: When you say if there were two people, do mean if there were two experimenters involved in running the study?

[00:31:05.41] [redacted]: It could be two experimenters, or it could just be that I was in the room doing my-- I was in my office doing my job, but someone was managing the experiment. So I wasn't-- I'm-- [AUDIO OUT] overseeing.

[00:31:22.37] TERESA AMABILE: I'm sorry. You blipped out there. But you were like part of the furniture if you were just working and another RA was running the study. You're nodding. Yes. OK. That detail is actually helpful. Let me ask just again directly because I think the answer is yes, but I'm not sure. There were some studies that you ran where two experimenters were involved in interacting with the participant?

[00:31:58.26] [redacted]: Yes.

[00:31:59.28] TERESA AMABILE: Yes? OK.

[00:32:00.84] [redacted]: For sure.

[00:32:01.28] TERESA AMABILE: OK. OK. If there were two, were they sometimes both not you? There were sometimes both other RAs, or would you have been likely to be one of those two experimenters?

[00:32:17.38] [redacted] Yeah, that could be the case where-- that could be the case, especially if it was a complicated study or the design had people playing different roles. Maybe one person was there just collecting the information to get paid and paying them and the other person was managing the study. So would you call that person an experimenter if they're really just managing the process? I don't know. But it could be that there were two people.

[00:32:54.93] It could also be that the study was really complicated or there were people running in both rooms at the same time. And so if we knew that they were going to have a lot of questions or need a lot of support, then maybe there would be-- yeah, two research assistants, and one person managed one room, one person managed another room. Yes, that was common.

[00:33:21.20] TERESA AMABILE: OK, that was common.

[00:33:22.52] [redacted]: Sure.

[00:33:23.48] TERESA AMABILE: OK. And how likely is it that those could have been two other RAs? If there were two, quote, "experimenters" working with a participant during a session, how likely is it that you would have been one of them?

[00:33:47.96] [redacted]: I'm guessing fairly high because I was there all the time. And a lot of the research assistants were undergrads. So-- I don't want to say I'm a micromanager, but I wanted to make sure they had support, for sure.

[00:34:16.18] The other thing that strikes me about the data is that it appears like I entered all the data manually myself and was doing the calculations. And so if I was the person manually entering all of this data, then I would imagine that I was there for a good portion of the studies, if not all of them.

[00:34:45.01] TERESA AMABILE: OK. Thank you. You said you supervised the undergrad RAs, that you supervise any other RAs in the lab. Yes? You're nodding. OK. And who was your supervisor or supervisors?

[00:35:01.81] [redacted]: For my general work as the manager of Center for Decision Research, also known as the behavioral lab at Kenan-Flagler, my supervisor was Francesca until she left, and then my supervisor was [redacted]. That's for my role as the manager. If I was running a research study, then the supervisor for that study was always whoever the PI was for the study--

[00:35:40.08] TERESA AMABILE: For-- OK, so for Experiment 1, it would have been Francesca.

[00:35:44.41] [redacted]: Yes.

[00:35:45.27] TERESA AMABILE: OK. Thanks. You said something about you could tell by looking at the emails and the attachments recently that you manually entered the data. You said-- and did the calculations. What calculations would those have been?

[00:36:05.48] [redacted]: Yes. There was an email where-- I think it's the very first one where it says, "Here's the tax study data. These people are serious dumdums on this study." The calculations-- and I reread that yesterday and I had a very vivid memory of this study. So there was the form where they're filling out their answers, the tax form, and there were margins on that paper so white space on the side.

[00:36:48.67] And one of the questions asked them to, I think, do a percentage or divide something by another. So on the side of the form, they were trying to calculate the math that the form asked them to do.

[00:37:08.42] And so I was looking at those calculations because sometimes they would have a different answer in the form and they would have a different answer on the side, or they wouldn't put the answer in the form and they would just put it on the side. There was some kind of discrepancy between them.

[00:37:31.08] And my recollection is that they were trying really hard to-- it seemed like they were trying really hard to do the math and put the right answer on the form, but they just were having a really hard time with the math. That could be my naivete. Maybe they were trying to cheat and somehow it went over my head. But my recollection is that they were really having a hard time with the math. And so I was trying to figure out what their calculations were and then enter that manually in the data.

[00:38:04.83] TERESA AMABILE: So when you refer to calculations, you were trying to kind of check the math that they had scribbled in those margins on the tax form?

[00:38:11.21] [redacted]: Yeah.

[00:38:12.17] TERESA AMABILE: OK, thank you. Shawn? Yeah.

[00:38:15.26] SHAWN COLE: Can I just go back to the experimental procedure? If you recall, you said there were two rooms, and the study description describes two rooms. Did the study involve two staff members or experimenters, one in each room? Or you said sometimes there would be one room with no experimenter present and another room with the staff or experimenter present. Do you recall the staffing arrangement for this experiment?

[00:38:40.45] [redacted]: I can't say for sure, but I can say in general it depended on the study design. So if the study design-- anywhere in the study design it said that the participants needed to not

be in the presence of a researcher, then they always were alone in one room. There would have been no experimenters in that room.

[00:39:06.97] The experimenters would have been in the second room, which was right across the hall because we knew that they needed to-- like in this study, they needed to be alone so that they could cheat, theoretically. So any time there was something like that, they would have been completely alone with nobody in the room with them.

[00:39:30.32] TERESA AMABILE: Shawn, does that answer your question?

[00:39:33.93] SHAWN COLE: We're going to go through the IRB report form in a bit?

[00:39:37.35] TERESA AMABILE: Yes we are, Shawn.

[00:39:38.49] SHAWN COLE: So we can follow up on that. Keep going.

[00:39:40.38] TERESA AMABILE: Yeah. And when we look at the IRB form, [redacted] which we got from Francesca's computer, it might jog your memory a little bit more.

[00:39:49.81] [redacted]: OK.

[00:39:50.54] TERESA AMABILE: OK. So we're done with discussion of data collection, and that was super important and super helpful. Now the next stage is data cleaning. Who would have supervised that? Who would have done it?

[00:40:05.37] [redacted]: Can you explain what you mean by data cleaning?

[00:40:08.71] TERESA AMABILE: So when I've run experiments, I would look at the data sometimes as it was coming in every few days, look at it with my doctoral student, or my RA, whoever was running the study, or myself in the old, old days, and look, for example, if there was a survey that was collected as part of the experiment and a participant answered only half of the questions on the survey or less, we would have had a criterion in advance that we're not going to consider a survey if more than half of the responses are missing.

[00:40:56.61] So we would move that participant's data to a bad data folder or something like that. We would look to see if there were out-of-range responses like somebody gave their age as 120. We'd say, there's something bizarre going on here and discuss, should we kick out this participant without really looking at whether their data supported the hypothesis or not or even looking at what condition they were in. That kind of thing, just getting rid of weird responses.

[00:41:36.76] So does that help you get a sense of what-- and did you do that kind of thing? Would someone else in the lab have done that kind of thing? And if you can remember for this experiment specifically, who would have done it?

[00:41:51.95] [redacted]: Yes, that helps me understand what you mean. In terms of-- so I would have been responsible for collecting-- personally collecting or supervising the collection of data. And then once we have the data-- so in this example, the data was on paper.

[00:42:22.53] So I would say that in most cases, I would have been the person who either sent raw data files to the PI or manually entered data off of forms and then sent that raw data to the PI. And I also was responsible for keeping all of the hard copies for all of the studies. They were all stored in the lab, so I would have had those organized and filed and stored.

[00:42:58.62] When I sent over raw data, I often would look at it and flag anything that was strange. So I might call out in these first five participants they started 15 minutes late, or there was a loud thing happening at this time, or the age for this one makes no sense. Or if there's anything strange that I saw in the data itself or I knew because I was in the lab observing and I thought it would influence the data, then I usually noted that information somewhere, either in the file or in an email. And then I would send that data to the PI with those observations.

[00:43:50.14] But I was never responsible for deleting-- like, this one's weird, I'm going to delete it. I never did anything with the data when it came to actually taking it, manipulating it, and analyzing it. In fact, I wouldn't have known how to if I wanted to, which I did want to, but I didn't know how. So that would have been generally the PI or the PI and a graduate student if they were working on something in collaboration.

[00:44:22.02] TERESA AMABILE: Super helpful. Thank you. So you would have entered-- for this particular experiment, the data were all on paper, as you said. You would have with this experiment entered the data from every single participant's form into the data file.

[00:44:40.95] And then when you sent it to the PI, who was Francesca, you would have noted, there's something odd about-- there's something odd about what happened in the lab when this participant was being run or there's something that looks weird in their responses or something missing. You would have flagged that either orally or through an email or exclusively through an email when you sent the data file.

[00:45:11.89] [redacted]: I would have either flagged it in the data file with a comment or a highlight, or in this example where I said I started over at number 1, this indicates that new thing. That's a good example of, here's a change I made in the data. So I might have flagged it on the data file, or in an email, or both. And I also could have verbally said something to someone.

[00:45:38.49] I would say I usually documented things either in email or [AUDIO OUT] as there were so many studies running at any given time that it's hard to remember, so I was pretty big on documenting things on paper.

[00:45:54.21] TERESA AMABILE: OK. So again, your audio went out for a second. It sounds like you were saying you would document things either in the text of the email-- things that were strange or different either in the text of the email or in a comment that you would have put directly into the Excel data file. Correct?

[00:46:14.28] [redacted]: Yes.

[00:46:15.18] TERESA AMABILE: OK. OK, thank you. Follow-ups, guys? No? OK. And data analysis. I believe I heard you say you never did data analysis.

[00:46:29.16] [redacted]: Never.

[00:46:30.56] TERESA AMABILE: Thank you.

[00:46:32.21] [redacted]: I didn't know how.

[00:46:33.59] TERESA AMABILE: OK. And the next stage is describing the study procedure and write-ups of the study. It sounds like you said that the only time you would write up a study procedure would be for the IRB, which would be done before the study was run. Is that correct?

[00:46:50.60] [redacted]: Yes. I never wrote anything that had to do with a paper. Again, writing-- I would not-- again, writing is not my strong suit. I would have definitely not wanted to do that task. So no, I was not involved in it.

[00:47:04.58] TERESA AMABILE: OK. So I think I know the answers to these other stages, but tell me if you know who was involved in-- well, do you know who was involved in writing up the procedure or anything in this experiment for this paper?

[00:47:24.92] [redacted]: I can-- in my mind, I'm thinking about particular faculty members who I know like writing or who I know like data analysis, so I don't know that this is true. I would have thought from my recollection that Francesca was usually really involved in the analysis piece of the data because I just remember lots of studies sending back and forth and she'd say, I'm going to check the data and tell you what to do. So she was always looking at the data and giving me direction.

[00:48:04.58] I can't remember her ever telling me she loved writing like other faculty members, so I don't know if she was the person who wrote it or if somebody else did. I have absolutely no idea.

[00:48:19.44] TERESA AMABILE: OK. But it sounds like you feel there's a high likelihood that she herself did the data analysis?

[00:48:28.26] [redacted]: I know for sure she would have looked at all of the data because she was looking at it and telling me what to do, to continue the study or not. The final review of data before it went into a paper or something, I really don't know.

[00:48:50.43] I know that in other studies I ran, there were often multiple faculty members, and they all kind of played their part. One person loved writing. One person loved analysis. One person loved study design. For this study, I don't have any knowledge of which faculty member played which part, if any.

[00:49:12.58] TERESA AMABILE: OK. Thanks. It seems to me from what you've said that you didn't have any visibility into what process was followed in writing this particular paper, who did what parts of it, who reviewed the drafts at different stages. You're shaking your head.

[00:49:34.51] [redacted]: No. I would have to think really hard about an example of when I was involved in something like that. I would have had to ask explicitly to be part of that so I could gain experience. It just generally was not something I was-- my job ended at sending the data, and that was it. So yeah, I don't have any knowledge for this paper of what happened once I sent the data off.

[00:50:05.84] [redacted]: OK. And my guess is you have no knowledge of who did the data posting on the public forum OSF, which stands for Open Science Framework. That actually happened well after the paper was published.

[00:50:21.15] [redacted]: No, I have no idea.

[00:50:22.82] TERESA AMABILE: OK. Thank you. Guys, follow-ups on that? I'm about to move on to question four. OK. Moving on. So, [redacted] could you please tell us who had or might have had access to the data and the ability to modify it at any point from data collection through data posting on Open Science Framework in addition to the individuals you mentioned who had access to the data are you and Francesca?

[00:50:58.17] Can you tell us who else had or might have had access to the data? So for example, is there anyone who was working in that lab who would have been able to get into wherever the data were stored?

[00:51:16.32] [redacted]: In this particular case, if the data we're referring to is the spreadsheet of data that I sent called Tax Study 07-13-2010 and there were three different files-- is that the data we're referring to?

[00:51:33.96] TERESA AMABILE: That is the data, yes.

[00:51:35.40] [redacted]: OK. A file like that would have been stored on my personal laptop, which was my work laptop for UNC. It was also the only laptop I had, so that laptop was with me everywhere. That was my work and personal laptop. Because this data was manually entered into an-- [AUDIO OUT]

[00:52:08.08] TERESA AMABILE: You blipped out. Because this data was manually entered--

[00:52:11.98] [redacted]: --into an Excel file, I'm pretty confident, very confident that I would have manually entered all of that data into that Excel file, which then would have lived on my computer in a Dropbox folder, which is where I got it to send it to you. And then I would have sent that data to the PI. So I would have had access to the data.

[00:52:52.50] No one else used my laptop in the lab, so no one else would have had access to that file on my computer. It wouldn't have been on any other computers, and nobody had access to my Dropbox folder. So on my end, that file, I would have been the only person who had access to that data.

[00:53:19.36] Once I emailed that file to Francesca, I have absolutely no idea. Anyone who had access to her email or where she stored files, who she shared it with, I have zero knowledge of that.

[00:53:35.15] TERESA AMABILE: Super helpful. Thank you. And just to clarify, is it true that Francesca did not have access to that Dropbox folder you were using?

[00:53:48.95] [redacted]: Hmm. I would say probably not.

[00:54:02.59] TERESA AMABILE: If the folder still exists, you could actually look at it and see who it's shared with maybe.

[00:54:08.14] [redacted]: I can? The reason--

[00:54:11.08] TERESA AMABILE: If you can't do that super quickly, we'd rather not spend time on it.

[00:54:16.99] [redacted]: So what I'll say is that in general, I was the owner of that Dropbox folder, but sometimes I would share particular folders with a collaborator. So maybe I would give access to a particular folder. And so that certainly could be the case that I gave somebody access to that folder. I can double check after this.

[00:54:45.32] TERESA AMABILE: OK, you know what? If you can double check after and just communicate to Alain about that, that would be fantastic and helpful. Bob, Shawn, any follow-ups? OK.

[00:54:57.84] So, [redacted] could you please tell us to the best of your knowledge whether and how the final data set for this study was modified at any point or points between completion of data collection and final posting of the data set on OSF? And this could include, for example, data cleaning.

[00:55:23.77] [redacted]: The only thing I can say for sure is the files that I sent to you [AUDIO OUT] that I sent to Francesca?

[00:55:33.63] TERESA AMABILE: The files that you sent to us were the files that you sent to Francesca. Is that what you said?

[00:55:38.13] [redacted]: Yes. And that would have been the only version of data I ever had or ever saw. So if there are any changes that happened to the files that I sent you, I wouldn't have been any part of that. I don't know who could have touched it, or changed it, or when, or how, or why.

[00:56:05.24] TERESA AMABILE: OK. Thank you very much. And, [redacted] I keep trying-- I keep repeating things that you've said, and what that means is that your audio went out for a few seconds. I hope it's not too annoying for you. OK. Thank you. Can you please describe for us the process by which you would typically-- oh, we already did this, talking about cleaning of data sets. I'm going to skip that question.

[00:56:29.59] OK. So next, we have a series of questions about the experimental procedure of Experiment 1. You OK? Do you need a break or do you have to go? OK. The experimental procedure for Experiment 1, specifically what the participants were told, what they were given, and what they did, where, and when.

[00:56:56.36] First-- this is a more general question-- can you recall any communications before, during, or after Experiment 1 was run among any of the paper's co-authors and/or other personnel involved in Experiment 1? Any communications about the sequence of steps in the experimental procedure or any other details about the experimental procedure?

[00:57:27.84] [redacted]: Can you repeat the question?

[00:57:30.01] TERESA AMABILE: Yeah. Can you recall any communications before, during, or after Experiment 1 was run among any of the paper's coauthors and/or other personnel, including yourself, involved in Experiment 1 about-- so communications about the sequence of steps in the experimental procedure or any other details about the experimental procedure?

[00:58:00.16] [redacted]: The only recollection I have is from the emails that I sent to you. And it does seem like there were several exchanges of me indicating something was happening in the lab and how did they want me-- how did Francesca want me to proceed with that. Outside of the topics that are already indicated in the emails, there's nothing else I can recall.

[00:58:35.94] TERESA AMABILE: Can you give us an example of one or two of those things that you were communicating with her about?

[00:58:42.99] [redacted]: The first one is the email I mentioned before where I was indicating that they were having trouble doing the math, so that would have been a good example. Let me see if there's anything else.

[00:59:09.22] TERESA AMABILE: That's the only one that comes to my mind. I did not review all the emails super recently. Bob, Shawn, do you guys remember anything else about the procedure in those emails?

[00:59:26.07] SHAWN COLE: So there's a discussion about how many subjects were needed and how long it would go for, but other than that, I don't recall anything else.

[00:59:32.75] TERESA AMABILE: Mm. Thanks.

[00:59:36.72] [redacted]: Yeah, the other example-- that's exactly right. The other example would have been asking if she should add on another study to the-- sometimes we ran multiple studies at the same time, so students would do a study back to back. So that was indicated in the email as well, but those are good examples of--

[01:00:05.72] TERESA AMABILE: OK. Are you looking at that particular email right now, [redacted]? You are? Yes?

[01:00:12.99] [redacted]: Yes.

[01:00:13.74] TERESA AMABILE: Could you read it to us or read the relevant sentences to us and give us the date of it?

[01:00:20.25] [redacted]: Sure. July 20, 2010. "[redacted] can you run studies next week, Monday, Tuesday and Wednesday? I would like to run a different version of the tax study. I just need to change the forms a little bit. I can add in another study if it makes it easier to run. Let me know, and I will send you the information."

[01:00:43.93] TERESA AMABILE: When she said "I can add in another study," what would that have meant?

[01:00:51.13] [redacted]: So we had a decently sized participant pool. I don't remember now how many, but it was a decent size. But we often have-- and I think this is the same in many behavioral labs. We have participants who would come back to the lab often.

[01:01:14.00] And so sometimes if we we're trying to get someone to come back to the lab or maybe encourage their friends to come with them, something like that, if we added in a new study that someone who came for the other one that had already done but we added a new one, then maybe they would come for the new one, and then maybe we would get more people in total for the studies. So we were always trying to add in new studies so that we could keep the participant pool alive and going.

[01:01:53.46] TERESA AMABILE: OK, I've got it. So if there was a second-- a different version of this study, this experiment that was done, overlapping or simultaneously, it sounds like it's possible some of the same people could have participated in both. Is that-- did I understand that correctly from what you said?

[01:02:23.10] [redacted]: Sometimes. It depended on-- one of the things that we would do when we wrote a study was either part of the IRB or part of the study design before it went to the IRB, we would have exclusions of studies that someone could not participate in.

[01:02:45.75] So let's say, for example, that something was called Tax Study, Tax Study 2, Tax Study 3, Tax Study 4. If the study was similar enough that the participants shouldn't go through it again, then in the study design there would be an exclusion, anyone who does Tax Study 2 cannot-- anyone who did Tax Study 1 cannot participate in Tax Study 2.

[01:03:12.41] And then in the Center for Decision Research system, you could select the studies that they couldn't participate in. Sometimes a study had multiple versions, but the PI felt like it had changed enough that they didn't need to exclude them, even if they had done a prior one. So sometimes someone had done Tax Study 1, but Tax Study 2 was, in their mind, wildly different. And so that participant was allowed to do both.

[01:03:51.36] TERESA AMABILE: OK. Thank you. That's helpful. Would it have been the case if Francesca had put up another study or whatever that phrase was that she used in the email to you-- would it have been the case that you would have submitted another IRB for that particular study, for that new study?

[01:04:15.96] [redacted]: Where it says I can add in another study if that makes it helpful? Sometimes yes, and sometimes no.

[01:04:25.08] TERESA AMABILE: And what are the circumstances of the yes and the circumstances of the no?

[01:04:31.19] [redacted]: Sometimes yes would be there's another study that she wanted to do either on her own or in collaboration with another faculty member that I imagine they were going to actually run the study and want to do something with the data. And so in that case, they would usually write up a full IRB and come up with the study design. It might happen quickly, but it had the full process. And then that study would get approved and added on.

[01:05:09.06] Sometimes if it was this case that I mentioned before where we were just trying to add more studies into the system, there might be a study that was based on a previous IRB, but then the design was tweaked a little bit, and then it was rerun with a different name, usually like a number 2, a number 3, a number 4.

[01:05:42.59] TERESA AMABILE: OK. And when you say the design was tweaked a little bit, the implication I get from that is that the design was tweaked a little bit but not in any way that would materially change the experience of the participants so not requiring a new IRB. You're nodding your head.

[01:06:03.87] [redacted]: Yes, because sometimes IRBs were written by faculty members where they're quite vague. And so they're written in a way that it's vague enough that you could substitute lots of different activities and it would still fall under the IRB. And this was nothing where it was like deception and anything that would be harmful to a participant. It would be simply like, they're going to fill out this form or they're going to do this puzzle.

[01:06:38.87] So it was usually like a pretty simple experiment, but the IRB was written in a really vague way. And so then the researchers would tweak the design a bit and rerun it to test something else. It was usually if they were trying to figure out a measure or something.

[01:06:57.11] TERESA AMABILE: OK. Follow-ups, Shawn, Bob? No follow-ups. OK. All right. According to the paper, participants in Experiment 1 were, quote, "students and employees at local universities in the southeastern United States," end quote. Can you tell us to the best of your recollection how far distant the lab was from the participants who would have been coming from the closest distance so how far-- distant the lab was from the participants who would have been coming from the closest distance?

[01:07:35.68] [redacted]: If I understand this correctly, the lab was located in the Business School. So the closest distance that someone would participate is anyone who was an undergrad of the Business School or an employee of the Business School.

[01:07:53.37] TERESA AMABILE: And they could have been coming from an office on the same floor potentially?

[01:07:59.84] [redacted]: Yes.

[01:08:00.20] TERESA AMABILE: Yeah, sure. Or a classroom somewhere in the same building.

[01:08:03.98] [redacted]: Yes.

[01:08:04.88] TERESA AMABILE: So it would have been a matter of-- it might have taken them just a matter of seconds or minutes to get to the lab from wherever they were.

[01:08:12.02] [redacted]: Minutes. Minutes, yeah.

[01:08:13.40] TERESA AMABILE: Minutes. OK. OK. Thank you. Do you recall if in Experiment 1 you or whatever experimenter ran subjects had to take money back from some subjects at the end of their session in the lab?

[01:08:35.24] [redacted]: No.

[01:08:38.04] TERESA AMABILE: So you don't recall? Or basically, we want to know if you recall ever having to do that in any experiment you ran for Francesca, having to take money back from subjects at the-- or some subjects at the end of the experiment.

[01:08:51.84] [redacted]: Was it part of the design, do you know?

[01:08:56.17] TERESA AMABILE: It was not part of the design for money to be retrieved-- for money to be clawed back from them at the end of the experiment. But in our reading of the materials, it seems like it could have happened in some situations. Well, it'll become clearer when we look at the forms in just a minute.

[01:09:16.56] [redacted]: OK. My gut reaction is no. Obviously, if it was part of the research design, then yes, but I couldn't think of any research designs where that happened. In most cases, if we accidentally overpaid someone, then we would have just let them keep the money. And that's something we would have noted in the data. Like, ooh, we made a mistake here. They got overpaid.

[01:09:54.83] TERESA AMABILE: OK. Do you want to think about that some more?

[01:09:59.57] [redacted]: No.

[01:09:59.98] TERESA AMABILE: OK. Do you recall when subjects received money in Experiment 1 and if they received money more than once during the experiment?

[01:10:11.71] [redacted]: Hmm. I don't recall. That, again, would have been part of whatever the research design was. Sometimes-- we ran a lot of studies where we used this matrix table math problem or something similar. Lots of studies where people got paid, and we did that all different kinds of ways.

[01:10:41.89] Sometimes there would be an envelope on the desk in that other room, and the participant would solve the math problems, add up how many they got right, and then they would pay themselves out of the envelope. And then they would come into the other room to receive the rest of their payment.

[01:11:09.57] So for example-- I don't know if this happened in this study, but an example would be they paid themselves for the math problems, and then they came into the other room and they got paid for their mileage. And if they got paid something else, then we would have paid them that as well.

[01:11:27.16] And they would have never known that we knew how much money they made. Obviously, we can go back and check the envelope to see how much they took, but we wouldn't have known who was who. So that's a good example where somebody might be paid at two different points and how we would create the impression that the person could cheat without anybody watching.

[01:11:52.94] TERESA AMABILE: I understand. When would the show-up fee have been paid in a situation like you just described?

[01:11:59.75] [redacted]: I'm sorry. Can you repeat?

[01:12:01.19] TERESA AMABILE: There was a show-up fee for people to just show up to the lab for an experiment. When would they have been-- when would they have gotten that show-up fee? In the scenario you just described.

[01:12:16.32] [redacted]: Usually, at the end because anything that they earned-- they always had to fill out a payment receipt at the end because if they earned a certain amount of money in a year, then they had to claim that on their taxes. However-- I don't know. $200, $500 something like that. So yeah, they would have always had to come into the other room to say that they had been there, write down their student ID, and then get paid their show-up fee or any other fee that we were paying them.

[01:12:50.45] TERESA AMABILE: OK. Thank you. [redacted] can you tell us to the best of your recollection what the exact procedure for this study was? We're particularly interested in the timing sequence and physical location of what the participants were told, what they were given, and what they did.

[01:13:19.65] [redacted]: Sorry, you cut out a little bit. The question was, do I have a recollection of how the study was run, particularly what we told them, what they did, and where they were?

[01:13:29.61] TERESA AMABILE: Exactly.

[01:13:30.78] [redacted]: OK. No, I don't. I mean, I don't think that the tax study design or the IRB that I sent had too much detail in it. I can open it again and see, but it would have followed whatever was in-- whatever was written in the document.

[01:13:54.63] And if it wasn't specific enough, usually what I would do is I would take the information that was in that IRB. And then I would come up with a training document, especially if I was training somebody else to run the study, so it would have a very specific number 1, sit them in the chair, number 2, make sure the envelope is there, number 3-- it would have a very specific procedure.

[01:14:19.98] TERESA AMABILE: And it would have been like, and then number 4, say exactly this to the--

[01:14:24.21] [redacted]: Oh, yeah. There were scripts that-- exactly what you have to say. If you needed to be in one room versus the other, all of that would be very specifically laid out because I needed to make sure that every single study was run exactly the same no matter who was running it.

[01:14:41.54] TERESA AMABILE: OK. All right. And where and how would the randomization into conditions be done?

[01:14:52.94] [redacted]: That's a good question. It depended on the study. That's the phrase of the day, I guess. In this particular study or any study where they weren't interacting with a computer, which that would do the randomization usually, we often would have some kind of a-- I'm trying to remember-- some kind of a piece of paper or spreadsheet where we would keep track of how many participants we were at and which condition they did. And we normally would just rotate, like one, two, three, one, two, three, one, two, three because-- [AUDIO OUT] Sometimes--

[01:15:41.40] TERESA AMABILE: Because what? You blipped out.

[01:15:43.14] [redacted]: Because that's random enough. If you just rotate one, two, three, and someone comes in and they can get one, two, three, then that's random enough. That was very often the way that we did it.

[01:15:55.89] Every now and again, there might be something where we would put the conditions into some kind of random generator, and that would come up with a sequence, and then we would follow that sequence. But usually, we would just rotate one, two, three, one, two, three, one, two, three.

[01:16:09.48] And then when we started to get close to the end of collection-- let's say we're trying to get 100 students and we've been doing one, two, three, one, two, three, one, two, three, but we've gone back through the data, somebody did some cleaning of it or there was flagging, and it's like, oh, well, we had to throw out a bunch of these data points because of whatever reason, now we need to get 20 more of condition number 2. So now we need to [AUDIO OUT] people so that we can randomize and get enough of that [INAUDIBLE].

[01:16:45.69] TERESA AMABILE: OK. To get the minimum number needed in that condition where you were lacking, you'd run more in each condition.

[01:16:52.38] [redacted]: Yes, usually.

[01:16:53.94] TERESA AMABILE: OK, Shawn.

[01:16:55.20] SHAWN COLE: Just-- would you have the training document available from this study?

[01:17:02.73] [redacted]: I didn't find it when I was looking through all the materials. I assume it would have been in the same place that I had everything. I can look again.

[01:17:15.97] TERESA AMABILE: OK. Good question. Thanks, Shawn. [redacted] I'm aware that we only have about another 12 minutes or so of the time that you committed to us. We've got more than 12 minutes worth of material still. Could you give us some additional time today, do you think?

[01:17:38.52] [redacted]: Let me check my calendar. I know I have a client. I can go till 4:30.

[01:17:54.34] TERESA AMABILE: Which would be-- would that be 40 minutes from now?

[01:17:58.42] [redacted]: Yes.

[01:17:59.38] TERESA AMABILE: OK. Where are you? What country are you in?

[01:18:01.66] [redacted]: I'm in Budapest.

[01:18:03.07] TERESA AMABILE: OK, thank you.

[01:18:04.46] [redacted]: And let me just be clear too. I'm happy to do another 90-minute call or whatever amount of call if that's necessary. I'm just very big on efficiency, so I said let's start with 90, be as effective as we can. And if we need to go further, then I'm happy to do that.

[01:18:24.44] TERESA AMABILE: We're grateful for that. Thanks a lot, [redacted] Really appreciate it. OK. All right. So we're going to show you some materials now that came from Francesca's computer. So when this process started, her hard drive was sequestered, and then we asked her to point us to where on her hard drive materials for this study were. So we're going to show you some documents that came from her computer, three of them.

[01:18:59.60] So Alain is going to be screen sharing for us. And, Alain, I'll ask you in just a minute if you could just screen share Table 1. But, [redacted] let me give you a little background first.

[01:19:14.47] [redacted]: OK.

[01:19:15.46] TERESA AMABILE: All right. We have two concerns about the exact procedure in this study. First, exactly when participants self-reported and got paid for their math puzzle performance. And the second concern is the description of the experimental procedure in the published paper.

[01:19:39.96] So for the first concern, it seems that subjects self-reporting of math puzzle performance and their payment for that performance might have occurred before participants were asked to sign the tax form. This would be a problem because it would mean that the independent variable, signing the tax form at the top or the bottom, happened after the dependent variable it was expected to influence, which was cheating on the self-report of math puzzle performance. So you get that? I'm sorry. You're muted.

[01:20:18.64] [redacted]: Sorry, I lost my mouse. I do-- can you say it again just so I can--

[01:20:23.44] TERESA AMABILE: Yeah. Right. So this concern is-- it seems to us-- it's at least possible that subjects self-reporting of math puzzle performance and their payment for that performance might have occurred before participants were asked to sign the tax form.

[01:20:43.89] This would be a problem because it would mean that the independent variable, signing the tax form at the top or the bottom, happened after the dependent variable it was expected to influence, which was cheating on the self-report of math puzzle performance. This concern arose when we examined the three documents we're going to show you from Francesca's computer.

[01:21:08.81] So first, I'll show and describe these three documents and the specific elements of them that concern us, and then I'll pose questions for you about them. But please, as I'm going through these, feel free to stop me for comments or questions at any point as I'm talking through these documents, OK?

[01:21:29.10] [redacted]: OK.

[01:21:29.97] TERESA AMABILE: All right. Great. Thanks. So, Alain, could we please have Table 1? OK. So [redacted] this first screen share, which we're calling Table 1, shows the step-by-step procedure for the experiment as laid out in the IRB submission. I'll give you a few seconds to look it over, but I'll ask you to focus on those three lines that are yellow highlighted.

[01:22:12.93] And just for the transcript, the yellow highlighted portions are points 2B, 3, and 4 on this Table 1. So, [redacted] from this procedure outline, it seems that participants--

[01:22:33.45] [redacted]: I'm sorry. Can I just have another--

[01:22:35.03] TERESA AMABILE: Yeah, yeah. Go ahead. Go ahead.

[01:22:36.13] [redacted] I'm a slow reader.

[01:22:38.36] TERESA AMABILE: All right. Let me know when you're ready for me to go on.

[01:23:03.37] [redacted]: OK.

[01:23:04.60] TERESA AMABILE: All right. So from this procedure outline, it seems that participants were paid in Room 1-- it's referred to Room 1 in the paper-- before they saw the tax form in Room 2.

[01:23:20.02] So as you can see-- Alain, I don't know if you can highlight this in real time on the document, but if you could just highlight on point 5 "in the second room". Just the phrase "in the second room". Just that very first phrase.

[01:23:43.93] So it does seem that participants were in two different rooms. It seems that they did the math puzzle, and were paid, and reported their performance, and were paid for it in the first room. We assume that participants were compensated based on their self-reported tally. It doesn't exactly say here that they will compute their own score, but in the next piece of material we'll look at, it's pretty clear that they did, or maybe the third table.

[01:24:24.91] We assume that participants were compensated based on their self-reported tally of the number of puzzles they'd solved. That's performance on the math task. To us, this suggests that they reported their performance in Room 1 and that that self-report wasn't just a private notation they made but was submitted to the experimenter for payment in Room 1.

[01:24:53.04] So I want to show you the second table, but I want to see first if you followed what I was saying and how we came up with this assumption. Do you have any questions about it? If you just want to look at it for another minute.

[01:25:16.39] [redacted]: Yeah, I think that this could have played out in many different ways, reading it. I do think it's clear that they were in one room when they got paid for the matrix tables and they were in another room when they got paid for the other one. I would say that seems clear and that would have happened because as I said before, if the design had something like this in it, then we would follow that design. But the way that someone reported the matrix task and how they got paid, whether they paid themselves or whether a person paid them, that could have played out a couple of different ways in that yellow section.

[01:26:10.19] TERESA AMABILE: Are you thinking specifically about line 3? You think that that could mean that they actually gave themselves money from the envelope, from an envelope on the desk?

[01:26:20.27] [redacted]: It could [AUDIO BLIP]

[01:26:22.36] TERESA AMABILE: I'm sorry. You blipped out.

[01:26:24.34] [redacted]: It could be. It could be. So yes, that's possible. It's also possible someone would have walked into the room when-- they would have said, I'm done. And someone could have walked in, and then they said how much they earned. And then we paid them in that room, and then we told them to go into the other room. That could have happened.

[01:26:49.59] On the matrix puzzle, those puzzles were often a packet that had a couple of different pages. And one of the pages would say, how many did you get right? So there was always a sheet of paper on top or on the bottom. Depends on what the study was--

[01:27:09.57] TERESA AMABILE: Yeah, we'll actually be looking at that in just a couple minutes. But, [redacted] as I look at 2A, it says-- the last sentence of 2A says-- or the last two sentences, "You will be working under time pressure. The experimenter will keep track of time and will let you know when time is up."

[01:27:31.86] So I'm imagining that either the experimenter walked back into the room when the time was up, five minutes, because it says at point 2 at the top, participants complete the matrix task for five minutes. That when five minutes was up, either the experimenter came back into the room or the experimenter had never left the room and stayed in there, and a time device kept track of when the five minutes was up and then said time was up. Would that be a fair assumption from this?

[01:28:10.10] [redacted]: I would say it could have been two things. There were timers, little kitchen timers that were on all of the desks. So sometimes if people were starting at different times, then-- because there's a session time, but not all the participants always showed up at the same time and got instructions at the same time. Sometimes they did. Sometimes they staggered in. And then they would each get instructions, and then you would start the timer.

[01:28:43.42] And so in the instructions, you might say, we're going to keep track of time. There's this five-minute timer. When the timer goes off, pay yourself in this envelope and then walk next door. So they got all the instructions at the beginning. So this is true, but it just happened slightly differently. Or it could be that all the participants came in at the same time.

[01:29:06.19] We told them, you're going to have a time pressure. You're going to have five minutes. We'll let you know when it goes up. We have a timer on our side. In the other room the timer goes off, and then we walk into the other room and say, the time is up, pay yourself, and then come next door. It just could have happened several different ways, but I don't think there's any scenario where the experimenter would have stayed in the room with them.

[01:29:35.69] TERESA AMABILE: OK. I just realized that I have been having probably the wrong visual image of these lab rooms. It sounds like you often ran subjects in experiments like this one in group sessions where they each had their own little area of the lab, but there were many people in the lab at the same time, many participants at the same time.

[01:29:57.54] [redacted]: Yes, I think there were only-- you could only do-- it's either eight or 10.

[01:30:02.22] TERESA AMABILE: OK. All right. That's helpful. That's helpful updating. And this sentence, "The experimenter will keep track of time and will let you know when time is up," you're saying that it could be that they just let themselves know or that the timer let them know.

[01:30:27.69] [redacted]: I can't say for sure. I mean, I can see a scenario where they all start at the same time and we say, we're going to keep track of time, and we'll let you know when the time is up. And when the time's up, we walk to the next room, say the time is up, pay them, and then they come next door.

[01:30:47.90] There definitely were many experiments where they had the timer on the desk. And I remember the timer would go off, so the timer let them know. I don't know if that was this one or not.

[01:31:04.20] TERESA AMABILE: OK, thanks. Fair enough. But I think I heard you say before that what's clear to you is that they did the matrix task in the first room and they got paid. However they got paid, they got paid for that task in that first room.

[01:31:22.27] [redacted]: It seems like that would have--

[01:31:23.53] TERESA AMABILE: And then-- it seems like that to you?

[01:31:25.81] [redacted]: Yes.

[01:31:26.83] TERESA AMABILE: And then they went into a second room and you said-- and then they got paid for the other thing. What would the other thing-- what was the other thing that they would have gotten paid for here?

[01:31:37.51] [redacted]: The travel time and cost of commute. Yeah.

[01:31:42.23] TERESA AMABILE: OK. All right. Shawn, Bob, follow-ups? No? Bob, you're not visible, so if you have a follow-up, just unmute yourself. OK. So Table 2 now. Alain, could you give us Table 2, please? OK. And, Alain, could you make that just a tiny bit bigger?

[01:32:03.03] You see, [redacted] before it disappears that the sign here is at the bottom. And that was the experimental manipulation. The sign here was either at the bottom or at the top. And there was a control condition where there was no signature on the form.

[01:32:18.78] So the second screen share, Table 2, is the tax form that was used in this experiment. Line 1 states-- I don't know if you can see it, [redacted] It states, "Please enter the payment you received on the problem solving task. $1 per correct matrix you solved in the other room." Do you see that? OK.

[01:32:41.22] The use of the past tense in this instruction does imply that payment had already been made to participants before they saw the tax form. Moreover, we note that the tax form presented in Room 2 does not ask participants to report the number of puzzles they solved. Rather, the form asked them to report the income they received from the math puzzle task, which seems to be only an indirect measure of their self-reported performance. This further suggests to us the participants reported their performance and received payment for it in Room 1.

[01:33:23.48] So you don't have to comment on it right now if you want me to say that again or if you want more time to look at this, but what I'm saying is to us this confirms the impression we got from having looked at the IRB step-by-step procedure.

[01:33:41.03] [redacted]: That seems clear to me too.

[01:33:44.62] TERESA AMABILE: OK, thanks. Can we-- I'm sorry, what was that last thing, [redacted]?

[01:33:49.03] [redacted]: From what I'm looking at and-- yeah.

[01:33:51.28] TERESA AMABILE: OK. Thanks. Alain, could we have Table 3, please? OK, so this is the sheet you were referring to before, [redacted] the matrix task. And, Alain, could you just scroll down for a second so [redacted] can see that the collection slip is down below?

[01:34:12.44] [redacted]: Yep.

[01:34:13.81] TERESA AMABILE: And just take a minute to look at the collection slip before we go up and let you read the instructions. So does this ring a bell in your memory as--

[01:34:25.39] [redacted]: Yes. Seen this many times, and it lines up with the data spreadsheet too.

[01:34:31.72] TERESA AMABILE: OK. So I want you to look at the bottom line of the collection slip in particular. And, Alain, if you could just momentarily highlight that very bottom line. I correctly solved so many boxes, which amount to so much money, $1 per box.

[01:34:48.14] [redacted]: OK.

[01:34:48.61] TERESA AMABILE: OK. Great. All right. Alain, could you go back up so we can fully see the top sheet? OK, [redacted] I'm going to give you a minute to look at this. Familiarize yourself with it. And again, I'm going to be wanting to focus on the yellow highlighted sentences.

[01:35:27.78] [redacted]: Hmm. Yes, I see it.

[01:35:35.25] TERESA AMABILE: OK. So I'm going to ask you, when you look at this, when you read this "when finished" portion, this last portion of the sheet, can you talk through what you-- now that you see this, what you believe most likely happened in Room 1 with the participant?

[01:36:07.61] [redacted]: Here is my best guess. I would say that the participants were in Room 1 so the room where the experimenter is not. They would have a certain number of minutes to complete this task. We would have-- they would have read these instructions.

[01:36:42.86] Sometimes we might have reiterated them vocally to throw-- so let's say the timer is up after five minutes. And then we would say, OK, now fill out the collection slip and throw your matrices into the recycle bin. We had a recycle bin right in the middle of the room, and they would throw that in there.

[01:37:12.23] And then it sounds like in the last line of this, the experimenter would have gone cube to cube and paid the person based on their collection slip right there and then told them to go into the next room to fill out the final payment form.

[01:37:36.84] TERESA AMABILE: OK. Thank you. Bob, Shawn, any follow-ups? OK. So just to reiterate while we still have this up, [redacted] the material that we see here also suggests to us that participants self-reported their performance to the experimenter in Room 1 who then calculated their performance and paid them for it in Room 1 before they went into Room 2 and saw the tax form.

[01:38:14.96] [redacted]: Did you say the experimenter calculated and paid them?

[01:38:18.19] TERESA AMABILE: No. Participants self-reported their performance to the experimenter in Room 1. And it looks like actually-- I think I misspoke here. From the collection slip, it looks like they calculated their payment--

[01:38:38.31] [redacted]: Yes.

[01:38:38.85] TERESA AMABILE: --and that the experimenter gave them their payment, and, as you said, then brought them to Room 1 or told them to walk over to Room 1.

[01:38:50.90] [redacted]: To Room 2. Yeah.

[01:38:52.16] TERESA AMABILE: I'm sorry, to Room 2. So that fits with your understanding from this?

[01:38:57.66] [redacted]: From looking at it, I mean, that's what I would say.

[01:39:01.61] TERESA AMABILE: And we're sort of putting this together with the other forms we've looked at, that they in fact did write down their performance and calculate their payment and that the experimenter looked at that and gave them their money before they ever saw the tax form in Room 2.

[01:39:23.52] [redacted]: It appears that way.

[01:39:26.35] TERESA AMABILE: OK. So, Alain, you can take the screen share down now. So, [redacted] here are the questions. I know I've been asking you a lot of questions all along, and I may have covered some of these already. Do you have any general reactions, comments, or questions about the three documents we just shared, beyond what you've already shared with us?

[01:40:05.07] [redacted]: I guess the one thing that comes up for me-- although I don't know if this is relevant, but it came up, so I'll share it anyways. I said this before. We used that matrix task many different times, so there were lots of versions of that document that had different language on it because we changed the procedure many, many times. So I can only assume that the one that was shared is the one that we used for this research because it's what exists.

[01:40:41.45] But I just know in the back of my mind that there were many other versions of it, so hopefully, it didn't get mixed up in some kind of way. But if that's the one that's there, then that's-- I would say that's what we would have followed.

[01:40:55.16] TERESA AMABILE: OK. Thank you. It's the one that Francesca pointed us to. She said, this folder has the materials for that Experiment 1. OK. To the best of your recollection, was the experiment carried out as described in the excerpt of the IRB protocol shown in Table 1? I think we've talked this

through. I think you've said aside from looking at the materials or looking at what's written in the paper, you don't have any specific recollection of this particular experiment.

[01:41:28.80] [redacted]: No. I mean, we ran so many studies that were quite similar. The only thing that stood out to me about this one in particular was the math on the margins because I just really remembered that moment. But the matrix table, getting payment in different rooms, signing different things, that played out in dozens of different ways, so I'm sure it would get all muddled trying to remember.

[01:41:55.17] TERESA AMABILE: OK. So, Bob and Shawn, I'm skipping to 12.3 here. Do you-- so it seems to us all, including you, [redacted] now, I think, that participants did get money twice, in the first room for math puzzle performance-- I see you nodding-- and then in the second room for any expenses they had in traveling to the lab.

[01:42:27.85] [redacted]: It does seem that way.

[01:42:29.41] TERESA AMABILE: It seems that way. OK. So they did write down their performance on the collection slip in Room 1, and they did indirectly say what their performance was on the tax form in Room 2 because they were asked on that Line 1, how much did you earn for your math task performance? And I see you nodding.

[01:42:54.16] [redacted]: Yeah. Yes, based on looking at everything. The only thing that has been sitting unwell with me is that recollection of the math on the margin. The only reason that's making me hesitate is because I'm having a hard time imagining someone walking into the second room, filling out that form, and then standing there and trying to do the math.

[01:43:34.47] TERESA AMABILE: Alain, I think we need to see the tax form again. I think that was Table 2. Could you screen share Table 2 with us? Because it was on the tax form that you said people were scribbling in the margins, right, [redacted]?

[01:43:45.66] [redacted]: Yes. Yes.

[01:43:46.77] TERESA AMABILE: OK. And again, if you could enlarge this, mostly for me because I'm having trouble seeing it. Enlarge it so that we can see, yeah, part 1 super clearly.

[01:44:01.85] OK. So, [redacted] it seems to me that the calculations they would have been doing would have been for line 2, tax on payment. So in line 1, they would simply write down how much money they walked out of Room 1 with, and on line 2, they would have to calculate 20% of whatever they wrote into line 1. Bob?

[01:44:31.99] ROBERT KAPLAN: And in addition, when they got to part 2, they would have to multiply their estimated travel time by 10 cents. So that's an additional calculation they would perform, right?

[01:44:50.50] TERESA AMABILE: You're right, Bob. Yeah. And then they have to do simple addition, subtraction in part 3.

[01:44:58.14] ROBERT KAPLAN: Yeah. I mean, some of us would know how to multiply a number by 10 cents, but if it's been a while since you did arithmetic, you may have to do it manually.

[01:45:09.91] [redacted]: I think this explains why I put "SERIOUS" in all caps in that email.

[01:45:16.51] TERESA AMABILE: "SERIOUS dumdums"? [NOTE: Spelling of “dumdums” is rendered exactly as in an email from J[redacted] to Francesca Gino on 5/13/2010.]

[01:45:18.55] [redacted]: Yeah. So I don't know if it was this form. I mean, I remember there's several different tax forms with different calculations. But I just remember so prominently that I was like, what is going on with the math, like how these people are trying to calculate the math?

[01:45:35.44] So I hesitate saying this because it goes against everything that I just told you for the last hour, which is we would have followed a procedure specifically the way that it's laid out. And the way that it's written, it sounds and it looks like they would have been in Room 1.

[01:45:57.55] They would have gotten paid in Room 1 by an experimenter. They would have come into Room 2. They would have filled out this form and then they would have gotten paid in Room 2 and filled out the payment receipt in Room 2 for whatever was here.

[01:46:16.72] But the only reason I'm hesitating is I'm just having a hard time imagining them in Room 2 filling out this form and doing the calculations while someone is watching, especially because if there's multiple people they kind of queue up because they're all waiting to get paid. So they're all standing there. Sometimes they're standing with a clip-- they always had a clipboard.

[01:46:43.34] So it just makes me wonder if they had this form in the other room, and they paid themselves, and then they were given this form in the other room, and they filled it out, and then they brought it into Room 2. That's not how it was written. So if I have to go by exactly what was written and if we followed that to a T, then I agree with you. I would say this is my only hesitation about it.

[01:47:16.30] TERESA AMABILE: OK. You mean what was written in the IRB step-by-step procedure--

[01:47:20.60] [redacted]: In the-- yes.

[01:47:22.58] TERESA AMABILE: --when you say what was written? OK. I get-- so you're having trouble visualizing this. Let me just suggest something else. So they had a little desk, a cubicle or something to sit at in Room 1. You're nodding your head.

[01:47:37.31] [redacted]: Yes.

[01:47:37.64] TERESA AMABILE: Yes. And you said there were eight cubicles in that room. Something like that. So there could have been eight people at a time.

[01:47:43.97] [redacted]: Yeah.

[01:47:44.81] TERESA AMABILE: And they did not have a place to sit in Room 2?

[01:47:49.71] [redacted]: No.

[01:47:50.82] TERESA AMABILE: OK. So you're having trouble visualizing them all standing there, trying to do this math on their clipboard in Room 2 as they're standing in line?

[01:48:00.30] [redacted]: Either they're standing they're doing it in a queue on their clipboard or they're-- we had a payment station where they would kind of walk, and then they would fill out another payment form, and then they would type it into a computer, and then we would pay them the money. It was like a couple of steps.

[01:48:22.12] So I'm imagining if somebody's standing at that station and they're trying to fill this out, if they're trying to do math on the side of the page and it's taking them forever, because obviously they don't know how to do math, that the line would be getting really long. And maybe that did happen. Maybe that's why I was like, we've got a problem here. These people can't do math. I don't know.

[01:48:47.56] But it's the only thing that gives me hesitation of maybe they did it in the other room or maybe that impacted us changing the design in some kind of way. But I don't know. That's just--

[01:48:59.89] TERESA AMABILE: OK.

[01:49:00.92] [redacted]: Yeah.

[01:49:01.66] TERESA AMABILE: Yeah. And let me ask, would you ever have actually run subjects individually to avoid a problem like you just described? So only one person coming to the-- scheduled to come to the lab at a time?

[01:49:16.85] [redacted]: Yes, but it would have been in the design.

[01:49:21.29] TERESA AMABILE: It didn't say anything in the IRB about whether they would be run individually or in group sessions, and I don't believe the paper says.

[01:49:30.13] [redacted]: If it didn't say, then I would say we wouldn't run them individually because that would have taken way longer. And if this whole study was done in a couple weeks with 100 participants, however many it was, I would say they probably were not run individually.

[01:49:45.88] TERESA AMABILE: OK. Bob, Shawn, follow-ups? No? OK. All right. To get back to the questions. Let me see if we need this up still. I think, Bob and Shawn, I'm looking at 12.4, 12.3 and 12.4 in the sub parts. I believe that we have covered all of this. Yes. Shawn's saying yes. Bob, what do you think?

[01:50:18.01] ROBERT KAPLAN: Yeah, I'm OK.

[01:50:19.43] TERESA AMABILE: All right. OK. So, Alain, you can take this down, but we'll be asking you for another screen share of Table 4 in just a minute. So, [redacted] now we'll turn to the second concern we have. I think we can go through this quickly enough that we'll be able to release you in eight minutes, but let me look at this. Ugh.

[01:50:53.15] I'm wondering, Bob and Shawn, if I should just skip to question 14 and-- 14, 15, 16-- those are the general observations and concerns-- and then maybe, because [redacted] has kindly agreed to give us more of her time, go through the second concern we have about the description of the procedure in the paper because that is kind of I think not necessary for today. Bob and Shawn, let me know what you think.

[01:51:28.51] ROBERT KAPLAN: Yeah. I just want to look further down what you're going to ask.

[01:51:32.98] TERESA AMABILE: I would be asking all the questions that start with question 14. And I think we can get through those in the next few minutes.

[01:51:43.96] ROBERT KAPLAN: Well, I just had one quick question. And maybe this is too much in the details here, but it had to do about the giving back combined with your description of where many of these students came from to get to the experiment.

[01:52:00.68] So assuming they did a reasonable job on the matrix test, they might have gotten paid 15 dollars or 18 dollars from that. And subsequently, they'll have a 20% deduction from the tax form, which would have been say 3 dollars, 3-and-a-half dollars.

[01:52:21.43] But their expenses, if they just walked five minutes from floor 8 to floor 2, wherever the lab was, the expenses would be less than the tax that had to get withheld, which would have put the experimenter in a situation of having to reclaim some of that money, that 20%. And would you have recalled that ever happening, that the expenses that the students legitimately claim-- because it took me five minutes to walk here times 10 cents a minute is 50 cents, but I have to give back 20% out of 15 dollars, which is 3 dollars.

[01:53:04.44] [redacted]: Wow. Huh.

[01:53:07.46] TERESA AMABILE: Yeah, that's-- Bob, thank you. I intended to ask that question. I forgot. So, [redacted] that's a scenario that we're breaking our heads over. Would you have said, oh, sorry, your expenses aren't high enough to cover the taxes, so you need to give us back 2 dollars and 50 cents?

[01:53:25.42] [redacted]: Yeah, that's a really good question.

[01:53:33.75] ROBERT KAPLAN: This wouldn't have come up if everyone commuted for-- drove, and had to park, and walk from the parking lot, but it struck me when you said that the students were already in the building.

[01:53:44.63] [redacted]: Well, they could have been. They could have come across--

[01:53:47.00] ROBERT KAPLAN: Yeah, no, some set of them would have been. Yeah.

[01:53:48.71] TERESA AMABILE: But chances are at least some of the participants did come from in the building if you ran-- I don't remember how many were run in this study but 100 or more.

[01:53:58.46] [redacted]: For sure. I think a way to estimate would be I think the form asked their major, so if they had any major that wasn't business, then I think I could say, OK, they probably came

from somewhere else on campus because the Business School was really far away from every other building. But yeah, I mean, it's a really good question. I can't-- I can't remember taking money back from people.

[01:54:30.24] ROBERT KAPLAN: No, and you said that originally. And this would have been so anomalous, and it had to happen to at least, I don't know, a significant 15%, 20% of the students that it's likely you would have recalled.

[01:54:42.69] [redacted]: Well, I would be curious to look at the data and see if there were any entries where that actually played out because if it didn't, then that's a good reason why I can't remember. But if it didn't-- yeah. But if it did, then I don't know.

[01:54:59.16] TERESA AMABILE: You're just saying we could figure that out from the data file by looking at the numbers solved correctly and looking at what the expenses claimed were?

[01:55:10.56] [redacted]: Yeah, how many matrix they claimed they solved and then with the addition of the tax form because all of that's in the data.

[01:55:19.56] TERESA AMABILE: OK. OK. I think I heard you say earlier that you wouldn't-- if you had accidentally overpaid a participant, which happened occasionally, you wouldn't ask them to give back the overpayment.

[01:55:32.34] [redacted]: I can't think of any time that would have happened.

[01:55:35.76] TERESA AMABILE: OK. So it sounds like you don't remember any time when money had to be taken back from participants or was taken back from participants at the end of the study.

[01:55:47.42] [redacted]: Not as a whole study practice. I can't remember anything like that.

[01:55:53.38] TERESA AMABILE: OK. All right. Bob, does that satisfy your question? OK, thank you. So, [redacted] we haven't talked in detail about the data for Experiment 1, but when we talk again, we will have a number of questions about the data itself. And we'll give you as much support as we can in helping you prepare for that. So you'll be in communication with Alain before that next interview. And of course, we'll schedule it at your convenience.

[01:56:25.43] So please understand that we feel we must ask this direct question to everyone we speak to who was involved in this research. Did you in any way falsify the data or fabricate the data for Experiment 1?

[01:56:43.34] [redacted]: No.

[01:56:45.76] TERESA AMABILE: Thank you. And just two more questions today. At any time during or after Experiment 1 was being done, written up, or published, did you have any concerns about the study procedure, the way the procedure was described, or the integrity of the data for this study?

[01:57:09.12] [redacted]: No.

[01:57:12.57] TERESA AMABILE: Is there anything else we should know at this point as we try to determine whether research misconduct occurred with respect to Experiment 1 in this paper, and if it did, who might have been responsible?

[01:57:31.71] [redacted]: Yeah I don't-- no. I mean, I can only speak for the parts that I played, and they were pretty limited. I followed instructions as best I could and passed along data. If something happened after that, it's really hard for me to say. I definitely don't know of anything unethical that was happening or I wouldn't have been part of it. I can say that.

[01:58:00.67] TERESA AMABILE: Thank you. Bob and Shawn, any follow-ups from you?

[01:58:06.79] ROBERT KAPLAN: None from me.

[01:58:09.22] TERESA AMABILE: OK. [redacted] again, thank you so much for even spending extra time with us today. And Alain will be in touch with you. And next time we talk, we'll want to go through those things about the way the procedure was described in the paper, but we'll also want to talk about the data itself. And we'll be looking at some data together, OK?

[01:58:31.27] [redacted]: Ok. I wanted to say one thing really quickly, just so it's on my mind and I don't forget. And it might be completely irrelevant, but my impression of that tax form was always that-- I think was always that they were also cheating on the tax form was my impression. So that they were like double cheating. So just-- when you were talking about the independent variable happening before or after, and because there's two moments of cheating-- maybe I had a misunderstanding.

[01:59:09.12] TERESA AMABILE: Well, you're absolutely right. You're absolutely right. Your memory's better than you think it is because-- then you said because there were really two dependent measures in the study. Today we were focusing on just the self-reporting of how well they did on the math puzzle task, but the other-- and they could cheat on that. But the other dependent measure of cheating was, did they over-claim their expenses?

[01:59:36.21] SHAWN COLE: Sorry to interrupt. If my math is right, you have a client waiting for you. Is that--

[01:59:41.30] [redacted]: Soon. Yeah, I had--

[01:59:42.23] SHAWN COLE: OK. So I didn't want to interrupt that. I just want to say I know it's really hard to travel in Europe with children, and so we really appreciate your taking the time.

[01:59:51.05] TERESA AMABILE: Yeah, Shawn just came back from Europe where he was with his wife and kids for several weeks.

[01:59:57.20] SHAWN COLE: It's a lot harder to get work done than I thought.

[02:00:00.00] [redacted]: Yes. Yes.

[02:00:01.49] TERESA AMABILE: [redacted] thanks again, and we'll talk to you sometime soon.

[02:00:05.43] [redacted]: Thank you. Have a nice day.

[02:00:06.50] TERESA AMABILE: Thank you so much. OK. Bye bye.

Exhibit 12
Maidstone Consulting Group Forensic Report for Allegation 1

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MCG 0022 July 2022 Initial Assessment Report of Allegation 1

SCOPE AND SUMMARY OF ANALYSIS

Review Initiation. This report was requested of Maidstone Consulting Group, LLC ("**MCG**") by Harvard Business School ("**the client**") for a forensic analysis of allegations of data manipulation within four papers associated with Dr. Francesca Gino. The current report focuses on one paper associated with Allegation 1.

Relevant Publications:
Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 ("**2020 JPSP Paper**")

Allegation 1:
Dr. Gino falsified and/or fabricated the dataset for Study 3a in the 2020 JPSP Paper by altering observations to affect the significance of findings of the study in the hypothesized direction. In particular:

a. In the promotion-focus condition, by changing extreme values of "7" to "1" to drive the expected effect. Specifically, for 9 observations there seems to be a mismatch between participants' impurity ratings and the words participants chose to describe how they felt;
b. In the prevention-focus condition, by changing some values of "1" to either "2" or "3" to drive the expected effect. A number of observations also show a mismatch between participants' impurity ratings and the words participants chose to describe how they felt.

Report Organization. This document (**MCG 0022 July 2022 Preliminary Assessment Report.docx**) outlines findings relative to Study 3A of the *2020 JPSP Paper*. The accompanying **"MCG0022_Allegation 1_allData_analysis.xlsx"** includes the complete calculations and summary findings discussed in the MCG ***Analysis and Observations*** section.

I. ***Data Sources.*** The following materials were utilized as data sources for this report:

1. Publicly available materials
   i. a pdf copy of the published paper
   ii. two files from the Open Science Foundation (OSF) repository Networking with a Promotion or Prevention Focus
   https://osf.io/kf2ut/?view_only=26073af04f9046cd9e0a62159a5755d4

a. Data/data study3A anonymous.sav[1]
b. Materials/Study 3A Materials.docx

2. Materials provided to MCG by the client (description as provided by client), distribution of 05.14.2022
   i. Allegation 1 OSF Data.xlsx
   a copy of apparent source data for the **2020 JPSP Paper** uploaded to OSF, herein "**OSF data**"
   ii. OSF file location.docx
   a file containing the location of files related to the study on the OSF website
   iii. SV_8jeI9PXvlowBnRr_RF_and_Networking_-_Study_3A_New.csv
   the original survey downloaded directly from Qualtrics, herein "**Qualtrics data**"

See the *Metadata* sheet in the accompanying **MCG0022_Allegation 1_allData_analysis.xlsx** file for all accompanying metadata associated with the described files as reported by Mdls search.

Should the client need to consider additional data evaluation, potential next steps and data sets to consider identifying may include, but not be limited to:

- A full comparison of the results reported in the **2020 JPSP Paper** obtained by using all **OSF site data** and **Qualtrics data.**
- A secondary preliminary assessment of the calculations performed by the initial complainant.

II. *Executive Summary.*

Within the data files reviewed there appear to be multiple discrepancies in certain score sets related to the raw data source ("**Qualtrics Data**") and public repository data associated with the 2020 JPSP Paper ("**OSF data**") provided by the client. The discrepancies are demonstrated in two treatment areas: Condition 1 "promotion focus" and Condition 2 "prevention focus". Furthermore, assessment areas of both "moral impurity" as well as "net intentions" for the two treatment conditions appear to be modified with directionality (e.g., comparative alterations appear to align with described theorized and resultant published motivational approaches). Analyses of the **OSF data** for average "moral impurity", "net intentions", as well as other statistical assessments using a statistical software package (SPSS) are consistent with the results reported in the **2020 JSPS Paper**. Utilizing the same calculations for the Qualtrics data demonstrates that outcomes a) appear contrary to reported study effects, and b) have lower (or no) statistical significance.

[1] data study3A anonymous.sav is a SPSS file specifically associated with the current review and was posted to the OSF site "Networking with a Promotion or Prevention Focus", Anonymous contributors, 2020-04-20 10:48 AM

ANALYSIS AND OBSERVATIONS

III. Data Analysis.

MCG analyzed data related to publicly available Study 3A and the 2020 JSPS Paper (**OSF data**) in comparison to reported original data (**Qualtrics data**); a copy of which was provided to MCG by the client. According to the client, the Qualtrics files' location was provided by the respondent and identified as the original/raw data file utilized for the **2020 JPSP Paper**.

Approach:

The **Qualtrics data** file included 74 input columns (see Appendix 1). A subset of the 74 input columns of the **Qualtrics data** were found in the Study3A data set found on the OSF repository (**OSF data,** 22 columns, see Appendix 2). The **OSF data** also included survey IDs (Column 1) and analysis columns (Columns 24 to 31). Surveys IDs and analysis columns were not present in the Qualtrics data file.

MCG compared the data within the shared subset of input columns between the **Qualtrics data** and the **OSF data** in the file **MCG0022_Allegation 1_allData_analysis.xlsx**:

1. Data from both Qualtrics and OSF surveys were imported into a single Excel spreadsheet for ease of comparison. Please see sheets *OSF* and *Rawdata_Qualtrics*.
2. A single common column was chosen for a 1:1 identification of the same subject between data sets. For example, please see columns F and BG on sheet *Analysis_Condition1*.
3. Data were filtered by each Condition 1-3 utilizing columns W in the *OSF* sheet and BW in the *Rawdata_Qualtrics* sheet and exported in single sheets, one per condition, named respectively *Analysis_Condition1*, *Analysis_Condition2*, and *Analysis_Condition3*.
4. The essay texts were sorted alphabetically descending and the TRIM and CLEAN functions were applied to remove specific non-printing characters, extra spaces, and line breaks. The combination of the two functions (=TRIM(CLEAN("Cell"))) returns text ready for comparisons. For example, please see columns F and G on sheet *Analysis_Condition1_appendix*.
5. All survey data in Qualtrics that were not completed by participants were removed[2]. There were 95 incomplete surveys. (See sheet *Excluded_Qualtrics*, Columns BR-BU show incomplete net intention scores).
6. The alignment of OSF and Qualtrics essay data were assessed by running a character-by-character comparison of texts. (Example, =IF("Cell1"="Cell2","Match","Not a match")). For example, please see column H on sheet *Analysis_Condition1_appendix*.
    - When non match in data were identified, a visual inspection of the text was completed to determine a reason why wording may be inconsistent and manually adjusting as needed (e.g., incorrect interpretation of unusual characters). For example, please see column I on sheet *Analysis_Condition1_appendix*.
7. This same approach was applied for comparing all other text values confirming the two surveys were the same. For example, please see columns O-Q and R-U on sheet *Analysis_Condition1_appendix*.
8. The OSF IDs were utilized as common participant IDs for matching text.

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[2] This was apparently also done by the authors to produce their final working dataset of 599 surveys. See section IV. Observations, MCG Discussion 1.1 for additional details.

9. The numerical values reported in the OSF and Qualtrics datasets, including age, moral impurity and net intention scores were subtracted. The differences between the Qualtrics and OSF data were reported as a numerical value. 0=same. Relative differences were reported as increases (positive values) or decreases (negative values). For example, please see columns DP-EL on sheet *Analysis_Condition1*.
10. The differences between the Qualtrics and OSF data were reported as a visual heat map to demonstrate trends in apparent original vs. published data. Please see the *Assessment of Data* sheet.

SPSS analyses

11. The OSF and Qualtrics data were imported into IBM SPSS Statistics software, and an additional "avg" variable was calculated for each data set to account for averages across the seven "Moral Impurity" and the four "Net Intention" surveys answers respectively. Please see the *SPSS_Output_OSF_Qualtrics* sheet, 'Report' sections (see rows 30-40).
12. The additional "avg" column was populated by selecting
    Transform → Compute Variable → =MEAN('columns of interest') from the SPSS menu dropdown options.
13. Mean and standard deviation across conditions were calculated by selecting
    Analyze → Compare Means → Means (and selecting Anova table and eta under options) with the "_avg" column calculated as described in point 12 above as *Dependent Variable* and the "condition" column as *Layer 1*.
14. Eta squared and significance across groups were calculated by selecting
    Analyze → General linear models → Univariate, with the "_avg" column calculated as described in point 12 above as *Dependent Variable* and the "condition" column as *Fixed Factor*. Using the 'option' button then select the *Estimates of effect size* box. Finally select *continue* and *OK*.
15. The SPSS software output was exported and included as a sheet named *SPSS_Output_OSF_Qualtrics* in the **MCG0022_Allegation 1_allData_analysis.xlsx** file
16. A comparison and summary for the statistical analysis was included as the *Assessment of Statistics* sheet in the **MCG0022_Allegation 1_allData_analysis.xlsx** file

IV. Observations.

1. **Participation and exclusion: apparent differences between source data and published data descriptions.**

From p.1228 of the 2020 JPSP Paper:

> *"Participants and design. A total of 599 working adults recruited through MTurk (M_{age} = 36.94, SD = 9.15; 46% male), all located in the United States, participated in a 15-min online study, and received $2 for their participation. We recruited 600 participants but only 599 completed the study in the time allotted. We randomly assigned participants to one of three conditions: control versus promotion focus versus prevention focus."*

MCG Discussion 1.1:
Although the 2020 JPSP Paper described 600 participants as recruited to the study, when compared to the Qualtrics data (source data) it was determined that there were 695 participants recruited (see *Rawdata_Qualtrics* sheet in **MCG0022_Allegation 1_allData_analysis.xlsx**), and the 95 excluded from participation had incomplete questionnaires (see *Excluded_Qualtrics* sheet in **MCG0022_Allegation1_allData_analysis.xlsx**). This resulted in a total of 599 participants' surveys that were then considered for the 2020 JPSP Paper analysis. It is unclear which participant/survey the authors referred to when they described one participant as "not being able to complete the survey in the time allotted". The exclusions were distributed throughout the three conditions:

- Condition 1 (promotion focus): 28 total excluded
- Condition 2 (prevention focus): 38 total excluded
- Condition 3 (control): 29 total excluded

Additionally, evaluation of the Qualtrics data demonstrated that 4 participants did not appear to have given consent to the research, even though the data these participants provided were utilized in the 2020 JPSP Paper.

2. **Identifying Differences between Qualtrics data and OSF data**

By employing the methodology described in the **III. Data Analysis. Approach** section, MCG produced a list of 1:1 comparisons of surveys presenting identical essay text as well as descriptive words. All surveys with same 'Essay' text also showed the same 'words'. An example for 3 assigned participant IDs is shown below for Condition 1 (*columns have been renamed for ease of review*).

ID	OSF data Essay	Qualtrics data Essay	OSF words 1	Qualtrics words 1	OSF words 2	Qualtrics words 2
113	working for World Wildlife Fund when I retire from current job	working for World Wildlife Fund when I retire from current job	career, rewarding, interest, policy, environment, passion	career, rewarding, interest, policy, environment, passion	career, networking, schmoozing, fake, business, money	career, networking, schmoozing, fake, business, money
233	To pay off my student loans	To pay off my student loans	Hope desire dream wish try	Hope desire dream wish try	life hard help hope want	life hard help hope want
417	To open my own food truck.	To open my own food truck.	Money, partnership, ambition, creativity, investment	money, partnership, ambition, creativity, investment	interaction, friends, entertainment, party,	interaction, friends, entertainment, party,

MCG Discussion 1.2

After having identified the source data for each survey utilizing essay contributions and aligning participant IDs, MCG compared the value scores for a number of categories, including the areas assigned by the research participants as perceived "moral impurity" or "intentions to network" for Qualtrics data compared with OSF data. Condition 3, the control condition, showed no difference between the scores in Qualtrics and OSF data sets (please see for review, **MCG0022_Allegation 1_allData_analysis.xlsx**, *Analysis_Condition3* sheet, columns DJ-EG.) However, conditions 1 and 2 demonstrated a number of differences between the Qualtrics data and the OSF data. In total, 168 survey scores for moral impurity or net intentions appear to have been modified (about the 28% of the data in these survey areas) when comparing OSF survey score data to the scores captured in the original Qualtrics survey. Please see **MCG0022_Allegation 1_allData_analysis.xlsx**, *Assessment of Data* sheet.

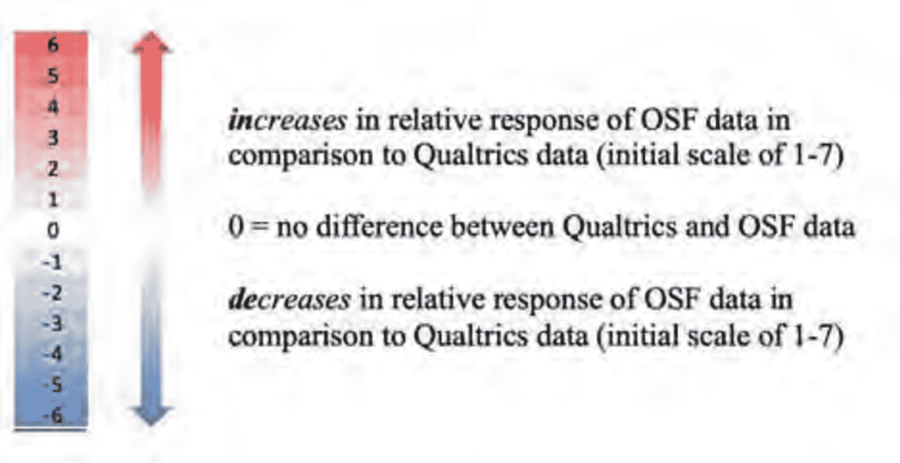
3. **<u>Assessing Differences between Qualtrics and OSF data</u>**

According to p.1229 of the 2020 JPSP Paper:

> *"Participants felt more morally impure in the prevention-focus condition (M =2.39, SD = 1.36) as compared to the promotion-focus condition (M = 1.64, SD = 1.07; p < .001) or the control condition (M = 1.93, SD = 1.34; p < .001). Moral impurity was also lower in the promotion-focus condition than in the control condition (p =.024).*
>
> *Networking intentions. Networking intentions also varied by condition, F(2, 596) = 19.84, p < .001, h2p = .062. Participants indicated they would network less frequently in the future in the prevention-focus condition (M = 4.07, SD = 1.70) as compared to the promotion-focus condition (M = 5.12, SD = 1.68; p < .001) or the control condition (M = 4.74, SD = 1.71; p < .001). Network intentions were higher in the promotion-focus condition than they were in the control condition (p < .024).*

To aid data visualization and summarize the evaluation of the two data sets (OSF vs Qualtrics) we provide a heatmap of the difference in scores by subtracting the Qualtrics score from the OSF score (within the initial 7-point scale, where the authors defined the range as 1 = *not at all* to 7 = *very much*). See **MCG0022_Allegation 1_allData_analysis.xlsx**, *Assessment of Data* sheet for full analysis.

The heatmap values:



MCG Discussion, Condition 1.

When considering Condition 1, the *promotion focus* condition, 40 survey responses appear to have been modified. 16 of the OSF surveys, when compared to their Qualtrics counterparts, had decreased moral impurity scores; **BLUE** heatmaps indicating the degree of decrease from slight or low (-1, pale blue) to more substantial decreases (-6, dark blue). 32 of the OSF surveys, when compared to their Qualtrics counterparts, had increased net intention scores; **RED** heatmaps indicating the degree of increase from slight or low (1, pale red) to more substantial increases (6, dark red). The trend of the data alteration in the respective categories appears to align with the authors theorized projections for Condition 1, lower moral impurity and higher networking intentions.

OSF Condition 1 data table, snapshot from **M0022_Allegation1_allData_analysis.xlsx**, *Analysis_Condition 1 sheet*

First column Survey ID Found only in OSF data)

Moral impurity data

Network intention data

ID (from OSF)	moralImpurity_1	moralImpurity_2	moralImpurity_3	moralImpurity_4	moralImpurity_5	moralImpurity_6	moralImpurity_7	netIntentions_1	netIntentions_2	netIntentions_3	netIntentions_4
233	0	0	0	0	0	0	0	4	4	4	4
200	-2	-2	-2	-2	-2	-2	-3	0	0	0	0
447	-3	-3	-5	-3	-5	-6	-5	0	0	0	0
471	-3	-4	-5	-4	-5	-6	-5	3	2	1	0
335	-4	-3	-6	-4	-5	-6	-6	2	4	3	3
319	0	0	0	0	0	0	0	4	4	4	4
199	-2	-4	-3	-4	-5	-2	-4	0	0	0	0
30	0	0	0	0	0	0	0	3	3	3	3
498	-4	-3	-5	-2	-2	-4	-4	0	0	0	0
237	0	0	0	0	0	0	0	4	4	4	4
118	-5	-5	-6	-4	-4	-5	-5	2	1	2	1
120	-4	-4	-4	-4	-4	-4	-4	0	0	0	0
204	0	0	0	0	0	0	0	2	2	2	2
309	0	0	0	0	0	0	0	6	6	6	6
589	-4	-4	-5	-4	-5	-6	-5	4	3	4	5
220	0	0	0	0	0	0	0	2	2	2	2
251	0	0	0	0	0	0	0	6	6	6	6
248	-5	-5	-6	-4	-5	-6	-4	5	3	3	4
364	-6	-6	-6	-6	-6	-6	-6	3	3	3	3
376	0	0	0	0	0	0	0	6	6	6	6
5	0	0	0	0	0	0	0	3	3	3	3
268	0	0	0	0	0	0	0	2	2	2	2
290	-3	-2	-3	-2	-2	-4	0	0	0	0	0
47	0	0	0	0	0	0	0	3	3	3	3
454	-3	-2	-4	-3	-4	-4	-4	0	0	0	0
441	-4	-3	-2	-3	-4	-5	-3	0	0	0	0
538	-6	-6	-6	-6	-6	-6	-6	2	5	6	6
8	0	0	0	0	0	0	0	3	3	3	3

414	0	0	0	0	0	0	0	4	4	4	4
232	0	0	0	0	0	0	0	1	1	1	1
260	0	0	0	0	0	0	0	1	1	1	1
103	0	0	0	0	0	0	0	1	1	1	1
224	0	0	0	0	0	0	0	6	6	6	6
593	0	0	0	0	0	0	0	2	2	2	2
169	0	0	0	0	0	0	0	2	2	2	2
359	-6	-5	-6	-4	-6	-6	-4	5	4	4	5
53	0	0	0	0	0	0	0	2	2	2	2
378	0	0	0	0	0	0	0	3	3	3	3
73	0	0	0	0	0	0	0	2	2	2	2
462	0	0	0	0	0	0	0	2	2	2	2

MCG Discussion, Condition 2.

When considering Condition 2, the *prevention focused* condition, 128 survey responses appear to have been modified. 88 of the OSF surveys, when compared to their Qualtrics counterparts, had increased moral impurity scores; **RED** heatmaps indicating the degree of increase from slight or low (1 – pale red) to more substantial increases (6 - dark red). 54 of the OSF surveys, when compared to their Qualtrics counterparts, had decreased net intention scores; **BLUE** heatmaps indicating the degree of decrease from slight or low (-1 – pale blue) to more substantial decreases (-6 - dark blue). The trend of the data alteration in the respective categories appears to align with the authors theorized projections for Condition 2; higher moral impurity and lower networking intentions.

OSF Condition 2 data table, snapshot from **MCG0022_Allegation1_allData_analysis.xlsx**

First column Survey ID Found only in OSF data)

Moral impurity data

Network intention data

ID (from OSF)	moralImpurity_1	moralImpurity_2	moralImpurity_3	moralImpurity_4	moralImpurity_5	moralImpurity_6	moralImpurity_7	netIntentions_1	netIntentions_2	netIntentions_3	netIntentions_4
28	0	0	0	0	0	0	0	-2	-2	-2	-2
418	2	2	2	2	2	2	2	0	0	0	0
63	1	1	1	1	1	1	1	0	0	0	0
160	1	1	1	1	1	1	1	0	0	0	0
304	2	4	3	4	5	2	4	0	0	0	0
52	1	1	1	1	1	1	1	0	0	0	0
256	1	1	1	1	1	1	1	0	0	0	0
385	1	1	1	1	1	1	1	0	0	0	0
165	1	1	1	1	1	1	1	0	0	0	0
571	1	1	1	1	1	1	1	0	0	0	0
219	2	2	2	2	2	2	2	0	0	0	0
92	2	2	2	2	2	2	2	0	0	0	0
80	2	2	2	2	2	2	2	0	0	0	0
288	1	1	1	1	1	1	1	0	0	0	0
285	1	1	1	1	1	1	1	0	0	0	0
166	0	0	0	0	0	0	0	-1	-1	-1	-1

483	1	1	1	1	1	1	1	0	0	0	0
205	1	1	1	1	1	1	1	0	0	0	0
327	1	1	1	1	1	1	1	0	0	0	0
98	5	5	6	4	4	5	5	-2	-1	-2	-1
105	1	1	1	1	1	1	1	0	0	0	0
36	4	4	5	4	5	6	5	-4	-3	-4	-5
598	1	1	1	1	1	1	1	0	0	0	0
336	1	1	1	1	1	1	1	0	0	0	0
27	1	1	1	1	1	1	1	0	0	0	0
58	0	0	0	0	0	0	0	-2	-2	-2	-2
573	1	1	1	1	1	1	1	0	0	0	0
486	1	1	1	1	1	1	1	-1	-1	-1	-1
249	2	2	2	2	2	2	2	0	0	0	0
197	1	1	1	1	1	1	1	0	0	0	0
431	1	1	1	1	1	1	1	0	0	0	0
74	2	2	2	2	2	2	2	0	0	0	0
437	0	0	0	0	0	0	0	-2	-2	-2	-2
347	1	1	1	1	1	1	1	0	0	0	0
397	0	0	0	0	0	0	0	-2	-2	-2	-2
578	1	1	1	1	1	1	1	0	0	0	0
508	1	1	1	1	1	1	1	0	0	0	0
453	0	0	0	0	0	0	0	-3	-3	-3	-3
449	0	0	0	0	0	0	0	-3	-3	-3	-3
590	0	0	0	0	0	0	0	-1	-1	-1	-1
38	4	3	6	4	5	6	6	-2	-4	-3	-3
121	0	0	0	0	0	0	0	-1	-1	-1	-1
79	1	1	1	1	1	1	1	0	0	0	0
294	1	1	1	1	1	1	1	0	0	0	0
108	5	5	6	4	5	6	4	-5	-3	-3	-4
492	1	1	1	1	1	1	1	0	0	0	0
104	1	1	1	1	1	1	1	0	0	0	0
95	1	1	1	1	1	1	1	0	0	0	0
342	1	1	1	1	1	1	1	0	0	0	0
314	0	0	0	0	0	0	0	-2	-2	-2	-2
9	1	1	1	1	1	1	1	0	0	0	0
525	1	1	1	1	1	1	1	0	0	0	0
196	4	3	5	2	2	4	4	0	0	0	0
410	0	0	0	0	0	0	0	-2	-2	-2	-2
377	2	2	2	2	2	2	2	0	0	0	0
164	3	2	4	3	4	4	4	0	0	0	0
262	1	1	1	1	1	1	1	0	0	0	0
531	1	1	1	1	1	1	1	-1	-1	-1	-1
333	0	0	0	0	0	0	0	-1	-1	-1	-1
505	1	1	1	1	1	1	1	-1	-1	-1	-1
476	2	2	2	2	2	2	2	0	0	0	0
575	1	1	1	1	1	1	1	0	0	0	0
511	0	0	0	0	0	0	0	-2	-2	-2	-2
406	0	0	0	0	0	0	0	-1	-1	-1	-1
167	1	1	1	1	1	1	1	0	0	0	0
325	2	2	2	2	2	2	2	0	0	0	0
576	0	0	0	0	0	0	0	-2	-2	-2	-2
40	1	1	1	1	1	1	1	0	0	0	0
523	1	1	1	1	1	1	1	0	0	0	0
506	2	2	2	2	2	2	2	0	0	0	0
379	1	1	1	1	1	1	1	0	0	0	0
356	1	1	1	1	1	1	1	0	0	0	0
562	0	0	0	0	0	0	0	-3	-3	-3	-3
201	1	1	1	1	1	1	1	0	0	0	0
467	0	0	0	0	0	0	0	-2	-2	-2	-2
479	0	0	0	0	0	0	0	-1	-1	-1	-1
178	2	2	2	2	2	2	2	0	0	0	0

132	0	0	0	0	0	0	0	-2	-2	-2	-2
281	0	0	0	0	0	0	0	-3	-3	-3	-3
503	2	2	2	2	2	2	2	0	0	0	0
170	0	0	0	0	0	0	0	-2	-2	-2	-2
214	1	1	1	1	1	1	1	0	0	0	0
126	6	5	6	4	6	6	4	-5	-4	-4	-5
24	0	0	0	0	0	0	0	-2	-3	-3	-3
473	0	0	0	0	0	0	0	-1	-1	-1	-1
352	2	2	2	2	2	2	2	0	0	0	0
18	1	1	1	1	1	1	1	0	0	0	0
316	0	0	0	0	0	0	0	-1	-1	-1	-1
580	0	0	0	0	0	0	0	-1	-1	-1	-1
261	1	1	1	1	1	1	1	0	0	0	0
396	2	2	2	2	2	2	2	0	0	0	0
4	3	4	5	4	5	6	5	-3	-2	-1	0
301	2	2	2	2	2	2	2	0	0	0	0
19	2	2	2	2	2	2	2	0	0	0	0
171	6	6	6	6	6	6	6	-2	-5	-6	-6
380	1	1	1	1	1	1	1	0	0	0	0
110	0	0	0	0	0	0	0	-1	-1	-1	-1
591	0	0	0	0	0	0	0	-1	-1	-1	-1
391	2	2	2	2	2	2	2	0	0	0	0
355	0	0	0	0	0	0	0	-1	-1	-1	-1
549	1	1	1	1	1	1	1	-1	-1	-1	-1
317	0	0	0	0	0	0	0	-1	-1	-1	-1
291	0	0	0	0	0	0	0	-4	0	0	0
85	0	0	0	0	0	0	0	-1	-1	-1	-1
271	1	1	1	1	1	1	1	0	0	0	0
283	1	1	1	1	1	1	1	0	0	0	0
584	0	0	0	0	0	0	0	-1	-1	-1	-1
114	1	1	1	1	1	1	1	0	0	0	0
193	0	0	0	0	0	0	0	-1	-1	-1	-1
235	1	1	1	1	1	1	1	0	0	0	0
13	0	0	0	0	0	0	0	-5	-5	-5	-5
243	0	0	0	0	0	0	0	-1	-1	-1	-1
361	1	1	1	1	1	1	1	0	0	0	0
502	1	1	1	1	1	1	1	-1	-1	-1	-1
450	0	0	0	0	0	0	0	-2	-2	-2	-2
115	1	1	1	1	1	1	1	0	0	0	0
384	1	1	1	1	1	1	1	0	0	0	0
522	1	1	1	1	1	1	1	-1	-1	-1	-1
238	0	0	0	0	0	0	0	-2	-2	-2	-2
111	1	1	1	1	1	1	1	0	0	0	0
366	0	0	0	0	0	0	0	-2	-2	-2	-2
258	6	6	6	6	6	6	6	-3	-3	-3	-3
192	4	4	5	4	4	4	4	0	0	0	0
239	0	0	0	0	0	0	0	-1	-1	-1	-1
514	1	1	1	1	1	1	1	0	0	0	0
413	1	1	1	1	1	1	1	0	0	0	0
405	0	0	0	0	0	0	0	-1	-1	-1	-1
594	2	2	2	2	2	2	2	0	0	0	0

MCG Discussion, Assessing statistical differences between OSF and Qualtrics data.

The replication of the statistical assessment of the data relative to Study 3A shows lower statistical significance between samples when comparing results obtained under the three conditions (see *SPSS_Output_OSF_Qualtrics* sheet). It also shows opposite trends of means between the OSF data (results reported in the 2020 JPSP paper) and the Qualtrics data for prevention and promotion focus both for net intentions as well as moral impurity. The tables below outline the differences in calculated statistical values between the OSF data (reported in the 2020 JPSP paper) and the Qualtrics data.

Data tables, partial snapshot from **M0022_Allegation1_allData_analysis.xlsx** *Assessment of Statistics sheet.*

Table 1. Moral impurity

	F-test analysis			Average and SD				p between conditions		
				Prevention		Promotion		Prev.-Control	Prom.-Control	Prev.-Prom.
	F	p value	η_p^2	M	SD	M	SD	p value	p value	p value
2020 JPSP	17.69	<0.001	0.056	2.39	1.36	1.64	1.07	<.001	0.024	<.001
OSF	17.69	3.44E-8	0.056	2.39	1.36	1.64	1.07	<.001	0.024	<.001
Qualtrics	3.90	0.02	0.013	1.63	1.17	1.98	1.48	0.028	0.704	0.010

Table 2. Net Intentions

	F-test analysis			Average and Standard Deviation				p between conditions		
				Prevention		Promotion		Prev.-Control	Prom.-Control	Prev.-Prom.
	F	p value	η_p^2	M	SD	M	SD	p value	p value	p value
2020 JPSP	19.84	<0.001	0.062	4.07	1.70	5.12	1.68	<0.001	0.024	<0.001
OSF	19.84	4.55E-9	0.062	4.07	1.70	5.12	1.68	<0.001	0.024	<0.001
Qualtrics	0.48	0.62	0.002	4.57	1.83	4.63	1.75	0.335	0.516	0.750

As outlined above, the data as reported in the 2020 JPSP appear to align with the OSF data analyzed using SPSS software. However, when considering statistical significance, the p-value of the F test for both 'moral impurity' and 'net intention' appears to be higher in the Qualtrics data than in the OSF (2020 JPSP) data, and much higher than 0.05 (0.62) for 'net intention'.

Comparing calculated η_p^2, for both data sets, the OSF η_p^2 values align with the 2020 JPSP published data for both 'moral impurity' and 'net intentions' (see "F-test analysis" in Tables 1. and 2. η_p^2 columns for both 2020 JPSP and OSF; aligning values are 0.056 and 0.062, respectively). When the same η_p^2 calculations are completed for the Qualtrics data, the resultant values appear decreased compared to their 2020 JPSP and OSF counterparts (see "F-test analysis" in Table1. η_p^2 column,

0.013 (Qualtrics) compared to 0.056 (OSF) and Table2. η_p^2 column, 0.002 (Qualtrics) compared to 0.062 (OSF)).

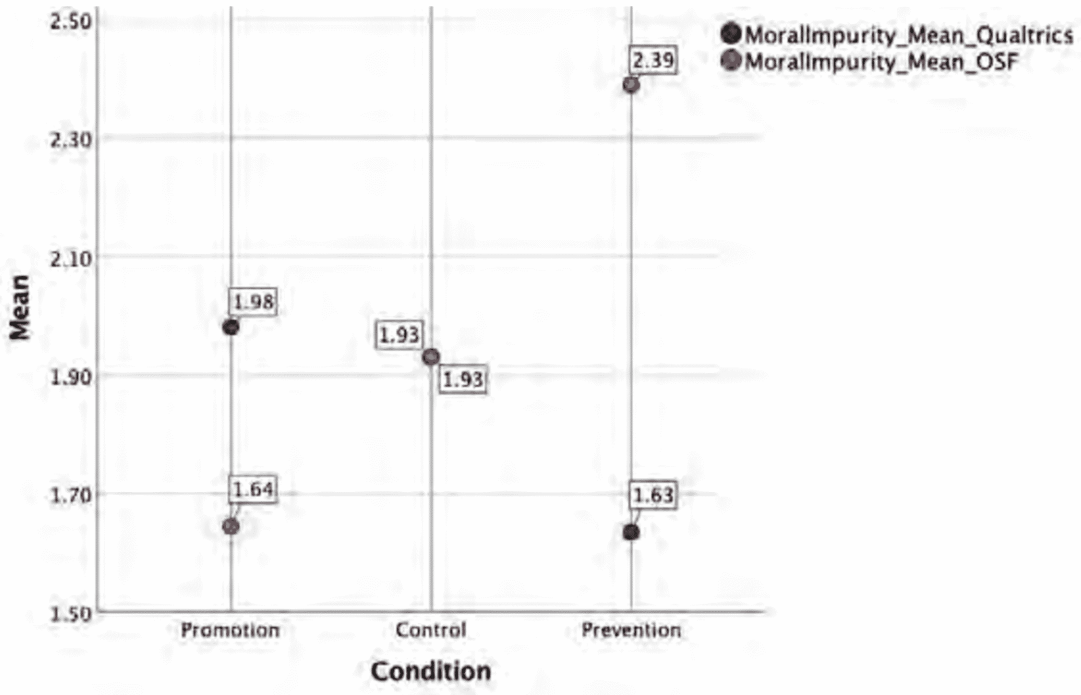
To compute the significance between conditions, all post-hoc anova significance algorithms were tested[3]. A match was found with the published results when using Fisher's Least Significant Difference (LSD) Test post-hoc on OSF data. The same algorithm on the Qualtrics data shows lower significance (see **MCG0022_Allegation1_allData_analysis.xlsx**, SPSS_Output_OSF_Qualtrics sheet, rows 100-223).

Finally, the means obtained in Qualtrics for "moral impurity" and "net intentions" data appear to show opposite effects than reported. **Graph 1.** below details these differences in the "Moral Impurity" data where Promotion Focus data are higher (1.98) and Prevention Focus data are lower (1.63) in Qualtrics data as compared to their OSF (published) counterparts. Similarly, for "net intentions" (see **Graph 2.**) data we also see an opposite effect than reported; where Promotion Focus data are lower (4.63) and Prevention Focus data are higher (4.57) in Qualtrics data as compared to their OSF (published) counterparts. Additionally, for the "net intentions" data, the highest value was obtained for the control condition (see **Graph 2.**, Control Condition).

Plot of averages scores across data sets (possible values of 1-7)

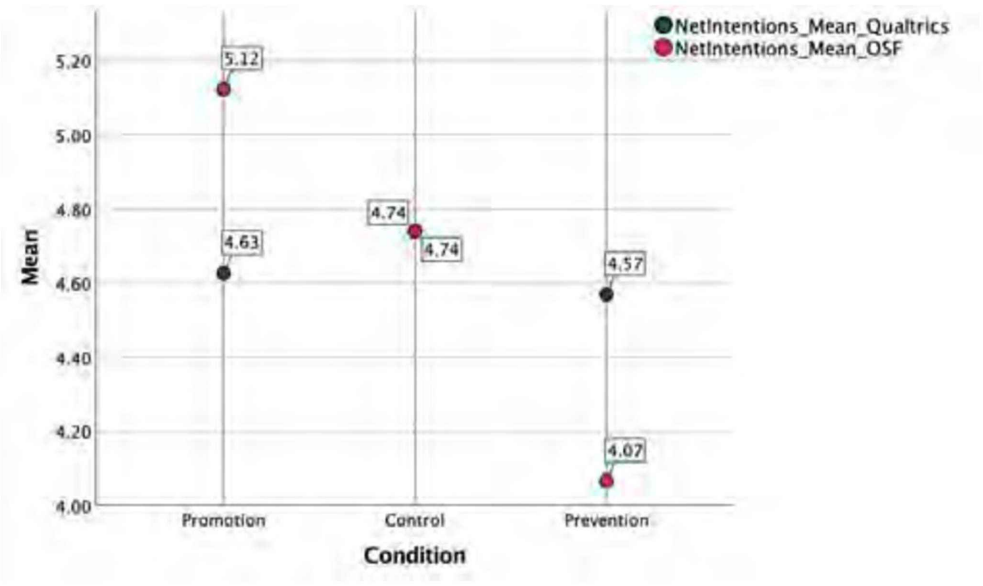
Snapshots from **MCG0022_Allegation1_allData_analysis.xlsx** *Assessment of Statistics sheet.*

Graph 1



[3] As the post hoc analysis was not described by the authors in the 2020 JPSP paper, MCG reverse-engineered these resultant data by performing a series of post hoc analyses on the OSF data and identifying the resultant post hoc test p value that aligned with the published p value.

Graph 2


NetIntentions_Mean_Qualtrics
NetIntentions_Mean_OSF
5.20
5.00
4.80
4.60
4.40
4.20
4.00
Mean
5.12
4.63
4.74
4.74
4.57
4.07
Promotion
Control
Prevention
Condition

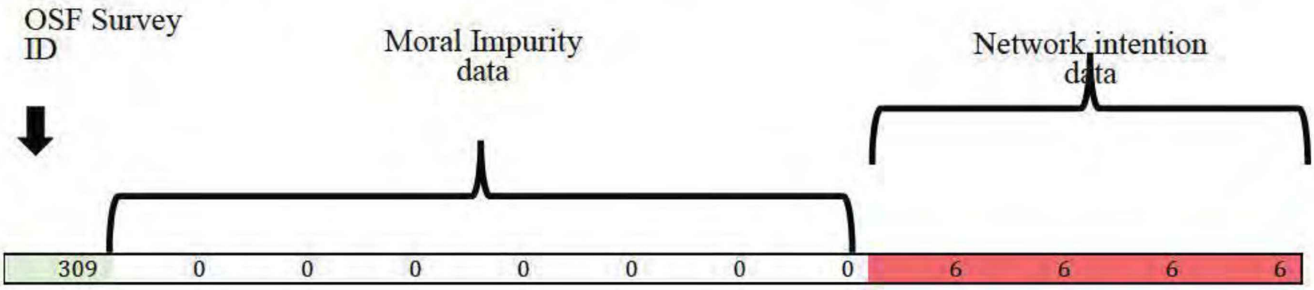
IV. Summary.

Within the data files reviewed there appear to be multiple discrepancies between the published data found in the public repository associated with the 2020 JPSP Paper ("OSF data") and the raw source data ("Qualtrics Data") identified by the respondent and provided for review by the client.

Discrepancies encompass both the described number of participants (MCG Discussion 1.1) as well as associated scores (MCG Discussion, Conditions 1. and 2., "promotion focus" and "prevention focus", respectively) and associated statistical analysis (MCG Discussion Assessing statistical differences). No differences were identified in the survey areas for "moral impurity" and "networking intentions" for Condition 3 ("control"). Assessment areas of both "moral impurity" as well as "net intent" for the two treatment conditions appear to be modified with directionality (e.g., comparative alterations appear to align with described theorized and resultant published motivational approaches).

A closer look at the discovered modifications shows alteration of the data at the single cell level. For example, from MCG Discussion, Condition 1.:

Participant 309: no change in moral impurity data, uniform change in networking intention data:



Participant 589: selective changes, non-uniform, in both moral impurity and networking intention data:

Therefore, differences are demonstrated at both the inter-survey responses (between moral impurity and networking intentions) and intra-survey response (within a given participant's response).

Overall, 28% of the total survey scale data for assessing the effects of promotion and prevention regulatory focus on feelings of impurity and intentions to engage in networking appear to be different in the published repositories as compared to the original Qualtrics data (See table below for Summary and **MCG0022_Allegation 1_allData_analysis.xlsx**, *Assessment of Data* sheet for complete analysis.)

Total rows with values changed	Number of surveys with modified data	Percentage of surveys with modified data
condition 1	40	20%
condition 2	128	65%
condition 3	0	0
TOTALS	168	28%

Statistical analysis of the data from Qualtrics and OSF shows that the data from OSF were the likely source for the reported statistics as their calculated values in the assessments presented here align with the published data. The same analysis on the Qualtrics data, however, demonstrates that the original data report:

i. lower statistical significance, with p values orders of magnitude higher, and above 0.05 for both 'moral impurity' and 'net intention',
ii. decreased values and apparent smaller size-effect,
iii. opposite resultant means for 'moral impurity' and 'net intention' scores across Promotion or Prevention conditions,
iv. opposite resultant study trends for 'moral impurity' scores across Promotion and Prevention conditions,
v. almost no effect for 'net intention' scores across conditions with highest value apparently obtained for the control condition in the original (Qualtrics) data, and,
vi. lower significance of the difference of effect between conditions (compare LSD post hoc analysis of Qualtrics to OSF data sets, respectively).

Metadata and corollary information:

Metadata (see sheet Metadata in the accompanying **MCG0022_Allegation1_allData_analysis.xlsx** file) indicate:

1. Study 3A Materials.docx
    a. Qualtrics as application creator of the file
    b. Francesca Gino identified as last person to save the file
2. data study3A anonymous.sav
    a. From SPSS creation date: April13, 2020

APPENDIX 1 Qualtrics Data, 74 input columns

1	Start Date
2	End Date
3	Response Type
4	IP Address
5	Progress
6	Duration (in seconds)
7	Finished
8	Recorded Date
9	Response ID
10	Recipient Last Name
11	Recipient First Name
12	Recipient Email
13	External Data Reference
14	Location Latitude
15	Location Longitude
16	Distribution Channel
17	User Language
18	Please enter your worker ID in the box below. To find your worker ID, please click here to open a new window and log into your MTurk account. The worker ID is located under the "Your Account" tab on the MTurk dashboard. Please do not exit out of this su
19	Which letter is missing from this chain? abcdefghijlmnop
20	What is this a picture of?
21	What year is it?
22	Indicate below if you are giving your consent.
23	Please think about something you ideally would like to do. In other words, think about a hope or aspiration that you currently have. Please list the hope or aspiration below.
24	Timing - First Click
25	Timing - Last Click
26	Timing - Page Submit
27	Timing - Click Count
28	Please think about something you think you ought to do. In other words, think about a duty or obligation that you currently have. Please list the duty or obligation below.
29	Timing - First Click2
30	Timing - Last Click3
31	Timing - Page Submit4
32	Timing - Click Count5
33	Please think about something you usually do in the evening. Please list the activities you engage in during the evening on a typical day below.
34	Timing - First Click6

35	Timing - Last Click7
36	Timing - Page Submit8
37	Timing - Click Count9
38	Timing - First Click10
39	Timing - Last Click11
40	Timing - Page Submit12
41	Timing - Click Count13
	You will now answer a few questions about the event you just read about.
42	Please indicate the extent to which the situation you read about made you feel... - Dirty
	You will now answer a few questions about the event you just read about.
43	Please indicate the extent to which the situation you read about made you feel... - Tainted
	You will now answer a few questions about the event you just read about.
44	Please indicate the extent to which the situation you read about made you feel... - Inauthentic
	You will now answer a few questions about the event you just read about.
45	Please indicate the extent to which the situation you read about made you feel... - Ashamed
	You will now answer a few questions about the event you just read about.
46	Please indicate the extent to which the situation you read about made you feel... - Wrong
	You will now answer a few questions about the event you just read about.
47	Please indicate the extent to which the situation you read about made you feel... - Unnatural
	You will now answer a few questions about the event you just read about.
48	Please indicate the extent to which the situation you read about made you feel... - Impure
	Now please take a minute and think about what you wrote about earlier, about something ideally you would like to do. In other words, think about a hope or aspiration that you currently have. Please reflect on your experience
49	for 1-2 minutes and then proce
	Now, consider the story you read about the party you attended. Please reflect on the experience for 1-2 minutes and then proceed to the next task.
50	Please write a few words that came to mind while you were reflecting? (please list 5-6 words)
51	Timing - First Click14
52	Timing - Last Click15
53	Timing - Page Submit16
54	Timing - Click Count17

55	Now please take a minute and think about what you wrote about earlier, about something you ought to do. In other words, think about a duty or obligation that that you currently have. Please reflect on your experience for 1-2 minutes and then proceed to th
	Now, consider the story you read about the party you attended. Please reflect on the experience for 1-2 minutes and then proceed to the next task.
56	Please write a few words that came to mind while you were reflecting? (please list 5-6 words)18
57	Timing - First Click19
58	Timing - Last Click20
59	Timing - Page Submit21
60	Timing - Click Count22
	Now please take a minute and think about what you wrote about earlier, about something you do in the evening on a typical day. Please reflect on your experience for 1-2 minutes and then proceed to the next task.
61	Please write a few words that came to m
	Now, consider the story you read about the party you attended. Please reflect on the experience for 1-2 minutes and then proceed to the next task.
62	Please write a few words that came to mind while you were reflecting? (please list 5-6 words)23
63	Timing - First Click24
64	Timing - Last Click25
65	Timing - Page Submit26
66	Timing - Click Count27
67	Now please think about your professional network, and how you may want to change it in the near future. - To what degree will you try to strategically work on your professional network in the next month?
68	Now please think about your professional network, and how you may want to change it in the near future. - In the next month, how likely are you to voluntarily engage in behaviors that expand your professional network?
69	Now please think about your professional network, and how you may want to change it in the near future. - To what degree do you plan to establish new professional connections in the next month?
70	Now please think about your professional network, and how you may want to change it in the near future. - In the next month, to what degree is having a strong professional network a goal that you plan to pursue?
71	Your age:
72	Your gender: - Selected Choice
73	Your gender: - Other - Text
74	condition

APPENDIX 2 OSF data, 31 columns

List of Columns present in the OSF data files. Greyed cells, refer to Cells not present in the Qualtrics data set.

1	CumID_all
2	attcheck1
3	attcheck2
4	attchq3
5	consent
6	essay
7	moralImpurity_1
8	moralImpurity_2
9	moralImpurity_3
10	moralImpurity_4
11	moralImpurity_5
12	moralImpurity_6
13	moralImpurity_7
14	words1_cond
15	words2_cond
16	netIntentions_1
17	netIntentions_2
18	netIntentions_3
19	netIntentions_4
20	age
21	male
22	male_3_TEXT
23	condition
24	moral_impurity4
25	moral_wrong3
26	moral_impurity7
27	networking_intentions
28	cond_name
29	control Dummy
30	promotion_Dummy
31	prevention dummy

Exhibit 13
[redacted]'s Written Responses to Investigation Committee's Follow-up Interview Questions received on September 25-28, 2022

CONFIDENTIAL

Date: September 22, 2022

To: [redacted]

From: Investigation Committee on Research Integrity Case RI21-001

Re: Follow-up questions to your August 2nd interview about the 2012 PNAS paper

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[redacted] we want to start by thanking you again, very much, for the long interview you gave us on August 2, 2022, and for your willingness to answer some additional questions in writing. The information you have already share with us is invaluable. If you require any clarifications, or have any questions, don't hesitate to reach out to Alain. And, of course, if you have no information on any of our questions, or don't know the answer, please just say so.

Questions about the procedure for Experiment 1 in the 2012 PNAS paper

1. On August 2, we asked a number of questions about the procedure for Experiment 1, and you answered as fully as you could. However, you told us that, because you ran so many studies for Professor Gino at UNC that used some version of the matrix puzzles task and a tax form, you couldn't be sure of recalling this specific experiment – except for some participants' scribbling in the margins of one of their sheets, scribbling that prompted you to say, in an email to Professor Gino during data collection, that "The people are SERIOUS dumdums on this study" (July 13, 2010).
    a. Since our August 2 conversation, have you been able to recall anything else about this specific study with any clarity? If so, please describe.

No, I don't recall anything else about the study. I wouldn't say there were many studies with the matrix and the tax form though, only that there was many studies with the matrix form. I believe this was the only study with a tax form. I'm including the modification of the tax form as the same "study" since I collected all the data under the same IRB and put on the same spreadsheet for one study. Although, it may have been differentiated as separated studies later in the article, and I see how it's labeled as "new tax study" in the emails.

    b. Have you recalled anything else about the typical lab setup or procedures in studies using the matrix puzzles and tax forms that might be helpful to us? If so, please describe.

Nothing more than what I already shared.

2. We have one more specific set of questions about the procedure and data collection for this experiment, which we didn't have time to cover on August 2.

Appendix 1 to this document contains a chain of email exchanges between Professor Gino and you on July 20, 2010, which you shared with us. The first (starting from the bottom) is from her to you at 8:21am that day. (The date doesn't appear in the Appendix, but it does appear in that early-morning email, which you shared with us in a separate file.) That initial email refers to "a different version of the TAX STUDY" that she wanted you to run. In it, she says, "just need to change the forms a little bit."

Appendix 2 contains the email Professor Gino sent you on July 22, 2010, plus what could be the new forms she had promised to send you; these two documents were attachments to that July 22, 2010 email (filenames: matrix stimuli new - STUDY 2.docx and TaxStudyForm - STUDY 2).

Appendix 3 contains an email you sent to Professor Gino on July 27, 2010, with the Subject line "Taxstudy." The body of that email has only one sentence: "The numbers starting over at 1 are the new form." The email had one attachment, an Excel file with the filename Taxstudy.xlsx. (We assume that you have that Excel file from that date, because you shared that email with us back in May. But, if you need it, just let Alain know.) Here are our questions:

a. We wonder how you interpret the messages between Professor Gino and you on July 20 and July 22, 2010. Specifically, after Professor Gino sent you the materials on July 22, did you start to collect data for a different "tax study" using the materials that had "STUDY 2" in the filenames (i.e., different from the "tax study" for which you had collected data up to July 20)? Please explain.

I interpret this as I continued to run an experiment called "Tax Study" but with new forms. It doesn't appear that I differentiated these as being different studies, but instead a different version of the same study. This is why I continued collecting all the data on the same spreadsheet, but I differentiated the different versions by starting the Participant #'s over again. My interpretation is that calling this "Study 2" would be equivalent; it's just not how I referred to it.

b. The Excel file (Taxstudy.xlsx) that you sent Professor Gino on July 27, 2010 has data from 98 participants (in rows labeled with "P#" ranging from 1-97; two of those rows are labeled as P#, 13, but contain different data. After the P# 97 row, the file has a second set of 28 rows, with the participant numbers starting at 1 (in row 100), and going up to P#24 (in row 124), (two non-identical rows within this set are also labeled as P#13). Rows 125-127 have data for participants with P# 1, 3, and 4.

   i. Can you explain how two different participants could end up with the same participant number (#13)? Even if you don't recall this study, specifically, can you say how such duplication of participant numbers might have occurred in the lab?

Gosh, this one is a mystery to me. Especially that it happens twice with the same # in each set. In general, I can say that it would not be common for anyone to have the same participant id. Each person would generally have a unique participant id. I also typically would make a comment on something like that if there was a reason of something happened out of the blue, so I think it's extremely odd that I didn't do that here. The only thing I can think of and this is just from loose memory is that we generally assigned participant numbers by hand. For example, we might have a clipboard that has a paper copy on it, when you seat the participant at their cubicle you might mark there p# in some way. It could be that someone manually gave someone the wrong number and then at the end they just duplicated the P#. I think that is less likely in this scenario since it happened twice the same. The other thing I'm thinking is that perhaps that matrix sheet (which I believe is where the P# came from, was incorrect and had #13 twice, and we missed it in both studies). Meaning there were two finished matrix tasks, both for the # 13 and that's why they have the same number. I'm going to look at the matrix sheets now and see if I see evidence of that. Yes, it looks like that is what happened. If you refer to pages 49-56 on the "matrix stimuli new – STUDY 2" you'll see that duplication. Not sure about the 1, 3, 4, those see odd to me as well. I might interpret that as we needed to run a few more subjects for some reason (not sure what the reason, there are multiple reasons why we might have done that), and maybe something similar happened on the matrix sheet, or we started renumbering for some reason (not sure what that reason would be) and P#2 just got skipped or the data was not useable (there are many reasons that could have happened as well). What I can say for sure is that these would have all been unique participants, even though some of the P#s are the same.

ii. Can you explain why there are three groupings of data in this one spreadsheet, each starting with P# 1?

The first set (to P#97) would have been the first forms. The second set (to P#24) would have been the "new" forms. I would interpret set three (P# 1,3,4) as the "new" forms as well, but I don't know why they are renumbered, and if they were some third version of the study I don't see any evidence of that in the emails I sent you.

iii. Looking at the July 27, 2010 "Taxstudy" Excel document, and considering the emails between you and Professor Gino, can you explain if that Excel contains data for one tax study, two tax studies, or something else? (Note: We received no emails from you with dates between July 20 and July 27, 2010, and none after July 27, 2010.)

I believe I've covered this already. I considered these all to be the same study (meaning the procedure of the study, potentially the name of the study we collected under, the IRB# we collected under, etc) to be the same. But, there were different versions of the study materials used. So that's how I was differentiating them. I think it could be interpreted that how I was differentiating as a different "Version of the study", someone else may have called "study 2" or "the new tax study".

Questions about the description of the Experiment 1 procedure in the published paper

We have some questions about the description of the Experiment 1 procedure in the published paper. (Alain is sending you a PDF of the published paper, for your reference, along with these questions.) We realize that you may have no knowledge relevant to some or all of these questions. If that's the case, please just say so.

We're trying to understand the apparent discrepancies that we observe between the description of the experimental procedure in the published paper and the procedure for this experiment as it appears in the documents we showed you and discussed on August 2; those were documents the study materials that we got off Professor Gino's computer.
To refresh your memory, we have attached those three documents here as
Table 1 (the step-by-step procedure in the IRB application for this experiment),
Table 2 (the tax form used in this experiment, which we believe is identical to the tax form attached to the email Professor Gino sent you on July 22, 2010, see Appendix 2, attachment 2), and
Table 3 (the math puzzles instructions and collection slip used in this experiment, which we believe is identical to the material attached to the email she sent you on July, 22, 2010, see Appendix 2, attachment 1).

We're going to focus on two parts of the procedure description and follow that with some questions. Please take a look at the study description for Experiment 1 on page 15199 of the published paper (**Table 4**), which has two passages highlighted.

The first highlighted sentence in Table 4 is about the Collection Slip. It reads, "The sole purpose of the collection slip was for the participants themselves to learn how many puzzles in total they had solved correctly." However, based on Table 3 (the document with the math puzzles instructions and collection slip), it appears that the Collection Slip was also used to compute participants' payment based upon their self-report, payment which they received immediately from the experimenter in Room 1. Thus, it seems that the first highlighted sentence may misstate the purpose of the Collection Slip.

The second highlighted sentence in Table 4 is about the expenses that participants reported on the tax form in Room 2: "These expenses were 'credited' to their posttax earnings from the problem-solving task to compute their final payment." This is the only place in the Materials and Method section of the published paper where payment is mentioned for Experiment 1. Based on the materials in Tables 1, 2, and 3, it seems that this part of the published procedure may omit information about when, where, or how many times participants received payments.

Here are our questions, based on these observations about the published paper.

3. Do you have any general reactions or comments about the two highlighted passages of the published paper shown in Table 4?

1st highlighted passage: Yes, I see how it does not mention explicitly that it's used for them to calculate their money owed. The form was also used as a way to identify the participants, and track how many matrices they reported correctly vs. how many they actually completed correctly. So I think the line "Neither of the two forms……..had any information on it that could

identify the participants, to be interesting. However, I believe it means that the participants didn't know they could be identified. Finally, I think that removing the statement "the sole purpose…." from the two preceding lines of the paragraph changes the context of it. When I read the entire paragraph together, I read them as all going together. Meaning, that the participants didn't know they were being identified on any of the materials, and they also didn't know that they were being identified on the last one, they only thought it was for them to tally their totals. I understand in research you want to be explicit, and I see how this could be interpreted different ways, but anyway I think the context of all of it together is important.

2nd highlighted passage:

I don't agree with the interpretation of "This is the only place in the Materials and Methods section of the published paper where payment is mentioned for experiment 1. It seems that this part of the published procedure may omit information about when, where, or how many times participants received payments."

As I read Table 4, I believe these areas are a reference to payment and/or time.

"They received a show up fee and had the opportunity to earn additional money throughout the experiment," indicates a reference to payment and time. I can see a difference between earning vs. being paid, however.

"Once the 5 mins were over, …….. the experimenter asked participants to count the number of correctly solved puzzles, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter," to me this also implicitly references payment as well as time period. Because the collection slip in itself is a reference to money in my opinion. It doesn't state where, but we know that it's different from the room in the "tax return form". I can see how it doesn't explicitly say they got paid at this point though. (I will also say I don't think this is accurately written because they didn't hand in the test sheet, but not really the point).

"After the problem solving task, participant's went to a second room to fill out a research study tax return form. Participants filled out the form by self-reporting their income…..on which they paid a 20% tax," I believe this is also a reference to when, where, and how they got paid. I think it could be interpreted that the "self-reporting their income" means reporting what they had already earned. Again, not explicit, but I could see someone thinking that was accurately describing the money they already received.

4. Do you recall ever having a conversation or communication with Professor Gino about what to do if a participant in a study that used a tax form ended up owing money after all the calculations on the tax form had been done? If so, please tell us what you recall about that.

It feels loosely familiar, but I don't know if that's because we talked about it in our first call with the ethics committee or because it actually happened. Looking at the data, what strikes me about the people who should have taken home less that they earned in the matrix task is that the

amounts weren't round. So I feel like we would have been counting out dimes with people if we actually made people give us the money back. Which I feel like I would remember, but don't. I would say 1 or 2 things probably happened. 1) We paid them what they reported in this form and they gave us money back at the end. 2) Once they signed the form and then we actually had them fill out a payment form and did some sort of a debrief about the study and then paid them a full/rounded up amount.

After writing the above, I decided to see if I still have the payment records for these time periods. I do, and all of the payment amounts are round, which to me indicates something like #2 happening.

5. To the best of your knowledge, who drafted the earliest version of the description of the Experiment 1 procedure for the paper, and who revised it between that earliest version and the final, published version? Please mention everyone who was involved, and describe the role that each person played.

Absolutely no idea who was involved in this, I was never part of writing up studies. Once I sent off the data for a study my role was pretty much done, minus reconciling payment records or other miscellaneous question answering after the fact.

6. To the best of your knowledge, as the paper reporting Experiment 1 was being written, was the description of the Experiment 1 procedure changed in any substantive way between the first draft of that section and the published paper? If so, in what ways was it changed?

No idea, per #5 above.

7. In your view, does the published paper omit or misstate any important aspect(s) of the procedure of Experiment 1? If so, please describe those aspects of the procedure, and, if you know, say who was responsible for the omission(s) or misstatement(s).

    - a.: At the beginning of each session participations were…. In addition given the following information, " For the problem solving task, you will be paid a higher amount."" Based on the study materials alone, I can't say whether this actually happened or not.
    - b. "participants were asked to then submit both the test sheet and the collection slip to the experimenter." Almost 100% this is not accurate, we always had them throw their matrices away, to further make them believe we were tracking them. That's why they had # identifiers on them. Maybe in this one study we didn't do that, for some reason, since it's not in the student materials. Hard to say for sure.
    - c. "neither of the forms had any information on it that could identify participants." Already mentioned above that this could potentially be interpreted two ways. There was an identifier to match the forms together, but not an identifier to know which student the forms belonged to. (Although after reading through the study it

says the tax form had the same identifier, so we would have been able to match them to a person them, but the participant would not have known this, of course).

- d. "The sole purpose of the collection slip….". As noted above this is not quite accurate.
- e. "Participants filled out the form by self-reporting their income on which they paid a 20% tax." Noted above this is written in an ambiguous way, I think it could be interpreted a couple ways. The way it happened based on the study materials is they were taxed after they had already received the money.
- f. "When participants completed the first part of the experiment, the experimenter gave them a tax return form and asked each participate to go to a second room with a second experimenter to fill out the tax form and receive their payments." Based on the study materials alone I'm not sure if 1) they were given the form in one room vs. the other 2) they were asked to fill out the form in one room vs. the other 3) whether or not there were two experimenters present. I do know that they would have handed in and been paid the final amount in a separate room that they were paid the first time. And, I do think it's very possible they were given the form to fill out in the first room, but brought it to the second room to be paid.

In general, I just think it's difficult to verify the paper based on what's written in the study materials because they are so vague, and there are conflicting pieces of information.

Don't know who was responsible for any ommisions, etc. Not involved in that part of the study.

8. Can you recall any communications during the writing and revision of this paper, among any of the paper's coauthors, and/or other personnel involved in Experiment 1 (including yourself), about the sequence of steps in the experimental procedure or any other details about the experimental procedure? If so, please describe those communications in as much detail as you can recall.

No, I do not recall having any communications like that. If it was in an email, there is no reason I can think of that I wouldn't have a record of it. I doubt it would have been in person given the timeline and where the faculty were located at the time of this study.

Questions about the data for Experiment 1

9. You shared with us three emails relevant to this study that had Excel attachments. The dates of those emails are July 13, July 16, and July 27, 2010, and they are all from you to Professor Gino. (In the files you provided, these emails were called 1.eml, 3.eml, and 17.eml, respectively.) Although the Excel files differ, all have the filename "Taxstudy.xlsx." It appears that each later file contains data from the previous one, plus new data that you apparently added as you ran more subjects. (You should have those emails and their Excel attachments, but please contact Alain if you would like him to send them to you.)

a. Was it your usual practice, in running studies for Professor Gino, to continue adding data to the same Excel file for a particular study as you added more subjects, sending her interim Excel files along the way?

- Yes it was a usual practice to add all the data for the same study to one excel file until the study was concluded.
- Yes it was a usual practice to denote different versions of the same study in 1 excel file, as I did for this one.
- If we ran a similar study but with a new different name, meaning that we wrote a new IRB for it, or it had substantive changes then I would start a new excel file.
- If the data file was requested along the way in a study I would send it, if it wasn't I probably didn't until the study was complete. It was a common practice, but I don't know that it happened for every study.

b. Your email of July 16, 2010, 4:57pm (called 3.eml), had the Subject line: "That's a wrap: Tax Study." That email had no text in the body, only the attachment. Can you explain what you meant (or probably meant) by the Subject line, "That's a wrap: Tax Study"?

Yes, I meant it was finished. That we collected all the data we needed and that study was no longer running.

10. We hope you can help us understand the atmosphere in the UNC lab in which the data for Experiment 1 were collected – specifically, the extent to which you or other people working in the lab might have felt pressured or highly motivated to produce certain outcomes in a study. Can you give us your views on the atmosphere in this lab at the time the data were collected?

There would have been absolutely NO pressure or motivation to produce any certain outcome for this study or any other study by myself or any of the research assistants working on my team.

There was often a motivation to collect the data quickly and to meet the requests/expectations of the researchers, but I would never have done that in a way that meant the practices were unethical. And, I would have never let any of my research assistants be put in that position either.

As you probably know, every researcher wants all of their research to be completed as fast as possible, yesterday. But, I think I had a strong reputation in the lab for pushing back and setting expectations about what was possible or not, and calling things out when I felt like they weren't what I thought to be a good practice. However, there is always a possibility I was trained or told to do something in a way that wasn't supposed to be done that way, but was too naïve or inexperienced to know, I had no research experience coming into this role.

The atmosphere in general was that we had a high-functioning lab, with a good participant pool, and could collect data quite quickly, and we were self-motivated to try to keep it that way.

11. Finally, can you think of anything else we should know, as we try to determine whether research misconduct occurred with respect to Experiment 1 in this paper and, if it did, who might have been responsible?

No, I cannot. Other than I can guarantee that if there was misconduct that happened, that it did not happen by myself or any other research assistant who would have been working with me at the time.

Again, [redacted] thank you very much for answering our questions.

You're welcome.

I know that you cannot share the outcome of this investigation. However, I would request as someone who's committed to always learning and growing that if there any practices that I was taught or used in running research that would be considered poor practices for executing sound research, I would appreciate knowing. I know I don't work in this academia/research anymore, but it would be helpful to know if someone could share any thoughts there is some medium.

CONFIDENTIAL

Date: September 27 & 28, 2022

To: [redacted]

From: Investigation Committee on Research Integrity Case RI21-001

Re: Additional Follow-up questions from Investigation Committee about Experiment 1 in the 2012 PNAS paper

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Sent Tuesday, Sept. 27, 2022

The Committee had a chance to review your answers and it has a few follow-up questions related to the participant payment logs you referenced in your response to question #4 (p. 5 in the "ResponsesforHarvard.docx" document you shared with me on September 25, 2022):

1. Do any participant payment records during the time period in question (July 2010) show negative numbers, indicating that the participant either owed money or actually gave money back at the end of the experiment?

   No, there are no negative payment records. These are receipts for what participants were paid.

2. If any participants did owe money or give money back at the end of the experiment, would you have been likely to note that in the payment record?

   No, it would not have been noted. It's a standard payment receipt form for money.

3. In examining the participant payment records from that month, do you see any evidence that any participants either owed money at the end of an experiment or actually gave money back at the end of an experiment? If so, how many participant records from that month contain such evidence?

   No, I would not have been able to know that. It appears we rounded to the nearest amount. I believe for all the participants on the initial data sheet who owed money it was a non-round amount. So to me, that means we rounded up in some way, but to what number I don't know.

Sent Wednesday, Sept. 28, 2022

We really appreciate your quick response, and find the first two replies very clear. However, we are a bit confused by your third reply. In particular, we hope you can clarify the sentence, "I believe for all the participants on the initial data sheet who owed money it was a non-round amount." About this sentence:

a. Did you perhaps mean to say "who were owed money" instead of "who owed money"? We are trying to determine if there might have been any participants whose "final payment" in the last line of the tax form, at the end of the experiment, was a negative amount – meaning that, technically, they would have owed money at the end.

b. We assume that all experiments in the lab, in July 2010, paid money for participation. Even if some experiments offered course credit or some other incentive for participation, please answer this question with respect to only those experiments that offered money for participation: Would you have a payment record for every single participant, or is it possible that there would be no payment record for some participants because they earned no money, received no money, or would have actually owed money at the end of the experiment?

c. In your sentence, "I believe for all the participants on the initial data sheet who owed money it was a non-round amount," what sheet were you referring to by "the initial sheet"?

[redacted] recorded a video answering the questions. The transcript of the video is appended below.

[redacted] sent a follow-up email to the RIO on 9-29-2022 to add a comment that was not fully captured at the end of the video. Her comment is as follows: And, just to clarify here if there was a participant who earned $0 or earned $- amount, yes I do believe that would have been captured on the data sheet, because I would have collected ALL the data for the study. So it does appear that everyone earned something. There is no scenario where I would have just not recorded/throw data out because their were negative amounts, if that's what you're asking, as well.

Appendix 1
Emails from July 20, 2010

From: Gino, Francesca fgino@hbs.edu
Subject: RE: study
Date: July 20, 2010 at 10:05 PM
To: [redacted]

FG

it'd be great to have about 120 for the time of day study. do you remember what instructions to send to them? for the

amazon -- as many as we can get :-)

and for the new tax study -- anything between 60-100 would be great! franci

---
Francesca Gino
Associate Professor of Business Administration
Negotiation, Organizations & Markets
Harvard Business School
Phone: 617.495.0875
Fax: 617.495.5672
Email: fgino@hbs.edu
Website: http://www.francescagino.com

From: [redacted]
Sent: Tuesday, July 20, 2010 11:35 AM
To: Gino, Francesca Subject: Re: study

Hi,

How many more people do we need for the two online studies from this week. The team study is pretty much wrapped. I believe we had 21 teams total (1 had bad data though) I will finish the data entry and send it to you and [redacted] later today.

I would prefer to get this new study ready and run on Friday maybe. I could do 1 day next week or maybe two short days(my best friend is in town from Florida and I wasn't planning any studies in the lab from the schedule).

If we have to rerun it under the same name the sign-ups are going to be very low as are participant pool is not very big right now.

Anyways, let me know what you think. I'm available today if you want to catch me on the phone as well.

[redacted]

Gino, Francesca wrote:

[redacted],

Can you run studies next week M, Tu, W? I would like to run a different version of the TAX STUDY. I just need to change the forms a little bit. I can add in another study if it makes it easier to run.

Let me know and I will send you the information

Thanks franci

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Appendix 2
Email from July 22, 2010

From: **Gino, Francesca** Francesca_Gino@kenan-flagler.unc.edu
Subject: study material -- tax study
Date: July 22, 2010 at 6:17 PM
[redacted]

FG

matrix stimuli new -...2.docx

TaxStudyForm - STUDY 2.docx

Appendix 2 (cont.)
Email attachment 1 from July 22, 2010: "matrix stimuli new – STUDY 2.docx"[1]
Page 1

Welcome to our study.

This study is designed to test performance on math tasks under time pressure. The instructions to the task are provided below.

In the boxes on the "Matrix Sheet", your goal is to find **2 numbers** so that their sum **equal 10**.

Circle those numbers and mark the 'Found It' box.
See example →
For each pair you'll find, you will receive $2.

Example

1.69	1.82	2.91
4.67	3.81	3.05
5.82	5.06	4.28
6.36	6.19	4.01

Found it ☑

When finished:

- Fill out the attached collection slip.
- Submit the collection slip to the experimenter. In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and **hand in ONLY your collection slip**. We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time.
- The experimenter will give you your payment and ask you to fill out a payment form.

[1] This file attachment contains 100 copies of a 3-page document, each of which is identical to the others except for the numerical values in the matrix on the third page. This Appendix contains just one iteration of those 100 copies.

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Appendix 2 (cont.)
Email attachment 1 from July 22, 2010: "matrix stimuli new – STUDY 2.docx"
Page 2

Collection Slip

1. Are you a student? Y N

2. Major? _____

3. Academic Year? _____

4. Gender? M F

5. Age? _____

I correctly solved _____ Boxes, which amount to $ _____ (=$2 per Box)

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Appendix 2 (cont.)
Email attachment 1 from July 22, 2010: "matrix stimuli new – STUDY 2.docx"
Page 3

Matrix Sheet

7.17	4.89	7.76
5.66	1.86	5.11
9.83	5.95	4.25
7.01	6.28	3.82

Found it ☐

1.69	2.32	7.93
1.93	9.1	4.63
2.79	4.86	1.19
9.52	5.37	5.57

Found it ☐

5.97	9.62	9.41
3.6	7.4	7.01
5.49	0.59	2.62
7.51	5.71	0.49

Found it ☐

6.1	7.01	3.97
0.97	4.46	9.82
3.07	2.92	8.56
1.12	6.93	9.12

Found it ☐

1.63	2.11	5.36
0.53	2.17	9.3
7.31	2.29	9.46
3.1	6.52	2.69

Found it ☐

2.92	4.98	4.34
0.39	0.72	5.53
9.61	3.57	3.36
6.8	0.53	8.58

Found it ☐

4.74	4.78	0.83
1.61	5.97	4.09
5.96	3.29	9.09
0.89	9.17	2.71

Found it ☐

9.43	7.04	2.21
5.49	3.8	5.82
4.18	9.41	7.5
7.13	4.26	8.8

Found it ☐

6.21	2.47	9.57
1.68	9.52	4.52
8.7	7.69	1.47
6.4	4.44	8.32

Found it ☐

0.07	7.75	8.78
7.22	6.01	3.93
2.25	0.77	3.53
7.89	0.55	0.18

Found it ☐

0.93	1.6	2.23
0.22	5.11	9.28
3.91	1.35	2.41
1.35	8.65	3.97

Found it ☐

3.08	9.42	5.87
3.94	5.41	3.42
4.02	5.06	4.12
4.13	4.65	2.86

Found it ☐

1.57	5.94	3.17
1.11	3.97	2.33
6.99	0.13	8.89
0.85	3.7	0.08

Found it ☐

0.74	4.55	3.19
8.51	7.91	8.68
5.62	0.81	2.15
3.75	3.72	2.09

Found it ☐

9.38	8.17	6.68
6.61	3.06	9.7
4.88	8.21	3.39
6.71	4.87	6.42

Found it ☐

8.17	7.29	7.27
0.55	4.14	5.42
8.48	9.55	8.71
6.56	5.86	0.23

Found it ☐

2.22	4.5	7.13
9.33	9.77	5.96
7.04	4.04	5.22
2.28	1.72	8.16

Found it ☐

2.16	4.51	1.66
8.29	8.05	9.03
4.73	7.84	9.86
5.21	3.94	7.18

Found it ☐

9.4	6.51	8.33
0.58	8.55	8.63
5.42	3.54	4.7
6.46	7.43	4.56

Found it ☐

4.73	2.12	8.99
0.63	8.89	9.33
1.02	2.34	4.98
1.11	0.65	2.01

Found it ☐

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Appendix 2 (cont.)
Email attachment 2 from July 22, 2010: "TaxStudyForm – STUDY 2.docx"
Page 1

Form 3305 (Rev. June 2010) Center for Decision Research	Research Study Tax Return For the period June 1, 2010, through August 30, 2010	Keep a copy of this return for your records OMB No. 1555-0111

Write Clearly	Name	PID	For Administrative Use Only
	Address (Number, street, and room or suite number)		T ..... FF ..... FP ..... I ..... TL .....
	City, State, and ZIP code		

Part 1	Please fill out the questions below to compute your taxed payment.		
	1. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ▶	1	
Part 2	In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.		
	1. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ▶	2	
	2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	3	
	3. Please add the value specified in box 2 and the value specified in box 3 ▶	4	
Part 3	Please compute your taxable income and your taxes.		
	1. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income ▶	5	
	2. Please compute your taxes by multiplying the value specified in box 5 by 50% ▶	6	
Part 4	Please compute your final payment.		
	1. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session ▶	7	

Sign Here	I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete
	▶ _____ Signature ▶ _____ Date

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Appendix 2 (cont.)
Email attachment 2 from July 22, 2010: "TaxStudyForm – STUDY 2.docx"
Page 1

Form 3305 (Rev. June 2010) Center for Decision Research	Research Study Tax Return For the period June 1, 2010, through August 30, 2010	Keep a copy of this return for your records OMB No. 1555-0111

Sign Here	I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete ▶ Signature ▶ Date		
Write Clearly	Name	PID	For Administrative Use Only
	Address (Number, street, and room or suite number)		T ..... FF ..... FP ..... I ..... TL .....
	City, State, and ZIP code		

Part 1	Please fill out the questions below to compute your taxed payment.		
1. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ▶		1	
Part 2	In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.		
1. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ▶		2	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶		3	
3. Please add the value specified in box 2 and the value specified in box 3 ▶		4	
Part 3	Please compute your taxable income and your taxes.		
1. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income ▶		5	
2. Please compute your taxes by multiplying the value specified in box 5 by 50% ▶		6	
Part 4	Please compute your final payment.		
1. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session ▶		7	

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Appendix 3
Email from July 27, 2010

From: [redacted]
Subject: Taxstudy
Date: July 27, 2010 at 3:26 PM
To: Gino, Francesca fgino@hbs.edu

The numbers starting over at 1 are the new form.

[redacted]

Taxstudy.xlsx

Table 1
Step-by-step procedure for Experiment 1 as described in the UNC IRB submission

Procedure

1. Participants are welcomed to the lab, asked the read the consent form for the study and sign it
2. Participants complete the matrix task for 5 minutes
    a. Instructions: "You will first complete a problem solving task. This task should take about 5-10 minutes. You will be working under time pressure. The experimenter will keep track of time and will let you know when time is up"
    b. They are paid a $2 show-up fee, plus a bonus depending on their performance on the task
3. Participants receive payment for the first task ($1 per correct matrix, max $20)
4. Participants will be told that they will have to go to a second room to fill out a payment form
    a. They are told that they will receive higher payment than in a regular study because they will be taxed on their earnings
5. In the second room: Participants will have to fill out a form in which they need to report their income (performance on the matrix task) and then we will ask them to indicate how many minutes it took them to travel to the lab, and their estimates cost for their commute. We will "deduct" those costs to compute their final payment
    a. Report income (20% tax, i.e. $0.20 for every dollar earned)
    b. Deductions:
        i. Time to travel to the lab: $0.10 per minute (Max: 2 hours, $12)
        ii. Cost of commute: (Max: $12)
        iii. Instructions: "We would like to compensate participants for extra expenses they have incurred in order to participate in the session"
6. Final payment
    a. The maximum payment participants can make is $42 (payment range $2-42):
        i. $2 show up fee
        ii. $20 on matrix task minus a 20% tax on income (i.e., $4)
        iii. $12 as deductions for travel time
        iv. $12 as deduction for cost of commute

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Table 2
Tax Form that was used in Experiment 1

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return
For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... ..... ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶	7	

Sign Here

I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ ▶ _____ Signature
Date

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Table 3
Math puzzles instructions and Collection Slip used in Experiment 1

Welcome to our study.

This study is designed to test performance on math tasks under time pressure. The instructions to the task are provided below.

In the boxes on the "Matrix Sheet", your goal is to find **2 numbers** so that their sum **equal 10**.

Circle those numbers and mark the 'Found It' box.
See example →
For each pair you'll find, you will receive $1.

Example

1.69	1.82	2.91
4.67	3.81	3.05
5.82	5.06	4.28
6.36	6.19	4.01

Found it ☑

When finished:

- Fill out the attached collection slip.
- Submit the collection slip to the experimenter. In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and **hand in ONLY your collection slip**. We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time.
- The experimenter will give you your payment and ask you to fill out a payment form

Collection Slip

1. Are you a student? Y N
2. Major? _____
3. Academic Year? _____
4. Gender? M F
5. Age? _____

I correctly solved _____ Boxes, which amount to $ _____ (=$1 per Box)

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Table 4
Study description on page 15199 of the published paper

PNAS

Materials and Methods

Informed consent was obtained from all participants, and the institutional Review Boards of Harvard University and University of North Carolina reviewed and approved all materials and procedures in Experiments 1 and 2.

Experiment 1: Participants and Procedure. A total of 101 students and employees at local universities in the southeastern United States (M_{age} = 22.10, SD = 4.98; 45% male; 82% students) completed the experiment for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the experiment.

Participants were randomly assigned to one of three conditions: (*i*) signature at the top of the tax return form (before filling it out); (*ii*) signature at the bottom (after filling it out); or (*iii*) no signature (control). The statement that participants had to sign asked them to declare that they carefully examined the return and that to the best of their knowledge and belief it was correct and complete.

At the beginning of each session, participants were given instructions in which they were informed that they would first complete a problem-solving task under time pressure (i.e., they would have 5 min to complete the task). In addition, the instructions included the following information. "For the problem-solving task, you will be paid a higher amount than what we usually pay participants because you will be taxed on your earnings. You will receive more details after the problem-solving task."

Problem-solving task. For this task (3), participants received a worksheet with 20 math puzzles, each consisting of 12 three-digit numbers (e.g., 4.78) and a collection slip on which participants later reported their performance in this part of the experiment. Participants were told that they would have 5 min to find two numbers in each puzzle that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. Once the 5 min were over, the experimenter asked participants to count the number of correctly solved puzzles, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter. We assume respondents had no problems adding 2 numbers to 10, which means they should have been able to identify how many math puzzles they had solved correctly without requiring a solution sheet. Neither of the two forms (math puzzles test sheet and collection slip) had any information on it that could identify the participants. The sole purpose of the collection slip was for the participants themselves to learn how many puzzles in total they had solved correctly.

Tax return form. After the problem-solving task, participants went to a second room to fill out a research study tax return form (based on IRS Form 1040). The one-page form we used was based on a typical tax return form. We varied whether participants were asked to sign the form and if so, whether at the top or bottom of the page (Figs. S1–S3). Participants filled out the form by self-reporting their income (i.e., their performance on the math puzzles task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their cost of commute. These expenses were "credited" to their posttax earnings from the problem-solving task to compute their final payment. The instructions read: "We would like to compensate participants for extra expenses they have incurred to participate in this session." We reimbursed the time to travel to the laboratory at $0.10 per minute (up to 2 h or $12) and the cost of participants' commute (up to $12). All of the instructions and dependent measures appeared on one page to ensure that participants knew from the outset that a signature would be required. Thus, any differences in reporting could be attributed to the location of the signature.

Payment structure. Given the features of the experiment, participants could make a total of $42—an amount which breaks down as follows: $2 show up fee, $20 on math puzzles task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Opportunity to cheat on the tax return form. The experiment was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem-solving task and by inflating the travel expenses they incurred to participate in the experiment. When participants completed the first part of the experiment (problem-solving task), the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments. The tax return form included a one-digit identifier (one digit in the top right of the form, in the code OMB no. 1555-

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[redacted] **Video Response**
September 29, 2022

[redacted] Hi Alain, I wanted to shoot you a quick video for the sake of time to answer the couple of questions, or the few questions that you had in your email, and to show you what I'm looking at so that hopefully it'll be maybe easier to understand what I'm talking about.

So your first question was, did you perhaps mean to say that participants who were owed money versus participants who owed money. And what I meant there is participants who, theoretically based on the study would have owed us money back, which is what you're asking about. And so in the form, when I was talking about the initial sheet, I was referring to this tax study data form [NOTE: screen-shared file "TaxStudyForm - STUDY 2"]. So this is all the data for the study. And this is the tax form. And so these 7 items refer to the 7 columns that are on this form.

And so, let's look at P#1 for study #1 [NOTE: screen-shared data file "Taxstudy07272010.xlsx", row 2], and so we have this person is claiming that they made 8 dollars [NOTE: cell K2], that they were already paid, we believe, 8 dollars in this study, and then once they fill out the rest of the tax form, they would be owed, they would be owed by us $10.40 [NOTE: cell Q2]. So we would have paid this person an additional 2 dollars and 40 cents.

However, on the payment forms, there is no record of someone being paid $10.40, so we would have rounded that in some way. So let's say we maybe rounded it up to $11 because I don't think that I would have ever felt good about rounding it down and paying them less than they were supposed to be owed, or paid. So let's say that this person earned and we owed them $11.

If we look at another example, let's look at P#5 [NOTE: screen-shared data file "Taxstudy07272010.xlsx", row 6]. This person would have, is claiming that they earned $16 in the matrix task [NOTE: cell K6], and we would have already paid them $16 in the matrix task, theoretically. But once they fill out the tax form with these columns here, they would have owed us 20 cents back from the 16 dollars that they earned [NOTE: cell Q6]. So this person would have owed us 20 cents back, but on the payment form, I don't know how this would have been reflected. They could have paid us the money back in which case I imagine the payment form would have said that they were paid $15.80, or we could have rounded up and said, OK, well that's $16, and so you were paid $16, so this would have been $16 in the payment form, or we could have rounded down, again something I don't think I would have been comfortable with. And then the payment form would have reflected $15.

I don't know if that's helpful in any regard. I just meant that the payment form doesn't reflect any non-round numbers, so in some way, we were adjusting these numbers to round numbers. Now the payment form, I'll just kind of show you what the grid of that would look like. So it's basically a form. This is one from I believe the time period when this study was run [NOTE: screen-shared file "Copy of PPI071510.xlsx"]. And so we would collect these pieces of information and then there is, as you can see here, just non-, just rounded numbers (NOTE: column H). And so you wouldn't be able to tell which person relates to which participant number, but we do see here that they all are round numbers.

So if someone, they all would have earned money, even if they had to pay us back some of the money. So there's no scenario where somebody owed all of the money back. They all earned something. So this receipt would only have reflected how much money they walked out of the lab with. It wouldn't reflect

that they had initially earned 16 and then they paid back 20 cents, because they didn't fill out the payment receipt until the end of the study.

The other thing I guess I'm just a little bit struggling with, maybe I don't understand why this is so important. To me, the payment receipt, or any money that was given back, would have happened after basically this study concluded. Because they didn't, they would have already filled out all the form and perhaps even been debriefed by the time they were filling out this payment receipt. So I don't think the payment receipt reflects any kind of influence that would have happened on a person in this study. I don't know if that's helpful or not.

So yes, they technically would have owed us, to answer your question A, they would have technically owed us money back, but I don't know that -- there was definitely no way that that would have been reflected anywhere, if that makes sense.

Question B, we assume that all the experiments in the lab paid money? Yes, or they could have been course credit. Do we have a payment record for every participant? Is it possible that there would have been no payment record because they earned no money, received no money, and would have actually owed money?

Again, these receipts would have only recorded people who walked out and earned money. Because the receipts are used for tax purposes and also to reconcile the funds that are used for research. So there would be no reason to write down that somebody had zero dollars, and there would be no case where somebody paid us money. That's just not even possible. And so if we look at all the data here, everyone walked away with some money from the study. If we look at column Q [NOTE: screen-shared data file "Taxstudy07272010.xlsx"], we don't have an accurate idea in my mind of if they walked with $8 or if they walked away with $10 or if they walked away with $11 but they would have walked away with some money in this study. Because it's rounded, we don't know the exact amount.

In your sentence, I believe for all the participants on the initial data sheet who owed money, it was a non-round amount. Yes, I answered that already. So I'm referring to this tax study data, is what I meant there.

So I hope that helps. I hope that's not more confusing. But again if you have additional questions, let me know. If this is important for some reason, that would be helpful for me to understand to give me a different way of thinking about it, of course let me know. To me, the payment kind of happens after the study is done, so I don't necessarily understand exactly why it's so important. So I hope this helps. Alright, have a great day.

Exhibit 14
Professor [redacted]'s Written Responses to Investigation Committee's Written Questions received on October 3, 2022

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Date: October 3, 2022 - Final

To: [redacted]

From: Investigation Committee on Research Integrity Case RI21-001

Re: Your 2012 PNAS Paper with [redacted], and the Research in Experiment 1

Thank you very much for your willingness to answer questions for us (a committee of three HBS senior faculty members) as we investigate possible research misconduct in **Experiment 1** in the following paper:

Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*").

Experiment 1 is the lab experiment in which participants solved math problems and signed a tax form at the top or the bottom. As you will recall, Experiment 2 is quite similar, except that a higher incentive and higher tax rate were used, and the tax form was a bit more like a real IRS tax form. Also, there was an additional measure in Experiment 2, a word completion task. We are focusing on Experiment 1 in this investigation. NOTE: In versions of the paper that were being drafted and revised before the original submission to OBHDP in May 2011, Experiment 1 (as published in PNAS) was called Study 2.

General Questions

1. First, could you please share with us any and all documents or other materials that you have on Experiment 1? That would include, for example, emails (and any email attachments) and other communications to or from your coauthors about that experiment or the write-up of it; partial or complete data files; preliminary write-ups; and various versions of the manuscript reporting this study, from the time it was first drafted to the time it was published. Alain Bonacossa can assist you in figuring out how to transmit these materials to us.

I have shared relevant documents as instructed.

2. Can you please tell us, briefly, how and when you got to know Professor Gino and how and when you came to be involved in the research project that led to the 2012 PNAS paper with her?

I first got to know Professor Gino when I attended a talk of hers at MIT. This was during my time as a postdoc at MIT, so sometime between 9/2003 and 7/2007.

I was invited by Professor Gino in January 2011 to join the group of co-authors.

3. For each stage of Experiment 1 (see the table below), please tell us, to the best of your knowledge, **when** it occurred, **who** was involved in **supervising (or leading)** the activity, and **who carried out (or was involved in)** the activity. Also, to the best of your ability, please describe **your own involvement**, if any, in each stage. Please insert your replies directly into the table below. If you don't know a piece of information, simply insert "DK" ("Don't know.")

   Done. Please see the table below.

Stage	When it occurred	Who supervised it or led it	Who carried it out or was involved in it	Describe your involvement
a. Study conceptualization and design	2010	Professors Gino and [redacted]	[redacted] and Professors Gino and [redacted]	None
b. Data collection	2010	Professor Gino	[redacted] and/or [redacted]	None
c. Data cleaning	2010/2011	DK	DK	None
d. Data analysis	2010-2012	Professor Gino	Professor Gino	None
e. Writing, reviewing, and revising the description of Experiment 1 (its purpose, methods, and results), and the interpretation of its results, in all drafts and revisions of the paper that was ultimately published in PNAS in 2012.	2011/2012	Professors Gino and [redacted]	Professor Gino (primarily). Others involved: [redacted], and Professors [redacted] and [redacted]	I reviewed/revised these parts.
f. Data posting on OSF	2019	Professor Gino	[redacted]	None
g. Writing, reviewing, and revising the introduction of the paper (p. 15197 in the PNAS paper) and the concluding paragraph of the Results and Discussion (pp. 15198-9)	2011/2012	Professors Gino, [redacted], and [redacted]	[redacted] (primarily; note: the bulk of that work happened during the submission to a different journal that we attempted after being rejected from OBHDP	I reviewed/revised these parts.

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 560 of 1282

			and before going to PNAS: Science (11/2011). Additional major edits then happened in the 2nd round of the PNAS review process - version 2012-07-13, see here p. 17, which was later moved up to the concluding paragraph). Others involved: Professors [redacted] Gino, and [redacted]	

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 561 of 1282

Questions about the Procedure for Experiment 1

We have questions about the specific sequence of steps in the procedure: It seems that the participants self-reported their performance on the math puzzles before seeing the tax form. Our questions arise from examining three documents we got from Professor Gino's computer. We will point out certain elements of those documents, and then pose questions for you based on them. First, we describe the three documents and the specific elements of them about which we have questions:

Table 1 (appended, with the other tables, at the end of this document) shows the step-by-step procedure for the experiment as laid out in the IRB submission that was submitted and approved at UNC. That procedure states that participants would be paid for matrix task performance in Room 1, before they saw the tax form in Room 2. We assume that participants would be compensated based on their self-reported tally of the number of puzzles they'd solved (performance on the matrix task). To us, this suggests that they reported their performance in Room 1, in a manner known to the experimenters.

Table 2 shows the Tax Form that was used in this experiment. Line 1 states, "Please enter the payment you received on the problem solving task." The use of the past tense in this instruction implies that payment had already been made to participants before they saw the tax form. Moreover, we note that the tax form (presented in Room 2) does not ask participants to report directly the number of puzzles they solved but, rather, the income they received for the matrix task (an indirect measure of their self-reported performance). This further suggests to us that their self-reported performance occurred in Room 1.

Table 3 shows the sheet of math puzzles, labeled as the "matrix stimuli" document on Professor Gino's computer. This document makes it clear that participants themselves tallied up and recorded their performance in Room 1; the procedure reported in the published paper also clearly states that participants themselves tallied up and recorded their performance on the math task, using the Collection Slip, in Room 1. In addition, the matrix stimuli document indicates that participants were then paid for their performance by the experimenter in Room 1. As you can see, the instruction page (first page of that document) states: "When finished: Fill out the attached collection slip. Submit the collection slip to the experimenter. In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and hand in ONLY your collection slip." The last sentence in those instructions reads, "The experimenter will give you your payment and ask you to fill out a payment form." This, too, suggests that participants self-reported their performance, and were paid for that performance, before they saw the tax form in Room 2.

4. Our questions below are based on the observations we have made about these three documents. If you have no information relevant to a particular question, simply say so.
    a. Did you ever receive copies of any of the materials used in this study?

        Yes.

        If so, when did you receive them, and from whom?

At the time of the 2012 paper, I received copies of the three tax forms embedded in the first draft file that Professor Gino shared with all co-authors via email on 2011-02-23 (see pages 19-21 in that draft file).

I received those same tax forms and additional materials (such as an instruction file, a matrix task with collection slip (the same as in Table 3 in this document), a consent form from UNC, a tax debriefing form, a participant recruitment form, and a first draft for a BU IRB application) in an email from [redacted] on 2018-09-16, for the purpose of replicating Experiment 1 from the 2012 for the 2020 PNAS paper.

If not, did you request them, when, and from whom? At the time of the 2012 PNAS paper.

NA

We are particularly interested in knowing if, when, and from whom you received the materials shown in Tables 1, 2, and 3: (1) the IRB submission or any part of it; (2) the tax form; and (3) the matrix task instruction sheet, which had the collection slip at the bottom.

Please see my responses to Question 4a above.

b. Please describe (and, if possible, provide documents showing) any communications among any paper coauthors, and/or the individual(s) who carried out Experiment 1, either before, during, or after the study was run, about the sequence of steps in the study procedure or any other details about the study procedure that might be relevant to the observations we made above.

During the work on the 2012 PNAS paper, all communications, that I am aware of, are covered in my answers to Questions 5-8.

I would like to add that in Sep-Nov 2018 [redacted] (HBS PhD student and co-author of the 2020 PNAS paper) and I had discussions about the sequence of steps and the procedure of Experiment 1 as she and I were preparing to replicate part of it at BU. In particular, [redacted] and I wondered about the discrepancy between the "original" materials she had shared with me in an email on 2018-09-16 (i.e., Tables 1-3) versus what our/my understanding was regarding how the experiment was conducted (Table 4). Ultimately, since I don't have any direct knowledge about how Experiment 1 was designed/conducted, I asked [redacted] to check with Professor Gino and confirm which of the two procedures (i.e., payment in room 1 or in room 2) was implemented.

A few weeks later, [redacted] sent updated materials including a pre-registration file from 2018-11-05, the latter of which she informed me was reviewed by Professors [redacted] Gino, and [redacted] Those files suggested that the payment happened in room 2 only and that the DV was the matrixes solved as reported on the tax form (see e.g., Points 3 and 4 on page 1 of the file from 2018-

11-05: "After the problem-solving task, participants will go to a second room to fill out a research study tax return form (based on IRS Form 1040) and report the number of matrices they solved. …The IV is either signing to verify the truthfulness of the report before reporting the number solved and expenses or after.").

c. To the best of your knowledge or recollection, was the experiment carried out as described in the excerpt of the IRB protocol shown in Table 1? If not, what changes were made, and why?

I have no first-hand knowledge about how Experiment 1 was carried out. However, the IRB protocol shown in Table 1 seems to suggest that participants received payment for the matrix task before moving to room 2 (i.e., before they filled out the tax form; see Steps 3 and 4 in Table 1). This is not how I was led to believe (after the responses that followed my inquiries in 2011 and 2018) the Experiment was conducted. In particular, I was under the impression that participants were paid in room 2 only, after filling out the tax form.

d. To the best of your knowledge or recollection, when and how, during the experimental procedure, did subjects make the self-report of puzzle performance that was used as the dependent variable? We refer specifically to the puzzle-performance measure of cheating that was reported in the published paper.

I was under the impression that the self-reported number of puzzles solved depicted in Figure 1 of the 2012 paper was based on participants' entry in cell 1 of the tax form (i.e., when in room 2).

Questions about the Experiment 1 Procedure Description in the Paper

We have questions about a few specific aspects of the Experiment 1 procedure, as it is described in different drafts of the manuscript. We also have several general questions about the accuracy of the description of the experimental procedure in the published paper. The page of the published paper that we refer to several times, page 15199, appears in this document as **Table 4**. *We have attempted to lay out these questions as clearly and concisely as possible, but don't hesitate to contact Alain if you require any clarification. Also, if you feel that you have already fully answered a question when you responded to a previous question, please simply say so, and note the number of that previous question (e.g., 5a).*

5. The source of the puzzle-performance dependent measure of cheating. Different versions of the manuscript (which we got from Professor Gino's computer) describe the source of this dependent variable differently. The bullet points below lay out the changes and then our question.

   a. The manuscript draft with the filename "Making Ethics Salient 2011-03-09_vs2" has a paragraph that states the collection slip provided the measure of cheating. That paragraph appears immediately below, in *italics*. We have highlighted three sentences that were apparently added to this particular version of the manuscript

or altered from a previous version (as shown in tracked changes in the document). We have used yellow highlighting to show the parts of the sentences that [redacted] inserted on 3/7/2011, and purple highlighting to show the parts of the sentence that you inserted on 3/9/2011. Please explain, to the best of your recollection, how and why these three sentences were inserted into the manuscript and how and why they were deleted from later versions of the paper (including the published version).

The matrix search task allowed us to directly measure each individual's level of cheating: All participants' matrix worksheets were identical with the exception of one digit (in one number of one matrix) which was unique to each individual's work station—a difference that was completely imperceptible to participants. We later took out participants worksheets from the recycling bin and matched them to their collection slips. As a result, we were able to compare actual to reported performance. If those numbers differed for an individual, that difference represented that individual's level of cheating. (from p. 10 of "Making Ethics Salient 2011-03-09_vs2")

Prof. Gino wrote the 1st draft, shared it with all co-authors via email on 2011-02-23, and suggested to [redacted] (at that time an HBS PhD student) that she edit the draft next.

On 2011-03-06 Professor [redacted] emailed that he had read through that 1st draft and, in that email, raised among others that "in multiple lab studies, we need to clarify how we know when someone cheats - I couldn't find that in the paper - again, this may be my error."

[redacted] edited the draft next and said that she would incorporate Professor [redacted]'s comments. She added this below paragraph in the new, 2nd draft, which she shared with all co-authors via email on 2011-03-08:

> "The matrix puzzle task allows us to directly measure each individual's level of cheating. All participants' matrix worksheets will be identical with the exception of one digit (in one number of one matrix) which will be unique to each individual's work station—a difference that will be completely imperceptible to participants. We can later extract participant worksheets from the recycling bin and match them to their collection slips. As a result, we can compare actual to reported performance. If these numbers differ for an individual, that difference represents that individual's level of cheating. Thus, this task allows us distinguish between cheaters and non-cheaters." (from p. 10 of "Making Ethics Salient 2011-03-08")

It was my turn next to edit the draft. I returned my edited version (i.e., the 3rd draft) on 2011-03-09 ("Making Ethics Salient 2011-03-09_vs2") via email to all co-authors. In that email I summarized for all co-authors my main comments, the first of which was "In studies 2&3 it's unclear why we find differences in cheating in the matrix task, since the collection slip is supposedly submitted before the tax form with the signature manipulation. could it be that there was no collection slip as participants also had to indicate their performance on the tax form? could you clarify that part."

After me it was Professor Gino's turn to edit the draft again. She shared her edited version (4th draft; "Making Ethics Salient 2011-03-15") with all co-authors via email on 2011-03-15 and wrote "*I clarified the issues related to the procedure we used in our studies (thanks to* [redacted] *for pointing out parts that were unclear)*". This 4th draft no longer had the paragraph (including the three sentences you are inquiring about) that [redacted] had added in the 2nd draft.

b. The italicized paragraph above, from the 2011-03-09 manuscript draft, clearly indicates that the dependent measure of cheating on self-reported math puzzles task performance equaled the difference between the number of puzzles the participant self-reported as correct on the collection slip and the number actually correct, as revealed by the participant's completed matrix sheet. The published paper, however, clearly indicates that the dependent measure of cheating on the puzzles task self-report came from the tax form: *"Experiment 1 tested this intervention in the laboratory, using two different measures of cheating: self-reported earnings (income) on a math puzzles task wherein participants could cheat for financial gain… […] We measured the extent to which participants overstated their income from the math puzzles task and the amount of deductions they claimed. All materials were coded with unique identifiers that were imperceptible to participants, yet allowed us to track each participant's true performance on the math puzzles against the performance underlying their income reported on the tax forms. The percentage of participants who cheated by overclaiming income for math puzzles they purportedly solved differed significantly across conditions."* (2012 PNAS paper, p.15197) The published paper reinforced this role of the tax form, in the "Tax return form" section, by stating: *"All of the instructions and dependent measures appeared on one page to ensure that participants knew from the outset that a signature would be required. Thus, any differences in reporting could be attributed to the location of the signature."* (p. 15199).

Our question: How do you explain the discrepancy between the 2011-03-09 version and the published version of this paper, with respect to the source of the dependent variable of cheating on self-reported puzzles task performance?

Please see my response to Question 5a. In addition, the newly revised draft that Professor Gino shared with all co-authors via email on 2011-03-15 had the following paragraph added right before the Results section of the study:

> "*Opportunity to cheat*. The study was designed such that participants could cheat by overstating their "income" on the payment form (i.e., they could overstate their performance on the matrix search task) and by inflating the expenses they incurred in order to participate in the study. All participants' matrix worksheets were identical with the exception of one digit (in one number of one matrix) which was unique to each individual's work station—a difference that was completely imperceptible to participants. When participants received payment after completing the first part of the study, the experimenter gave them a payment form and asked each participant to go to a second room

to fill it out and ask the other experimenter questions if they had any. The payment form included a one digit identifier as well (one digit in the top right of the form, in the code OMB No. 1555-0111). As a result, at the end of each session, we were able to compare actual performance on the matrix search task and reported performance on the payment form. If those numbers differed for an individual, that difference represented that individual's level of cheating." (from p.12 of "Making Ethics Salient 2011-03-15")

I ended up having a new full pass on the paper after Professor Gino sent another revised draft to [redacted] and me on 2011-04-02, indicating that it was my turn. Note, the version from 2011-04-02 is identical to 2011-03-15 with regards to the description of the lab study that this inquiry is about.

I returned my newly revised version on 2011-04-04 to Professor Gino and [redacted]. In the accompanying email I wrote "Most importantly, however, there are still a few things that seem unclear. I have commented on them." Specifically, in the draft that I returned I made the comments that you inquire about in your Question 6e, see 2nd and 3rd screenshots below.

Professor Gino revised the draft that same day and returned it via email to me and [redacted] (2011-04-04). That new draft ("Making Ethics Salient 2011-04-05") had no longer any mentioning of payment in room 1, indicating that the dependent measure of cheating on the puzzles task came from the tax form.

6. In an email you sent to Professor Gino on March 9, 2011, and in comments you made in versions of the paper as it was being drafted and revised, you questioned the source and timing of the puzzle-performance dependent measure of cheating. Parts a, b, and c of this question are about your email. Parts d and e are about your comments on versions of the paper; relevant parts of those manuscripts (with your comments) are shown in three screenshots below this question.

   On March 9, 2011, in the evening, you sent an email to Professor Gino, copying the other paper coauthors, with the Subject line: "moral saliency: working draft 4 Francesca."

   a. Can you explain the second part of the Subject line?

   Before I worked on the draft that [redacted] shared via email to everyone on 2011-03-08, Professor Gino responded via email to everyone:

   "Thank you [redacted]!!! [redacted] -- I can work on the draft after you do and then I can send it to [redacted] and [redacted]. Francesca". (see Email 2011-03-08b)

   "4 Francesca": This was my way to remind everyone that it was Professor Gino's turn next (as per her email 2011-03-08b).

   b. Your email starts by expressing a concern about when the collection slip for self-reporting performance was submitted to the experimenter, relative to when the tax form manipulation was administered. (Note that, at that point, Experiment 1 was called "Study 2.") Here is the opening of your 3/9/2011 email:

HI All,
attached is my first pass.
A few comments as we move forward:
1) In studies 2&3 it's unclear why we find differences in cheating in the matrix task, since the collection slip is supposedly submitted before the tax form with the signature manipulation. could it be that there was no collection slip as participants also had to indicate their performance on the tax form? could you clarify that part.

I don't see a question posed here?

c. Can you tell us what followed that March 9, 2011 email, with respect to these concerns you raised, whether what followed was ensuing emails, and/or phone conversations, and/or revisions to the manuscript? Can you recall how the coauthors addressed this question?

Please see my responses to Questions 4b, 5a and 5b. To my knowledge, none of the other co-authors commented on the concerns I had raised or revised the manuscript.

The first screenshot below is from page 11 of the 03-09 version of the paper (Making Ethics Salient 2011-03-09_vs2), which you attached to your March 9, 2011 email to Professor Gino. Your comment, starting with "This is odd…" seems consistent with the excerpt from your email that we quoted above, which is that you believed, based on the procedure described in the paper, that the measure of cheating on the matrix task was taken before subjects saw the tax form with the signature box.

The second screenshot below is from page 13 of the 04-04 version of the paper (Making Ethics Salient 2011-04-04_2nm). You questioned the logic of paying subjects for their self-reported matrix task performance in the first room, and then again for their expenses (if any), as reported on the tax form, in the second room. (That comment begins with "This doesn't seem to make sense.") We interpret your comment as raising the question of whether the over-reporting of expenses on the task form might be the only legitimate dependent variable, because the other (over-reporting of puzzle task performance) had occurred before subjects saw the signature box on the tax form.

The third screenshot below is from page 14 of the 04-04 version There, you asked whether, if subjects were, indeed, paid for task performance in the first room, and they claimed no expenses in the second room, they would have had to pay tax to the experimenter in the second room.

Our questions about the information on the three screenshots below:

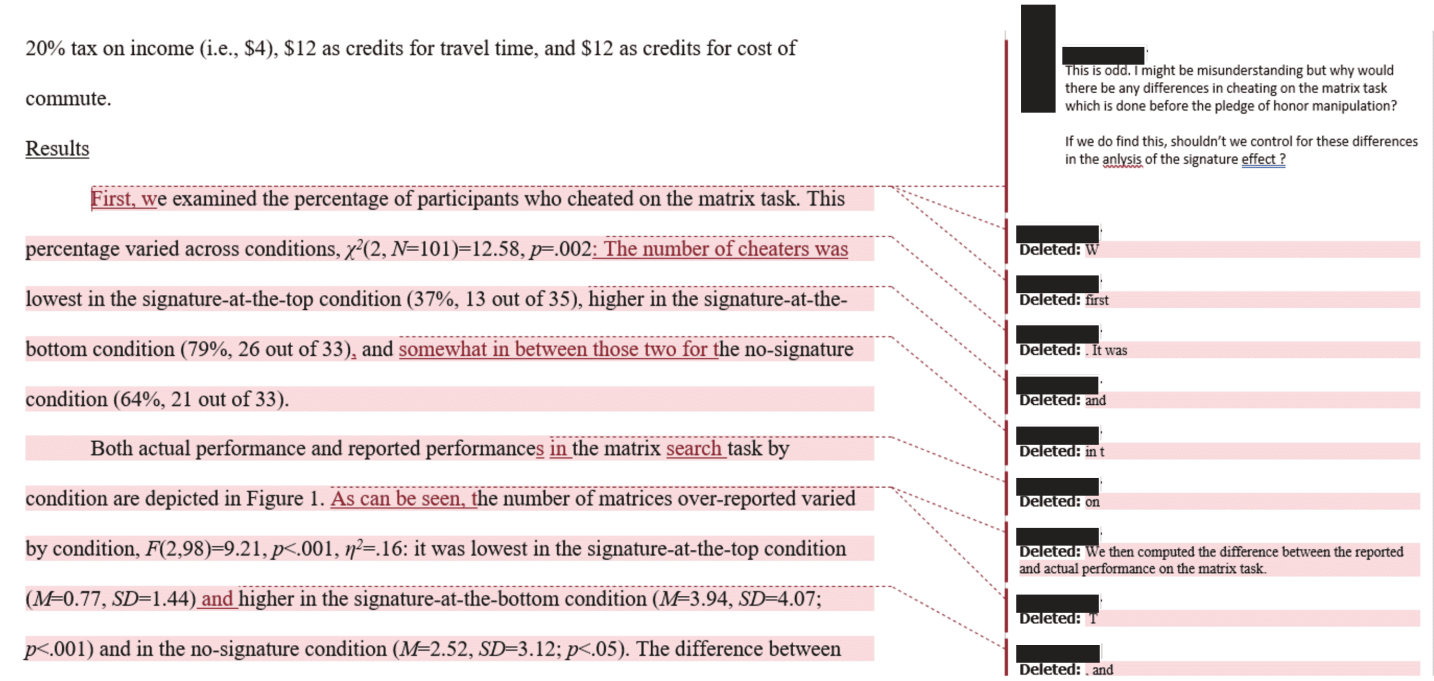
d. Are our observations about and interpretations of your March 9, 2011 email and the three comments shown in the screenshots substantively correct? If not, please correct them, explaining as fully as you can.

Yes, they are substantively correct.

e. Could you please describe, to the best of your recollection, any communications you had with any of the paper co-authors, or anyone else involved with the study, concerning the points raised in your email and in these three in-manuscript comments, and/or subsequent revisions resulting from your comments? In addition to receiving copies of any such communications or revisions that you can find (if, for example, they were emails), we are also interested in knowing when such communications occurred: (i) when Experiment 1 was being designed and run, (ii) when the paper was being drafted and revised, and/or (iii) after the paper was published.

See my responses to Questions 4b, 5a, and 5b.

*********First screenshot (p. 11 of the 03-09 version):


20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Results

First, we examined the percentage of participants who cheated on the matrix task. This percentage varied across conditions, $\chi^2(2, N=101)=12.58$, $p=.002$: The number of cheaters was lowest in the signature-at-the-top condition (37%, 13 out of 35), higher in the signature-at-the-bottom condition (79%, 26 out of 33), and somewhat in between those two for the no-signature condition (64%, 21 out of 33).

Both actual performance and reported performances in the matrix search task by condition are depicted in Figure 1. As can be seen, the number of matrices over-reported varied by condition, $F(2,98)=9.21$, $p<.001$, $\eta^2=.16$: it was lowest in the signature-at-the-top condition ($M=0.77$, $SD=1.44$) and higher in the signature-at-the-bottom condition ($M=3.94$, $SD=4.07$; $p<.001$) and in the no-signature condition ($M=2.52$, $SD=3.12$; $p<.05$). The difference between

[redacted]: This is odd. I might be misunderstanding but why would there be any differences in cheating on the matrix task which is done before the pledge of honor manipulation?

If we do find this, shouldn't we control for these differences in the anlysis of the signature effect ?

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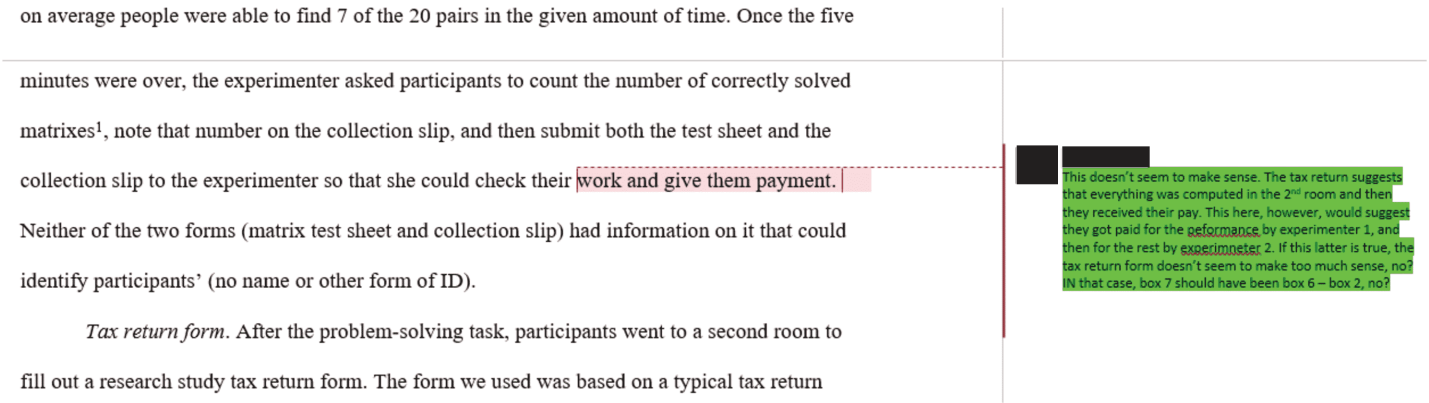
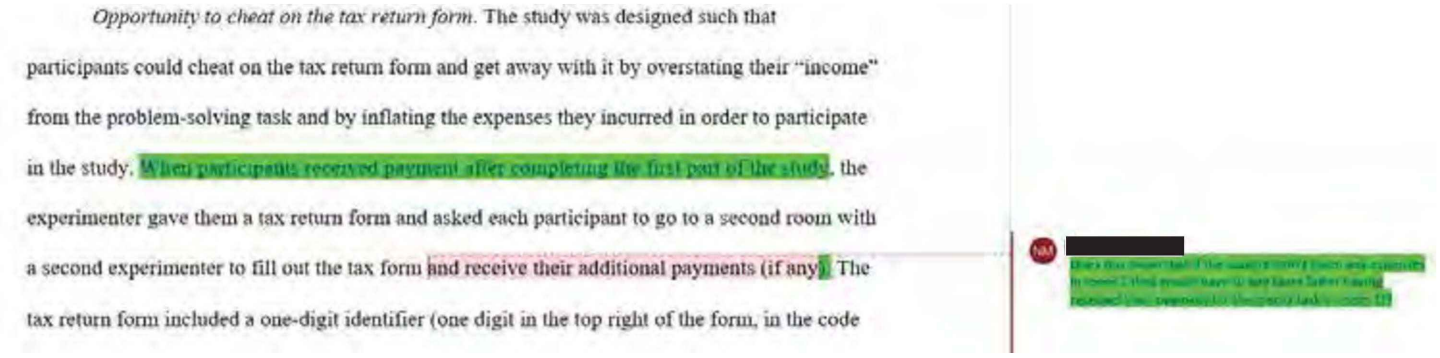
**********Second screenshot (p. 13 of the 04-04 version):


on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes[1], note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment. Neither of the two forms (matrix test sheet and collection slip) had information on it that could identify participants' (no name or other form of ID).

Tax return form. After the problem-solving task, participants went to a second room to fill out a research study tax return form. The form we used was based on a typical tax return

[redacted]: This doesn't seem to make sense. The tax return suggests that everything was computed in the 2nd room and then they received their pay. This here, however, would suggest they got paid for the peformance by experimenter 1, and then for the rest by experimneter 2. If this latter is true, the tax return form doesn't seem to make too much sense, no? IN that case, box 7 should have been box 6 – box 2, no?

*********Third screenshot (p. 14 of the 04-04 version):



Opportunity to cheat on the tax return form. The study was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem-solving task and by inflating the expenses they incurred in order to participate in the study. When participants received payment after completing the first part of the study, the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their additional payments (if any). The tax return form included a one-digit identifier (one digit in the top right of the form, in the code

7. Specific changes made to the manuscript on April 5, 2011. With respect to the comments you made on the 04-04 version of the manuscript, as depicted in the second and third screenshots above, we noted two changes in the procedure description that were then made in the 04-05 version of the paper (Making Ethics Salient 2011-04-05). The two screenshots below capture the key portions with changes. Note, in particular:
    - In the first screenshot, from page 13 of the 04-05 version, the final phrase "*and give them payment*" has been cut from the sentence that had ended, "*…so that she could check their work and give them payment*" in the 04-04 version.
    - In the second screenshot, the sentence that had begun "*When participants received payment after completing the first part of the study…*" and had ended, "*…and receive their additional payments (if any)*" in the 04-04 version was changed, in the 04-05 version, to begin "*When participants completed the first part of the study,*" and end "*… and receive their payments*."
    - In the published paper, the Materials and Methods section for Experiment 1 mentions participant payments only once, and that is in the "Tax return form" section: "*These expenses were 'credited' to their posttax earnings from the problem-solving task to compute their final payment*." (p. 15199)

We have the following requests and questions based on these screenshots:

a. Please tell us, to the best of your recollection, about any communications you had with any of the paper coauthors, or anyone else involved with Experiment 1, about the specific changes we have noted here.

Having no first-hand knowledge of how Experiment 1 was run, I had no communications with any of the paper co-authors or anyone else involved with Experiment 1 about the specific changes you have noted in your first two bullet points of Question 7 above.

A note about your third bullet point referring to the Materials and Methods section for Experiment 1 on p. 15199 in the 2012 PNAS paper: The 1st draft shared by Professor Gino with all co-authors "Signing on the dotted line turns moral gaze inward 2011-02-23" already said on page 10 "These costs were "credited" to compute their final payment." [redacted] subsequently edited this sentence further in the 2nd draft that she

shared with all co-authors (see page 11 of "Making Ethics Salient 2011-03-08") to say, "These costs were "credited" to their post-tax earnings from the matrix task compute their final payment."

b. Please explain, as best you can recall, why and how the specific changes described above came about. For example: were these agreed to by a subset of the coauthor team (please specify who was involved), or did one coauthor make the changes (please specify who that was), with others not commenting or objecting, or did something else happen?

See my response to question 5b above. I was not part of a conversation in which my co-authors or a subset of them agreed to those changes, or in which other co-authors commented or objected. I am not aware of any such communications having taken place.

c. Having seen the study materials we got from Professor Gino's computer, and recalling your comments on 2011 versions of the manuscript, as well as any communications you had with any coauthors (or others) about them, do you believe that the sentences we have noted in the screenshots below, from the 04-05 version of the paper, accurately describe the procedure of Experiment 1? Please explain your reply as fully as possible.

See my responses to your Questions above.

Given how my comments/concerns about Experiment 1's procedure were handled in 2011 and 2018, I have been under the impression that the sentences you have noted in the screenshots below more or less accurately describe the procedure of Experiment 1.

**********First screenshot (p. 13 of the 04-05 version):

on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes[1], note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work. Neither of the two forms (matrix test sheet and collection slip) had information on it that could identify participants' (no name or other form of ID).

Tax return form. After the problem-solving task, participants went to a second room to fill out a research study tax return form. The form we used was based on a typical tax return

**********Second screenshot (p. 14 of the 04-05 version)

Opportunity to cheat on the tax return form. The study was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem-solving task and by inflating the expenses they incurred in order to participate in the study. When participants completed the first part of the study, the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments. The tax return form included a one-digit identifier (one digit in the top right of the form, in the code OMB No. 1555-0111) that was

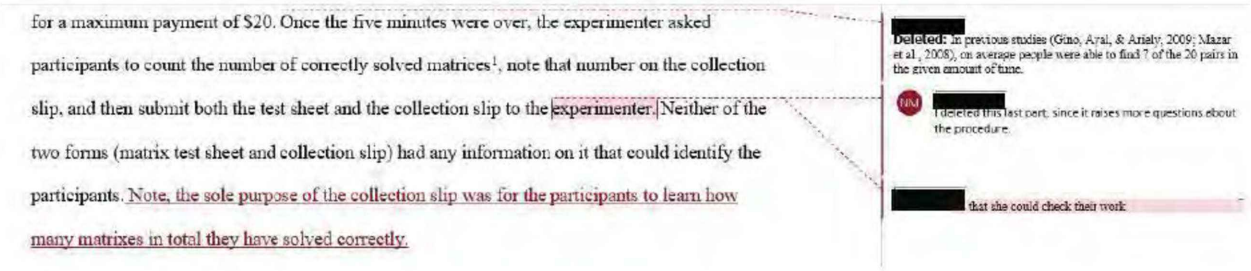
****

8. Statement about the purpose of the collection slip. In the 2011-05-08 version of the manuscript (2nmMaking Ethics Salient 2011-05-08) you added a new sentence in the last part of the paragraph entitled "*Problem-solving task*" on page 12 of that manuscript: "*Note, the sole purpose of the collection slip was for the participants to learn how many matrixes in total they have solved correctly.*" (A screenshot of that part of the paragraph appears below)
    a. Can you recall why you inserted the new sentence in that paragraph (which remained, almost verbatim, in the published paper (page 15199))?

    Having no direct knowledge of the experimental design or how it was conducted, and after having expressed concerns about payment taking place in room 1 based on the collection slip, I felt the paper needed to clarify what the collection slip was for. Therefore, I suggested adding this sentence, which described what I assumed was its purpose, and was looking for [redacted] and Professors Gino and [redacted] to confirm my assumption.

    b. Can you recall why you inserted a comment and deleted the phrase, "so that she could check their work," in that same paragraph? Can you explain what you meant by your comment explaining that deletion?

    It was not clear to me, and I suspected that would be the case for other readers, too, why participants were told to "submit both the test sheet and the collection slip to the experimenter, so that she could check their work" [in room 1]. Most importantly, after my concerns (those that I had expressed on 2011-03-09 and 2011-04-04) were resolved by manuscript iterations, I felt that detail was confusing (i.e., some readers could wrongfully assume that the experimenter in room 1 checked the performance to pay individuals) and irrelevant (i.e., it could not have possibly affected the IV's effect on the DV 'self-reported performance on the tax form in room 2').



9. Is there anything else that you think might be helpful to us as we try to determine if research misconduct occurred in the reporting of the procedure used in Experiment 1 and, if it did, who might have committed it? If so, please provide as much detail (and, if relevant, documentation) as you think might be helpful.

I have no further comments.

Questions about the Data for Experiment 1

We have some additional questions, about the data for Experiment 1. As before, if you don't know the answer to any question, or have no information, please respond with "DK" or "NI".

10. Do you have, or did you ever have, the dataset for Experiment 1, other than the publicly-posted OSF version? If yes, how did you obtain it, and can you please share it with us? If you have multiple versions, please share them all.

Only within the last year have I downloaded the publicly posted OSF version of the dataset for Experiment 1. I have never had any other data file for Experiment 1.

11. In addition to the individuals you named in answering Question 4 (specifically, 4b, 4c, 4d, and 4f), please tell us who, if anyone, might have had access to the data and the ability to modify it at each stage, from data collection to data posting on OSF.

DK.

12. Please tell us, to the best of your knowledge, whether and how the dataset for this study was modified at any point or points between initial data collection and its final posting on OSF.

DK

13. Is there anything you can think of that we should know, as we try to determine whether research misconduct occurred with respect to the data in Experiment 1 and, if it did, who might have been responsible?

No.

Finally, we have one general question:

14. At any time during or after Experiment 1 was being done, written up, or published, did you have any concerns about the study procedure, the way the procedure was described, or the integrity of the data for this study? If so, please tell us about those concerns and how they arose.

See my detailed responses to your previous questions.

In sum, I had concerns about the study procedure / the way the procedure was described, in particular, at three points in time:

- in my email and related comments in my draft version 2011-03-09 (as my reaction to the 2011-03-08 draft that [redacted] had shared with all co-authors);
- in my email and related comments in my draft version 2011-04-04 (as my reaction to the 2011-04-02 draft that Professor Gino had shared with [redacted] and me);
- my outlined exchange with [redacted] in Fall 2018 about the procedure for the replication of Experiment 1 from the 2012 PNAS paper (as part of the 2020 PNAS paper project).

I have not had any concerns about the integrity of the data.

[redacted] thank you very much for answering our questions. We deeply appreciate your help in this process.

Table 1
Step-by-step procedure for the experiment as described in the UNC IRB submission

Procedure

1. Participants are welcomed to the lab, asked the read the consent form for the study and sign it
2. Participants complete the matrix task for 5 minutes
    a. Instructions: "You will first complete a problem solving task. This task should take about 5-10 minutes. You will be working under time pressure. The experimenter will keep track of time and will let you know when time is up"
    b. They are paid a $2 show-up fee, plus a bonus depending on their performance on the task
3. Participants receive payment for the first task ($1 per correct matrix, max $20)
4. Participants will be told that they will have to go to a second room to fill out a payment form
    a. They are told that they will receive higher payment than in a regular study because they will be taxed on their earnings
5. In the second room: Participants will have to fill out a form in which they need to report their income (performance on the matrix task) and then we will ask them to indicate how many minutes it took them to travel to the lab, and their estimates cost for their commute. We will "deduct" those costs to compute their final payment
    a. Report income (20% tax, i.e. $0.20 for every dollar earned)
    b. Deductions:
        i. Time to travel to the lab: $0.10 per minute (Max: 2 hours, $12)
        ii. Cost of commute: (Max: $12)
        iii. Instructions: "We would like to compensate participants for extra expenses they have incurred in order to participate in the session"
6. Final payment
    a. The maximum payment participants can make is $42 (payment range $2-42):
        i. $2 show up fee
        ii. $20 on matrix task minus a 20% tax on income (i.e., $4)
        iii. $12 as deductions for travel time
        iv. $12 as deduction for cost of commute

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Table 2
Tax Form used in Experiment 1

Form **3305** (Rev. June 2010) Center for Decision Research	**Research Study Tax Return** For the period June 1, 2010, through August 30, 2010	Keep a copy of this return for your records. OMB No. 1555-0111

Write Clearly	Name	PID	For Administrative
	Address (Number, street, and room or suite number)		T .... FF .....
	City, State, and ZIP code		

Part 1 Please fill out the questions below to compute your taxed payment.		
1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ....▶	1 2 3	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned).....		
Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.		
1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ....▶	4 5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ....▶ 3. Please add the value specified in box 4 and the value specified in box 5 .....▶	6	
Part 3 Please compute your final payment.		
1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's	7	
Sign Here	I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete. ▶	

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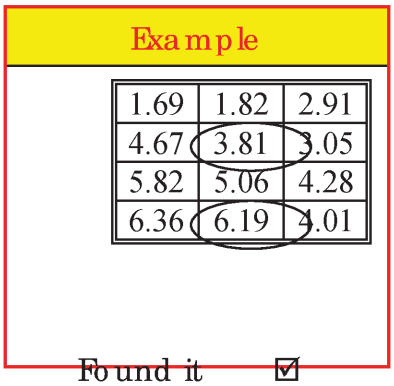
Table 3
Math puzzles instructions and Collection Slip used in Experiment 1

Welcome to our study.

This study is designed to test performance on math tasks under time pressure.
The instructions to the task are provided below.

In the boxes on the "Matrix Sheet", your goal is to find **2 numbers** so that their sum **equal 10**.

Circle those numbers and mark the 'Found It' box.
See example →
For each pair you'll find, you will receive $1.



When finished:

- Fill out the attached collection slip.
- Submit the collection slip to the experimenter. In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and **hand in ONLY your collection slip**. We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time.
- The experimenter will give you your payment and ask you to fill out a payment form

Collection Slip

1. Are you a student? Y N
2. Major? _____
3. Academic Year? _____
4. Gender? M F
5. Age? _____

I correctly solved _____ Boxes, which amount to $ _____ (=$1 per Box)

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Table 4
Study description on page 15199 of the published paper

PNAS

Materials and Methods

Informed consent was obtained from all participants, and the Institutional Review Boards of Harvard University and University of North Carolina reviewed and approved all materials and procedures in Experiments 1 and 2.

Experiment 1: Participants and Procedure. A total of 101 students and employees at local universities in the southeastern United States (M_{age} = 22.10, SD = 4.98; 45% male; 82% students) completed the experiment for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the experiment.

Participants were randomly assigned to one of three conditions: (*i*) signature at the top of the tax return form (before filling it out); (*ii*) signature at the bottom (after filling it out); or (*iii*) no signature (control). The statement that participants had to sign asked them to declare that they carefully examined the return and that to the best of their knowledge and belief it was correct and complete.

At the beginning of each session, participants were given instructions in which they were informed that they would first complete a problem-solving task under time pressure (i.e., they would have 5 min to complete the task). In addition, the instructions included the following information. "For the problem-solving task, you will be paid a higher amount than what we usually pay participants because you will be taxed on your earnings. You will receive more details after the problem-solving task."

Problem-solving task. For this task (3), participants received a worksheet with 20 math puzzles, each consisting of 12 three-digit numbers (e.g., 4.78) and a collection slip on which participants later reported their performance in this part of the experiment. Participants were told that they would have 5 min to find two numbers in each puzzle that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. Once the 5 min were over, the experimenter asked participants to count the number of correctly solved puzzles, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter. We assume respondents had no problems adding 2 numbers to 10, which means they should have been able to identify how many math puzzles they had solved correctly without requiring a solution sheet. Neither of the two forms (math puzzles test sheet and collection slip) had any information on it that could identify the participants. The sole purpose of the collection slip was for the participants themselves to learn how many puzzles in total they had solved correctly.

Tax return form. After the problem-solving task, participants went to a second room to fill out a research study tax return form (based on IRS Form 1040). The one-page form we used was based on a typical tax return form. We varied whether participants were asked to sign the form and if so, whether at the top or bottom of the page (Figs. S1–S3). Participants filled out the form by self-reporting their income (i.e., their performance on the math puzzles task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their cost of commute. These expenses were "credited" to their posttax earnings from the problem-solving task to compute their final payment. The instructions read: "We would like to compensate participants for extra expenses they have incurred to participate in this session." We reimbursed the time to travel to the laboratory at $0.10 per minute (up to 2 h or $12) and the cost of participants' commute (up to $12). All of the instructions and dependent measures appeared on one page to ensure that participants knew from the outset that a signature would be required. Thus, any differences in reporting could be attributed to the location of the signature.

Payment structure. Given the features of the experiment, participants could make a total of $42—an amount which breaks down as follows: $2 show up fee, $20 on math puzzles task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Opportunity to cheat on the tax return form. The experiment was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem-solving task and by inflating the travel expenses they incurred to participate in the experiment. When participants completed the first part of the experiment (problem solving task), the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments. The tax return form included a one-digit identifier (one digit in the top right of the form, in the code OMB no. 1555–

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Exhibit 15
Maidstone Consulting Group Forensic Report for Allegation 4a

Maidstone Consulting Group
1874 Center Street, Boston MA 02132
P (617) 935-0048
E info@maidstonecg.com

MCG 0022 September 2022 DRAFT Assessment of Allegation 4a

SCOPE AND SUMMARY OF ANALYSIS

Review Initiation. This report was requested of Maidstone Consulting Group, LLC ["**MCG**"] by Harvard Business School ["**the client**"] for a forensic analysis of research misconduct allegations within four papers associated with Dr. Francesca Gino. The current report focuses on one paper associated with Allegation 4.

Relevant Publications:
Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*")

Allegation 4: *The discussion in this document focuses on* ***Allegation 4a***
With respect to ***Study 1[1] in the 2012 PNAS Paper****:*

a) Dr. Gino falsified and/or fabricated the results by removing part of the description of study instructions to research participants from a draft of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. Such instructions pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.

b) Dr. Gino falsified and/or fabricated the datasets by altering a number of observations. In particular, when sorted by "experimental condition" and by "participant ID number," the dataset for Study 1 appears to include 1 duplicate observation and 8 observations where the "participant ID number" is out of sort. The out of sort observations substantially contribute to the significance of the hypothesized effects.

Report Organization. This document (**MCG 0022 September 2022 DRAFT Assessment of Allegation 4a**) outlines findings relative to Study 1 of the *2012 PNAS Paper*. The accompanying **"MCG0022_Forensic Review_Allegation_UPDATES 4a.pptx"** includes step-by-step methods and data observations related to Allegation 4a. Additional support documents include:
MCG0022_Allegation 4a_Data_analysis.xlsx
MCG0022_APPENDIX_Allegation 4a.pptx

[1] Study 1 corresponds to published Experiment 1 in the 2012 PNAS paper. This may be relevant to the panel's discussion of multiple research record files available for allegation 4. The description of "Study" and "Experiment" terms are further clarified in this report as it may be relevant to the panel's discussion. See **MCG0022_Forensic Review_Allegation_UPDATES 4a.pptx SLIDE 2.**

The contents of this report are Privileged & Confidential/Attorney Work Product/Consulting Expert Report Pursuant to Fed. R. Civ.P. 26(b)(4)

I. Data Sources.

In the file and correspondence distribution folders from the clients over the cited dates, all files and correspondence were reviewed. The following cited materials were reviewed as data sources for this Report.

Distribution of 05.14.2022

- Tax Study STUDY 1 2010-07-13.xlsx
- Allegation 4b OSF data.xlsx

  The data included in these files are identical, and represent the dataset found at https://osf.io/2ehzt/, herein "OSF data"

FOLDER: Tax Study\

- **Signing on the dotted line turns moral gaze inward 2011-02-23.docx,** *herein "2011-02-23.docx"*
- **Making Ethics Salient 2011-03-08.docx,** *herein "2011-03-08.docx"*
- **Making Ethics Salient 2011-03-09_vs2.docx,** *herein "2011-03-09_vs2.docx"*
- **Making Ethics Salient 2011-03-15.docx,** *herein "2011-03-15.docx"*
- Making Ethics Salient 2011-03-17.docx
- Making Ethics Salient 2011-04-01.docx
- Making Ethics Salient 2011-04-02.docx
- **Making Ethics Salient 2011-04-04_2nm.docx,** *herein "2011-04-04_2nm.docx"*
- **Making Ethics Salient 2011-04-05.docx,** *herein "2011-04-05.docx"*
- Making Ethics Salient 2011-04-06.docx
- Making Ethics Salient 2011-04-10.max.docx
- Making Ethics Salient 2011-04-10b.docx
- Making Ethics Salient 2011-04-11.docx
- Making Ethics Salient 2011-04-26.docx

FOLDER: Tax Study\ready to submit\

- **Making Ethics Salient 2011-05-08.docx,** *herein "2011-05-08.docx"*

*Where: the non-grey text files are herein collectively referred to as "***Draft Manuscripts"**[2]

FOLDER: Taxes and over-reporting (10-1127)\

- **Taxes and Over-Reporting Behavioral Study IRB Application CLEAN.docx,** *apparently signed 06.25.2010 and herein referred to as the "2010 June IRB application"*
- **Instructions.docx**[3]**,** *herein part of the "2010 July experimental description(s)"* file series.
- **matrix stimuli new.docx,** *herein part of the "2010 July experimental description(s)"* file series.

[2] The files highlighted "grey" are versions of the paper that showed no differences except typos fixing in *Study 2*. They were removed from the current analysis of Allegation 4a.

[3] There are 3 files that are collectively referred to as the "2010 July experimental description(s)" file series, the two files in the cited folder and a 3rd attached to an email described in the next section.

Distribution of 05.26.2022:

- **Taxstudy07162010.xlsx,** herein "16-Jul data"

Distribution of 08.06.2022:

Selection of email exchanges retrieved from the respondent's inbox, as per the client's description of provenance.

1. ./2010-07-22-1 (11):
   i. 15.eml
   ii. 15.eml.email.study material tax study.pdf
   iii. **15.eml.fileattachment1.matrix stimuli new - STUDY 2.docx,** *herein part of the* "2010 July experimental description(s)" file series.
   iv. 15.eml.fileattachment2.TaxStudyForm - STUDY 2.docx
2. ./2011-03-09 (22):
   i. **Making Ethics Salient 2011-03-09_vs2.docx**
   ii. **moral saliency working draft 4 Francesca.pdf**
   iii. 04 moral saliency_ working draft 4 Francesca.eml
3. ./2011-05-08 (35):
   i. **2nmMaking Ethics Salient 2011-05-08.docx**, *herein,* "2nm 2011-05-08.docx".
   ii. Re signature paper ready to submit.pdf
   iii. Re_ _signature paper__ ready to submit.eml
4. ./ 2018-08-07 (62):
   i. **Re Replicating signing first .pdf**
   ii. Re_ Replicating signing first .eml

ANALYSIS AND OBSERVATIONS

II. Data Analysis.

MCG analyzed versions of the ***2011 Draft Manuscripts*** to determine potential authorship and associated metadata. The described methodology in the ***2011 Draft Manuscripts*** and the ***2012 PNAS paper*** was compared to apparent detail available in an example of original methodology, including the ***2010 June IRB application*** and apparent descriptions of experiments performed in the ***2010 July experimental description(s)*** file series. Data related to publicly available Study 1 (***OSF data*** from the site "Reducing Dishonesty – Replication(s)" https://osf.io/2ehzt/) was also compared to reported original data (***16-Jul data***)[4]. Similarities and differences between the datasets are reviewed in additional detail below.

Approach:

See **MCG0022_Forensic Review_Allegation_ UPDATES_4a.pptx** for direct slide references

1. By reviewing the documents provided by the client relative to the published 2012 PNAS paper it appears that the first available draft version is the "2011-02-23.docx". From this document forward, the main structure of the paper remained then unaltered while specific versioning occurred, until a version of the study substantially identical to the published document was identified. All versions were imported into git[5] as a single commit in an

[4] See discussion regarding Allegation 4b as to the identification of original data sources by the client.
[5] Git is a free and open-sourced software that is able to track changes in source code. https://git-scm.com

order determined from the date included either in the filename or an email date the relevant document was attached to. Git allows for in depth visual version control and comparison. A first imported version is compared line by line with a second imported version and differences highlighted. **SLIDE 4** demonstrates a visual representation of this stratified approach (see **MCG0022_APPENDIX_Allegation 4a.pptx, slides 10-71** for a completely documented set of modifications across all versions reviewed).

2. The ***2011 Draft Manuscripts*** group was created by filtering from versions mentioned in point 1 featuring apparent potentially relevant modifications to the text of the details of Experiment 1 in question, "Study 2" in the draft manuscripts (which corresponds to "Study 1" and Experiment 1 in earlier experimentation and the final published 2012 PNAS version (see **SLIDE 2**).
3. The git assessments were also paired with assessments from an apparent IRB application predating the paper and having relevant detail to the discussion (***2010 June IRB Application***) and to a series of experimental description files, often in script formator reviewable explanatory text and visuals for participants (***2010 July experimental description(s)***) also having relevant details for the discussion and the resultant descriptions included in the ***2012 PNAS Paper***. Additional information reviewed and utilized for the discussions were the direct comparison of available documents (e.g., reviewing comments provided by authors in the ***2011 Draft Manuscripts*** as well as email exchanges of potential interest for the discussion). These approaches combined were utilized to assess subject matter that may be potentially relevant to the allegation, the chronology of which modifications may have occurred, and in some cases the authors involved. Classifications of discussion points that may be relevant to the allegation discussion are outlined in **Figure 1**.

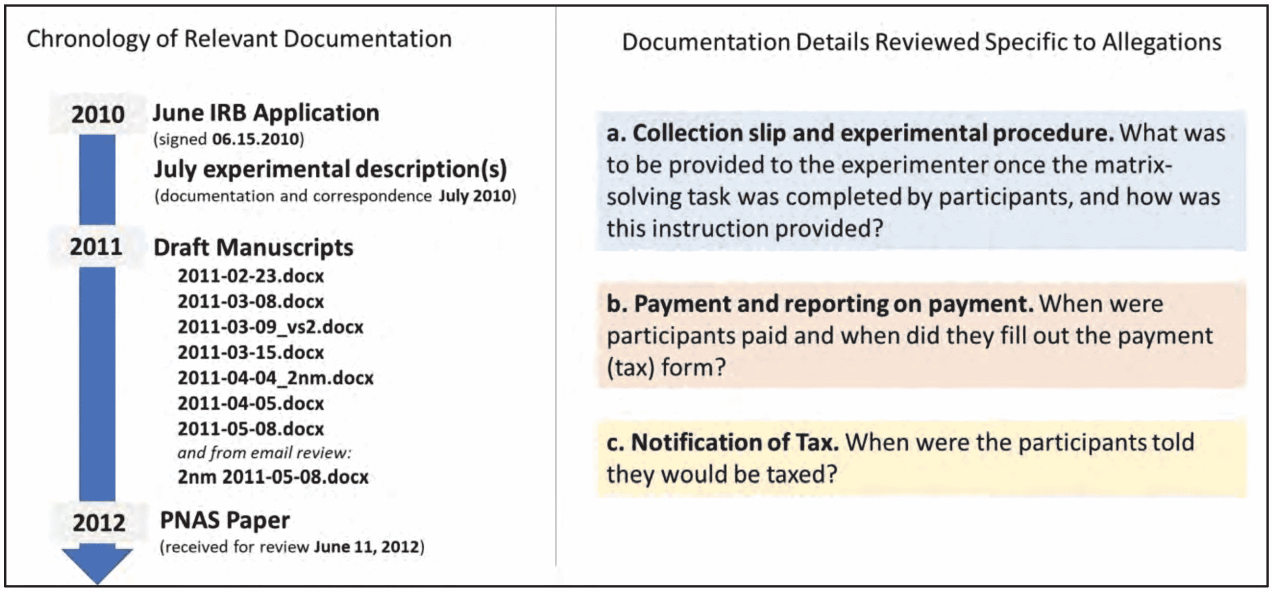

Figure 1. Outline for reviewing documents and categories identified for potential discussion.

Available metadata from the versioned ***2011 Draft Manuscripts*** demonstrate the involvement of certain the authors in the development of the detail ultimately included in the ***2012 PNAS Paper*** which may be relevant to the client's discussions. These metadata are included in **Figure 2.**

Available Metadata organized for review of **2011 Draft Manuscript** versions included in the analysis

Identification of document	Created date	Author	Last Saved by	company
2011-02-23.docx	02-12-2011	Francesca Gino;Lisa Shu	Francesca Gino	The University of North Carolina at Chapel Hill
2011-03-08.docx	03-07-2011	Francesca Gino;Lisa Shu	[redacted]	The University of North Carolina at Chapel Hill
2011-03-09_vs2.docx	03-10-2011	Francesca Gino;Lisa Shu	[redacted]	The University of North Carolina at Chapel Hill
2011-03-15.docx	03-11-2011	Francesca Gino;Lisa Shu	Francesca Gino	The University of North Carolina at Chapel Hill
2011-04-04_2nm.docx	04-04-2011	Francesca Gino;Lisa Shu	[redacted]	The University of North Carolina at Chapel Hill
2011-04-05.docx	04-04-2011	Francesca Gino;Lisa Shu	Francesca Gino	The University of North Carolina at Chapel Hill
2011-05-08.docx	05-08-20122	Francesca Gino;Lisa Shu	Francesca Gino	The University of North Carolina at Chapel Hill
2nm 2011-05-08.docx	05-09-2011	Francesca Gino;Lisa Shu	[redacted]	The University of North Carolina at Chapel Hill

YELLOW HIGLIGHTING = For the **2011-04-04_2nm.docx** and **2011-04-05.docx** documents, accompanying identifying correspondence files support Metadata evaluations as to who may have sent versions of draft files (see ***Appendix*** for additional details)

Figure 2. Metadata associated with a series of the 2011 Draft Manuscripts reviewed as part of this report.

While the metadata may be informative regarding individuals involved in the documentation generation and chronology of developments and alterations within documentation versioning, it is not an unequivocal representation of individual responsibility of content within said documentation. There may be possible scenarios, where another individual (or individuals) may have been involved at a point prior to the "last modified" time stamp that play an unknown role in the data representation.

Observations and Summary. See **MCG0022_Forensic Review_Allegation_UPDATES 4a.pptx** for direct slide references and Summary Tables 1 and 2 at the end of this report for a comprehensive review of apparent changes across manuscript versions.

a. **Collection slip and experimental procedure (SLIDES 5-12).** Within the ***2011 Draft Manuscripts*** there appear to be contrasting descriptions of the experimental procedure as it relates to how and what participants were told to do once they finished the matrix task (submitting collection slips and testing sheets, or only collection slips). Additionally, the nature of the explicit instructions provided to participants appeared to change (e.g., explicit instructions sheets regarding the task vs explicit instructions described on collection slips

vs experimenters explaining procedures). As only portions of the instructional procedure and instructions process were cited in the ***June 2010 IRB application*** document available (see **Figure 3.** and **SLIDE 5**) it is unclear what the actual experimental procedure was and how delivery of instructions was intended.

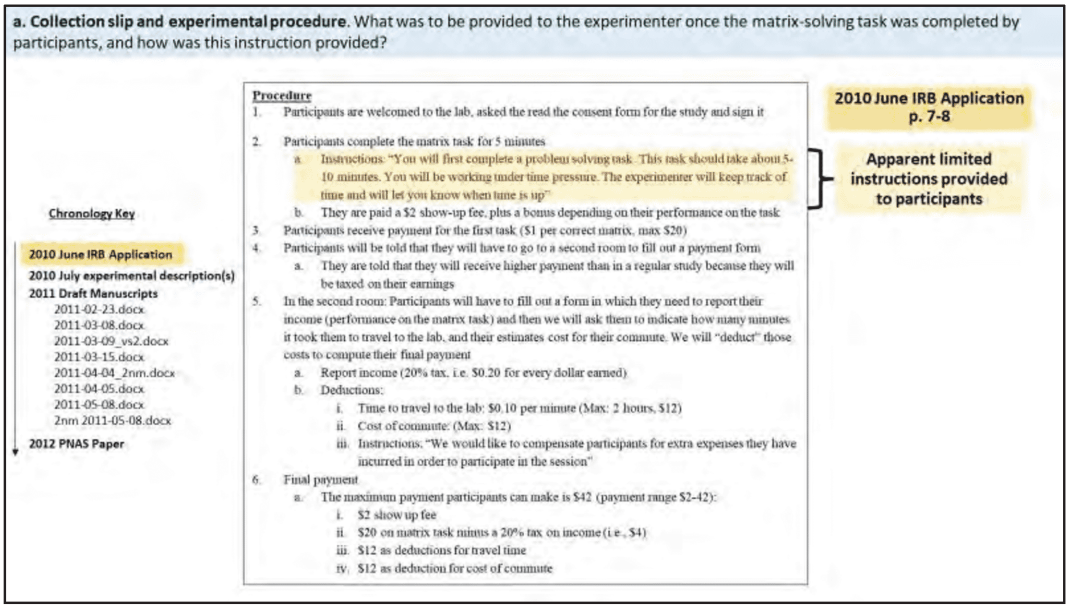

Figure 3. Metadata associated with a series of the ***2011 Draft Manuscripts*** reviewed as part of this report.

However, the ***July 2010 experimental description(s)*** documentation found in Dr. Gino's computer and within correspondence, specifically files dated at/around the time of experimentation (for example, see **Figure 4.** and **SLIDE 6**) suggest that participants may have been instructed to submit only the collection slip.

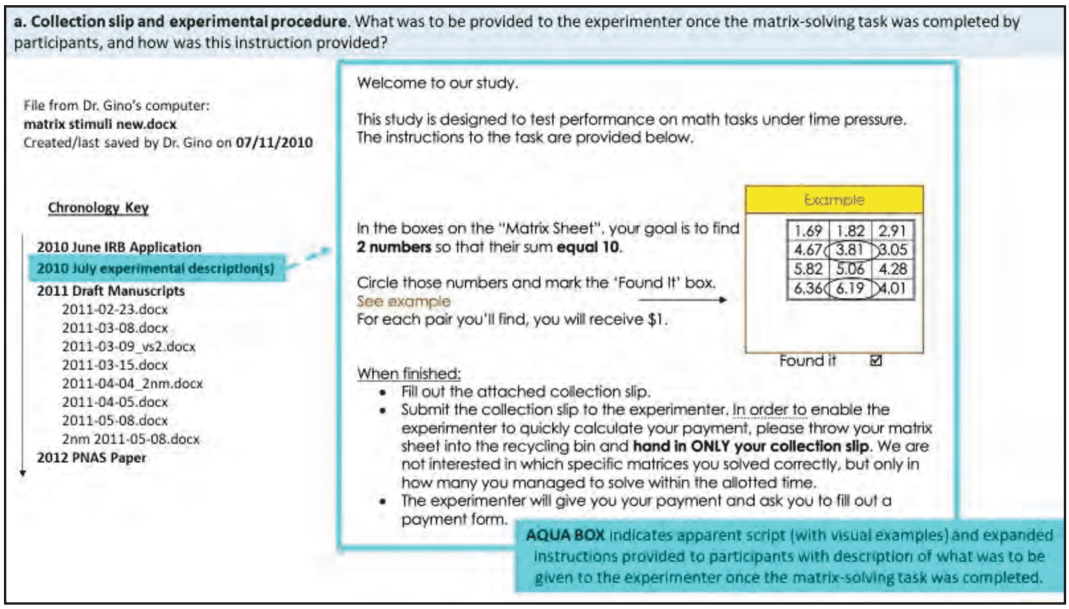

Figure 4. Example of the ***July 2010 experimental description(s)*** demonstrating direct instructions regarding submission of the collection slip only.

This appears to be in contrast to the methodology published in the ***2012 PNAS Paper*** (for example, see **Figure 5.** and **SLIDE 11**).

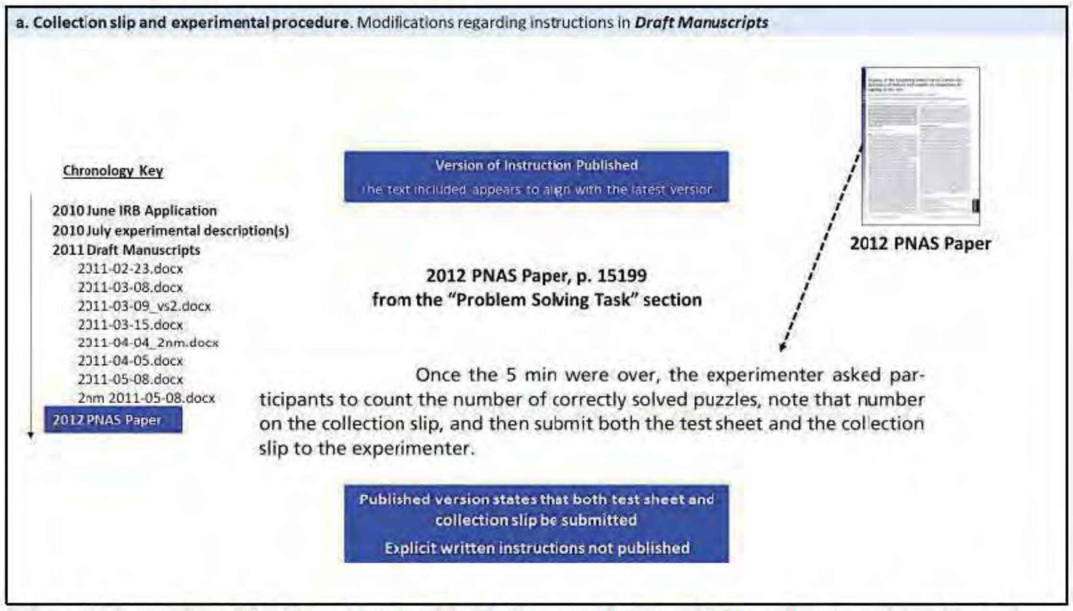

Figure 5. Example of the description of both the test sheet and the collection slip submission detail included in the ***2012 PNAS Paper.***

The assessments MCG provides for this section include:

i. the possible period of time where modifications to the methodology took place (during the manuscript drafting phase), and

ii. who may have made the modifications (often Dr. Gino appears to have been responsible for apparent modifications); this is summarized in **Figure 6.**

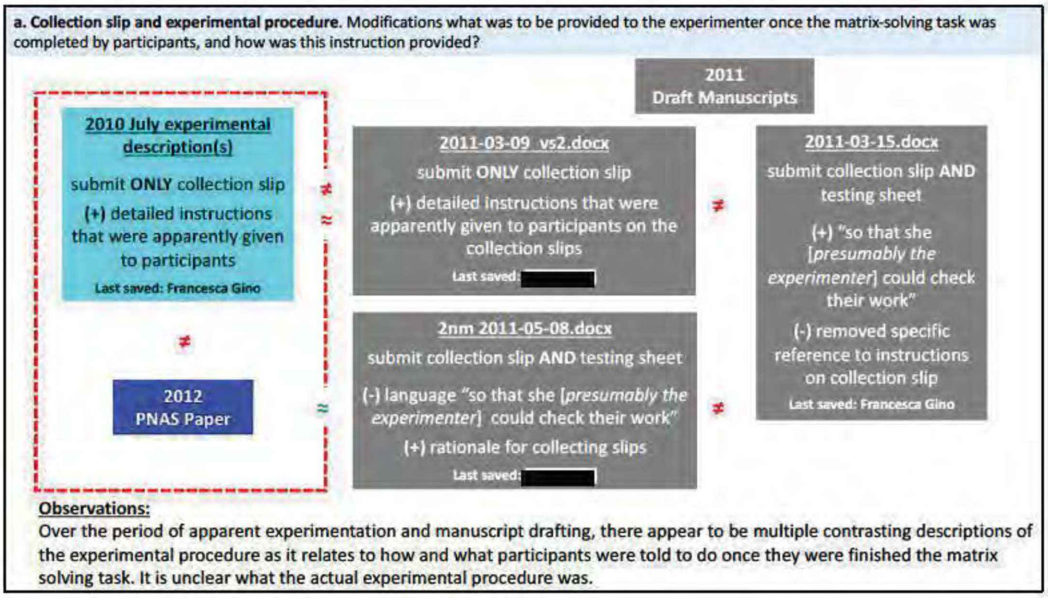

Figure 6. Summary of the apparent evolution of the description of the research record regarding collection slip submission and experimental procedures in the development of the ***2012 PNAS Paper.***

See **Table 1** at end of this document for a list of apparent changes across manuscripts regarding collection slip and experimental procedure.

Payment and reporting on payment (SLIDES 13-26). How and when participants received payment and engaged in reporting payments on tax forms appear to vary in multiple versions of the ***2011 Draft Manuscripts***. These often differ as well from the apparent intended process detailed in the available ***2010 June IRB application***. Ultimately, the process published in the ***2012 PNAS paper*** appears to differ from the ***2010 June IRB application.*** The assessments MCG provides for this section include **i.** the possible period of time where modifications to the methodology took place (during the manuscript drafting phase), **ii.** who may have made the modifications (often Dr. Gino appears to have been responsible for apparent modifications), and **iii.** in some document versions, why modifications to the descriptions may have taken place (e.g., in response to author questions of methodology); this is summarized in **Figure 7.** See **Table 2** at end of this document for a list of apparent changes across manuscripts regarding payment and reporting on payment. While we have access to the described versions of documents, and subsets of correspondence(s) in the form of available email, this does not preclude the possible existence of additional documents and correspondence containing details specific to the evolution of the experimental procedure description. Additionally, across versions of the paper and related documents, explicit statements about the number of experimenters vary.

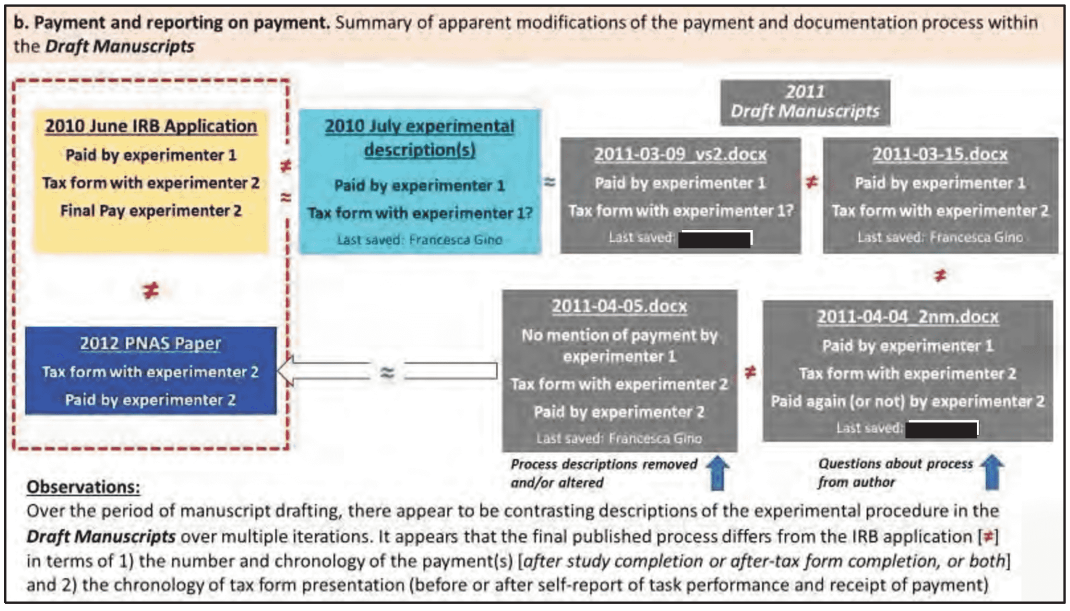

Figure 7. Summary of the apparent evolution of the description of the research record regarding payment and reporting on payment in the development of the ***2012 PNAS Paper.***

b. **Notification of Tax (SLIDES 27-30).** The description of when participants were notified they would be taxed on the matrix task earnings appears to be different in the ***2010 June IRB application*** in comparison to the ***July 2010 experimental description(s)*** and ***2012 PNAS Paper***. There do not appear to be any iterations of this description in the currently available ***2011 Draft Manuscripts***. However, the ***July 2010 experimental description(s)*** "instructions.docx" document sequestered by the client from Dr. Gino's computer describes the methodology and wording exactly like reported in the paper. Such document was created and last printed on July 11, 2010 prior to when the RA for the study sent Dr. Gino the first set of results (July 13, 2010). It is unclear if that document was utilized during experimentation since no other details were present.

As part of the assessment, we also considered the following details:

Number of participants who had to pay back the experimenters. According to the original version of the protocol, participants were paid in room 1, based solely on the collection slips they provided the experimenter, and then a second time in room 2, when taxes and deductions were added. The panel asked MCG to calculate the number of participants who should have given money back since their deductions were lower than the taxes owed. The **MCG0022_Allegation 4a_Data_analysis.xlsx** spreadsheet presents in Columns V and U the calculation performed. Specifically, the following IF statement was utilized: =IF(taxesOwed<Deductions,0,1), then the number of '1', where the amount of taxes owed was greater than the deductions claimed, was calculated for the **OSF** and the **Jul-16** datasets. In the **OSF** dataset, *20 participants* should have given money back to the experimenter following the tax statement completion task. However, *22 participants* should have given money back when counting the **16-Jul** dataset.

Were results computed from the matrices solved reported on the collection slips *or* tax forms? In the **MCG0022_APPENDIX_Allegation 4a.pptx slides 1-9** demonstrates evidence relative to differences in text between versions prompted by one of the co-authors of the paper. While the procedure for data collection is still not completely clear, it appears that here the authors added more details to clarify the procedure (instead of, for instance, changing the description).

In summary, there appear to be multiple modifications to the content of the paper through versioning. In one instance, the details of what was provided to the experimenter (collection slips AND testing sheets) distinctly changed through versioning. In another instance, a specific portion of the experimental procedure related to payment and self-reporting is described and then is edited to a different procedure (see for example **MCG0022_Forensic Review_Allegation_UPDATES 4a.pptx** SLIDE 22, **2011-03-15.docx** compared to **2011-04-04_2nm.docx**). In some cases, modifications to described processes in the ***2011 Draft Manuscripts*** appear after a co-author, [redacted] points to a potential study flaws or questions regarding process, as for the payment process. (see for example **MCG0022_APPENDIX_Allegation 4a.pptx** SLIDES 23 and 24, **2011-04-04_2nm.docx** compared to **2011-04-05.docx**). Modifications appear to be included in versions of draft documents last saved by Dr. Gino. Additionally, there appears to be a potential discrepancy between the IRB

approved protocol and the actual experiment, as per when the participants were informed of the need to pay taxes.

Potential limitations of assessments and points for discussion. While it was possible to examine the email inbox of Dr. Gino, there is scarce evidence of her outbox content, hence versions of files found on her computer were utilized as potential source documents sent to co-authors. A clear outbox record would strengthen and add clarity to the analysis, particularly with respect to metadata and chronology. Additionally, some of the conversations regarding the study procedure are missing from email exchanges and may have happened via phone or other mode of communication. Finally, years after publishing the paper, one of the co-authors appeared to be unable to reproduce the findings (see email "**Re Replicating signing first .pdf** ").

Table 1. Description of the research record regarding collection slip submission and experimental procedures

Version	Last Saved by	Collection slip and experimental procedure
2011-02-23.docx	Francesca Gino	
2011-03-08.docx	[redacted]	
2011-03-09_vs2.docx	[redacted]	*Problem-solving task*...In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit the collection slip to the experimenter. The instructions on the collection slip read: "In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and hand in ONLY your collection slip. We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time. The experimenter will give you your payment and ask you to fill out a payment form." • ***Submit ONLY collection slip*** • ***(+) detailed instructions that were apparently given to participants on the collection slips***
2011-03-15.docx	Francesca Gino	*Problem-solving task*… In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment. • ***Submit collection slip AND testing sheet*** • ***(+) detail on experimenters' role in checking work*** • ***(-) removed specific reference to instructions on collection slip***
2011-04-04 2nm.docx	[redacted]	
2011-04-05.docx	Francesca Gino	
2011-05-08.docx	Francesca Gino	

2nm 2011-05-08.docx	[redacted]	***Problem-solving task***... ~~In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time.~~ Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrices, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter. Neither of the two forms (matrix test sheet and collection slip) had any information on it that could identify the participants ~~so that she could check their work~~. Note, the sole purpose of the collection slip was for the participants to learn how many matrixes in total they have solved correctly. • ***Submit collection slip AND testing sheet*** • ***(-) detail on experimenters' role in checking work*** • ***(+) detail on purpose of collection slip***
PNAS paper		Once the 5 min were over, the experimenter asked participants to count the number of correctly solved puzzles, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter. (p. 15119)

Table 2. Description of the research record regarding payment and reporting on payment

Version	Last Saved by	Payment and reporting on payment
2011-02-23.docx	Francesca Gino	
2011-03-08.docx	[redacted]	
2011-03-09_vs2.docx	[redacted]	***Problem-solving task***. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; based on Mazar, Amir, & Ariely, 2008) and a collection slip on which participants later reported their performance in this part of the study. Participants were told that they would have five minutes to find two numbers in each matrix that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit the collection slip to the experimenter. The instructions on the collection slip read: "In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and hand in ONLY your collection slip. We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time. The experimenter will give you your payment and ask you to fill out a payment form." • ***Paid by experimenter 1*** • ***Tax form with experimenter 1?***
2011-03-15.docx	Francesca Gino	***Problem-solving task***. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; based on Mazar et al., 2008) and a collection slip on which participants later reported their performance in this part of the study. Participants were told that they would have five minutes to find two numbers in each matrix that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment.

		Opportunity to cheat. The study was designed such that participants could cheat by overstating their "income" on the payment form (i.e., they could overstate their performance on the matrix search task) and by inflating the expenses they incurred in order to participate in the study. All participants' matrix worksheets were identical with the exception of one digit (in one number of one matrix) which was unique to each individual's work station—a difference that was completely imperceptible to participants. When participants received payment after completing the first part of the study, the experimenter gave them a payment form and asked each participant to go to a second room to fill it out and ask the other experimenter questions if they had any. The payment form included a one digit identifier as well (one digit in the top right of the form, in the code OMB No. 1555-0111). As a result, at the end of each session, we were able to compare actual performance on the matrix search task and reported performance on the payment form. If those numbers differed for an individual, that difference represented that individual's level of cheating. • ***Paid by experimenter 1*** • ***Tax form with experimenter 2***
2011-04-04_2nm.docx	[redacted]	***Problem-solving task***. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; based on Mazar et al., 2008) and a collection slip on which participants later reported their performance in this part of the study. Participants were told that they would have five minutes to find two numbers in each matrix that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment. Neither of the two forms (matrix test sheet and collection slip) had information on it that could identify participants' (no name or other form of ID). ***Opportunity to cheat on the tax return form***. The study was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem-solving task and by inflating the expenses they incurred in order to participate in the study. When participants received payment after completing the first part of the study, the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to

		fill out the tax form and receive their additional payments (if any). The tax return form included a one-digit identifier (one digit in the top right of the form, in the code OMB No. 1555-0111) that was identical with the digit of one number of one matrix (which was unique to each individual's work station)—a difference that was completely imperceptible to participants but allowed us to identify the matrix worksheet, the collection slip, and the tax return form that belonged to the same participant. As a result, at the end of each session, we were able to compare actual performance on the problem-sovling task and reported performance on the tax return form. If those numbers differed for an individual, that difference represented that individual's level of cheating on the problem-solving task. • ***Paid by experimenter 1*** • ***Tax form with experimenter 2*** • ***Paid again (or not) by experimenter 2***
2011-04-05.docx	Francesca Gino	***Problem-solving task***. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; based on Mazar et al., 2008) and a collection slip on which participants later reported their performance in this part of the study. Participants were told that they would have five minutes to find two numbers in each matrix that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work. Neither of the two forms (matrix test sheet and collection slip) had information on it that could identify participants' (no name or other form of ID). ***Opportunity to cheat on the tax return form***. The study was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem-solving task and by inflating the expenses they incurred in order to participate in the study. When participants completed the first part of the study, the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments. The tax return form included a one-digit identifier (one digit in the top right of the form, in the code OMB No. 1555-0111) that was identical with the digit of one number of one matrix (which was unique to each individual's work station)—a difference

		that was completely imperceptible to participants but allowed us to identify the matrix worksheet, the collection slip, and the tax return form that belonged to the same participant. As a result, at the end of each session, we were able to compare actual performance on the problem-sovling task and reported performance on the tax return form. If those numbers differed for an individual, that difference represented that individual's level of cheating on the problem-solving task. • ***Tax form with experimenter 2*** • ***Paid by experimenter 2***
2011-05-08.docx	Francesca Gino	
2nm 2011-05-08.docx	[redacted]	
PNAS paper		When participants completed the first part of the experiment (problem-solving task), the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments. • ***Tax form with experimenter 2*** • ***Paid by experimenter 2***

Exhibit 16
Maidstone Consulting Group Forensic Report for Allegation 4b

Maidstone Consulting Group
1874 Center Street, Boston MA 02132
P (617) 935-0048
E info@maidstonecg.com

MCG 0022 August 2022 DRAFT Assessment of Allegation 4b

SCOPE AND SUMMARY OF ANALYSIS

Review Initiation. This report was requested of Maidstone Consulting Group, LLC ["**MCG**"] by Harvard Business School ["**the client**"] for a forensic analysis of allegations of data manipulation within four papers associated with Dr. Francesca Gino. The current report focuses on one paper associated with Allegation 4.

Relevant Publications:
Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*")

Allegation 4: *The discussion in this document focuses on* ***Allegation 4b***
With respect to ***Study 1[1] in the 2012 PNAS Paper****:*

a) Dr. Gino falsified and/or fabricated the results by removing part of the description of study instructions to research participants from a draft of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. Such instructions pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.

b) Dr. Gino falsified and/or fabricated the datasets by altering a number of observations. In particular, when sorted by "experimental condition" and by "participant ID number," the dataset for Study 1 appears to include 1 duplicate observation and 8 observations where the "participant ID number" is out of sort. The out of sort observations substantially contribute to the significance of the hypothesized effects.

Report Organization. This document (**MCG 0022 August 2022 DRAFT Assessment of Allegation 4b**) outlines findings relative to Study 1 of the *2012 PNAS Paper*. The accompanying **"MCG0022_Allegation 4b_allData_analysis.xlsx"** includes step-by-step methods and data observations related to Allegation 4b.

[1] Study 1 corresponds to published Experiment 1 in the 2012 PNAS paper. This may be relevant to the panel's discussion of multiple research record files available for allegation 4.

The contents of this report are Privileged & Confidential/Attorney Work Product/Consulting Expert Report Pursuant to Fed. R. Civ.P. 26(b)(4)

I. Data Sources.

The following materials were utilized as data sources for this Report.

Distribution of 05.14.2022:

- **Tax Study STUDY 1 2010-07-13.xlsx**
- **Allegation 4b OSF data.xlsx**
  The data included in these files are identical, and represent the dataset found at https://osf.io/2ehzt/, herein "OSF data"
- **study1 data.sav** (SPSS file originally shared as part of the Allegation 4a materials)

Distribution of 05.26.2022:

Additional Files From Respondent's hard drive:

- **study1 data.sav**
- **syntax study 1.sps**

Raw files from [redacted] *records:*

- Emails and study material
  - **1.eml**
  - **17.eml**
  - **3.eml**
  - **Tax study design 2010-06-04.docx**
  - **TaxStudyForm - STUDY 2 (1).docx**
  - **matrix stimuli new - STUDY**
  - **TaxStudyForm - STUDY 2.docx**
- **Taxstudy07132010.xlsx**
- **Taxstudy07162010.xlsx**
- **Taxstudy07272010.xlsx**
  Where: **Taxstudy07132010.xlsx**, herein "13-Jul data", **Taxstudy07162010.xlsx**, herein "16-Jul data", **Taxstudy07272010.xlsx**, herein "27-Jul data", and together these three files are collectively referred to as the "Excel files."

Distribution of 08.06.2022:

Selected email exchanges retrieved from the Respondent's inbox, as per the Client's description of provenience.

1. ./2011-07-28 (37):
   i. Re further revised draft with the new analyses as discussed this morning.pdf
   ii. Re_ further revised draft (with the new analyses as discussed this morning).eml
2. ./2011-08-01 (39):
   i. RE stats question2.pdf
   ii. RE_ stats question2.eml
3. ./2018-08-07 (62):
   i. Re Replicating signing first .pdf
   ii. Re_ Replicating signing first .eml

II. Executive Summary.

Within the data files reviewed there appear to be multiple discrepancies in various areas of the original data source(s) ("***Excel Files***") provided by the client and public repository data associated with the 2012 PNAS Paper ("***OSF data***"). The discrepancies include alterations of data included and reported across all three "treatment areas": Condition 0 "No signature", Condition 1 "Signature at the top", and Condition 2 "Signature at the bottom". Furthermore, assessment areas of both "math puzzles reported" as well as "claimed deductions" for the three treatment conditions appear to be modified with directionality (e.g., comparative alterations appear to align with described theorized and resultant published behavioral modifications). Statistical analysis (SPSS provided script) of the data uploaded to the OSF site is consistent with the results reported in the 2012 PNAS Paper. Utilizing the same calculations for the Excel Files demonstrates that a) outcomes appear contrary to reported study effects and b) often have lower (or no) statistical significance.

ANALYSIS AND OBSERVATIONS

III. Data Analysis.

MCG analyzed data related to publicly available Study 1 (***OSF data*** from the site "Reducing Dishonesty – Replication(s)" https://osf.io/2ehzt/) in comparison to reported original data (***Excel files data***). According to the client, the ***Excel files*** were provided by the research assistant (**"RA"**) aiding with the study. The RA also provided multiple email communications with attachments, sent at the time of experimentation, which included Excel and Word files (cited above in ***I. Data Sources***). The Excel files attached to the correspondence provided by the RA appear to contain the same data as the ***Excel files*** mentioned above, and the dates of the correspondence appear to match with the date in the filename. Correspondence having same dates and content were also retrieved directly from Dr. Gino's inbox by the client. The ***Excel files*** data were described by the RA as sources of original data supporting the 2012 PNAS paper (***OSF data***); similarities and differences between the datasets are reviewed in additional detail below and demonstrated in the accompanying **MCG0022_Allegation 4b_allData_analysis.xlsx**.

Approach:

The ***Excel files*** included 17 input columns. All 17 input columns of the Excel files were found to correspond to similar OSF repository columns (see *OSF Data*, sheet, 28 columns). The ***OSF data*** included additional analysis columns (see *OSF data*, sheet Columns R-AB), and two additional sheets called *OSF Data Graphs Study 1* and *OSF Data Graph Study 2*. The additional analysis columns and sheets were not present in the Excel files provided by the RA.

MCG compared the data within the shared subset of input columns between the Excel Spreadsheets provided by the RA and the OSF data in the file **MCG0022_Allegation 4b_allData_analysis.xlsx**:

1. Data from the Excel files provided by the RA and OSF data were imported into a single Excel spreadsheet for ease of comparison. Please see sheets *OSF Data* and *13-Jul, 16-Jul, 27-Jul.*

2. Each dataset in cited above in **1.** was coded with a single color and combined in a table. See sheet *MCG_regrouping.*
   OSF Data (Green)
   13-Jul (Purple)
   16-Jul (Blue)
   27-Jul (Peach)
3. In the *MCG_regrouping* sheet, because the ***OSF*** and ***Excel files'*** data did not feature a single column that could be used to unambiguously identify a specific participant[2], multiple common columns were chosen for a 1:1 identification of the same subject between data sets. **Participant number**, **condition**, **major**, and **age** categories were used to cross-identify participants across datasets. Specifically:
   - The datasets were filtered by **condition**, and
   - single tables having an identical **major** were created;
   - the single tables were then sorted by **participant number** for additional comparison and analysis.
   - Where available, each entry was matched across the ***OSF data*** and the ***Excel files***.
   - A one-to-one comparison to identify cross-dataset inconsistencies was performed, and differences in specific values between aligned entries were colored in **RED**. It was noted every single 'student' and/or 'male' entry that featured a 2 in the ***Excel files***, had a value of 0 in the ***OSF data***. The participant IDs having a 'student' and/or 'male' value of 1 appear to have remained unaltered for these values. It was hence derived that the authors possibly applied a simple, potentially arbitrary rescaling/legend-switching before reporting of student/male data. For example, if 'male' gender was identified by the number 2 in the corresponding *Excel file*, it was instead identified by the number 0 in the ***OSF data***. These data were color-coded in **GREEN BOLD TEXT** when exported to the *All entries aligned across set* sheet. All other alterations were kept in **RED BOLD TEXT** when exported to the *All entries aligned across set* sheet.
   - All entries that were present in the ***OSF data*** but not in the ***Excel files*** provided by the RA or were not present in the ***OSF data*** but were present in the ***Excel files***, were copied in a sheet called *Data Excluded and Added*.
4. Where available, each entry was matched across the ***OSF data*** and ***Excel files***, see the *All entries aligned across sets* sheet. A column, U, titled 'modified?' was added to the sheet, and a value of 1 was assigned to each entry that showed a difference between ***Excel files*** and ***OSF data***. Only **RED BOLD TEXT** values were considered for this purpose. Using column U, it was possible to evaluate the incidence of reported response data having at least a single modification in a descriptive category for Study 1.
5. A subset of data in the ***27-Jul*** file (all data that *were not* present in the ***16-Jul*** file) also did not have a counterpart in the Study 1 ***OSF data***. By evaluating email exchanges (see files **12.eml**, **13.eml**, **14.eml**, **15.eml**, **4.eml**, **16.eml**, **5.eml**, **17.eml**[3]) it was determined these data were probably considered for Study 2/Experiment 2. Additionally, the ***13-Jul data*** file appeared to have a smaller subset of the ***OSF data*** that was also present in the ***16-Jul***

[2] For example, the '**participant number**' column had multiple representations of data, see *OSF Data* and *27-Jul* sheets noting the presence of two participants 49 and 13 in the *OSF data* set or multiple participant entries (e.g., see 1, 3, and 4) in the *27-Jul data* set.
[3] .pdf versions of these email files were provided to MCG by the client July 18, 2022.

data file. Hence, it was determined to use the ***16-Jul data*** file, containing all the identified counterparts to the ***OSF data***, as dataset for all additional Study 1 analysis.

6. By utilizing the equations found in the *OSF Data* sheet, Columns R-T, named OverReport, CheatOnMatrixTax, and Deductions, those outputs were also computed for the ***16-Jul data*** dataset, see Columns AT-AV in the *Summary Analysis Data* sheet. Specifically:
   - OverReport, is calculated by subtracting the number of solved matrixes, #ActuallyCorrect, from the reported matrixes solved, #B, Columns L and N for OSF data and AJ and AL for ***16-Jul data*** of the *Summary Analysis Data* sheet,
   - CheatOnMatrixTax is calculated assigning a 0 if OverReport is not > 0, or a 1 if it is, with the formula =IF("OverReport">0,1,0)
   - Deductions were calculated by summing Deduction 1 and 2, Columns R and S for OSF data and AP and AQ for ***16-Jul data*** of the *Summary Analysis Data* sheet.
7. All participants for whom corresponding values had been established within a condition were further analyzed by subtracting the numerical values reported in the ***OSF data*** and ***16-Jul*** datasets, see *All entries aligned across sets* sheet, for the participants' matches and the *Summary Analysis Data* sheet for the subtractions. The differences between the ***Excel files*** and ***OSF data*** were reported as a numerical value. 0=same. Relative differences were reported as increases (positive values) or decreases (negative values). For example, please see columns BA-BT on sheet *Summary Analysis Data*.
8. The differences between the ***Excel files*** and ***OSF data*** were reported as a visual heat map to demonstrate trends in apparent original vs. published data. Please see the *Summary Analysis Data* sheet, columns BA-BT. Increasing values, shades of RED color coding or decreasing values shades of BLUE color coding, comparatively. Using columns BA-BT, it was possible to further evaluate the incidence of reported response data having at least a single modification in a descriptive category for Study 1.
9. The SPSS file from Study 1 (**study1 data.sav** file) was also imported, see sheet *from Study 1 Data.sav*. Data from this file were compared with the ***OSF data*** and determined to be identical (e.g., *OSF data* appear to be the source value data for the SPSS statistical analysis reported in the 2012 PNAS paper, see *SPSS results – provided script* and *SPSS results – additional sheets*, left side analyses).
10. For the ***16-Jul data***, additional calculations for the cheating % were performed by applying the same calculations found in the *OSF data* sheet, columns R, S and T. The headings of the ***16-Jul data*** were then title matched with the ***OSF Data*** to allow for same code-based calculations, see sheet *16-Jul for SPSS*.
11. The **syntax Study 1.sps** script file was employed to calculate the results for both the ***OSF data*** as well as the ***16-Jul data***. The results were added to the sheet *SPSS results provided script*.
12. An additional set of analyses were performed to calculate the significance across groups. Specifically, in SPSS:

    Analyze -> General linear models -> Univariate, with the "overreport" and "deduction" columns as *Dependent Variable* and the "condition" column as *Fixed Factor*. The 'option' button was used, and the *Estimates of effect size* box selected. Selecting *continue* and *OK* completed the calculation.
13. The SPSS software output was exported and included as a sheet named *SPSS results - additional.*

14. A comparison and summary for the statistical analysis was included as the *Summary Analysis Statistics* sheet.

IV. Observations and Summary.

The three Excel files provided by the RA and described as source data for the publication (***OSF data***) appear to have commonalities and notable differences. As per the relationship between the Excel files, some of the Excel files have more data (e.g., ***27-Jul data***, see more discussion regarding these data below) and some files appear to have less data (e.g., ***13-Jul data***). The ***16-Jul data*** had the complete representation of the available Excel file data for Study 1/Experiment 1 evaluation (e.g., sections of the ***13-Jul*** and ***27-Jul data***) and was identified as the representative of the "Excel file" *original data* source for comparison to the ***OSF data***.

i. Comparing the *OSF data* (published) to the *16-Jul data* (original) characteristics:

- There is an absolute **difference (n) of 3** between the ***16-Jul data*** and the ***OSF data*** (e.g., n of participants is 98 and 101, respectively)
- Participant IDs 98 and 99 are missing in ***all Excel files*** and the ***OSF data***.
- Participant IDs 13 and 49 appear twice in the ***OSF data***;
  - The duplicated Participant 49 appears only in the ***OSF data*** (no underlying research record found in the Excel files)
  - The duplicated Participant 13 is found in the ***OSF data*** and the ***Excel files***
- Participant IDs 100 and 101 are only present in the ***OSF data*** (no underlying research record found in the Excel files)
- Participants IDs 7, 12, 51, 52, 64, 91 are present in both the ***OSF data*** and the ***Excel files*** but under different conditions.
- **61% of all reported response entries** that were successfully matched between the ***16-Jul data*** and the ***OSF data,*** **have been modified** in the ***OSF data*** as compared to the original data.
  - **9% of the modified reported responses above** contained miscalculations that were apparently corrected by the authors in the ***OSF data***. For example, see the 'Income minus tax' values P129/P130 in the ***All entries aligned across sets*** sheet, given income 13, and taxes 2.6, the correct value is 10.4, as reported in the ***OSF data*** P129, not 9.3 as in the original ***13-Jul data***.
  - **52% of reported responses contained entries that were modified** without apparent cause, see **Cell U360** in sheet *All entries aligned across sets*. Within each participant, the extent of further modification is explored in **ii.** below.

ii. Comparing the *OSF data* (published) to the *16-Jul data* (original), one by one comparison of results:

To aid data visualization and summarize the evaluation of the two data sets (***OSF*** vs ***Jul-16***) we provide a heatmap of the difference in scores by subtracting the Jul-16 score from the OSF score, see **MCG0022_Allegation 4b_allData_analysis.xlsx**, *Summary Analysis Data*

sheet for full analysis. Here, we are only comparing the values that were matched within specific conditions and excluded the 6 survey responses that were previously identified as having modified conditions. When inspecting the single survey responses entries, trends of modifications may not be readily discernable. However, when the additional calculations, and intermediate steps before plotting and statistical analysis are computed, a certain trends become apparent.

MCG Discussion, Condition 0

When considering Condition 0, the *no signature* condition, 16/31 survey responses (approximately 52%) appear to have been modified by increasing the rate of over-reporting of solved matrixes 1, and/or of participants who 'cheated' on the matrix task 2, and/or of deductions claimed 3 (see Condition 0 data table below). In some cases, all three reported outcome data areas were modified per participant.

Condition 0 data table, snapshot from **MCG0022_Allegation 4b_allData_analysis.xlsx**, *Summary Analysis Data sheet*

Participant ID	1 delta OverReport	2 delta CheatedOnMatrix Tax	3 delta Deductions
2	0	0	2
3	4	1	8
10	0	0	1
13	2	0	4
15	0	0	0
19	0	0	0
21	0	0	0
24	0	0	2
29	0	0	2
32	0	0	6
33	0	0	0
39	3	1	4
41	1	0	0
45	0	0	0
47	2	1	4
50	0	0	0
53	0	0	1
56	4	1	0
59	0	0	0
62	0	0	1
65	3	1	2
67	0	0	0
71	1	0	0
74	0	0	0
79	0	0	0
81	0	0	0
83	6	1	0
87	0	0	0
89	0	0	0

93	0	0	0
96	0	0	0

MCG Discussion, Condition 1.

When considering Condition 1, the *signature at the top* condition, 7/31 survey responses (approximately 26%) appear to have been modified by *decreasing* the rate of over-reporting of deductions claimed 3, and this appeared to be the case for the majority of the outcome data modified. One participant had two of the outcomes modified by decreasing the rate of over-reporting of solved matrixes 1, and/or of participants who 'cheated' on the matrix task 2 (Participant 63). One exception is the trends for Condition 1 data are represented by participant 1, who appears to have under-reported the number of matrixes solved. In this instance, the survey response was adjusted to report the correct number of matrixes had been claimed (e.g., the participant apparently underreported their performance, and this was modified to align the data as reported performance = actual performance).

Condition 1 data table, snapshot from **MCG0022_Allegation 4b_allData_analysis.xlsx**, *Summary Analysis Data sheet*

Participant ID	1 delta OverReport	2 delta CheatedOnMatrix Tax	3 delta Deductions
1	1	0	0
4	0	0	0
6	0	0	0
9	0	0	0
11	0	0	-2
14	0	0	0
16	0	0	0
20	0	0	0
23	0	0	-5
25	0	0	0
28	0	0	-8
31	0	0	0
35	0	0	0
37	0	0	0
40	0	0	-16
42	0	0	0
46	0	0	0
49	0	0	0
55	0	0	0
58	0	0	-4
61	0	0	0
63	-6	-1	0
68	0	0	-2
70	0	0	0
73	0	0	0
76	0	0	0

80	0	0	0
82	0	0	0
85	0	0	0
88	0	0	0
95	0	0	0

MCG Discussion, Condition 2.

When considering Condition 2, the *signature at the bottom* condition, 13/30 survey responses (approximately 43%) appear to have been modified by *increasing* the rate of over-reporting of deductions claimed **3**, and this appeared to be the case for the majority of the outcome data modified. Three participants had all three outcomes (**1, 2** and **3**) modified (Participants 34, 38 and 97) and one participant (8) had both over-reporting of solved matrixes **1** and deductions claimed **3** modified.

Condition 2 data table, snapshot from **MCG0022_Allegation 4b_allData_analysis.xlsx**, *Summary Analysis Data sheet*

Participant ID	**1** delta OverReport	**2** delta CheatedOnMatrix Tax	**3** delta Deductions
5	0	0	0
8	1	0	10
13	0	0	0
17	0	0	0
18	0	0	0
22	0	0	0
26	0	0	0
27	0	0	0
30	0	0	0
34	4	1	8
36	0	0	0
38	5	1	7
43	0	0	6
44	0	0	4
48	0	0	0
54	0	0	0
57	0	0	0
60	0	0	1
66	0	0	4
69	0	0	3
72	0	0	0
75	0	0	6
77	0	0	2
78	0	0	0
84	0	0	0
86	0	0	8
90	0	0	0
92	0	0	2
94	0	0	0
97	4	1	8

iii. **Comparing the *OSF data* (published) to the *16-Jul data* (original) quantitative trends and outcomes:**

The replication of the statistical assessment of the data relative to Study 1/Experiment 1 often shows lower (or no) statistical significance between various stated outcome groups when comparing results[4] obtained under the three conditions (for example, see *Summary Analysis Statistics* sheet, columns H and Table 1 and section **d.** below). It also shows different trends of means between the ***OSF data*** and the data from the ***Excel files*** when considering the percentage of cheating participants, the number of math puzzles over reported, the number of deductions claimed and the significance between conditions (for example, see *Summary Analysis Statistics* sheet, columns AG and AH for between condition statistical comparisons, and section **d.** below for discussion).

a. Evaluation of participants who cheated on matrix tax, Figure 1. and Table 1.

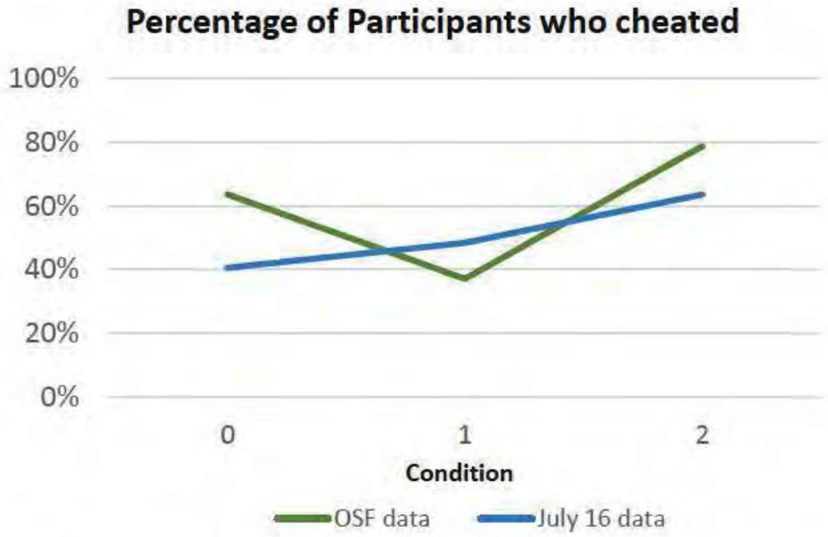

Figure 1. From *Summary Analysis Statistics* sheet. Differences across all conditions in the reported percentage of participants who cheated when comparing the published ***OSF data*** to the original ***16-Jul data***. "No Signature" = 0, "Signature at Top" = 1 "Signature at Bottom" = 2.

[4] 2012 PNAS paper, p. 15197, the authors describe "fewer cheated in the signature-at-the-top condition (37%) than in the signature-at-the-bottom and no-signature conditions (79 and 64%, respectively), $\chi 2(2, n = 101) = 12.58$, $P = 0.002$, with no differences between the latter two conditions ($P = 0.17$). It is not clear where the lack statistical significance calculation ($P = 0.17$) came from for the comparison between Conditions 2 (signature-at-the-bottom) and Condition 0 (no-signature) as these data appear to be directly associated with math puzzles overreported data. Please see the *Summary Analysis Statistics* sheet, Column W, where p=0.06 (***OSF data***), as also described on p.15199 of the 2012 PNAS.

Table 1. *Summary Analysis Statistics* sheet, participants and χ^2 snapshot of "participants who cheated"

		χ2		CheatedOnMatrixTax		
	N of participants	value	p	0	1	2
OSF data	101	12.58	0.002	64%	37%	79%
July 16 data	98	3.57	0.168	41%	48%	64%

While the published ***OSF data*** reported that the percentage of participants who cheated differed significantly across conditions, and significantly less if asked to sign at the top (Figure 1, **GREEN** trend line) the ***16-Jul data*** (Figure 1, **BLUE** trend line) do not appear to demonstrate similar trends with respect to the inter-condition differences. As an example, compare the ***OSF data*** line to the ***16-Jul data*** line between Conditions 0 and 1; the directionality is opposite. Additionally, the *overall* inter-condition trends are different (e.g., Condition 1< Condition 0 *and* 2 in ***OSF data*** where Condition 0< Condition 1< Condition 2 in ***16-Jul data***). Specifically, the 2012 PNAS paper ***OSF data*** described that fewer participants cheated in the signature-at-the-top condition (Condition 1, 37%) than in the signature-at-the-bottom (Condition 2) and no-signature (Condition 0) conditions (79 and 64%, respectively), where the ***16-Jul data*** appear to demonstrate that the no-signature condition (Condition 0) had the fewest participants cheating (41%) than either the signature-at-the-top (Condition 1, 48%) or signature-at-the-bottom (Condition 2, 64%) conditions. Furthermore, the significance between the resultant data per conditions appear reduced or absent in the ***16-Jul data*** in comparison to the published ***OSF data.***

This pattern of differences when comparing the ***OSF data*** to the ***16-Jul data*** in effect size between conditions and significance in reported results is found in other areas of the datasets as well. For example, in both Math puzzles overreported and Claimed deductions, the effects between conditions and significance of reported results are altered, and in many cases reduced or absent ***16-Jul data*** when compared to ***OSF data***, (see the *Summary Analysis Statistic sheet* for 'Math puzzles overreported' and 'Claimed deductions' sections, respectively.)

b. Number of math puzzles over reported, Figure 2 and Table 2.

In the 'OverReporting Math puzzles per Condition' the data trends are altered in that there appears to be more Math puzzles overreported for the "No signature" and the "signature at the bottom" conditions and less puzzles over reported for the "signature at the top" condition in the ***OSF data*** then the original ***16-Jul data***. Additionally, the overall values for all conditions are different between the two data sets.

Table 2. *Summary Analysis Statistics* sheet, Math puzzles overreported snapshot

	M			SD		
Condition	0	1	2	0	1	2
OSF data	2.52	0.77	3.94	3.12	1.44	4.07
July 16 data	1.41	1.36	3.18	2.99	2.18	4.25

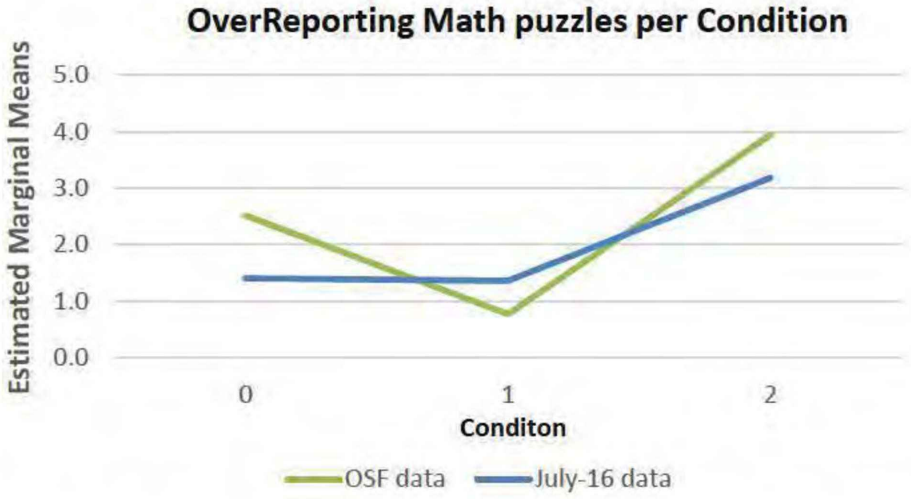

Figure 2. From *Summary Analysis Statistics* sheet. Differences across all conditions in the estimated marginal means of participants overreporting on math puzzles when comparing the published ***OSF data*** to the original ***16-Jul data***. "No Signature" = 0, "Signature at Top" = 1 "Signature at Bottom" = 2.

Figure 3. Example of Relative effects on Published Figure 1 Data. When comparing the ***OSF data*** to the ***16-Jul data*** in the calculated number of math puzzles solved (e.g., as a relative measure of honesty when comparing described reported data vs actual data), the trends for each Condition appear opposite; both in absolute values (inter-data set differences, for example compare **SOLID GREEN COLUMNS** to **SOLID BLUE COLUMNS**) and magnitude (intra-data set differences, for example compare **GREEN dashed trend line** to **BLUE**).

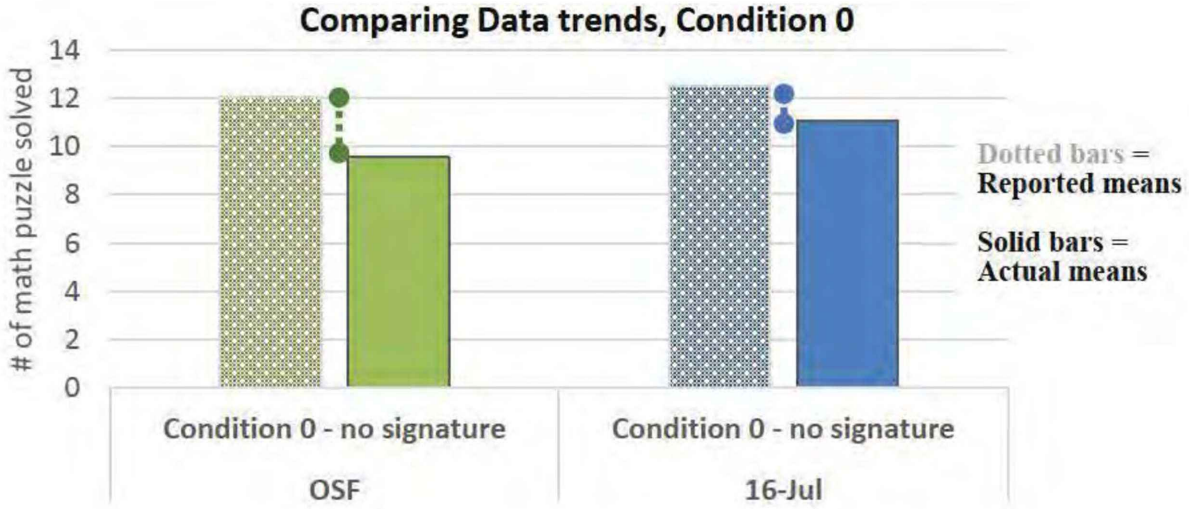

Figure 3. From *Summary Analysis Data* sheet. **Condition 0** "No Signature" data for ***OSF (left graphs)*** vs ***16-Jul (right graphs)*** data sets. Inter-data set differences: there are overall *a smaller* number of solved puzzle data included in the **OSF** than in the ***16-Jul data*** (# puzzles solved **OSF** < ***16-Jul data*** *for both* ***Actual*** *and* ***Reported*** *data*). Intra-data set differences: the difference between the Actual and Reported puzzles solved for the ***OSF data*** is *greater than* the difference between the Actual and Reported puzzles solved for the ***16-Jul data*** (△ "Actual vs Reported" ***OSF data*** > △ "Actual vs Reported" ***16-Jul data.***)

c. Number of deductions requested, Figure 4 and Table 4.

In the 'Claimed deductions per Condition', in addition to the overall values for all conditions being different (**Table 4.**, Means [M] and Standard deviations [S]), the trend for Conditions 1 ("Signature at the Top") and 2 ("Signature at the bottom") appear to be opposite in the original ***16-Jul data*** compared to the ***OSF data*** (**Figure 4.**)

Table 4. *Summary Analysis Statistics* sheet, Claimed Deductions snapshot

	M			SD		
Condition	0	1	2	0	1	2
OSF data	8.45	5.27	9.62	5.92	4.43	6.20
July 16 data	8.12	7.93	5.90	6.26	6.95	5.12

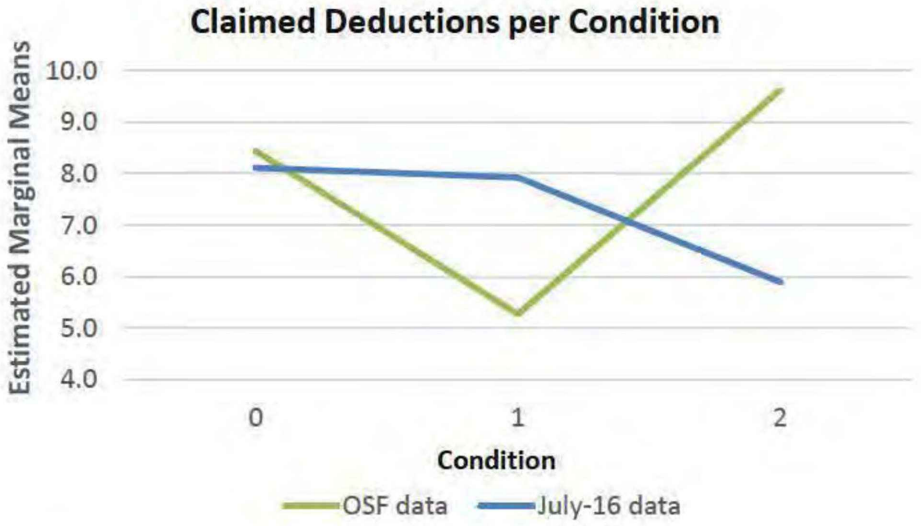

Figure 4. From *Summary Analysis Statistics* sheet. 'Claimed deductions' are higher for Condition 1 in the original ***16-Jul data*** vs the ***OSF data*** and lower for Condition 2 in the ***16-Jul data*** vs the ***OSF data***.

d. Other statistical inconsistencies:

Other instances of discrepancies between statistical results obtained with the ***OSF data*** and ***Excel data*** can be found in the table below:

Data tables, partial snapshot from **M0022_Allegation4b_allData_analysis.xlsx** *Summary Analysis Statistics sheet.*

Table 4. Additional statistical results

	Math puzzles overreported						Claimed deductions					
	between subjects effects			Between conditions effects			between subjects effects			Between conditions effects		
				p (LSD post hoc)						p (LSD post hoc)		
	F	η^2	p	0-1	1-2	0-2	F	η^2	p	0-1	1-2	0-2
Published data	9.21	0.16	<0.001	<0.05	<0.001	<0.07	5.63	0.10	<0.01	<0.05	<0.01	0.39
OSF data	9.21	0.16	0.0002	0.02	0.00004	0.06	5.63	0.10	0.005	0.02	0.002	0.39
July 16 data	3.33	0.07	0.04	0.96	0.03	0.03	1.31	0.03	0.27	0.90	0.18	0.15

As outlined above, the data as reported in the 2012 PNAS paper appear to align with the ***OSF data*** analyzed using SPSS software. However, when considering statistical significance, the F test analysis' p-value for both 'math puzzles overreported' and 'claimed deductions', appears to be higher in the ***Jul-16 data*** than in the ***OSF data*** (2012 PNAS), and higher than 0.05 for both (see "F" in Table 4, p column for "math puzzles over reported", 0.04 (***Jul-16***) compared to 0.0002 (**OSF**) and, p column for "claimed deductions", 0.27 (***Jul-16***) compared to 0.005 (**OSF**)).

Comparing calculated η^2, for both data sets, the OSF η^2 values align with the 2012 PNAS published data for both 'math puzzles over reported' and 'claimed deductions (see "F" in Table 4. η^2 columns for both 2012 PNAS and OSF; aligning values are 0.16 and 0.10, respectively). When the same η^2 calculations are completed for the ***Jul-16 data***, the resultant values appear decreased compared to their 2012 PNAS and OSF counterparts (see "F" in Table 4. η^2 column for "math puzzles over reported", 0.07 (***Jul-16***) compared to 0.16 (**OSF**) and, η^2 column for "claimed deductions", 0.03 (***Jul-16***) compared to 0.10 (**OSF**)).

To compute the significance between conditions, all post-hoc Anova significance algorithms were tested[5]. A match was found with the published results when using Fisher's Least Significant Difference (LSD) Test post-hoc on ***OSF data***. The same algorithm on the Qualtrics data shows lower significance (see **MCG0022_Allegation4b_allData_analysis.xlsx**, *SPSS results – additional* sheet). As evident from Table 4. the ***Jul-16 data*** show lower significance of the difference of effect between conditions (compare LSD post hoc analysis of ***Jul-16*** dataset to ***OSF data*** sets, respectively). Most importantly, the p values across conditions appear to be consistently above 0.05 for "Claimed deductions" as well as for the difference between conditions 0 and 1, "no signature" and "signature at the top condition" for "math puzzles over reported".

[5] As the post hoc analysis was not described by the authors in the 2012 PNAS paper, MCG reverse-engineered these resultant data by performing a series of post hoc analyses on the OSF data and identifying the resultant post hoc test p value that aligned with the published p value.

Summary of the Study 1/Experiment 1 *OSF data (published)* to the *16-Jul data (original)* data set comparisons:

The trend of the data alterations throughout the respective areas of the ***OSF data*** appears to align with the authors theorized projections published for Condition 1; that signing before self-reporting data appeared to be a more effective re-enforcement of "honest behavior" than signing afterward (Condition 2) or not signing at all (Condition 0).

- "math puzzles reported" as well as "claimed deductions" for the three treatment conditions appear to be modified with directionality (e.g., comparative alterations appear to align with described theorized and resultant published behavioral modifications.
- The Excel Files results show that a) outcomes appear contrary to published study effects and b) often have lower (or no) statistical significance.

Study 2/Experiment 2 Data Discussion. As described, a large section of the ***27-Jul data*** file was not reported in the ***OSF data*** (see, *All entries aligned across sets* sheet, Peach color-coded section at bottom). Apparent author discourse at/around the time of publication (see cited emails in **Approach** section **5.**) appear to suggest that these data were to be utilized for Study 2/Experiment 2; which would align with the Study identification on the OSF site (see the OSF site: https://osf.io/ew2ms - "Tax Study STUDY 2 2010-07-27.xlsx". However, initial review of these OSF data suggests at least some similar discussion points regarding the related research record as described for Tax Study 1 (e.g., potential duplication of Participant IDs, etc., please see *All entries aligned across sets* sheet, **SUBSET of *27-Jul data* Figure** at bottom the sheet for example).

Exhibit 17
Maidstone Consulting Group Forensic Report for Allegation 2

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MCG 0022 October 2022 DRAFT Assessment of Allegation 2

SCOPE AND SUMMARY OF ANALYSIS

Review Initiation. This report was requested of Maidstone Consulting Group, LLC ("**MCG**") by Harvard Business School ["**the client**"] for a forensic analysis of allegations of data manipulation within four papers associated with Dr. Francesca Gino. The current report focuses on one paper associated with Allegation 2.

Relevant Publications:
Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 ("*2015 PS Paper*")

Allegation 2:
Dr. Gino falsified and/or fabricated the datasets for ***Study 4 in the 2015 Psychological Science Paper*** by altering a number of observations. Notably, 20 observations substantially contribute to the significance of the hypothesized effects, and these same 20 observations presented an anomalous response pattern, in which study participants seemingly entered "Harvard" as their response to a question asking them to indicate "Year in School," in contrast to the vast majority of research participants who correctly answered this question.

Report Organization. This document (**MCG 0022 October 2022 DRAFT Assessment of Allegation 2.docx**) outlines findings relative to Study 4 (Experiment 4) of the *2015 PS Paper* which explored the effects of inauthenticity and cognitive dissonance. The accompanying **"MCG0022_Allegation 2_AllData.xlsx"** includes the complete calculations and summary findings discussed in the MCG ***Analysis and Observations*** section.

I. Data Sources.

The following materials were utilized as data sources for this Report.

1. Published materials:
   - a pdf copy of the published paper.
   - three files stored in the Open Science Foundation (OSF) repository The Moral Virtue of Authenticity[1] https://osf.io/sd76g/
     - **Materials_and_methods.docx**
     - **analyses_Experiment_4.sps**

[1] The files listed and associated with the current review were posted to the OSF site "The Moral Virtue of Authenticity", Francesca Gino, 2015-02-06.

The contents of this report are Privileged & Confidential/Attorney Work Product/Consulting Expert Report Pursuant to Fed. R. Civ.P. 26(b)(4)

- **data_Experiment_4.sav**; a copy of the source data uploaded to OSF, herein **"OSF data"**

2. Materials provided to MCG by the client (description as provided by client).

Distribution of 05.14.2022:

- **OSF file location.docx**; a file containing the location of files related to the study on the OSF website
- **SV_3n4LusSmSL8eqG1_Authenticity_-_2nd_R_R__cogn_dissonance__ONLINE.csv**; one of the original surveys downloaded directly from Qualtrics, herein "**ONLINE data**"
- **SV_eEdMBRDV26Sd0Fv_Authenticity_-_2nd_R_R__cogn_dissonance_.csv;** one of the original surveys downloaded directly from Qualtrics, herein "**CLER data**"

Distribution of 08.10.2022:

- **SV_3n4LusSmSL8eqG1_Authenticity_-_2nd_R_R__cogn_dissonance__ONLINE.pdf**; the questions related to the original ONLINE data survey, herein **"ONLINE questions**"
- **SV_eEdMBRDV26Sd0Fv_Authenticity_-_2nd_R_R__cogn_dissonance_.pdf**; the questions related to the original CLER data survey, herein "**CLER questions**"

Distribution of 08.08.2022:

- Folder named '**PS Experiment 4/**' containing:
  - **Authenticity__2nd_RR_cogn_dissonance_ONLINE.csv**
  - **Authenticity__2nd_RR_cogn_dissonance_ONLINE.zip**
  - **data_Authenticity__CD_online & CLER 2014-11-26.xls**
  - **data_Authenticity__CD_online & CLER.sav**
  - **data_Authenticity__CD_online 2014-11-26.xls**
  - **survey cogn dissonance study.pdf**

3. Materials provided to MCG by the client (data sequestered from Dr. Gino's computer)

Distribution of 05.18.2022:

- Folder named '**Data Referenced in 2.22.22 Respondent Memo to Committee/**', containing:
  - **analyses_Experiment_4.sps**
  - **data_Experiment_4.sav**

Distribution of 08.26.2022:

- Folder named '**Email Exchanges/**' containing Emails retrieved from Dr. Gino's HBS's email account. See **Appendix I** for full list of emails, and below for emails relevant to this report:

/2014-09-16-1 (12):

- **RE regarding my study proposed changes.pdf**
- **RE_ regarding my study_ proposed changes.eml**

/2014-09-16-2 (13):

- **RE regarding my study proposed changes2.pdf**

- **RE_ regarding my study_ proposed changes2.eml**

/2014-09-19 (15):

- **RE sessions.pdf**
- **RE_ sessions.eml**

II. *Executive Summary.*

There appears to be multiple study approaches employed asynchronously following initial participant recruitment and assessment which produced data sets that are related to the data published in the **2015 PS Paper**. However, while the data sets (**CLER** and **ONLINE data**) have some shared features, the data analyzed show other inconsistencies. Specifically:

1. Despite the fact that the two data sets are derived from distinct protocols, an amalgamation of these two resultant CLER and ONLINE data sets appear to be the source of a third data set (the **OSF data** set) published with the 2015 PS paper (see **section III.** below).
2. The number of participants published is lower than what appear to be acquired in the available Qualtrics surveys (see **Observations 2**).
3. Analysis of the datasets and associated files demonstrate:
    a. there were data points found in the **OSF data** set that were not found in either of these apparent source data files, the **CLER** and **ONLINE data**, (see Figure 1b below for an example, **Observations 3**),
    b. when the published **OSF data** (.sav) were exported in Excel and re-evaluated with the authors protocols, there is an example of resultant calculated data (average) published that do not appear to align with the source data that was calculated in the same way (e.g., published average ≠ source data average, see **Observations 1.** below for the results). It is not clear how this alteration was introduced into the data set,
    c. not all **CLER** and **ONLINE data** were sourced to create the **OSF data** set, and there were no clear inclusion and/or exclusion criteria applied for utilizing these data sources (see example Figure 1a. below and **MCG0022_Allegation 2_AllData.xlsx** sheet *All Added and Excluded*), and
    d. when a common data set was extrapolated from the **CLER** and **ONLINE data** (e.g., "**Qualtrics data**", n=530) using apparently completed survey data available from participants and compared to **OSF data** (.sav file, n=491) using the authors protocols (.sps file found in OSF), the statistical outcomes do not appear to align with what are reported. Additionally, the statistical outcomes, as derived from the "Qualtrics data" source data, appear to affect at least one of the authors published conclusions stated in the 2015 PS paper (see example Table 2. below, in **Observations 4**).

ANALYSIS AND OBSERVATIONS

III. Study Procedure, Analysis and Observations.

MCG reviewed the email exchanges, the published description of the study procedure and the original questions associated with Experiment 4 directly downloaded by the client from Qualtrics.

The provided email record appears to demonstrate that on 9/16/2014 Dr. Gino's correspondence with the IRB to modify the CLER study to recruit Harvard undergrads online ("email 1", see **RE regarding my study proposed changes2.pdf**). However, the original unmodified CLER study appears to have been kept going. On 9/18/2014, Dr. Gino emails the IRB again stating *"Well... finding undergraduates willing to come to the lab is proving difficult. I think I can use the sessions of Feb 26 to begging* [sic] *data collection for Study 2. For Study 2, I need Individuals between the ages of 18 and 30 Can you post sessions (all six of them) for Friday 9/26 for this second study? In the meanwhile I can explore ways to reach undergraduates."* ("email 2", see **RE sessions.pdf**)

Email exchanges (see **RE sessions.pdf**) appear to identify two different studies, a lab run study via **CLER**[2] (the HBS behavioral analysis lab) with a specific IRB approval, and a modified version of the study and the approval run completely online (**ONLINE**)[3] . The CLER and ONLINE studies are not identical. The CLER study happened in a lab equipped with computers able to access Qualtrics, and participants were told the study would last 45-60 minutes. The ONLINE study happened online via link and participants were told the study would last 10-15 minutes (To evaluate differences in protocol, see files **RE sessions.pdf; RE regarding my study proposed changes.pdf; RE regarding my study proposed changes2.pdf; RE IRB143048 Understanding authenticity copy.pdf; Re IRB143048 Understanding authenticity.pdf**).

When inspecting the **CLER data** file there appear to be participants' entries between 09/10/2014 and 09/26/2014 with the first actual (non test) participant contributions on 09/15/2014 (see *CLER data* sheet columns B and C; see also data entered in Row 5 for 09/15/2014 participant). Participants entries for the **ONLINE data** file appear to be between 09/22/2014 and 10/06/2014 (see columns StartDate and EndDate).

In addition to data set files, there were associated "questions" files specific to each study. Similarly, when inspecting the **CLER questions** and **ONLINE questions** files there appear to be specific differences between files (see red text on sheet *Questions_Comparison* in the **MCG0022_Allegation 2_AllData.xlsx** file columns Q, R, BW-DI showing questions included in the **ONLINE questions** file that are not found in the **CLER questions** file). Additionally, while the majority of the substantive survey questions appear to be unaltered until the BW column, a full additional set of questions related to job aspirations appear to have been included in the **ONLINE** survey. Such responses do not appear to have been used for Experiment 4 of the *2015 PS Paper*.

While it is unclear which other modifications (if any) between studies may have occurred, it is clear from comparison with the resultant **OSF data** file that the participant entries from both the **CLER** and **ONLINE** studies were combined and utilized for the *2015 PS Paper* (see, ***IV. Data Analysis*** for specifics).

[2] Also called 'Study 1' in the correspondences provided.
[3] Also called 'Study 2' in the correspondences provided.

IV. Data Analysis.

MCG comparatively analyzed data from three sources: publicly available Experiment 4 (**OSF data**) in comparison to reported original Qualtrics data sources (**ONLINE data** and **CLER data**); copies of which were provided to MCG by the client (distribution of 05.14.2022). According to the client the Qualtrics files' location was provided by the respondent and identified as the original/raw data file utilized for the *2015 PS Paper*.

In the remainder of this report, cited sheets and column detail are all found in the **MCG0022_Allegation 2_AllData.xlsx** file.

Approach:

The **CLER data** file included 69 input columns and the **ONLINE data** file included 109 input columns; see *CLER data* and *ONLINE data* sheets, respectively.

25 of the input columns in both the **CLER data** and **ONLINE data** files were found in the **OSF data.** The **OSF data** also included 5 analysis columns (columns Z to AD) that were not present in the **CLER** or **ONLINE data** files.

MCG ran three distinct sets of comparisons/analysis:

i. Re-calculation of the analysis columns (columns 26 [Z] to 30 [AD]) included in the **OSF dataset**
ii. Comparison of the **ONLINE** and **CLER data** with the **OSF** data to identify the full set of survey responses that appeared to align and potential survey responses that were altered/added and/or removed.
iii. Statistical analysis of the **ONLINE** and **CLER** data, and **OSF data,** to identify aligning and non-aligning data entries.

a. Repeat of OSF analysis

The **OSF data** file contained 5 analysis columns (see *OSF data* sheet, columns Z –AD). MCG re-ran the calculations for these columns to compare them with the results reported online. For consistency with the methodology utilized by the authors, the calculations were adapted from the authors' protocol file ***data_Authenticity_CD_online & CLER 2014-11-26.xls file***. Specifically, the following calculations were completed:

- av_products_clean =AVERAGE(scores assigned for cleaning products)
- av_products_neutral =AVERAGE(scores assigned for neutral products)
- self_alienation =AVERAGE(scores for self-alienation columns)
- amount_choice = score assigned to amount of choice
- cond_Num = the specific condition for that table

The *OSF Only analysis* sheet includes the calculations and results which are discussed below.

b. Comparison of OSF and Qualtrics files

Since the **Qualtrics data** (CLER and ONLINE) contained higher number of input columns, MCG compared the data within the shared subset of input columns between the **Qualtrics data** and the **OSF data** to determine which subset of values, if any, were utilized to compile the **OSF data**:

1. Data from both CLER, ONLINE, and OSF surveys were imported into a single Excel spreadsheet and their backgrounds color-coded for ease of comparison. Please see sheets
   OSF data,
   ONLINE data blue, and
   CLER data, .
2. With the aid of the pdf versions of the surveys' questions, the **ONLINE** and **CLER** answers relative to the three conditions reported on in Experiment 4 in the 2015 PS Paper were compiled: low choice counterattitudinal (Condition 0, low choice), high choice counterattitudinal (Condition 1, high choice), and high choice pro attitudinal (Condition 2, pro attitudinal)[4]. Specifically, each of the surveys had an essay to fill, the prompt stated: "I believe that Harvard College should include difficulty ratings in the Q guide because..." and depending on their randomly assigned conditions, participants were directed to answer an essay question which was also dependent on their response to an initial **yes**/**no** question (related to the addition of difficulty rating in the Q guide). When the responses were recorded into Qualtrics, each choice and condition were presented as different columns. The presence of an essay on a specific column allows for identification of participants in a specific condition. See Table 1 below for an example identification columns of participant/essay filled/condition for both **ONLINE** and **CLER data** sheets imported into Excel.

Table 1. Locations of essay responses in sheets *ONLINE data* and *CLER data*

In support?	Low choice	High choice	Pro-attitudinal
NO	X	AD	AI
YES	AN	AT	AY

   1. low choice, high choice, and proattitudinal participants were then grouped together:
      i. the Qualtrics surveys who featured essay responses in columns X and AN in both the **ONLINE** and **CLER** data sheets, were exported as raw data for the 'low choice' condition, see *Cond 0 – low choice* sheet,
      ii. the Qualtrics surveys who featured essay responses in columns AD and AT in both the **ONLINE** and **CLER** data sheets, were exported as raw data for the 'high choice' condition, see *Cond 1 – high choice* sheet,
      iii. the Qualtrics surveys who featured essay responses in columns AI and AY in both the **ONLINE** and **CLER** data sheets, were exported as raw data for the 'pro attitudinal' condition, see *Cond 2 – pro attitudinal* sheet
   2. columns which mirror the analysis completed for the OSF data were added to each of the sheets above (e.g., the averages for the 4 categories of "cleaning products ", "neutral products", "self alienation" and "choice"). Specifically, columns X-AB in Cond 0 - low choice, Cond 1 - high choice and Cond 2 – pro attitudinal sheets:

      av_products_clean =AVERAGE(I5,L5,M5,O5,R5)
      av_products_neutral =AVERAGE(J5,K5,N5,P5,Q5)

[4] Across the report, the paper, and the data: Condition 0 is also called no choice, low-choice, low choice, low-choice counterattitudinal, Condition 1 is also called high-choice, high choice, high-choice counterattitudinal, Condition 2 is also called pro-attitudinal, proAttitudinal.

self_alienation	=AVERAGE(S5,T5,U5,V5)
amount_choice	=W5
cond_Num	=the specific condition for that table

3. The *not filled the survey* sheet included all Qualtrics surveys in where none of the essay columns above were complete.

3. Since no single column could be used to identify a single subject across datasets, and no participant numbers were included, all columns were used to match data across datasets (see Cond 0 - low choice, Cond 1 - high choice, and Cond 2 – pro attitudinal sheets for the step-by-step calculations described). Recursive sorting and comparisons were used to identify surveys that had all identical scores. Values were then subtracted between the Qualtrics (**CLER** and **ONLINE** data combined per condition) and the OSF data to identify matches. Text values were matched using the =IF(CLEAN(TRIM('text1'))=CLEAN(TRIM('text2')),"Match","Not a match") function. For two of the columns data reassignment appeared to occur between Qualtrics and OSF.
   1. All values of 2 in the 'male', became 0 in OSF and all 2 of '...In favor...', became 0 in OSF. These alterations appeared to be an arbitrary reassignment and were considered as such.
   2. In two specific cases the entry 'college_student' was edited. Given that every other entry matched, we conservatively considered them as a possible match (please see Cond 0 - low choice (Column BN) and Cond 2 – pro attitudinal sheets, (Column BM)).
4. When no match was immediately identified, all other entries, within the same condition and same age, were tested.
5. For each condition, the entries that did not have a match were copied aside for further analysis.
6. For each condition, five subgroups were created:
   a. A subgroup of entries that were a complete match between **ONLINE** and **OSF data**,
   b. A subgroup of entries that were a complete match between **CLER** and **OSF data**,
   c. A subgroup of entries that only belonged to **OSF data** and had no match in either of the **ONLINE** or **CLER data**,
   d. A subgroup of entries that only belonged to **ONLINE data** and could not be found in **OSF data**; entries that were part of the ONLINE surveys but appeared to be test participants that were excluded from the OSF analysis and data set, and
   e. A subgroup of entries that only belonged to **CLER data** and could not be found in **OSF data**; entries that were part of the CLER surveys but appeared to be test participants that were excluded from the OSF analysis and data set.
7. The five subgroups a.-e. were added to a table, and an additional column applying a randomization factor around the value of the specific condition to spread the values on the x axis and allow for better data visualization. The values were plotted for comparison.
8. All the responses belonging to subgroups (of 6c., d., and e. above) were pasted into an additional sheet named *All added and Excluded* sheet. Specifically, the data that can be found in this sheet are:
   1. Rows 2-28, data present in **OSF data** that could not be found in **Qualtrics** surveys
   2. Rows 32-98, surveys found in **Qualtrics** surveys that did not have a match in OSF data.

9. All survey responses with filled essays from both **ONLINE** and **CLER data** were combined together, and the column names edited to match the corresponding OSF column(s), see *Qualtrics data for SPSS* sheet (n=530).
10. To explore the inclusion and exclusion criteria that the authors may have applied to the combined Qualtrics data sets, the data included in the column titled *finished = false* present in both the **CLER** and **ONLINE data** were evaluated, see sheet *finished = false* and see sheet *All added and Excluded* sheet Rows 105-116 for examples. These participants apparently had 'false' in the 'finished' column and are examples of participants who appear to have completed the relevant portion of the survey, but did not complete all the survey, see Column D to see examples of participants with 'false' that were included, and other that were excluded.
    1. An additional review tested for potential exclusion criteria that would explain data filtering from the Qualtrics data sets and showed the presence of a subset of participant data that appear multiple times. Examples of these duplications are included in the *All added and Excluded* sheet Rows 120-136, see Column D for examples of participants who filled the survey twice and were considered twice, as well as participants who filled the survey twice but were considered once.

SPSS analyses

11. The **CLER** and **ONLINE** data surveys that met the following characteristics were copied into an additional sheet called *Qualtrics data for SPSS*:
    Inclusion criteria 1: Had the essay question filled
    Inclusion criteria 2: Was not a test (see rows 2-6 *CLER data* sheet)
12. The name of columns in the *Qualtrics data for SPSS* sheet was renamed to match the **OSF** column identification. The additional analysis columns present in the **OSF** dataset were also calculated for the **CLER** and **ONLINE** data and added to the sheet.
13. The values from the *OSF* and *Qualtrics data for SPSS* sheets were imported into IBM SPSS Statistics software, and the 'Analyses_Experiment_4.sps' list of algorithms was applied. Please see the *SPSS Results* sheet,
14. Results for av_products_clean, av_products_neutral, self_alienation, and amount_choice data were compared for the two data sets, see the *Statistical Analysis* sheet.
15. The SPSS software output was exported and included as a sheet named *SPSS results.*
16. A comparison and summary for the statistical analysis for the two data sets were included as the *Assessment of Statistics* sheet.

Observations.

1. Repeat of OSF analysis

When re-analyzing the 4 averaged analysis columns present in the **OSF data,** inconsistencies in the reported outcomes for the data in the 2015 PS paper became apparent (see *OSF Only analysis* sheet, columns AN and AP specifically for examples of differences in the "cleaning products" and "self alienation data"). The differences between the reported data and the calculated data are highlighted by heatmapping, where light to dark **RED color** cells indicate where the reported OSF data in the 2015 PS paper are respectively *increased* when compared

to the calculated data, and light to dark **BLUE color** cells indicate where reported OSF data that are respectively *decreased* when compared to the calculated OSF data. Edits in both directions appear to have been made for all Conditions (0, 1 and 2). However, when rounding the av_products_clean and the self_alientation columns (see *OSF Only analysis* sheet, columns AB and AX), the values appear to match *with exception of one value* for Condition 2 in the av_products_clean column, where the value is lowered by 2.6 (rounded up to 3) in the reported OSF data (see *OSF Only analysis* sheet, columns BD).

2. **Number of participants**

From p.991 of the *2015 PS Paper*:

> *"Four hundred ninety-one college students (mean age = 20.42 years, SD = 1.90; 43% male) from Harvard University participated in the study in return for a $10 Amazon gift card. Fifty-four additional students started the study, but dropped out after reading the initial instructions and before the manipulation took place; their data were thus not recorded. We calculated our target sample size using an estimated effect size, f, of 0.15, which would require a sample size of approximately 490 participants for the study to be powered at 85%. We recruited 550 participants, knowing—from prior experience running online studies with this population— that about 10% to 15% of them likely would not complete the study after reading the initial instructions. We randomly assigned participants to one of three conditions: high-choice, counterattitudinal; low-choice, counterattitudinal; or high-choice, proattitudinal."*

According to the published paper, there were 550 total recruited participants, where 545 total were enrolled. The final value of participants was 491 as it was described that 54 participants didn't finish.

An alignment with the **Qualtrics data** was run by counting the number of participants who did not complete the survey and were not assigned a condition/did not complete the essay writing task. As two of the ONLINE participants did not fill the essay but did fill the scores, for completeness, MCG checked if they were part of the data utilized for OSF, and they did not appear to be.

Hence, when looking at the available Qualtrics surveys it appears that:

a. The **ONLINE data** set included 656 total entries, 202 apparently did not finish (see *not filled the survey* sheet)
b. The **CLER data** set included 84 total entries, 3 apparently did not fill the survey, and 5 additional entries were finished but excluded from additional analysis as "tests".

In Summary it appears that of the total recruited participants, at least as they appear to be acquired in the available Qualtrics surveys, following those that were excluded as "tests", there were 735 instead of the reported 545 in the OSF data (and the 2015 PS paper). A total of 205 participants apparently did not finish the survey and were removed, instead of the reported 54 in the OSF data (and the 2015 PS paper).

3. **Identifying Differences between Qualtrics data and OSF data**

By employing the methodology described above it was possible to subdivide the dataset into subgroups (see the *Data Entry Summary Analysis* sheet). Specifically:

1- The survey scores from **ONLINE data** that matched the **OSF data** (N = 391, see column Y, cell Y563)
2- The survey scores from **CLER data** that matched the **OSF data** (N = 75, see column Z, cell Z563)
3- The survey scores from the **OSF data** with no exact match in Qualtrics (N = 25, see column AA, cell AA563)
4- The survey scores from **ONLINE data** that had no match in OSF (N = 61, see column AB, cell AB563)
5- The survey scores from **CLER data** that had no match in OSF (N = 3, see column AC, cell AC563)

Figure 1 shows a score data plot that outlines the data apparently absent in the **OSF data** that were present in the identified source data (**CLER** and **ONLINE data** sets.) Furthermore, there are data present in the **OSF data** that are not found in either the **CLER** or **ONLINE data**. As the different Qualtrics datasets were identified as the source data it is not clear where the additional data present in the OSF data derive from, and the rationale (or description) of the excluded data points from the source data (**CLER** and **ONLINE data**) are equally unknown.

If one were to define "lower scale" data as ≤ 3.5 on scale of 1-7 and "higher scale" data as > 3.5, as shown in the Figure1a, it would appear that as the data transitioned from "source" to "published" data (see blue and yellow data points) higher scale response data available in "source" data were absent in the "published" data. While in Figure 1b "published" there are data that don't seem to derive from the available research record (**GREEN** data points, n=25 total data points were identified):

- higher scale response data were added to conditions 0 and 1, and
- lower scale response data were added for condition 2

In some cases, there appears to be some trends in data modifications which may align with anticipated outcomes, the data apparently added into, and removed from, the published data track with anticipated outcome for the Condition (lower desire for cleanliness in the pro attitudinal group of Condition 2). For example, for Condition 2; nine "lower scale" data points [≤ 3.5 on scale of 1-7] added and additional "higher scale" data [> 3.5] removed, see *Data Entry Summary Analysis* sheet for complete details. While these modifications do not seem to have an impact on the directionality of the data with respect to the authors anticipated outcomes, and this is across all categories and all conditions, the modifications of the data appear to have an impact in at least one area of the authors outcomes discussed in the **2015 PS paper** (see below).

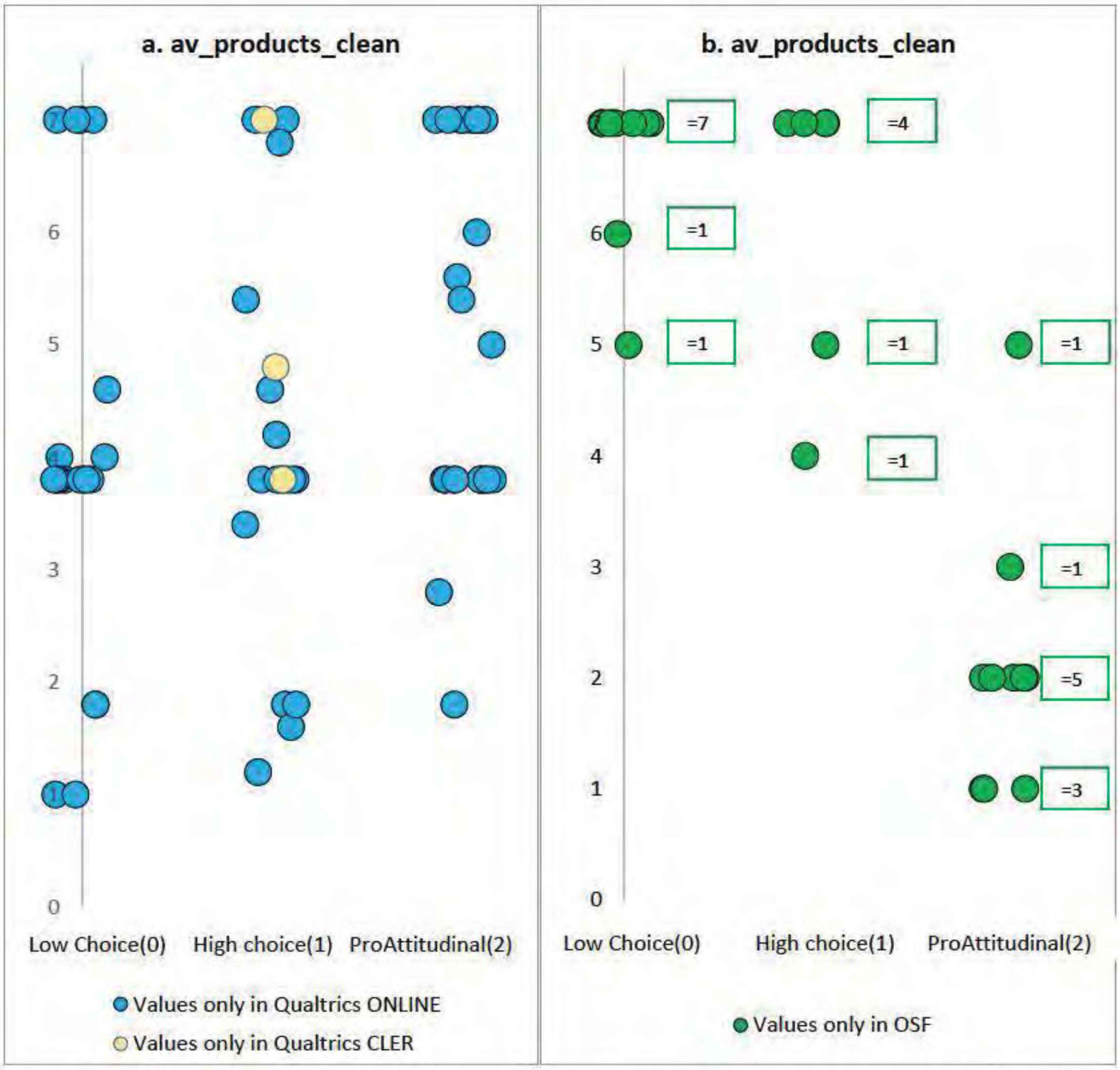

Figure 1. "cleaning products". **a.** Visualization of the trend of data found only in CLER (YELLOW) or ONLINE (BLUE) data and absent from the published OSF data. Applying a randomization factor around the axis of the specific condition to spread the values on the x axis and allow for better data visualization of the scale points added (or absent) per data set. **b.** Data found only in the OSF data and absent in the CLER and/or ONLINE data in GREEN (source unknown) are demonstrated to evaluate possible trends per Condition.

An additional check was conducted to evaluate if the irregularities were to be attributed to surveys having 'harvard' (or 'Harvard') as an entry on the 'yearSchool' column (see *OSF data sheet*, Column H where there were 20 instances where participants wrote 'harvard' as school year). A search through the **ONLINE data** pointed at 24 instances where participants apparently wrote 'harvard' as school year (see *ONLINE data sheet*, Column W). The 24 participants who wrote 'harvard' as school year in the *ONLINE data sheet* did not correspond exactly with those in the *OSF data sheet* (e.g., 8 of the OSF entries used in the paper ≠ ONLINE entries for 'harvard'). However, the rationale for inclusion or exclusion of value data in the **OSF data** set did not appear to be reliant on this category.

4. Assessing Differences between Qualtrics and OSF data

According to p.992 of the 2015 PS Paper:

*"**Manipulation check: self-alienation.** A one-way ANOVA using self-alienation as the dependent measure revealed a main effect of condition, $F(2, 487) = 21.14$, $p < .001$, $\eta_p^2 = .08$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported lower self- alienation in the proattitudinal condition ($M = 1.88$, $SD = 0.87$) than in both the high-choice, counterattitudinal condition ($M = 2.56$, $SD = 1.31$; $p < .001$) and the low-choice, counterattitudinal condition ($M = 2.70$, $SD = 1.40$; $p < .001$). Participants reported the same perceived self-alienation in the two counterattitudinal conditions ($p = .94$).*

***Perceived choice.** A one-way ANOVA using perceived amount of choice as the dependent measure revealed a main effect of condition, $F(2, 487) = 62.35$, $p < .001$, $\eta_p^2 = .20$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported lower perceived choice in the low-choice, counterattitudinal condition ($M = 2.85$, $SD = 1.98$) than in the high-choice, counterattitudinal condition ($M = 3.63$, $SD = 2.16$; $p = .001$) and in the proattitudinal condition ($M = 5.24$, $SD = 1.78$; $p < .001$). Perceived choice was higher in the proattitudinal condition than it was in the high-choice, counterattitudinal condition ($p < .001$).*

***Desirability of cleansing products.** A one-way ANOVA using participants' desirability ratings of cleansing products as the dependent measure revealed a main effect of condition, $F(2, 487) = 8.24$, $p < .001$, $\eta_p^2 = .033$. Pairwise comparisons (with Bonferroni adjustment) revealed that participants reported less desire for cleansing products in the proattitudinal condition ($M = 3.72$, $SD = 1.33$) than in both the high-choice, counterattitudinal condition ($M = 4.18$, $SD = 1.51$; $p = .012$) and the low-choice, counterattitudinal condition ($M = 4.34$, $SD = 1.44$; $p < .001$). Desirability ratings of cleansing products did not differ between the latter two conditions ($p = .94$). There were no differences across conditions in desirability ratings of the non-cleansing products, $F(2, 487) = 1.21$, $p = .30$, $\eta_p^2 = .005$."*

The replication of the statistical assessment of the data relative to Experiment 4 shows lower statistical significance between samples when comparing results obtained under the three conditions, however, general statistical trends appear to be retained for 3 of the 4 categories (see *Statistical Analysis* sheet).

Table 2. Desirability of cleaning products

	Average and Standard Deviation						p between conditions (Bonferroni[5])		
	ProAttitudinal		high choice		low-choice		proAttitutinal vs lowChoice	proAttitutinal vs highChoice	low-high
	M	SD	M	SD	M	SD			
Results reported (N=491)	3.72	1.33	4.18	1.51	4.34	1.44	<0.001	0.012	0.94
Results obtained OSF (N=490[6])	3.72 (N=161)	1.33	4.18 (N=161)	1.51	4.34 (N=168)	1.44	0.0003003	0.012	0.94
Combined Qualtrics sets (N=529[7])	4.03 (N=176)	1.40	4.11 (N=175)	1.51	4.19 (N=178)	1.42	0.8661559	1.000	1.00

However, as seen in Table 2, the modifications of the data set appear to have an impact on the authors assessments of the experimental outcomes for "desired cleanliness". During the discussion the authors conclude that "When participants wrote essays that were not consistent with their internal beliefs, regardless of choice, they showed a greater desire for cleanliness." However, when comparing the OSF to the Qualtrics data source(s), there does not appear to be any significantly greater desire for cleanliness regardless of the essay type either (e.g., see proAttitutinal vs lowChoice and proAttitutinal vs highChoice conditional comparisons, p=0.87 and p=1, respectively).

Additional observations for consideration

When evaluating significance between conditions for the desirability of neutral products, the differences, not reported in the paper, appear to be non-significant for both OSF and the Qualtrics dataset (see *Statistical Analysis* sheet, DESIRABILITY OF NEUTRAL PRODUCTS Table).

A number of additional tests to try to account for the non-reported values were run, see the *All Added and Excluded* sheet. When looking at the option that exclusions could be based on the column 'finished' having a '**false**' value, it was found that some surveys with '**false**' were utilized in the OSF dataset. When considering the option of participants having filled the survey more than once being either excluded from the study or considered only once, it was found that multiple participants appeared to have filled the survey more than once and were considered multiple times, see the *All Added and Excluded* sheet for examples.

During email exchanges on/around Sept. 18, 2014 Dr. Gino described the need to recruit participants between the ages of 18-30 (see email **RE sessions.pdf**). When evaluating the OSF data there were participants aged 36 and aged 17 included in the published data and therefore,

[5] https://www.ibm.com/support/pages/calculation-bonferroni-adjusted-p-values
[6] One value excluded as invalid because of listwise deletion based on all variables in the procedure (see SPSS result sheet).
[7] Same as footnote 6.

the analysis of the Qualtrics data sets did not apply this described (and apparently not utilized) inclusion/exclusion criteria.

5. ***"Harvard" data***

As described, the data included (or not) in this category did not appear to align across the data sets; 12 of the participants who wrote 'harvard' as school year in the **ONLINE data** sheet appeared to correspond with participants included in the **OSF data** sheet (3 for condition 0, 8 for condition 1, 1 for condition 2). However, as reviewed, the rationale for inclusion or exclusion of value data in the OSF data did not appear to be reliant on this category (or any specific category or grouping, see **Observations 3.**) Additionally, inclusion (or exclusion) of "Harvard" entries does not appear to alter the age of included participants in the **OSF data** set (see **MCG0022_Allegation 2_AllData.xlsx**, *OSF data – 'harvard'* sheet columns AK-AN) even if in some cases there is an impact on the statistical significance (see **MCG0022_Allegation 2_AllData.xlsx**, *Statistical Analysis* sheet **YELLOW CELLS**). However, given that these data already appear to represent a data set that do not align with source files and the research record (e.g., OSF vs Qualtrics Data), it is difficult to determine what impact (if any) participant data associated with this category have on the overall study and its reported outcomes.

IV. Summary.

There appears to be inconsistencies within the available data sets related to the data published in the 2015 PS paper. Multiple study approaches, modified in progress, resulted in the production of two different data sets (e.g., as related to CLER and ONLINE data sets) which may confound the assessments published in the 2015 PS paper. Furthermore, there appears to be additional value modifications as well as addition and removal of data within these data sets that have an impact on the authors conclusionary statements regarding Experiment 4. The rationale for the modifications within the data as they transition from the apparent research record into the published record were less clear (e.g., the modifications, while having some directionality, did not appear to align completely with authors hypothesized outcomes). However, the modifications did have an impact on at least one aspect of the authors' conclusions of the study; there do not appear to be any statistically significant differences regarding the desire for cleanliness associated with choice and internal beliefs based on the calculations of the available research record.

Appendix I

Folder named '**Email Exchanges/**', containing:

i. ./2014-01-30 (01):
Re Psych Science revision.pdf
Re_ Psych Science revision.eml

ii. ./2014-05-12 (02):
RE Psych Science Revision2.pdf
RE_ Psych Science Revision2.eml

iii. ./2014-06-30 (03):
RE Psych Science Revision3.pdf
RE_ Psych Science Revision3.eml

iv. ./2014-08-10 (04):
Responses to editorial letter 2014-08-10.docx
Responses to editorial letter 2014-08-10.eml
Responses to editorial letter 20140810.pdf

v. ./2014-08-11 (05):
Re Responses to editorial letter 20140810.pdf
Re_ Responses to editorial letter 2014-08-10.eml

vi. ./2014-08-18 (06):
Re[redacted] is right.pdf
Re_[redacted] is right....eml

vii. ./2014-09-08 (07):
The IRB review of IRB14-3048 has been completed.eml
The IRB review of IRB143048 has been completed.pdf

viii. ./2014-09-09 (08):
Re IRB143048 Understanding authenticity.pdf
Re_ IRB14-3048 _ Understanding authenticity.eml
study_info_lab authenticity.doc

ix. ./2014-09-10-1 (09):
RE IRB143048 Understanding authenticity.pdf
RE_ IRB14-3048 _ Understanding authenticity.eml

x. ./2014-09-10-2 (10):
RE almost ready to run.pdf RE_ almost ready to run.eml

xi. ./2014-09-10-3 (11):
Re testing.pdf Re_ testing.eml

xii. ./2014-09-16-1 (12):
RE regarding my study proposed changes.pdf
RE_ regarding my study_ proposed changes.eml

xiii. ./2014-09-16-2 (13):
RE regarding my study proposed changes2.pdf
RE_ regarding my study_ proposed changes2.eml

xiv. ./2014-09-16-3 (14):
RE quick question2.pdf
RE_ quick question2.eml

xv. ./2014-09-19 (15):
RE sessions.pdf
RE_ sessions.eml
xvi. ./2014-09-27 (16):
Online Study Payment.eml
Online Study Payment.pdf
xvii. ./2014-11-11 (17):
RE quick question .pdf
RE_ quick question .eml
xviii. ./2014-11-27 (18):
Responses to editorial letter 2014-11-26.docx
Responses to editorial letter 2014-11-26.eml
Responses to editorial letter 20141126.pdf
xix. ./2014-11-30 (19):
Morality and Authenticity PS revision 2014-11-28 MK.docx
paper and letter.eml
paper and letter.pdf
xx. ./2015-01-14 (20):
Attached standard file Open-Practices-Disclosure-v4-final.docx
FW Psychological Science Decision on Manuscript ID PSCI130989R3.pdf
FW_ Psychological Science - Decision on Manuscript ID PSCI-13-0989.eml
xxi. ./2015-02-09 (21):
RE Psychological Science PSCI130989R3.pdf
RE_ Psychological Science PSCI-13-0989.eml

Emails retrieved from Dr. Gino's HBS's email account.

Exhibit 18
Notice of revised Allegations 1, 2, 4a and 4b sent to Respondent on October 21, 2022

HARVARD | BUSINESS | SCHOOL

ALAIN BONACOSSA
RESEARCH INTEGRITY OFFICER

Confidential

October 21, 2022

RE: Notice of Change of Allegations Related to Allegations of Research Misconduct

Dear Professor Gino,

As stated in a letter to you dated April 15, 2022, Harvard Business School ("HBS") is conducting an investigation into allegations of research misconduct concerning the following publications:

> Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 ("*2020 JPSP Paper*")
>
> Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 ("*2015 Psychological Science Paper*")
>
> Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 ("*2014 Psychological Science Paper*")
>
> Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*")

We are writing to inform you that the language of the following allegations of research misconduct currently under investigation has been modified slightly to clarify their focus, based on the evidence that has been analyzed during the regular course of the investigation. The new wording is as follows:

Allegation 1:

Dr. Gino falsified and/or fabricated the dataset for ***Study 3a in the 2020 JPSP Paper*** by altering observations to affect the findings of the study in the hypothesized direction.

Allegation 2:

Dr. Gino falsified and/or fabricated portions of the dataset for ***Study 4 in the 2015 Psychological Science Paper*** by altering, adding, or deleting a number of observations. These changes resulted in significant effects supporting the hypotheses, as reported in the published paper. Analyses of the original Qualtrics data do not support the hypotheses.

Allegation 4:

With respect to ***Study 1 in the 2012 PNAS Paper***:

a) Dr. Gino falsified and/or fabricated the results by removing or altering parts of the descriptions of study procedures from drafts of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. The original procedure descriptions (subsequently removed or altered by Dr. Gino) pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results.

b) Dr. Gino falsified and/or fabricated the original dataset by altering a number of observations in a way that favored the hypothesized results

No additional evidence or records are requested by the Investigation Committee at this time. Should you have any questions about this notice, please do not hesitate to reach out to me at [redacted] or [redacted].

Sincerely,
Alain Bonacossa

Exhibit 19
Maidstone Consulting Group Forensic Report for Allegation 3

Maidstone Consulting Group
1874 Center Street, Boston MA 02132
P (617) 935-0048
E info@maidstonecg.com

MCG 0022 July 2022 Assessment Report of Allegation 3

SCOPE AND SUMMARY OF ANALYSIS

Review Initiation. This report was requested of Maidstone Consulting Group, LLC ("**MCG**") by Harvard Business School ["**the client**"] for a forensic analysis of allegations of data manipulation within four papers associated with Dr. Francesca Gino. The current report focuses on one paper associated with Allegation 3.

Relevant Publications:
Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 ("*2014 Psychological Science Paper*")

Allegation 3:
Dr. Gino falsified and/or fabricated the datasets for ***Study 4[1] in the 2014 Psychological Science Paper*** by altering a number of observations. In particular, when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found, it appears there are 13 observations out of sort within the cheating condition. These observations substantially contribute to the significance of the hypothesized effects. When these observations are corrected with the values implied by the sort, the effect in the expected direction is no longer significant (from p=.0003 to p >.17)

Report Organization. This document (**MCG 0022 October 2022 Allegation 3 Assessment Report.docx**) outlines findings relative to Study 4 of the *2014 PS Paper*. The accompanying **"MCG0022_Allegation 3_allData_analysis.xlsx"** includes the complete calculations and summary findings discussed in the MCG ***Analysis and Observations*** section.

I. Data Sources.

The following materials were utilized as data sources for this Report:

1. Published materials:
   - a pdf copy of the published paper.

2. Materials provided to MCG by the client (description as provided by client):
   - *Data Referenced in 2.22.22 Respondent Memo to Committee,* folder containing:
     i. data CCTRBC SB 2012-11-18c.xls
     ii. data study5B 2013-11-23.sav
     iii. data DAC Study_4 PS.sav

[1] Experiment 4 in the ***2014 Psychological Science Paper.***

The contents of this report are Privileged & Confidential/Attorney Work Product/Consulting Expert Report Pursuant to Fed. R. Civ.P. 26(b)(4)

iv. survey CCTRBC study5B.pdf
v. data study4 PS 2014-04-17.xls

- Email exchanges, a folder containing numerous correspondences potentially related to the paper in question.

II. Executive Summary.

The analysis of files provided in relation to Allegation 3 demonstrated an apparent series of manipulations to a dataset prior to its publication as Experiment 4 in the 2014 Psychological Science Paper:

- In the earliest version of source documentation available, a series of data, which were already color coded by an unknown individual, demonstrate manual alterations of data points that ultimately appear in the dataset that Dr. Gino expressly states is the basis for the research.
- Re-calculating statistical results with the unchanged values lowered significance of many entries and flipped the trend for the RAT_perf final score.
- Both the earliest version and the latest version of the data available for review were created in 2012 by Dr. Gino, and last saved by Dr. Gino, according to their Excel properties.

However, not having access to the raw file it is impossible to determine if more modifications and edits occurred prior to the earliest version of the data currently available.

Additionally, when evaluating the dataset identified by Dr. Gino as the file representing experimentation published, the values and calculations for the beta published values reported and discussed in the paper's 'Results and discussion' for Experiment 4 (p.977), are not present in any of the source data files available and could not be reproduced. Specifically, it is unknown which columns include the calculations and data in which 'participants' caring about rules' are included in the equation to estimate beta as well as which columns include the calculations and results related to the statement 'and such feeling predicted creative performance ($\beta = -0.18$, $p = .017$; 95% bias-corrected CI = [0.02, 0.29])'.

The analysis of available source data files specific to the claimants identification of 'suspicious' entries, and the methodology utilized by the complainant to do so, brought to light potential assumptions made by the claimant that may not be substantiated. However, the 13 entries identified appear to be of importance for the final results, and it is impossible to exclude they were also manipulated in the absence of raw data.

ANALYSIS AND OBSERVATIONS

III. Data Analysis.

MCG analyzed all data, provided by be client, related Study 4 (provided by the client).

Approach:

Four files potentially containing data related to the paper were provided to MCG by the client:

1- data CCTRBC SB 2012-11-18c.xls, herein "2012Excel"
   a. data study5B 2013-11-23.sav, , herein "2013sav"

      The *2013sav* file is related to the *2012Excel* file. The *2012Excel* included 134 columns (see sheet *2012Excel*), *2013sav* included 139 columns (see sheet *2013sav* which includes an Excel export of the .sav file); the extra columns in the *2013sav* file appear to be added by a statistical software package (SPSS). The 2012 Excel was created in 2012 and last saved by Dr. Gino (see *Metadata* sheet in **MCG0022_Allegation 3_allData_analysis.xlsx**)

2- data study4 PS 2014-04-17.xls, herein "2014Excel"
   a. data DAC Study_4 PS.sav, herein "DAC". This is also the file Dr. Gino expressly states is the basis for the published research in her 2/22/2022 response.

      The *DAC* file is related to the *2014Excel* file. The *2014Excel and DAC* files both have 78 columns. The 2014 Excel was created in 2012 and last saved by Dr. Gino (see *Metadata* sheet in **MCG0022_Allegation 3_allData_analysis.xlsx**)

Collectively, all four documents are herein "Source Data".

The Source Data contain certain important characteristics for consideration:

- All files include data representing 178 participants.
- The participant entries are all sorted in the same way.
- By considering the input columns and the filename the file *2012Excel* file appears to be the earliest within the set files provided. However, given the inclusion of a number of calculations columns, it is unlikely an original direct download of raw Qualtrics data.
- As noted, the *2013sav* file contains all the data in the *2012Excel* plus Z-value columns probably calculated directly in SPSS.
- The *DAC* file contains all data in the *2014Excel* file.
- The *DAC* file contains a subsection of the *2012Excel* file with some additional inconsistencies (see **IV.Observations** section).
- Both the 2012Excel and the 2014Excel were created in 2012 by Dr. Gino, and last saved by Dr. Gino.

MCG compared the data within the shared subset of input columns between the available data files in the file **MCG0022_Allegation 3_allData_analysis.xlsx**.

1:1 Comparison of data

1. Data from *2012Excel, DAC, 2013sav,* and *2014Excel* files were imported into a single Excel spreadsheet for ease of comparison. Please see sheets aligned with each file title.
2. Data were compared 1:1 on the basis of their Cum_IDs and MTurk IDs.
3. The alignment of the dataset entries were assessed:
   a. When text was included, by running a character-by-character comparison of texts after removing leading spaces, etc. (Example, =IF(CLEAN(TRIM("Cell in Sheet 1"))=CLEAN(TRIM("Cell in Sheet 2")),"Match","Not a match")). For example, please see column B on sheet *2012Excel - DAC*.
   b. When numerical values were included, by simple subtraction. The differences between the datasets were reported as a numerical values. 0=same. Relative differences were reported as increases (positive values) or decreases (negative values). For example, please see column E on sheet *2012Excel - DAC*.
4. The differences between the compared datasets were reported as a visual heat map to demonstrate trends in apparent source vs. published data. For example, please see the *2012Excel - DAC* sheet.
5. The *2012Excel* and *2013sav* data did not show any difference in values, with the exception of the 5 additional analysis columns present in the .sav dataset; similarly, *DAC* and *2014Excel* showed no difference in values between them. However, *2012Excel* and *2014Excel, both originally Excel spreadsheets*, included the calculations utilized for some of the columns. The *2012Excel* included color-coding of certain cells by an unknown individual, the meaning of which was not defined.
   a. The *2012Excel* dataset contained multiple entries highlighted with grey background. Such entries corresponded to the same IDs that showed discrepancies in the *2012Excel – DAC* sheet. This combination was chosen, instead of *2014Excel* and *2013sav,* because the *DAC* dataset was expressly pointed by Dr. Gino as being source data for the paper. The *2012Excel* file contained calculations and additional inputs, like the full text responses, that could be helpful for the analysis. Both files were created by Dr. Gino. When differences were identified, the entries and their relationships with other columns and values was evaluated, see **IV. Observations** section below.

Analysis of complainant's allegations

6. An inspection of the 4 Source Data files to identify columns that could have been either used for sorting or as basis for the sorted columns revealed that each file had subjects in the same exact order, and the 'cheat' column was the only column sorted consistently across all data.
7. Given the complainant's focus on the 'Number of responses' column, it was identified that the *2012Excel* dataset contained the source data for that column, specifically, a column which included the text inputs of the responses provided. A count of the items in that

column was apparently reported in the 'Number of Responses' column (*2012Excel* sheet, column W).

8. By utilizing a combination of CLEAN, TRIM and counting functions, the number of responses were re-calculated from the text input. When differences with what was reported were found, a visual inspection of the text entry was conducted. Specifically, the following functions were stepwise applied to the text (See sheet named *Number of responses Analysis.*):
   a. To remove extra spaces, =CLEAN(TRIM("Cell"))
   b. To remove final commas, =IF(RIGHT("Cell",1)=",",LEFT("Cell",LEN("Cell")-1),"Cell")
   c. To remove final slashes, =IF(RIGHT("Cell",1)="/",LEFT("Cell",LEN("Cell")-1), "Cell")
   d. To remove final periods, =IF(RIGHT("Cell",1)=".",LEFT("Cell",LEN("Cell")-1), "Cell")
   e. To count commas separated values, =LEN(TRIM("Cell"))-LEN(SUBSTITUTE(TRIM("Cell"),",",""))+1
   f. To count slashes separated values, =LEN(TRIM("Cell"))-LEN(SUBSTITUTE(TRIM("Cell"),"/",""))+1
   g. To count periods separated values, =LEN(TRIM("Cell"))-LEN(SUBSTITUTE(TRIM("Cell"),".",""))+1
   h. To count semicolon separated values, =LEN(TRIM("Cell"))-LEN(SUBSTITUTE(TRIM("Cell"),";",""))+1
9. Finally, the entries identified as suspicious by the complainant and the entries above and below them were also analyzed. Two sets of two values, and one set of one value were identified as having multiple possible permutations. Given the complainant's hypothesis that the dataset was sorted ascending (4 comes after 3, 7 comes after 6, etc.), only three possible combinations were possible for the two sets values (Example: values 0, 1 had possible options of 00, 01, 11, while 10 was excluded because of the sorting) and two for the one value one, it was determined that the total possible permutations was 3*3*2 = 18 (see sheet *Complainant Analysis* columns CB to CS for the write up of the 18 options).

SPSS analyses

10. The data *DAC* and the *2013sav* files were utilized to identify the specific Columns and algorithms employed to calculate the t values and averages reported in the paper.
11. The t values for *DAC* were calculated by selecting:
    Analyze → Compare Means → Independent- Samples T test
    and selecting the following as 'test variable(s)':
    - care_about_rules
    - reported_guessed_correctly
    - Number of responses
    - Originality
    - Flexibility
    - RAT_perf
    - pos_affect
    - neg_affect

    with as 'Grouping Variable' the Column cheated between 1 and 0
12. The *2012Excel* data were imported into IBM SPSS Statistics software, by editing Column's names with spaces to CamelCase to allow importing and changing the name instr to instr2

on column CE because SPSS does not allow for repeat names in variables (see *2012Excel for SPSS* sheet). t values and means were calculated as in point 11 above.

13. The different permutations of Numberofresponses, as well as a dataset that counts all responses excluding the ones identified by the respondent as 'suspicious' were also imported into IBM SPSS Statistic software and t values and means were calculated as in point 12 above.
14. A comparison and summary for the statistical analysis was included as the *Summary Analysis SPSS* sheet in the **MCG0022_Allegation 3_allData_analysis.xlsx** file

IV. Observations.

1. **Number of participants and demographics**

According to the 2014 PS paper, p.977:

> *"Participants. One hundred seventy-eight individuals recruited on MTurk (47% male, 53% female; mean age = 28.59, SD = 7.72) participated in the study for $1 and the opportunity to earn a $1 bonus."*

When analyzing the data provided, 3.4% of the participants did not fill the 'age' question, and 2, Cum_IDs 185 and 192, did not complete the questionnaire and did not respond to the questions relative to pos_affect and neg_affect. (see *2012Excel*, *DAC* and *2014Excel* sheets). Hence, the results obtained for pos_affect and neg_affect are not based on 178 participants.

Finally, participant with CumID 36 has a value of 1 in the 'Exclude' column, but their answers were utilized to calculate the published results and hence considered for the analysis.

2. **Analysis of available data and observations.**

As described, *2012Excel* and *2013sav* files, DAC and *2014Excel* files, appeared to have corresponding features that suggested they were associated. Comparisons between *DAC* and *2014Excel* and *2012Excel* and *2013sav* show that these two sets of files contain the same data (see *DAC - 2014Excel* and *2012Excel -2013sav* sheets). As DAC appeared to = *2014Excel*, and *2012Excel* appeared to =*2013sav*, DAC and *2012Excel* files were selected to compare the data between each data set.

However, by inspecting the *2012Excel* and the *DAC* files it appears that *2012Excel* may have been an earlier/more complete version of the *DAC* file. The *DAC* is made by a subsection of inputs present in the *2012Excel* file.

a. Discrepancies between conditions tested:

The main two comparison groups in the statistical evaluations presented in the paper are: participants who cheated (cheaters) and participants who did not cheat (Noncheaters).

When analyzing the *2012Excel dataset,* there is a column: "reported_guessed_correctly" [M] that may be the source of the 'cheat' column [DO], utilized to define which conditions had cheated [condition 1, cheat=1] or had not cheated, [condition 0, cheat=0] which the authors used for further analysis. There appear to be 12 entries whose values in 'reported_guessed_correctly'

did not match the values in the 'cheat' column, those values appear grey highlighted in the original document. See **Table 1,** *2012Excel* **file** for a summary example.

Table 1. Screenshot of *data 2012Excel* sheet showing a portion of the columns of interest. Notations in brackets indicate source column in noted files. (black boxes added for emphasis of cells of interest.)

	2012Excel file		*DAC* file
Cum_ID	reported_guessed_correctly [M]	cheat [DO]	reported_guessed_correctly [J]
99	1	1	1
36	1	1	1
97	0	1	1
153	1	1	1
8	1	1	1
171	1	1	1
136	0	1	1
191	0	1	1
105	1	1	1
32	1	1	1
51	1	1	1
187	0	1	1
172	0	1	1
9	1	1	1
157	1	1	1
159	1	1	1
180	1	1	1
14	0	1	1
146	0	1	1
20	1	1	1
156	1	1	1
149	1	1	1
31	0	1	1
169	1	1	1
63	1	1	1
102	0	1	1
129	1	1	1
11	0	1	1
42	1	1	1
138	1	1	1
77	1	1	1
170	1	1	1
22	0	1	1
74	1	1	1
84	1	1	1
128	1	1	1
106	1	1	1
35	0	1	1
50	1	1	1
38	1	1	1

Furthermore, the 0s for the IDs with cheat highlighted in grey in the *2012Excel* file appear all to be 1s in the newer version of the document, the *DAC* file (see above **Table 1 DAC file**).

In Summary, it appears that within the earliest available version of the data, almost 30% of the reported cheating data [**reported_guessed_correctly**] appeared to be altered from condition 0 (=no cheat) to condition 1 (=cheat) in a separate column [**cheat**]. These specific alterations were apparently color-coded grey by an unknown individual handling the data. Furthermore, these altered data appeared to translate into the DAC data in the reported cheating data [**reported_guessed_correctly**]. , See cell M181 in the *2012Excel* sheet and J181 in the *DAC* sheet for details, which show that *2012Excel* had only 31 counts for condition 1 (=cheat), while the *DAC* had 43 (27.9% more).

b. Discrepancies between RAT averages and manually entered scores:

When analyzing the *2012Excel,* there is a column: "RAT_perf" that contains calculations. However, within this column a subset of data, 4 specific entries appear to have values manually entered. Similarly as above, for the conditions tested, these data have a grey background introduced by an unknown individual in the *2012Excel* sheet.

When these apparently manually inserted values are compared to calculated values using the formula from the category [=SUM(CVxxx:DLxxx)] and the available values for the calculation in the data sheet [for example, =SUM(CV170:DL170)] the apparent manual entries do not align with the calculated entries. See **Table 2** GREY vs RED cells for details.s

Table 2. From *2012Excel* sheets (data and calculations) outlining a subsection of RAT_perf data.

CumID	RAT_perf	RAT_perf In 'Show Formulas' mode	Calculated Values (*2012Excel _consistentFormul* sheet)
42	11	=SUM(CV168:DL168)	11
138	9	=SUM(CV169:DL169)	9
77	14	14	0
170	14	=SUM(CV171:DL171)	14
22	15	15	2
74	14	=SUM(CV173:DL173)	14
84	14	14	4
128	2	=SUM(CV175:DL175)	2
106	8	=SUM(CV176:DL176)	8
35	10	=SUM(CV177:DL177)	10
50	6	=SUM(CV178:DL178)	6
38	13	13	3

A close look at the final files utilized for the analysis, the *DAC* file (and the accompanying *2014Excel* file) show apparent modifications of the single RAT values that are then added to compute RAT_perf (see Table 3 left hand side).

Table 3. Example of data modified between *2012Excel* file and the *DAC* (*2012Excel* – DAC, Columns CH-DC).

Cum ID	RAT																	SUM of single RAT values from 2012Excel	SUM of modifications	RAT values + modifications	RAT_perf reported
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17				
77	1	1	1	0	1	1	0	1	0	1	1	1	1	1	1	1	1	0	14	14	14
22	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	0	2	13	15	15
84	1	1	1	0	0	1	0	0	1	0	1	1	0	0	1	1	1	4	10	14	14
38	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	1	1	3	10	13	13

The sum of those modifications (see column *SUM of modifications* in Table 3), when added to the RAT_perf calculated based on values for the *2012Excel*, results in the modified final RAT_perf values manually entered into the *2012Excel*.

Of note, the *2014Excel* that feeds into the *DAC* shows no manually entered values but only calculations based on the single RAT entries. However, such calculations, given the editing of the single values themselves ended up to sum to the manually entered value in the RAT_perf of the *2012Excel* provided.

The modified entries, all part of condition 1 (= cheat), accounted for almost 10% of the condition 1 entries.

Therefore, it appears that the single values in the *DAC* file were modified to SUM to the value reported as RAT_perf.

c. Statistical evaluation of the impact of the data modifications above

The statistical results described in the paper were calculated for the datasets considered, and the impact of the modifications above were also included.

Evaluating statistical outcomes based on the *2012Excel* and *DAC* datasets provided the same results as published.

However, once the '**reported_guessed_correctly**' column from the *2012Excel* data was utilized to determine the data for the condition 1 [=cheat] the data for 'Caring about rules' and 'flexibility' became less significant than reported, and the 'RAT_perf' nonsignificant. 'RAT_perf' was also nonsignificant when re-calculating and applying consistent calculations across the dataset (see Table 4 row *2012Excel – 'reported guessed correctly' as 'cheated' column and re-calculated RAT*, and sheet *Summary analysis SPSS*).

An additional relevant effect the modifications had was on the averages and standard deviations for the two groups, for all the quantities estimated and, more so, for the RAT perf for which better RAT averages were measured for non-cheaters, but reported for cheaters, see **Table 5** and sheet ***Summary analysis SPSS***.

Table 4. Summary of statistical outcomes, p values Deviations (extract from *Summary analysis SPSS* sheet).

	Caring about rules	fluency	flexibility	RAT perf
2014 PS Paper	<.001	<.001	<.001	0.012
2012Excel – 'reported guessed correctly' as 'cheated' column	0.002	3.58E-04	0.001	0.803
2012Excel – 'reported guessed correctly' as 'cheated' column and re-calculated RAT				0.260

Table 5. Summary of Statistical outcomes, averages(Mean) and Standard Deviations (extract from *Summary analysis SPSS* sheet).

	number of RAT items solved				caring about rules			
	Cheated		non cheaters		cheated		non-cheaters	
	M	SD	M	SD	M	SD	M	SD
2014 PS Paper	9.47 N=43	4.4	7.84 N=135	3.4	3.66 N=43	1.8	5.28 N=135	1.3
2012Excel – 'reported guessed correctly' as 'cheated'	8.39 N=31	4.5	8.20 N=147	3.5	4.11 N=31	1.8	5.05 N=147	1.5
2012Excel – 'reported guessed correctly' as 'cheated' and recalculated RAT	7.29 N=31	4.5	8.12 N=147	3.5				

3. **Replication of analysis done by complainant.**

Per the client's request the analysis performed by the complainant was inspected and, where appropriate, replicated. The complainant identified three areas where they felt were important to discuss. In the complainant's words:

1. 'First, as before, it is not possible to sort the dataset to generate the order in which the data were saved. They were either originally entered this way (which is implausible, since the data originate in a Qualtrics file, which by default sorts by time), or they were manually altered'
2. 'Second, because rows are sorted by the variable of interest, "numberOfUses", if the values that are out of order were changed, it is straightforward to impute what they were changed from. For example, row #141 is "13", the number right before is "4", and the first non-suspicious value after is "5". Therefore, if the data were changed, then we can assume that that "13" used to be either a "4" or a "5".
   One can do this for each of the 13 highlighted values in the dataset. We can thus reconstruct what the data looked like before they were tampered with. The screenshot below shows the imputed values for all relevant cells.

Third, when one reconstructs the data in this way, by replacing the highlighted values with the values one would impute based on the order on which they are sorted the significant relationship between cheating and creativity on the uses task entirely disappears. It's p-value goes from <.0001 to .292 ("Imputed1") or .180 ("Imputed2").'

MCG Discussion:

As discussed above, none of the files provided contains the original raw data. All files either contain some calculations/subset of information, or derive from a file that does. Additionally, all files are identically sorted, independently on the number of columns present. Therefore, in the absence of raw data, there is no way to determine if any other column could have been originally present that accounted for such sorting.

The file *2012Excel* includes a column which presents the full-text version of entries/responses to the newspaper use question (see 'UsesTask', column V, *2012Excel* sheet). This column appears to be a single field where participants listed their responses separating each with some punctuation; commas, semicolons, periods, and slashes were used for this purpose. Not having access to the original responses as downloaded via Qualtrics, it is impossible to determine if the 'Number of responses' field was automatically generated in Qualtrics or manually calculated afterwards. Automatic calculation on the dataset is not trivial, and may give rise to error. It is possible that a combination of manual and automatic calculation occurred giving rise to some of the out of order data flagged by the complainant.

When analyzing the text responses for each entry, as present in the *2012Excel* file (see the *2012Excel* sheet for original data and *Number of responses Analysis* sheet for the independent re-calculations based on the original data) the number of responses appears to correspond with the entries. **Table 6** outlines the entries corresponding to the out of order items; for complete details see the *Number of responses Analysis* sheet for the independent recalculation of entries to confirm the 'Number of responses' column.

Table 6. Example from *2012Excel* responses relative to the entries in question. YELLOW cells = claimant flagged as 'suspicious'.

Cum_ID	UsesTask	Number of responses
156	gaining knowledge, make a collage, learn the weather, no whats on tv, make a paper hat, paper machee, eat it	7
149	eat it / wear it as a hat / fold it into a boat / keep the rain off you / read it / weird movie spy exchange of documents for money or whatever / burn it to keep warm / kill someone with it	8
31	put under cat box, roll up and use as self-defense weapon, start a fire in fireplace, soak up vomit, dry windows, write over it, shred	7
169	read the news, read comics, crossword puzzles, kill bugs, help start fires, fan, paper mache, and	7
63	kill bugs, start fire, pillow. fan. door stop, insulation, clean, litter, toilet paper, hat, decorate, read, weapon, keep light out,	14
102	soak up bacon grease, housetrain a pet, read for information, clean glass, shred for compost, line birdcage, papier-mache, wrapping paper	8

129	A news informer / A fly swatter / Fire starter / Plate / Napkin / Toilet Paper / Gift wrapping / Book wrap	8

The complainant identified 13 specific entries as 'suspicious'. Notably, the identification of 'suspicious' data, however, is not unique. It is, for instance unclear why ID 149 would be the suspicious value, and not 31 and 169. Multiple combinations of the number of uses task entries are possible.

While the complainant proposed two potential permutations of entries for the dataset, one called Imputed1 where the lowest potential value was applied, and one Imputed2 where the highest possible value was applied, it is important to notice that, utilizing the complainant's logic (that the number of responses column was used for sorting) and the entries identified by the complainant, there are many more possible permutations (as discussed previously, 18 total, see Table 7 and *Complainant Analysis* sheet).

While some of the values identified as 'suspicious' have one unique possible entry [because they are between two cells having identical values, see grey highlight] others have multiple possible entries. For example, IDs 36 and 97 have 3 possible permutations, as does IDs 14 and 146, while ID 149 has 2. The total number of permutations will be 3*3*2, hence 18 . Please see table below and *Complainant Analysis*. In **Table 7**, highlighted in yellow, are the entries the complainant flagged as "out of order", while values highlighted in grey are the 'suspicious' entries with only one possible value.

Table 7. Combinations of entries following the complainant's logic.

		Permutations																	
Cum_ID	Numberofresponses	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
99	4																		
36	13	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
97	9	4	5	5	4	5	5	4	5	5	4	5	5	4	5	5	4	5	5
153	5																		
8	5																		
171	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
136	5																		
191	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
105	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
32	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
51	5																		
187	6																		
172	6																		
9	9	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
157	11	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
159	14	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
180	6																		
14	8	6	6	6	6	6	6	7	7	7	6	6	6	6	6	6	7	7	7
146	10	6	6	6	7	7	7	7	7	7	6	6	6	7	7	7	7	7	7
20	7																		
156	7																		
149	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
31	7																		
169	7																		
63	14	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8
102	8																		

To evaluate the impact of the 13 entries highlighted by the complainant on the analysis, the statistical results reported for the paper were analyzed for all non-identical datasets as well as for the combinations of potential data identified on the basis of the complainant's logic.

An additional dataset excluding the 13 data points identified by the complainant was also analyzed (see DAC without Out of Order row in Table 8). The replication of the statistical assessment relative to Study 4 **in the 2014 Psychological Science Paper** shows lower statistical significance and averages of fluency less distinct between conditions between samples when comparing results obtained excluding the 13 observations or modifying those observations with combinations of values obtained following the complainant's logic.

Data tables, partial snapshot from **M0022_Allegation3_allData_analysis.xlsx** *Summary analysis SPSS sheet.*

Table 8. Comparison of **Fluency** across datasets

	fluency								
	cheaters			non-cheaters					
	N	M	SD	N	M	SD	t	df	p
2014 PS Paper	43	8.33	2.8	135	6.52	2.31	4.24	176	<.001
DAC	43	8.33	2.8	135	6.52	2.31	4.24	176	3.62E-05
2012Excel - reported guessed correctly as cheated column	31	8.42	3.1	147	6.65	2.31	3.64	176	3.58E-04
DAC without Out of Order	30	7.57	2.7	135	6.52	2.31	2.18	163	0.031
DAC with Out of Order - Combination 1	43	6.95	2.5	135	6.52	2.31	1.06	176	0.29
DAC with Out of Order - Combination 2	43	6.98	2.5	135	6.52	2.31	1.11	176	0.27
DAC with Out of Order - Combination 3	43	7.00	2.4	135	6.52	2.31	1.17	176	0.24
DAC with Out of Order - Combination 4	43	6.98	2.5	135	6.52	2.31	1.11	176	0.27
DAC with Out of Order - Combination 5	43	7.00	2.5	135	6.52	2.31	1.17	176	0.24
DAC with Out of Order - Combination 6	43	7.02	2.4	135	6.52	2.31	1.23	176	0.22
DAC with Out of Order - Combination 7	43	7.00	2.5	135	6.52	2.31	1.17	176	0.24
DAC with Out of Order - Combination 8	43	7.02	2.5	135	6.52	2.31	1.23	176	0.22
DAC with Out of Order - Combination 9	43	7.05	2.4	135	6.52	2.31	1.29	176	0.20
DAC with Out of Order - Combination 10	43	6.98	2.5	135	6.52	2.31	1.11	176	0.27
DAC with Out of Order - Combination 11	43	7.00	2.5	135	6.52	2.31	1.17	176	0.24
DAC with Out of Order - Combination 12	43	7.02	2.5	135	6.52	2.31	1.23	176	0.22
DAC with Out of Order - Combination 13	43	7.00	2.5	135	6.52	2.31	1.17	176	0.24
DAC with Out of Order - Combination 14	43	7.02	2.5	135	6.52	2.31	1.23	176	0.22
DAC with Out of Order - Combination 15	43	7.05	2.4	135	6.52	2.31	1.29	176	0.20
DAC with Out of Order - Combination 16	43	7.02	2.5	135	6.52	2.31	1.22	176	0.22
DAC with Out of Order - Combination 17	43	7.05	2.5	135	6.52	2.31	1.28	176	0.20
DAC with Out of Order - Combination 18	43	7.07	2.4	135	6.52	2.31	1.34	176	0.18

IV. Summary.

The analysis of the files provided in relation to Allegation 3 shows a series of data manipulations, a number of which were highlighted by an unknown individual indicating specific cells that have been modified. One example is the change of conditions for 12 entries where the 'reported_guessed_correctly' score appears to be "0" in the *2012Excel* version but become "1" highlighted in grey when apparently copied to the 'cheat' column used for the analysis. The same entries are then potentially modified all to be "1" for the *2014Excel* used as basis for the *DAC* file, the analysis file identified by the respondent.
A second example is the manually entered values for RAT_perf in the *2012Excel*, also highlighted in grey, in a column of calculations (Excel calculated SUMs of entered scores). In this example the *2014Excel* file apparently has RAT total scores increased [changed to 1] to match the RAT_perf value entered into the *2012Excel* sheet. ultimately represented as the RAT_perf sum represented in the *DAC* file and reported in the paper.

Notably, those modifications impact significance for 'Caring about rules' and 'flexibility', by lowering it, and the 'RAT_perf', which becomes non-significant. Additionally, the differences in averages for the two groups, for all the categories estimated, diminished while the trend of averages for the RAT_perf was inverted when re-calculating with the newly estimated data (see Table 5, Mean(cheaters, published)=9.47, Mean(noncheaters, published)=7.84 becomes Mean(cheaters, 2012Excel-reported_guessed_correctly)=7.29, Mean(noncheaters, 2012Excel-reported_guessed_correctly)=8.12).

Not having access to the raw Qualtrics file it is impossible to determine if more modifications and edits occurred.

Regarding the claimant's review, it is unclear that the assertions made by the claimant demonstrate resultant manipulation of the underlying source data. While the 13 observations identified by the respondent certainly impact the final reported results, in the absence of raw data it is impossible to determine if they represent modified participant entries.

Exhibit 20
Notice of revised Allegation 3 sent to Respondent on October 31, 2022

HARVARD | BUSINESS | SCHOOL

ALAIN BONACOSSA
RESEARCH INTEGRITY OFFICER

Confidential

October 31, 2022

RE: Notice of Change Related to Allegation of Research Misconduct

Dear Professor Gino,

As stated in a letter to you dated April 15, 2022, Harvard Business School ("HBS") is conducting an investigation into allegations of research misconduct concerning the following publications:

> Gino, F., Kouchaki, M., & Casciaro, T. (2020). Why connect? Moral consequences of networking with a promotion or prevention focus. Journal of Personality and Social Psychology, 119(6), 1221–1238 ("*2020 JPSP Paper*")
>
> Gino, F., Kouchaki, M., & Galinsky, A. D. (2015). The moral virtue of authenticity: How inauthenticity produces feelings of immorality and impurity. Psychological Science, 26(7), 983–996 ("*2015 Psychological Science Paper*")
>
> Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. Psychological Science, 25(4), 973–981 ("*2014 Psychological Science Paper*")
>
> Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. Proceedings of the National Academy of Sciences of the United States of America, 109, 15197–15200 ("*2012 PNAS Paper*")

We are writing to inform you that the language of Allegation 3 of research misconduct currently under investigation has been modified slightly to clarify its focus, based on the evidence that has been analyzed during the regular course of the investigation. The new wording is as follows:

Allegation 3:

Dr. Gino falsified and/or fabricated data within the datasets for ***Study 4 in the 2014 Psychological Science Paper***. In particular:

- some participant conditions appear to have been switched in a direction that favored the hypothesized and reported results;
- some participants' RAT scores appear to have been altered in a direction favoring the hypothesized and reported results; and

- 13 observations within the cheating condition are out of sort when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found. These 13 observations substantially contribute to the significance of the hypothesized effects.

No additional evidence or records are requested by the Investigation Committee at this time. Should you have any questions about this notice, please do not hesitate to reach out to me at [redacted] or [redacted].

Sincerely,
Alain Bonacossa

Exhibit 21
Respondent's Written Statement to Investigation Committee received on November 11, 2022

November 11, 2022

Submission to the Investigation Committee
Francesca Gino

I am thankful for all the work the committee has put into the investigation. I am sad that I am creating work for my own colleagues, and even sadder that the reason is these allegations. In the last few months, I have spent a lot of time and energy going through the same exercise that the forensic firm followed in order to better understand and make sense of these allegations. In this testimony, I will provide evidence of what occurred and that demonstrates I committed no wrongdoing.

As I am sure the committee understands, this has been a really stressful year in light of this investigation. I am not a perfect person but I do take integrity seriously. I also want to emphasize that while I rely heavily on research assistants and doctoral students in my research, I take full responsibility for the content and quality of the work. I have not manipulated nor fabricated data, and I've not written papers that intend to mislead readers with the way studies are described.

The Investigation and the HBS Policy

The investigation is meant to "develop a factual record" by "examining the evidence in depth" after "pursu[ing] diligently all significant issues and leads discovered that are determined relevant." Harvard Business School Interim Policy and Procedures for Responding to Allegations of Research Misconduct ("HBS Policy") at p. 7-9. A finding of research misconduct requires the investigation committee to "identify whether the research misconduct was falsification, fabrication, or plagiarism, and whether it was committed intentionally, knowingly, or recklessly." HBS Policy at p. 9. Such a determination must be made by a preponderance of the evidence. *Id.* A preponderance of the evidence means "proof by information that, compared with that opposing it, leads to the conclusion that the fact at issue is more probably true than not." *Id.* at p. 13. Research misconduct also "does not include honest error or differences of opinion." *Id.*

Fabrication and falsification are alleged in this matter. Fabrication means "making up data or results and recording or reporting them." *Id.* at p. 12. Falsification means "manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record." *Id.*

The HBS Policy does not define "intentionally, knowingly, or recklessly." HBS Policy at p. 9. In the absence of other definitions for these terms, I submit that the definitions from Black's Law Dictionary should apply. The Black's Law Dictionary definitions for these terms were adopted by an Administrative Law Judge ("ALJ") deciding a matter involving federal research misconduct findings. *In re Decision of Kreipke*, Recommended Decision, Docket No. C-16-402, Decision No. CR5109 (May 31, 2018) at p. 14. Specifically, the ALJ held that Black's Law Dictionary provides "the common definitions for intentional, knowing, and reckless and their adverb forms." *See id.* As described in *Kreipke*, Black's Law Dictionary defines these terms as follows:

- Intentional: Done with the aim of carrying out the act.

- Knowing: Having or showing awareness or understanding; well-informed; deliberate; conscious.
- Reckless: Characterized by the creation of a substantial and unjustifiable risk of harm to others and by a conscious (and sometimes deliberate) disregard for or indifference to that risk; heedless; rash. Reckless conduct is much more than mere negligence: it is a gross deviation from what a reasonable person would do.

See Black's Law Dictionary; see also *Kreipke* at p. 14. Though the allegations here do not involve federal research funds, these definitions are a useful benchmark in the absence of HBS's own adoption of definitions for these terms.

Allegation 1: 2020 JPSP Paper
Claimed Issue: Dr. Gino falsified and/or fabricated the dataset for Study 3a in the 2020 JPSP Paper by altering observations to affect the findings of the study in the hypothesized direction. October 21, 2022 Notice of Change of Allegations.

General Principle: I have never altered or made up any data in any of my papers, including the 2020 JPSP paper.

I first accessed the data for this study when running the analyses that are reported in the published paper. This is the file that is posted on OSF, and did not change from the first time I accessed it to the time it was posted on OSF. I was not the person who cleaned the data and prepared it for the analyses. As common in my practices, those are tasks RAs are responsible for since they oversee studies when conducted.

I had my fourth child in November of 2019 which was the time period in which revisions to this work were being conducted. I am thus confident that I relied heavily on the help of RAs as we worked through revisions. I wanted to reconstruct the history of this paper, and access to my Qualtrics account to understand when and how RAs accessed the data.

I contacted Qualtrics support to discuss a few issues that are relevant to this investigation, without mentioning the investigation itself. First, since I commonly shared log-in information with co-authors and RAs, I wanted to understand whether it would be possible to reconstruct log-ins to my account over the years. I was able to locate emails in the sent folder where I provided various log-ins to doctoral students and collaborators. Some examples include a July 19, 2015 10:35 pm email to [redacted]; March 8, 2016 10:15 am email to [redacted]; May 19, 2016 10:04 am email to [redacted]; June 8, 2016 1:09 pm email to [redacted]; June 17, 2016 10:08 am email to [redacted]; October 4, 2016 2:06 pm email to [redacted]; and February 27, 2018 7:43 am email to [redacted]. In addition to sharing my log in information via email, I have shared it live during meetings with collaborators, students and RAs over the years. While I cannot recreate a comprehensive list by memory, it is a common practice I followed when working with others on joint projects.

This is important information to gather since anyone with my account information can log into my Qualtrics accounts not only to download data; they could also edit it. It is only recently that Qualtrics has introduced a feature that allows for these edits to be recorded, but this is something

that was not in place at the time of this study. Unfortunately, as I learned, Qualtrics only keep records of the recent log-ins.

During my discussion with them, Qualtrics informed me that I am unable to view and provide to you historically how often and when others logged into Qualtrics using my log in information. I also asked Qualtrics support about data editing and whether edits are tracked. Qualtrics informed me that if someone was logged into my Qualtrics account and edited data related to studies that were conducted earlier than 2020, I will not be able to see edits as they were not tracked prior to 2020.

I also talked to an IT expert to try to understand whether one could track historically the log-ins into my computer. Unfortunately, as for the case of Qualtrics, if people used the same log-ins that I used, one can't tell whether it was me or others to use my laptop, which is the main and only machine I use for work. I was also informed that log-in data is not available historically and that I would not be able to determine on which dates and times in the past my log-in was used, regardless of the user. I took these steps to gain a better understanding of who may have accessed my files or data over the years and create a precise log. But, unfortunately, this effort did not produce results.

During this process, I did make a disturbing discovery. As you can see in the image below (which is a screen shot I took of the log ins available), just during the past few months, there have been multiple log-ins to my account from the User fgino@hbs.edu. I was surprised to see this, as I made only some of the attempts to log-in to my account. Over the years, as I noted during the inquiry stage, I shared my account information with collaborators, students and RAs so as to assure I did not create bottlenecks while working on projects. A check of the IP address (and connecting it to a physical address) indicates that these attempts were not from me (they correspond neither to my home address, Harvard address, or any other address at which I work or have been). In light of this discovery, I changed my password on October 31, 2022. Before that date, my password had been the same since the Qualtrics account was created.

Recent Logins Current IP: 199.94.8.69

User	IP Address	Location	Date
fgino@hbs.edu	199.94.8.69	Cambridge MA United States 6 miles to 98.229.25.197	October 31, 2022 at 1:17 PM
fgino@hbs.edu	172.110.63.13	Concord MA United States 18 miles to 98.229.25.197	October 28, 2022 at 4:32 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 6 miles to 98.229.25.197	October 28, 2022 at 10:58 AM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 5 miles to 98.229.25.197	October 28, 2022 at 10:51 AM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 6 miles to 98.229.25.197	October 20, 2022 at 10:17 AM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 6 miles to 98.229.25.197	October 7, 2022 at 2:23 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 6 miles to 98.229.25.197	October 3, 2022 at 7:06 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 5 miles to 98.229.25.197	October 2, 2022 at 4:06 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 6 miles to 98.229.25.197	September 19, 2022 at 7:12 PM
fgino@hbs.edu	199.94.8.26	Cambridge MA United States 5 miles to 98.229.25.197	September 16, 2022 at 10:45 AM
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 16, 2022 at 6:54 PM
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 16, 2022 at 10:56 AM
fgino@hbs.edu	199.94.27.41	Dorchester MA United States 4 miles to 98.229.25.197	August 10, 2022 at 5:48 AM
abonacossa@hbs.edu	199.94.27.41	Dorchester MA United States 4 miles to 98.229.25.197	August 10, 2022 at 5:48 AM
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 4, 2022 at 11:15 AM
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 3, 2022 at 12:07 PM
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 2, 2022 at 1:18 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 5 miles to 98.229.25.197	July 24, 2022 at 8:42 PM
fgino@hbs.edu	98.229.25.197	Boston MA United States	July 22, 2022 at 12:27 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 5 miles to 98.229.25.197	July 8, 2022 at 2:37 PM
fgino@hbs.edu	98.229.25.197	Boston MA United States	July 7, 2022 at 9:22 PM
fgino@hbs.edu	50.241.106.249	Chelsea MA United States 3 miles to 98.229.25.197	July 7, 2022 at 8:31 AM

I took this opportunity to change all of my log-ins and passwords. As a new practice in my lab, I will not share any of my accounts' information any longer with others. As I mentioned previously, the practice of sharing my log-in was something I learned when working as an RA for other faculty members and was certainly common practice in the past. However, due to the difficulties I have had during this process, I will cease sharing the log-in so that user data is accurate.

After reviewing the information in the forensic report, I find some of the errors in what may have been data cleaning to be difficult to understand, such as including the four participants who did not give consent. This basic information is something I would expect an RA to not miss or get wrong. This suggests the possibility that someone may have accessed the data on Qualtrics and edited it. I do not have records of procedures the RA/RAs may followed to prepare the data for analyses, so it is hard to make sense of the choices they may have made.

However, I believe in the accuracy of the data posted on OSF. That is the data I used to run the analyses. I would never post data that has errors in it. I also believe in the validity of the findings of the paper more generally. I conducted a meta-analysis without including the study in question, relying on the data from the field and the other lab studies, and the effects do exist.

While I no longer will share my passwords and log-ins with collaborators or others helping me conduct data, there should not be a finding of research misconduct based on the previous sharing of log-in information. Such sharing was how I was trained and was an accepted practice in the relevant research community. Additionally, the lack of evidence that data alterations occurred at all fails to support a finding of falsification or fabrication. Additionally, if any alteration did occur, I did not instruct, intend, or know of its occurrence. Based on a preponderance of the evidence, there cannot be a finding of research misconduct.

Allegation 2: 2015 Psych Science Paper
Claimed Issue: Dr. Gino falsified and/or fabricated portions of the dataset for *Study 4 in the 2015 Psychological Science Paper* by altering, adding, or deleting a number of observations. These changes resulted in significant effects supporting the hypotheses, as reported in the published paper. Analyses of the original Qualtrics data do not support the hypotheses. October 21, 2022 Notice of Change of Allegations.

General Principle: I have never altered or made up any data in any of my papers, including the 2015 Psych Science paper.

As it was the case for Allegation 1, I first accessed the data for this study when running the analyses that are reported in the published paper. This is the file that is posted on OSF, and did not change from the first time I accessed it to the time it was posted on OSF. I was not the person who cleaned the data and prepared it for the analyses. As common in my practices, those are tasks RAs are responsible for since they oversee studies when conducted.

When the committee asked me to provide the original data for this study, I went through my Qualtrics surveys to track down the data. Given that the research for this study was conducted more than eight years ago, I do not know nor do I remember the reason for using both data from the online version of the study and the CLER version of the study, and what decisions were made regarding inclusions or exclusions of participants. It is not uncommon to exclude observations from a study when there are reasons to believe that a participant has not complied with instructions or engaged in behaviors that would damage the quality of their responses (e.g., not paying attention, acting disruptively, etc.). When studies are conducted in the lab, as was the case for the CLER version, the RA overseeing the study would take note of any behaviors that would suggest the participant would have to be removed from the dataset. These are discussions I have with the RA prior to conducting a study or at least prior to cleaning the data. For instance, there had been instances where participants were excluded since, based on the RA's observation, they were distracted throughout the study or disrupted others.

There are also other changes across different versions of the data that the MCG report pointed to that are difficult for me to make sense of given that I have no notes about the procedures used to

handle the data before I analyzed it. And, given the fact that others had access to my Qualtrics account and that any data editing on Qualtrics was not tracked at the time, it is unclear who made changes and why.

Without notes on what happened during the study, I am unable to determine the conditions and reasons applying to those participants who appear to have been excluded. The Harvard data retention policy requires that research records be retained for seven years after the conclusion of the study activities. HBS Policy at p. 11; Retention and Maintenance of Research Records and Data Frequently Asked Questions at p. 4, https://research.harvard.edu/files/2020/07/research_records_and_data_retention_and_maintenance_guidance_rev_2017.pdf. Because the paper related to this allegation was published seven years ago, there is no requirement for additional retention.[1] Therefore, the inability to locate such notes related to participant exclusion cannot itself be the basis for a finding of research misconduct. HBS Policy at p. 2. Further, without any further evidence that such exclusions were unfounded, there is no evidence that such actions were improper or without an accurate research purpose. As such, there cannot be a finding of research misconduct by a preponderance of the evidence.

Allegation 3: 2014 Psych Science Paper
Claimed Issue: Dr. Gino falsified and/or fabricated data within the datasets for Study 4 in the 2014 Psychological Science Paper. In particular:

- some participant conditions appear to have been switched in a direction that favored the hypothesized and reported results;
- some participants' RAT scores appear to have been altered in a direction favoring the hypothesized and reported results; and
- 13 observations within the cheating condition are out of sort when sorted by whether participants cheated on the task they were asked to perform and by how many uses for a newspaper they found. These 13 observations substantially contribute to the significance of the hypothesized effects. October 21, 2022 Allegation Change Notification.

General Principle: I have never altered or made up any data in any of my papers, including the 2014 Psych Science paper.

The DAC file (as referred to in the MCG report) is the one I used when running the analyses that are reported in the published paper. This is the file that I shared with the committee as well and that I would have shared with anyone who asked for the data. I did not change any of the data from the first time I accessed it to the time the analyses were conducted. Again, I was not the person who cleaned the data, merged different datasets of raw data given how the study was conducted and prepared it for the analyses. As common in my practices, those are tasks RAs are responsible for since they oversee studies when conducted.

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[1]Though the quantitative data itself has been retained since the required period, along with other relevant documents, it is not immediately apparent from the Harvard retention policy that written notes regarding individual participants would have been required to be retained for the seven years. Retention and Maintenance of Research Records and Data Frequently Asked Questions at p. 3-4, https://research.harvard.edu/files/2020/07/research_records_and_data_retention_and_maintenance_guidance_rev_2017.pdf.
Additionally, the cited research record policy, dated July 2020, was only adopted since the conclusion of the study at issue. It is unclear what guidance or requirements were in place in 2015.

Like the MCG report notes, without access to the original data I am having trouble understanding if there are in fact errors in the way the data was cleaned or prepared for analyses by the RA/RAs who helped on the project. I do believe, as a I stated at the time of the inquiry, that the complainant's assertions about sorting may be the result of two datasets being merged, given that some of the data came from a software tracking whether participants cheated versus not.

As a general practice, not only in my lab but for research more generally, variables that need to be coded, as it was the case for fluency and flexibility as well as RAT performance, are coded by RAs who are blind to condition and hypotheses. It would create bias for authors to do such coding as authors are aware of the hypotheses being tested. The text in the published paper speaks about this point:

> "Success on the RAT requires people to think of uncommon associations that stimulus words may have instead of focusing on the most common and familiar associations of those words." 2014 Psych Science paper at p. 975.

This requires judgment of independent RAs asked to code responses to create the variable RAT performance. It is not something that can be coded and automatically computed on Qualtrics.

> "For the uses task, they had to generate as many creative uses for a newspaper as possible within 1 min (Guilford, 1967). To assess creativity on this task, we coded responses for fluency (i.e., the total number of uses), flexibility (i.e., the number of uses that were different from one another), and originality (averaged across the different suggested ideas." 2014 Psych Science paper at p. 976.

Again, for this task, RAs blind to the study hypotheses and condition would code the task.

I think it is important to consider the differences in standard research practices today versus ten years ago when this research was conducted. Ten years ago, when I regularly met with RAs in person, exchanged files with USBs, and allowed RAs to use my own computer, research was conducted differently than it is today. I am unable to reconstruct who did the coding on these tasks and who was responsible for merging files and prepare the dataset for analyses. However, despite this being a study from ten years ago, I know with certainty that I did not alter data. Without additional data and evidence, as the forensic report notes, there cannot be conclusions that the data cleaning or any other action taken was improper or without merit. In the absence of such evidence, there should not be a finding of research misconduct.

Allegations 4A and 4B

In the last few months, I took several actions to try to reconstruct the history of this project, which was published in 2012 in PNAS. More specifically:

- I contacted IT at UNC to see if it would be possible for me to have access to emails from the time I was at UNC. IT informed me that since I am not a UNC employee any longer that is not a possibility. And even if the Dean or the Provost were to make an exception, the emails do not exist any longer since too much time has passed. I left UNC in the summer of 2010.

- I contacted the lab at UNC and the people who are currently responsible to see if the data on paper still exists. It does not.
- I contacted the finance department to see if I could track down receipts of participants paid for the study in question. Receipts used to be on paper, and a record was not kept.
- I contacted the IRB at UNC to see if I could access the different versions of the IRB that had been submitted and then revised and approved. At the time, submissions were still done on paper rather than electronically and these submissions are not part of the records any longer since too much time has passed.
- I contacted the bank I had when I was at UNC. For studies, I used to go to the bank for cash and then get reimbursed by the university. I thought I could try to track down the flow of money in and out of the account. But, too much time has passed and the bank has no way to provide the information I was looking for (I closed the account when moving to Boston).
- I contacted one of the paper's co-authors, [redacted] without revealing that I was looking for the information because of this investigation to see if she had access to emails from that time. She does not.
- I contacted another co-author on the paper, [redacted], to see if he could share emails from that time, again without mentioning the investigation. He suggested I consult with IT to find the emails. I did reach out to IT at HBS, but there is no records of emails that I may have deleted when received and an incomplete record of emails in the sent folder during 2010-2011.

I also tried to reconstruct my 2010 summer since I was moving from UNC to HBS, but spent time working as a research consultant at Disney for work in collaboration with [redacted]. I have been unable to reconstruct my calendar for that period in time.

- I contacted Expedia to see if they had any records of flights I bought. They did not have the information I was looking for.
- I contacted the two people I worked closely with at Disney, who have since left the company. They do not have a way to help figure out which days I was on site and which days I was not during the summer of 2010.

I did not contact the Research Assistant at the time, [redacted], for two main reasons:

1. I was told the committee would reach out to her.
2. I am unsure whether [redacted] is a neutral person. As I mentioned in my Comments to the Draft Inquiry Report, [redacted] is a close friend of the Data Colada team who highlighted problems with the field study in the 2012 PNAS paper. In multiple occasions, [redacted] expressed frustration and her opinion that I did not do enough to defend her position and views in the contentious relationship with the other co-authors of the 2012 PNAS paper. [redacted] explicitly told me that she wished one day I "would suffer as much as" she did, though [redacted] had worked as a Post-Doctoral Fellow under [redacted] for years. [redacted], as a collaborator on multiple projects at the time is one of the people who had access to my accounts. [redacted] worked for both [redacted] and [redacted] following her time with me. To the extent that [redacted] discussed her view of the issues noted in Allegation 4A and 4B with [redacted] I am unsure of the neutrality of [redacted] given these friendships and connections.

Allegation 4A: 2012 PNAS Paper
Claimed Issue: "Dr. Gino falsified and/or fabricated the results by removing or altering parts of the descriptions of study procedures from drafts of the manuscript submitted for publication, thus misrepresenting the study procedures in the final publication. The original procedure descriptions (subsequently removed or altered by Dr. Gino) pointed to a significant flaw in the execution of the data collection for Study 1, which called into question the validity of the study results." October 21, 2022 Notice of Change of Allegations.

General Principle: In any of my papers, I've always followed the same approach I learned during my graduate school classes: descriptions of studies need to be accurate and detailed, so that any reader could re-run the same study without having to contact the author(s) with questions. I followed this principle in every paper I worked on so far in my career, including the 2012 PNAS paper.

I don't contest the analysis of the text and files that the MCG group conducted. Though I am not familiar with the Git software MCG used, I could follow their analyses as I myself compared various drafts of the paper when it was in draft form and made note of differences. I don't contest that differences across drafts do exist. All along, I provided all the files I could find that show different versions of the manuscript as we were working on it. In fact, I worked hard to find other versions of the paper that I do not have in my files.

I am not suggesting that another co-author on the paper or someone else changed the draft of the manuscript as a result of [redacted] asking questions about the procedure used in the lab study. I was the one who oversaw the study at UNC (with [redacted] and other RAs running it) so it made sense for [redacted] to ask me, and for me to clarify the procedure. I am confident I was the one who changed the draft to clarify the procedure. But I am also confident I did so after checking what the procedure that was followed in the study actually was.

The debate here is whether a first draft of this paper was accurate or the final draft is accurate regarding the experimental procedure that was used, and whether I knowingly tried to deceive anyone. The final draft is an accurate description of the study procedure, which was revised for accuracy and not with any intention to deceive.

A reasonable question to ask is: why is the first draft description different from the final draft submission? If we look at that first draft, there are many revisions that followed—some are small (like typos) and some are larger. I am not suggesting that my first draft is accurate. I may have made an error in writing up the first draft of the study. I certainly can't say that all of my first drafts of papers are perfect. And given that English is not my first language (and it was less developed then than now), I certainly have re-written a lot of first drafts in my career. I think everyone in our line of work revises drafts many times, and first draft and final drafts generally look quite different.

What happened here? In the email exchanges, [redacted] pointed out a possible error in the description of the study in the first draft. The way the first draft was written suggested an extremely basic methodological error in the study (measuring the dependent measure before the manipulation occurred). I am confident I checked with the lab manager, [redacted], after

[redacted] raised the question in her email dated March 9, 2011, 10:15 PM (Subject: moral saliency: working draft 4 Francesca). In going through my emails, I found the following exchange, which happened a few days earlier.[2] There is no reference to the description of the procedure of the study. [redacted]'s email seems to be the first one that raises questions about the procedure that needed clarification.

> From [redacted]
> RE: moral saliency: working draft
>
> Hi all:
>
> I read through our paper on a flight on Friday. I have some minor editing to do when it is my turn, but here are a couple of things that need attention by those of you with more knowledge and skills:
>
> 1) page 4: I hate motivating a paper with the "gap" positioning. Let's motivate by what it does, not by the fact that someone hasn't done it before.
>
> 2) page 8: The means for the number of miles driven in a year seem enormous - twice what I would have expected. Am I simply wrong, is the sample unusual, or is there an error in recording the data?
>
> 3) In multiple lab studies, we need to clarify how we know when someone cheats - I couldn't find that in the paper - again, this may be my error.
>
> 4) Why do we report the SEM instead of the standard deviation?
>
> 5) study 4: We could use a bit more intro on "ethical saliency". What is it? Why did we pick this variable.
>
> 6) study 4: explain why it is "sign first" vs. control, rather than have sign later. I am ok with this, but it could use a sentence.
>
> Thanks for all of the work.
>
> [redacted]

The MCG assessment appears to make the assumption that the IRB application and other study materials that are used in the analyses are the ones approved by the IRB and/or used in the study. That is not a safe assumption to make. RAs help me with preparing IRB applications. I generally share with them files needed to include in the application and they make necessary modifications. For this study we used a task that I often used in other studies, so it is very possible that I just copied over materials from other studies as placeholder.

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[2] This email is located in [redacted]'s email folder, dated Sunday, March 6, 2011 at 4:40 PM. Earlier replies in this email thread are visible in the original email.

The Math Task materials are materials I used in various previous studies at UNC and also at CMU but in a different way as compared to the study for the 2012 PNAS paper. We simply had people use the task and report their performance on the collection slip so that they could be paid based on what they reported.[3] This task appeared in many published papers I co-authored that were published before 2012:

a. Gino et al. (2009), Psych Science
b. Mead et al. (2009), JESP
c. Zhong et al. (2010), Psych Science
d. Gino et al. (2010), Psych Science
e. Gino et al. (2011), OBHDP
f. Shu et al. (2011), PSPB
g. Gino & Margolis (2011), OBHDP

It is also important to clarify how the IRB worked at UNC in 2010 when the study was conducted. It worked very differently than how the IRB works at Harvard in 2022. In 2010 at UNC, IRBs were relatively broad and not as detailed as they are today, where all materials need to be included in the application with the exact same wording used in the study. That was not the case for the UNC IRB at that time. Scholars like me would discuss the procedure with the RA or lab manager (in this case [redacted]). We would meet almost every day and work through the study procedures. [redacted] would then pilot the study and, then, if there were things that needed to be adjusted, we would adjust them before running the final study. It's hard to say exactly how many conversations we had (over 12 years have passed since then!), but I recall speaking to [redacted] almost every day. If there were an error in the procedure, [redacted] would have pointed it out to me, and I would have just stopped the project or re-run the study using the correct procedure. I am also confident that if [redacted] saw any discrepancy between the approved IRB protocol and the study she was asked to run, she would have raised this to me, or I would have raised this to her if she was the one responsible for submitting the IRB application and conducting the study.

The revisions that I made in the draft reflected what I understood the procedure to be from the conversations that I am confident I had with [redacted]. It is common practice for me to check with the RA who conducted studies on any clarifying questions about the procedures followed.

I can state with 100% confidence that I have never written anything in my papers with the intention to mislead. I have in other projects discovered errors in procedures—where the RA or company involved carried out the procedure differently than we had intended. For instance, in a project with [redacted] involving a Japanese company we discovered the error after the paper was submitted to a journal (Organization Science) and had received an R&R in July of 2011. We pulled the paper out once we discovered the error as we were working on the revisions (the randomization was done in a way that was not truly random). I have an entire folder on my computer of dropped projects.

The procedure described in the first draft of the 2012 PNAS paper defies the basic principles of experimental design. The study would have never been carried out to those specifications, which

[3] Examples are available in the folder: Fgino/Documents/IRB UNC/CLOSED STUDIES/Moral goals, and Wearing fake, and Ethics and MD.

was clear upon further review of that draft. Additionally, there is no indication that [redacted] or [redacted] saw a flaw in the experimental design when they joined the project. If the project had been showed and described to them consistent to the first draft procedure [redacted] or [redacted] would have commented on such an issue. All the co-authors saw and reviewed the final drafts of the paper, and after the revisions as thoroughly previously described, no one expressed any concerns with the way the description of the method was written, including those with knowledge of the actual study procedures. The study design as reported in the final paper is accurate and the revision made after the first draft accurately reflected how the study was carried out. Because the published version of the procedure is accurate and revisions were made only to correct the procedure, there was no fabrication or falsification and there cannot be a finding of research misconduct.

Allegation 4B: 2012 PNAS Paper
Claimed Issue: Dr. Gino falsified and/or fabricated the original dataset by altering a number of observations in a way that favored the hypothesized results. October 21, 2022 Notice of Change of Allegations.

General Principle: I have never altered or made up any data in any of my papers, including the 2012 PNAS paper.

I was able to follow the evidence presented in the MCG report and the various analyses presented. Without the original data which was collected on paper, I am unable to make sense of the inconsistencies across the files MCG analyzed. Unfortunately, it was common practice in my lab for others, whether an RA or doctoral student, to enter data often using my computer or log-in making it difficult to interpret the metadata for authorship. Despite all my efforts, I cannot recreate the day by day history of where I was in July of 2010 – what days I was at UNC, what days I was at Disney in Glendale, CA and what days I may have been in Boston, if any at that point.

What I do know with 100% certainty is that I did not alter any data. As I noted in my comments to the draft inquiry report, "I hold myself fully accountable for the research I publish, whether it is a solo-authored paper or one I collaborated on with others." If there are errors in the way an RA coded the data, cleaned the data, or entered the data, I am responsible for not catching those errors. But in this case, without the original data collected on paper, it is impossible to determine what errors, if any, have occurred. Without evidence of such errors and how they occurred, there cannot be a finding of fabrication or falsification by a preponderance of the evidence. The lack of evidence that data alterations occurred at all fails to support a finding of falsification or fabrication. Additionally, if any alteration did occur, I did not instruct, intend, or know of its occurrence. Based on a preponderance of the evidence, there cannot be a finding of research misconduct.

Conclusion

I hope that after reviewing the evidence in this matter, including the lack of evidence that I knew of or directed any alteration of data, that it is clear that allegations against me have no merit. I do regret that I did not do more to protect access to my accounts (e.g. sharing log in information

freely) and keep more detailed records of my interactions with RAs and collaborators over the years, as well as of every step of each research project. However, the steps that I did take, sharing log-ins with lab members and relying on RAs to conduct studies, were normal practices in my field. I had never imagined being accused of research misconduct and could not predict that those practices would hinder my ability to determine what exactly occurred. I also regret that at the time [redacted] told me that she wished I "would suffer as much as" she did that I did not report this threat to appropriate officials.

While many of the issues I have encountered when attempting to recreate these circumstances has been solved by the move to digital data and records, I am taking additional steps to better organize my projects going forward including using a better folder structure with clear labeling. I spent the last few months talking to many colleagues at other institutions to identify current best practices in labs that support the Open Science movement and I will work hard and thoughtfully to create even more detailed records of each of the projects I work on from now on.

I will also treat my computer going forward as something only I have access to. In the past, there have been many occasions where I sat with collaborators in my office, in their office or at conferences and gave them access to my computer. Similarly, I shared my accounts information (e.g., Qualtrics) with them. I will not engage in such practices any longer.

While there are practices where I can improve, there is no evidence in this investigation that my studies were conducted outside of the accepted practices of the relevant research community at the time of their occurrences. Additionally, there is no evidence that clearly supports the accusations of fabrication or falsification, or that I had any hand or knowledge in anything that may have occurred. As I have stated since the inquiry, any changes that were made would have been to most accurately reflect the study procedures or data, and would not have been made in any improper fashion. I have not taken any action or inaction that is consistent with a finding of research misconduct.

I have published over 140 papers and have co-authored with more than sixty people at institutions around the world. I am confident that if the committee were to sample a broad cross section of my co-authors they would attest to my honesty and integrity in research matters, and my commitment to discovering interesting phenomena and produce robust studies that advance our understanding of them. I have had many studies simply not work out in my career, and I have never had a problem walking away from research projects that prove not to be fruitful. I have even discovered errors in procedure in my research and have terminated studies or projects as a result. Though other research has built on my work and built on the evidence from my 2014 Psych Paper, my 2015 Psych Paper and my 2020 JPSP Paper discussed in these comments, I am interested in conducting replications of the research to provide further evidence that the findings are robust. I deeply care about advancing science and making meaningful contributions to both academia and practice.

As these comments make clear, I can't pin down every single detail responsive to the allegations, but I believe I have provided convincing evidence that I have committed no wrong doing.

Thank you all for your time and for reading these comments.

Francesca

Exhibit 22
Transcript of Respondent Interview on November 14, 2022

Francesca Gino Interview
November 14, 2022

[00:00:00.26] ALAIN BONACOSSA: So Alma, please. Good afternoon, everyone. My name is Alain Bonacossa. I'm the Research Integrity Officer here at Harvard Business School. I would like to thank Professor Francesca Gino and her advisor, Sydney Smith, for being here today for this interview with the investigation committee.

[00:00:19.44] I will now make a brief announcement before handing it off to the chair of the investigation committee. First, a reminder that this interview will be recorded and transcribed. And Francesca, you will be given a copy of the transcript for correction after the interview.

[00:00:33.05] I would like to introduce everyone on Zoom today starting with the investigation committee. Professor Teresa Amabile, the committee chair, Professor Bob Kaplan, and Professor Shawn Cole. Moving on to Professor Francesca Gino, of course, who is the respondent in this case, and her advisor, Sydney Smith, who is an attorney at Cohen Seglias in Washington DC.

[00:00:54.01] Finally, in addition to myself, we have two additional staff members on the call, Heather Quay, a University attorney with Harvard's Office of the General Counsel, and Alma Castro, Assistant Director in HBS Research Administration.

[00:01:08.11] Next, let me briefly explain how today's interview process will work. First, this is a faculty review of a faculty matter. So the interview will be a conversation between the committee and you, Francesca, as the respondent in this case. The interview will entail a series of questions and answers.

[00:01:27.31] Towards the end of the interview, we may put you, Francesca, and your advisor in a breakout room for a few minutes while the investigation committee discusses whether they have additional questions for you. If you'd like to confer with your advisor at any point in time during the interview, please just say so, and we could put both of you in a breakout room.

[00:01:46.34] I'd also like to cover some general rules of the road for the interview. First, some general rules. To make sure that the transcription is clear, only one person can speak at a time. Other than you, Francesca, and the investigation committee, no one else has a speaking role in this proceeding. So Sydney, Heather, Alma, and myself will turn our cameras off and mute ourselves at the end of my introduction.

[00:02:11.08] A few reminders specifically for you, Francesca. Please answer the committee's questions truthfully. All answers need to be audible so that they appear in the record and transcript. So nodding head is not sufficient. If you want to agree or disagree with something, please say so audibly.

[00:02:28.69] If you don't understand the question, please just ask for that to be rephrased. And if you don't know the answer to a question, you can just say so.

[00:02:37.93] As I mentioned previously, if you need a break or wish to confer with your advisor, please ask for one. I also believe that Teresa has a number of planned breaks throughout this interview as well.

[00:02:49.50] Francesca, if during the course of the interview you have any procedural questions about the investigation process and/or the HBS policy, I'll be happy to answer any of your questions offline as the interview itself will really focus on the research and the research records.

[00:03:05.07] Lastly, a few important reminders. HBS has an obligation to keep this matter confidential. So even the fact that this interview occurred or that there's a case-- a research misconduct case-- is confidential. Per HBS policy, HBS community members may not retaliate in any way against complainants, witnesses, their research integrity officers, or committee members.

[00:03:28.17] Francesca, do you have any questions for me before I hand it off to Teresa?

[00:03:32.42] FRANCESCA GINO: No, very clear. Thank you for reminding me not to nod and actually speak.

[00:03:38.29] ALAIN BONACOSSA: Thank you. Thank you, Francesca. Heather, Sydney, Alma and I will now turn off our cameras and mute ourselves. Thank you.

[00:03:49.58] TERESA AMABILE: Hi, Francesca. Thanks so much for meeting with us.

[00:03:53.69] FRANCESCA GINO: Thank you for being here.

[00:03:56.58] TERESA AMABILE: Yeah. You already know Bob Kaplan and me. And I think you know Shawn somewhat. But I'm going to ask Shawn Cole to just briefly introduce himself.

[00:04:06.03] SHAWN COLE: Hi, Francesca. We've met. You've helped me with some research questions in the past. I'm Shawn Cole on the finance faculty at HBS.

[00:04:14.49] TERESA AMABILE: Shawn, I'm finding your audio just a little bit soft. Is there any way you could increase the volume of your microphone?

[00:04:23.61] SHAWN COLE: I can move my microphone closer, I think.

[00:04:26.53] TERESA AMABILE: Ah, that's better.

[00:04:27.98] SHAWN COLE: Is that better? There we go.

[00:04:29.04] TERESA AMABILE: Yeah. So Francesca, we've read your written memo that you sent to us last Friday, November 11th. Thank you for that. Do you have an additional statement that you'd like to make before we begin with our questions on the allegations?

[00:04:44.85] FRANCESCA GINO: I just want to reinforce what I said at the very beginning of the statement, that I'm very thankful that you're taking such-- you're putting so much time behind this. And sorry that that's the reason why we're meeting.

[00:05:02.05] TERESA AMABILE: Yeah. I think I speak for the whole committee when I say, we're sorry too. So we'll start with one general question about the allegations that involve data discrepancies. And that's four of the five allegations.

[00:05:18.78] As we understand your memo from November 11, you're suggesting that one or more bad actors accessed your Qualtrics account and/or your computer and modified the data after you had analyzed the data and published the studies. Are we understanding that correctly?

[00:05:42.43] FRANCESCA GINO: During the last many months, I did a lot of the exercise that the forensic firm has done. And like you, I want to know the truth about what happened.

[00:05:55.48] And the starting point for me is that I did not falsify data. I did not modify or alter data, nor as I said in my statement, I wrote anything that is intended to mislead the readers. And so, the work that I've done is trying to understand where discrepancies might come from.

[00:06:17.51] And I have identified two possibilities. I spoke before and reinforced in my comments that my practices are such that there are multiple people working on projects.

[00:06:31.33] When I joined HBS, I didn't change those practices. I think that in-- I often talk to faculty about how it is important to leverage people's strength such that you focus your attention where it is required the most.

[00:06:47.30] And so, the two possibilities were either RAs made mistakes in the way they clean data, in the choices that they've made, or that somebody intentionally went to my accounts. And so, I tried to make sense of both stories as I was trying to make sense of why these allegations exist in the first place.

[00:07:14.59] TERESA AMABILE: Thank you for that clarification. I guess what I'd like to focus on in this first general question is the second of those possibilities than you brought forward, the possibility that-- and of course, when we get to the specific allegations we can talk about could these be due to-- these discrepancies -- be due to mistakes. Do you think it's more likely that they're due to a bad actor or bad actors. But in general, we'd like to focus right now on the bad actor theory.

[00:07:48.47] FRANCESCA GINO: Mm-hmm.

[00:07:52.00] TERESA AMABILE: Can you please provide us with evidence of this scenario? For example, evidence on who that actor or those actors might be? How and when they might have accessed your Qualtrics account and/or your laptop? And/or what their motives might have been?

[00:08:12.44] FRANCESCA GINO: Yes. So I speak to some extent about this in my comments. And it's something that even at the inquiry state I brought up.

[00:08:24.64] The 2012 paper was a collaboration that had two teams join forces. And that was on one side [redacted], our colleague at HBS, [redacted], at the time was a doctoral student in the OB department. And on the other side, [redacted] and [redacted]. [redacted] was a post-doc of [redacted] for many years and then became an assistant professor at Rotman and now at BU.

[00:08:58.60] And throughout the collaboration, as you can probably see from some of the emails, things got-- heated, and there was conflict related to the field data. At the time, [redacted] was using some of the data for her dissertation and her job talk-- sorry, not her dissertation, for her job talk. And questions were coming up about some of the large differences.

[00:09:28.91] And so, [redacted] in particular started asking a lot of questions about the data. And it created tensions in my mind because [redacted] and [redacted] do things differently. And I was putting myself in the middle as the one that was the joint link between the two teams to try to make sense of it.

[00:09:53.31] The conflict became more heated as we started working on the paper that failed to replicate the findings in the 2012 paper. And over and over again, what I heard from a co-author, in particular [redacted], is that I could have done more to defend [redacted] and making sure that there were not accusations coming from [redacted] that involved speaking badly of [redacted] and also of [redacted] to the point that there was-- I don't know if you would consider it a threat since I usually have a very good relationship with coauthors.

[00:10:36.50] But at some point [redacted] said, you're going to hurt as much as I do. The reason why I think that is relevant is that [redacted] is a very good friend with the group that is behind the Data Colada movement. And even after the retraction of a 2012-- sorry, yes, of the 2012 paper, [redacted] was invited to present in their seminar series, talked to them at length.

[00:11:06.70] And so, it's a story that seems plausible given that, again, I know the truth, which is I didn't falsify data nor alter the data. [redacted] was a co-author back in 2010, 2011, of multiple projects with me, some of which are not published because they didn't turn out to be supportive of the hypothesis that we had.

[00:11:34.51] But I did sit down with her at conferences. Sometimes we look at her computer when we were looking at the data from the field, sometimes we were on mine. She had, like many other people I collaborate with, access to my account.

[00:11:49.86] And as I said, I was surprised when I started talking to Qualtrics and investigating their policies, that if you have my account information, you can log in as me, and I won't be able to tell you whether it was me or somebody else.

[00:12:11.32] And I was disturbed by the fact that if you look at the screenshot that I took, many of the logins even in the last few months are not mine. I asked Alain whether the forensic firms had accessed my account, and I was assured that nobody on this committee nor the forensic firm has access to my account. And so, that's when I took the action of changing my password and account information.

[00:12:40.64] TERESA AMABILE: Thank you for that detail, Francesca. I have some follow-ups.

[00:12:46.10] FRANCESCA GINO: Absolutely.

[00:12:47.35] TERESA AMABILE: And then I'm going to see if Bob and Shawn have follow-ups as well. So you talked about contention between the various co-authors. And I just want to be sure that I understand that. That occurred concerning the field experiment, I believe, in the 2012 paper, the field experiment that [redacted] was primarily responsible for, and that [redacted] was involved in. Is that correct?

[00:13:28.13] FRANCESCA GINO: That is correct. What I would add is, because of the two sides of the team, [redacted] and [redacted] were always in the same group, and then we had the Harvard team. We even divided ourselves talking to each other that way.

[00:13:46.91] And when [redacted] was asking questions that [redacted] might have perceived to be too aggressive or too leading because he was accusing them of something that [redacted] didn't think was appropriate, [redacted] was upset about the fact that I didn't stand up more to support their side.

[00:14:13.32] TERESA AMABILE: Can you provide us with emails that show that conflict and that tension? That would be really helpful. Not now, not in real-time. But it would be super helpful if you could provide those to Alain after today's meeting.

[00:14:32.13] FRANCESCA GINO: Yeah.

[00:14:33.06] TERESA AMABILE: OK.

[00:14:33.87] FRANCESCA GINO: I will.

[00:14:35.13] TERESA AMABILE: As I understand it from your--

[00:14:36.90] [INTERPOSING VOICES]

[00:14:37.71] FRANCESCA GINO: May I add-- apologies just for interrupting, but may I add something else that, again, in the spirit of trying to understand this seemed important to me. Again, the field is full of friendship and relationship, which is the way it should be. I don't think that psychology-- or OB is different from any other.

[00:14:59.07] But part of what surprises me is that in situations where I think that there might be a discrepancy in the data of a paper, it's very common to reach out to the author and ask. So for example, I work with another person at the Kennedy School who's a very close friend of the Data Colada team. And at some point we published a paper in Psychological Science with [redacted], who used to be a doctoral student here at HBS.

[00:15:31.95] And the Data Colada group wrote to [redacted] and said, hey, [redacted] we used your data from this paper, and the three authors are [redacted] myself, and [redacted] And we have some questions because there seems to be an error. And the paper was published, but again, there was an email that seemed very genuine.

[00:15:54.57] And [redacted] [redacted] and I sat down. And as it turned out in the cleaning of the data and rearranging of the data, [redacted] had made a sorting error that ended up just being a sorting error in the way the data was posted, nothing changed. We just issued a correction that is now together with the paper.

[00:16:17.53] And so, I just find it strange-- it is, again, we move science forward if we treat each other in such a way that leads to understanding and being helpful to one another. And so, this just seemed a very different collaboration that had a lot of contentions and unhappiness among co-authors.

[00:16:39.27] TERESA AMABILE: Yeah. So for that reason, it would be super helpful if you could make available to Alain, who will make available to us, any emails you have among or between any co-authors on this 2012 paper that reveal tension, suspicion, misunderstanding, anything like that. And we'd really appreciate that.

[00:17:10.85] I guess, the other question I have is a confusion I've got about the specific tension between [redacted] and you.

[00:17:22.72] FRANCESCA GINO: Mm-hmm.

[00:17:25.12] TERESA AMABILE: The understanding I have, again from reading your memo on Friday and from what you just described to us in the greater detail, is that there was tension over that field experiment and your failure to defend [redacted] as much as she felt you should have in that conflict between the [redacted] team and the Francesca team at HBS-- that that was in 2011, I think, while the paper was being written up. Or was it 2010 when you were first looking at the field experiment data. Do you remember?

[00:18:09.97] FRANCESCA GINO: So I would go back to the time when [redacted] went onto the market. And so, as we were sitting in presentation listening to her and the type of questions that she was receiving, we started asking questions, and then we pointed the questions to [redacted] and [redacted] since until 2020 when we published the failure to replicate, we didn't have all the details about who is responsible for the field data.

[00:18:48.69] And so, often, when accusations or questions were going towards [redacted] [redacted] felt that she was the one who was also being addressed by the comments because she was part of the same team, close to [redacted] in the way she analyzed the data and dealt with the field experiment.

[00:19:10.83] There was an email in my comments. And I don't remember whether the date was eliminated. But it was an email from [redacted] in reaction to a draft of the paper. And that was an email that was already pointing to some questions in regard to the field experiments.

[00:19:31.53] And so, from very early on, there were questions that were raised. And [redacted] never felt OK with the type of details that he got in the answers. And he took that as a signal that [redacted] and [redacted] weren't very careful in the research.

[00:19:49.32] And I interpreted it differently, knowing that there are different approaches with doing research, and that [redacted]'s approach has always been quite different from [redacted]'s approach. Where [redacted] would get a lot of help from people like [redacted] and other postdocs to help him move his research forward.

[00:20:12.57] TERESA AMABILE: Yeah. So that was, what you just referred to, that email that you had a screenshot of in your memo.

[00:20:18.12] FRANCESCA GINO: That's it.

[00:20:18.39] TERESA AMABILE: That was, I think, early March 2011. So that was when the paper was being drafted. My understanding is that the tension between you and [redacted] didn't flare up between the publication of the 2012 paper and 2021 when the Data Colada team started doing their work and putting up that blog post. Am I understanding that correctly?

[00:20:51.69] FRANCESCA GINO: I'm not sure that that's accurate. Because if I think about how I show up for my collaboration, if, for example, I were that troubled that the writing in regards to study procedure change, I would have a conversation. And what instead I see is a person who raised a question and then moved on and forgot about it.

[00:21:17.50] And so, I think that there is more to the story in the way I might have not captured how upset I made [redacted] to be. Again, we stopped working on the projects that we had. There might be multiple reasons, including the fact that at some point she moved or she lost interest. I can find emails related to other projects that we were exchanging ideas about.

[00:21:45.27] But I don't think that she got angry in 2020. I think she was angry much earlier than that. Oops. I can't hear you.

[00:22:01.72] SHAWN COLE: You're muted, Teresa.

[00:22:03.18] TERESA AMABILE: OK. Sorry about that. I'm a little confused about why [redacted] would have gotten angry again when the Data Colada thing came out in 2021, or when it was about to come out.

[00:22:24.54] FRANCESCA GINO: Mm-hmm.

[00:22:26.10] TERESA AMABILE: Why she would have gotten angry with you. Because you said that she was close friends with the Data Colada people.

[00:22:36.20] FRANCESCA GINO: Mm-hmm.

[00:22:37.83] TERESA AMABILE: And it was the field experiment that she was part of that was being shown to be-- where the data were shown to be likely fraudulent.

[00:22:51.83] FRANCESCA GINO: Mm-hmm.

[00:22:53.07] TERESA AMABILE: So how did that cause tension between [redacted] and you specifically?

[00:22:59.50] FRANCESCA GINO: I believe that if you were to talk to [redacted] today she would tell you that she's still not convinced that the effect doesn't exist. When the issues around the potential problems with the field data came about, [redacted] and [redacted] but [redacted] primarily, wanted to conduct a broader research project to show the conditions under which the effect exists, or it doesn't.

[00:23:35.58] And what she found on the other side, primarily voiced by [redacted] was a person who said, no, this is not what we are going to be doing because the effect doesn't exist. If I were to take a step back, I don't know how to interpret those differences in terms of the reaction to see the same evidence.

[00:23:58.92] Yet again, just very recently, I saw two meta-analysis published in a top journal in psychology, one of which is looking at intervention on the growth mindset, suggesting that interventions don't lead to the type of results that they do, and the second meta-analysis leads-- it's framed as the how and when the interventions work. But it was a very strong difference in opinions that didn't get resolved.

[00:24:30.39] And since I'm part of the Harvard team, on multiple occasions [redacted] expressed really big disappointment to the fact that I wasn't doing enough to change the minds of [redacted] in particular on the way he looked at her and looked at [redacted]'s research.

[00:24:57.25] The last interaction is probably when [redacted] shared the chapter in his new book coming out tomorrow, where he described the collaboration. And the email, if I am remembering correctly, was directed to me and [redacted] to do some fact-checking.

[00:25:21.82] And so, I read the chapter and gave him some feedback. And [redacted] read the chapter and wrote a long note saying that if he continue down this path, it would call him out with a defamation suit, since [redacted] had actually some of the emails in the chapter. I haven't seen the latest version of the chapter. And so, I don't know whether that has changed.

[00:25:49.97] TERESA AMABILE: I think this is going to be my last follow-up, and then I really will see if Bob and Shawn have any. I want to go back to the meta-- the more general question that I asked.

[00:26:02.73] It seems that you are suggesting that [redacted] is the most likely bad actor, if there is a bad actor here, who would have gone in and changed data in your Qualtrics account after your studies were published to embed apparent discrepancies between the Qualtrics data and the data that you used to analyze the study and publish the study, or the studies. Is that correct? That you think it's most likely [redacted] if there is a bad actor?

[00:26:48.20] FRANCESCA GINO: I look at the last 20 years, or close to 20 years of being in this field. And again, I think I said that in the comment, but I believe that if you were to go and talk to my collaborators in research, in teaching, in any aspect of this job, I think they would tell you that I'm a person that really cares about integrity, but also that generally is part of a collaborations that function well rather than collaborations that have problems.

[00:27:26.70] And so, as I sat down and thought about how is this possible, who could possibly be angry at something that I might have done, [redacted] is the person that came to mind, because she's close to the Data Colada team. But also, she did express disappointments about the way I was not standing up or I was not behaving in the way that in her own mind showed being a good collaborator.

[00:28:03.46] TERESA AMABILE: Do you remember when she made this remark about someday you will hurt as much or suffer as much as she has?

[00:28:13.03] FRANCESCA GINO: I believe-- I don't. If you ask for the date, I don't. And I'm not sure I can reconstruct it for you. But I will try my best. But it was at a conference that we both attended where, again, we were asking a lot of questions about the field data.

[00:28:32.23] And if I were to provide an explanation, sometimes [redacted] is hard because he cares about the questions that he's asking. And so, but if you don't know him well, you might interpret it as aggressions towards something that you haven't necessarily done. And so, I think that [redacted] felt attacked and didn't feel like I defended her in any way to show that she's a good researcher.

[00:29:01.70] TERESA AMABILE: So this was an in-person conversation at a conference between you, [redacted] and [redacted] the three of you?

[00:29:07.64] FRANCESCA GINO: So when she said-- no, when she said what she said it was after. But we did meet. I believe [redacted] was also there. It was a conference where we were all present. It might have been JDM. But again, I can't-- it's been such a long time ago that I don't remember.

[00:29:26.56] TERESA AMABILE: So there was-- at the conference, during a presentation or after a presentation, [redacted] was really drilling down and asking hard questions about the field experiment data.

[00:29:36.81] FRANCESCA GINO: Yeah.

[00:29:38.68] TERESA AMABILE: Which made [redacted] feel attacked.

[00:29:41.17] FRANCESCA GINO: Yes.

[00:29:41.38] TERESA AMABILE: And because you were present, she had hoped-- expected that you would defend her because she had viewed you as a friend or friendly collaborator. And afterwards, she made this remark one-on-one to you in person--

[00:29:56.05] FRANCESCA GINO: Mm-hmm. Yeah.

[00:29:57.40] TERESA AMABILE: --about hoping that you suffer or you will suffer or something like that, in the future?

[00:30:02.15] FRANCESCA GINO: And again, in fairness, I'm the one who brought the team together. These were two independent efforts, and I'm the common link between the two teams.

[00:30:11.38] TERESA AMABILE: I understand that. And so, you're suggesting that she may have gone into your Qualtrics account because she would have had access. You gave her your password, your username, in the context of being at a conference together or sitting down together and collaborating at some point, and that she could have gone in and changed data in your Qualtrics account. Yes? I see you nodding your head.

[00:30:39.08] FRANCESCA GINO: Yes.

[00:30:40.79] TERESA AMABILE: And you think that she may have somehow altered data for the 2012 lab experiment that you were responsible for, which is allegation 4B? Because that wasn't in your Qualtrics account.

[00:30:57.77] FRANCESCA GINO: No, that was not in my Qualtrics account. I can't reconstruct where I was in the summer of 2010 when I was moving from UNC to Boston with part of the summer spent at Glendale in California on a research assignment for a project that was in collaboration with [redacted]. I tried my best going to people at Disney, travel agencies, it's just a really long time ago. And I can't reconstruct the data.

[00:31:37.95] TERESA AMABILE: Yeah. And we saw the chronology of what you tried to figure out in your memo last Friday, and we appreciate that detail. But why is it relevant where you were in 2010? How is that-- I don't understand how that's relevant to the question I just asked? Sorry.

[00:31:57.75] FRANCESCA GINO: So you were asking who had access to the Excel data at that point in time. And so, I think that knowing where I was would be relevant, since again, I don't think we should be judging the practice with a '22 set of eyes.

[00:32:19.85] But I've had many research meetings where you sit down in front of a computer of one person, and you leave the room, and it's OK to leave the room, it's OK for others to write papers while they're using your computer and not theirs if you're part of a research collaboration.

[00:32:40.49] Again, I think going forward, I will use my eyes of 2022 and revise my practices. But it's something that I was trained in when myself I was a lab manager. And so, it didn't seem to be a set of ground rules that should be questioned.

[00:33:01.77] TERESA AMABILE: So you think that particular data set or the data sets associated with the 2012 Experiment 1 could have been altered in the summer of 2010 because-- by someone who you were collaborating with in that summer. Is that correct?

[00:33:28.67] FRANCESCA GINO: I think that we should talk about that allegation more specifically. Again, if I-- my effort in responding to the allegations but really trying to understand that, was to start from what I know to be true. And what I know to be true is that I have not fabricated or altered data ever for any of my projects. And so, the question that I asked is, how is this possible?

[00:33:57.10] And so, what I thought would have helped me is understanding what happened between the email from [redacted] and also the time where I know I analyzed the data. That's what I was trying to understand.

[00:34:15.06] What I also thought would be helpful is-- and that is partly because I am married to a person who knows a lot about technology and also talked to a few IT experts, I could send you an email from 10 years ago that I revise while I resending it to you.

[00:34:36.60] And so, a question that I would have is, I don't know the right technology language for it. But there is a property that allows you to understand whether the email is proper. And I think my head went there, because again, I'm trying my best to understand something when I know that I didn't do anything wrong. And so all possibilities are to be considered.

[00:35:00.22] [INTERPOSING VOICES]

[00:35:03.13] TERESA AMABILE: Well, we will definitely talk about the data in Allegation 4b more when we get there. And like you, we're really, really trying hard to understand the specifics of what might have happened. So thank you for that. And I'm going to see now if Bob has any follow-ups. Bob, do you? Oh, Bob, you're still muted, Bob.

[00:35:29.76] ROBERT KAPLAN: Oh, here we go. No, that was an extensive line of inquiry, and I don't have an unanswered question at this time.

[00:35:40.41] TERESA AMABILE: OK. Thank you. Shawn, what about you?

[00:35:43.29] SHAWN COLE: No follow-ups, no.

[00:35:46.04] TERESA AMABILE: OK. Francesca, I did just think of one little follow-up. But again, we can park this until we get to this allegation. I just remembered that, yes, data for Allegation 4b was not in your Qualtrics. But also, data for Allegation 3 was not in your Qualtrics. So there are actually two data-

related allegations where the data were not in your Qualtrics account. So just wanted to park that for when we get to Allegation 3. Fair enough?

[00:36:20.16] FRANCESCA GINO: That's correct, yeah.

[00:36:22.17] TERESA AMABILE: Great. So are you OK to go on to Allegation 1 or do you feel like you need a break now?

[00:36:28.44] FRANCESCA GINO: I am OK going on to Allegation 1.

[00:36:32.25] TERESA AMABILE: Great. Let me just get a little water. So Allegation 1 addresses Study 3A in the 2020 JPSP paper.

[00:36:50.53] So Francesca, the memo you sent us last Friday says of this particular allegation, that there is a, quote, lack of evidence that data alterations occurred at all. The MCG report lays out a number-- a large number of discrepancies between the OSF data set and your Qualtrics data set in both dependent variable measures, in both experimental conditions, and it notes an absence of any discrepancies in the control condition.

[00:37:24.96] All of the discrepancies favor the hypothesized and reported effects as displayed in the heat maps on pages 7 through 11 in the MCG report. And we'd like to know, do you have an explanation for these discrepancies other than data alterations? And if you'd like, we can do a quick screen share of the relevant pages in the MCG.

[00:37:49.94] FRANCESCA GINO: I have it here. So--

[00:37:51.44] TERESA AMABILE: You've got it, right?

[00:37:52.19] FRANCESCA GINO: Yeah. So I should have been more clear in my language. There is no alteration done by me. When I think about the time I received the data for analysis, I know with 100% confidence that I did not alter data or falsify data or create a data. So I should have been-- apologies. I should have been clear about that.

[00:38:22.95] There is an aspect from the report that I noted in my comments that, again, makes me think through the two possibility is an RA who's looking at the data, merging the data set, cleaning it, or is it something else where a person edits the data directly in Qualtrics once the data is collected.

[00:38:54.21] And the part that surprised me is the part on page 5 of the report by the forensics firm where one of the discrepancies that they found is that four participants that did not appear to have consented to the research are actually included in the data set.

[00:39:19.76] And so, I've worked with many different RAs on my research. But that seems to be a strange thing to miss in terms of cleaning the data sets. Again, I have never written down practices of how data sets should be treated before analysis are conducted. But that stood out to me as really basic knowledge that I would have expected a person to pick up.

[00:39:58.20] TERESA AMABILE: So what's the implication that you take from that observation you just made?

[00:40:03.33] FRANCESCA GINO: That one-- I appreciate the question. Thank you for pushing me there. When I think about the possible explanation, RAs not following proper procedures when they're merging data sets or cleaning them, versus somebody intentionally editing the data, that, to me, the second explanation seems more plausible because this seems a foundational element of what an RA role requires.

[00:40:38.91] TERESA AMABILE: OK. I get that. Thank you. That's clear. Bob or Shawn, do you have a follow-up on this first question? And Bob, just it looks like, Bob, you're still muted.

[00:40:55.19] ROBERT KAPLAN: Yeah. I'm not sure what is being referred to, but the Qualtrics data set you said had 695 participants, and 95 of them were excluded because of they didn't finish the survey. And so, that's how you ended up with the final sample. I'm not familiar with Qualtrics and never have used it.

[00:41:23.47] So but it would seem that that would be a reasonable thing to have done, that even if the RA allowed the observations to stay there that you could look at that and say, yeah, and recommended these be excluded, that you would confirm that. But it doesn't address the anomalies in the 599 observations that were observed, the many anomalies, as documented in pages 7 to 12, I think, of the forensics report.

[00:41:57.69] FRANCESCA GINO: Yeah. And to clarify, since it seems like that came up in your question or observation but also Teresa's observations. I don't question the analysis that the forensic firm conducted. Again, I, when asked back in June for the raw data, I went and looked for it on Qualtrics trying to make sense of where the study was in my account.

[00:42:26.04] And so I did the, what I believe is the same type of effort that the firm went through of, OK, let's imagine I'm downloading the data now. How would I disqualify people who didn't consent to the study, or are there people who didn't finish the survey that are not part of the final sample. And so, I went back to the same analysis that the firm did. And I don't question the accuracy of the analysis that they conducted.

[00:42:59.60] ROBERT KAPLAN: But just to repeat Teresa's question here, just focusing on those discrepancies, do you have an explanation for how these could have occurred?

[00:43:13.22] FRANCESCA GINO: So the two explanations are the one that we highlighted earlier. One is that the person, an RA that was responsible for doing all the steps of downloading the data, cleaning it, and preparing for analysis made mistakes.

[00:43:35.47] I can't speak of whether those were intentional or not. Or somebody edited the Qualtrics account. I think part of the reason why I have trouble with the first explanation is that I don't believe I've created conditions in my labs or in my collaborations with RA that would lead to these errors.

[00:44:07.02] ROBERT KAPLAN: Let me go through the sequence. So you have an RA and so working with the Qualtrics data, preparing it, and handling it for you. Arguably, that's the data you worked with. And

therefore, that's the data that should have showed up in the OSF database. And the analysis based on that original data is what should be in the paper.

[00:44:28.82] FRANCESCA GINO: Yeah.

[00:44:29.63] ROBERT KAPLAN: But in fact, the reverse is true. I mean, somehow the OSF data are not consistent with the Qualtrics data.

[00:44:37.25] TERESA AMABILE: Can I jump in here for a second. Bob I-- Francesca will correct me if I'm wrong. But my understanding from what she's saying is that she thinks there are two explanations. One is that these--

[00:44:55.39] ROBERT KAPLAN: Yeah, I was following the first one.

[00:44:56.96] TERESA AMABILE: --the large number of discrepancies could be due to mistakes made by the RA. Or the large number of discrepancies could be due to a bad actor getting into her Qualtrics account.

[00:45:11.06] And I think she is saying that the second, the bad actor theory is more plausible to her, because she can't imagine that an RA trained by her and following the procedures in her lab would have made that huge number of mistakes.

[00:45:30.50] ROBERT KAPLAN: Well, I was saying--

[00:45:31.12] TERESA AMABILE: And what she's saying is that the discrepancies between what we see in Qualtrics in 2022 and what was posted on OSF in 2020 when the paper was published, that that large discrepancy can be accounted for by a bad actor getting into her Qualtrics account after the publication of the data in 2020.

[00:45:59.63] ROBERT KAPLAN: Yeah. All I was saying is I didn't see that--

[00:46:00.95] TERESA AMABILE: --and reverse engineering the Qualtrics data.

[00:46:06.71] ROBERT KAPLAN: Yeah. I didn't see how the first explanation was plausible at all--

[00:46:11.10] FRANCESCA GINO: Mm-hmm.

[00:46:11.83] ROBERT KAPLAN: --because if that occurred, you would have worked with the data, distorted or whatever, and you would have tried to write the paper based on that and published it. And there would be no discrepancy, because that's-- the RA is doing the data before you have it. Right?

[00:46:30.95] FRANCESCA GINO: Right. And so, what I'm suggesting-- and tell me if I'm misunderstanding you, which is very possible. But what I'm suggesting is that what I believe, if discrepancies happen before I put my hands on the data to analyze it, they're not going to be reflected in the data that is posted on the Open Science Frame, because what--

[00:46:57.21] ROBERT KAPLAN: You're stuck with that data. You're stuck with--

[00:46:58.92] FRANCESCA GINO: That's exactly right.

[00:46:59.88] ROBERT KAPLAN: Because that's the only data you would have seen.

[00:47:03.87] FRANCESCA GINO: That's exactly right. I think what your questions suggest as, again, I think about the way forward, is that maybe a good practice would be for me to make sure I always have access to the original data, such that I can do random checks, or checks, or maybe I change the practice altogether and I get to work always with the raw data rather than data that has been cleaned, merged, when appropriate, again, studies can be complex.

[00:47:35.46] And so, it's a different way of thinking about my relationship with the RA. But my practice has always been that the part of your role as an RA is that you do the first step of cleaning the data and preparing it for analysis. And the reason why that has been a good practice is that the RA is responsible for running the study.

[00:47:59.89] And so, especially when the study is conducted in the lab, if there are behaviors where a participant doesn't-- seems particularly distracted such that you question the validity of the data point, they should not put it in the final data set since it wouldn't be a valid data point.

[00:48:22.35] And so, I think what the practice-- the reason why I thought the practice was a good one is that it avoids you going into places that are other than the data that you have it as you have is the data that you get to analyze. Rather than saying, let's run a robust check if we use that data point from the participants that were distracted, would that be the same or different for the results that we obtained.

[00:48:52.12] TERESA AMABILE: May I, may I just restate? I think what I'm hearing here-- and I was misunderstanding, Bob, the line of your questioning, sorry-- is that Francesca is saying it's implausible that these discrepancies could be due to an RA having made mistakes in cleaning the data.

[00:49:12.54] And Bob is saying, it's actually impossible that an RA could have made mistakes in cleaning the data, because if that had happened, you would have been working with the data that had mistakes, and there would be no discrepancy between the OSF data and the data in Qualtrics.

[00:49:30.27] FRANCESCA GINO: The only plausible explanation there is that I created conditions in my lab where somehow research assistants want to please me, but again, I find it hard to believe, since many times as part of my work with RAs they've seen me abandon many projects, or they see me run study designs that ended up not supporting the hypothesis and moving away. And so, I have a hard time believing that RAs would try to create data that I'm happy to see because it supports other [INAUDIBLE]

[00:50:16.26] ROBERT KAPLAN: I understand. So I have one other question--

[00:50:18.60] FRANCESCA GINO: Of course.

[00:50:18.85] ROBERT KAPLAN: --since we've basically ruled out hypothesis one here. And let's operate under hypothesis two of bad actor, ex post, doing this. And again, it's my unfamiliarity with Qualtrics.

[00:50:31.72] What would be involved in changing 168 observations with multiple entries per observation. I don't know whether-- can I just create a duplicate Excel spreadsheet and just paste it over? What kind of effort is involved in doing--

[00:50:51.43] TERESA AMABILE: Bob, could I ask you to-- I think-- where is-- I think your microphone might be up on top of your head. Can you check where your microphone-- where's the microphone?

[00:51:01.15] ROBERT KAPLAN: It should be here. It's right in front of me.

[00:51:03.04] TERESA AMABILE: Oh, it's on the desk?

[00:51:04.80] ROBERT KAPLAN: Yeah.

[00:51:05.11] TERESA AMABILE: It's not--

[00:51:05.53] ROBERT KAPLAN: I just put my headphone on because it's a clearer sound from my computer.

[00:51:09.96] TERESA AMABILE: I understand. Thank you. Francesca, did you did you hear Bob's question clearly?

[00:51:14.62] FRANCESCA GINO: Yes. I don't know if I know of all the possibilities. Because if surveys were copied-- so I don't know what possibility. One possibility that I do know is that you could go into Qualtrics and you could find the survey and edit it.

[00:51:46.48] What is the best way to explain? I'm not sure what the best way to explain to a person who's not familiar with Qualtrics. Qualtrics is a survey tool that over the years got very sophisticated to allow for all sorts of possibilities where you're collecting the data.

[00:52:10.79] But in a sense, the back of it is that what you download is an Excel file. And you can look at the Excel file online once you're logged into Qualtrics. So in a sense, I don't think is as different as making modification to an Excel file. But you would be on the platform rather than on an Excel spreadsheet. But I also don't know if there are more sophisticated ways to modify data by recreating a survey. That I actually don't know.

[00:52:53.24] ROBERT KAPLAN: No further questions, Teresa.

[00:52:55.49] TERESA AMABILE: Hey, Shawn, how about you? Any follow-ups here?

[00:52:58.99] SHAWN COLE: No.

[00:53:01.60] TERESA AMABILE: So our second question on Allegation 1, Francesca, I think you might say that you've already answered this question. But I just want to ask it to see if you just can give us a quick answer.

[00:53:14.89] FRANCESCA GINO: Yeah.

[00:53:15.88] TERESA AMABILE: So your memo from last Friday notes that many people could log into your Qualtrics account and/or your laptop, as you. Can you provide us with evidence on who might have had both the access and the motivation to alter the data for this study?

[00:53:39.38] FRANCESCA GINO: So the evidence, I spoke to part of that in my comments. But I'm happy to reiterate. I've always shared my account information. The reason being that I didn't want to be the bottleneck for parts of the research.

[00:54:03.14] And so, in the spirit of making the research process more efficient, it has been shared. And I take full responsibility for having an account since joining in 2010 and keeping the same password since the login would still be attached to my email, and having not changed that in 12 years.

[00:54:30.94] I think that for the motives, I don't know if I can provide evidence other than what I said in response to the previous questions. If I think about who could possibly be angry at me for something that I did to them, the only person that I could think of is [redacted].

[00:54:57.03] TERESA AMABILE: OK, you know that, something just occurred to me. In your memo that you sent us on Friday, you listed several people where you have an email trail that you, in the email, I guess, gave them your login information for Qualtrics, for your Qualtrics account. Do you have evidence like that vis-a-vis [redacted]

[00:55:20.18] FRANCESCA GINO: I do not. I was surprised that I shared information like that via email since I usually do it live. It's the equivalent you write it down for a sticky note, and here it is. But when I checked in my email, it was collaborators, RAs, FSS, and [redacted] is a person who works for Survey Signal, which is a provider for data.

[00:55:51.46] TERESA AMABILE: OK. And--

[00:55:55.69] FRANCESCA GINO: I would just caution that, as you know, for reasons that I can't quite explain, some of my sent email is not comprehensive. And so, if I shared the password information with [redacted] early on in the years where the emails are not comprehensive, I wouldn't have a record of that. I [INAUDIBLE] that that's important to know.

[00:56:25.34] TERESA AMABILE: Can you just explain to me-- this is something that's really puzzling me. So you got these allegations about a year ago, a little over a year ago.

[00:56:36.65] FRANCESCA GINO: Mm-hmm.

[00:56:37.96] TERESA AMABILE: Can you explain why you didn't change your Qualtrics password until a couple weeks ago?

[00:56:48.60] FRANCESCA GINO: When we received the allegations, I was surprised. I'm a person who take integrity really seriously. I don't think that were-- my first response, you can ask my HBS advisor, it was, I don't think there are any accuracy.

[00:57:12.81] Again, I'm starting from the point of view of knowing with 100% certainty what I do in my practices. And so, when people accuse me of altering or fabricating data, I know 100% with certainty

that that is not the case. And so, I had to dig into the discrepancies, doing some of the work, and also doing a lot of learning with Qualtrics.

[00:57:42.39] I changed my password on Qualtrics right after one of the conversations with the Qualtrics teams, who said, with the eyes of 2022, you should have your account, and others should have their own. With it-- I guess it came-- so I don't have a good reason. The question, actually, I've never even thought about the question before you asked it. But when I first received the allegation, it was a disbelief of what this is all about.

[00:58:21.15] TERESA AMABILE: Yeah. Putting myself in your shoes, yes, I totally get that. So it sounds like you're saying that you didn't actually--

[00:58:34.22] FRANCESCA GINO: May I also add something.

[00:58:36.08] TERESA AMABILE: Yeah.

[00:58:36.50] FRANCESCA GINO: That by the time my computer was sequestered. Is that the right word?

[00:58:44.58] TERESA AMABILE: Yeah. I think so.

[00:58:46.43] FRANCESCA GINO: And it was October 27 of last year, since it was my husband's 50th birthday. I kept the same login also for my computer simply because it was my misunderstanding that if Alain needed to access my account, they could do so.

[00:59:07.94] I sent a note to Alain that I'm happy to forward to the committee last week after talking to Qualtrics asking whether you all were using my account to access Qualtrics over the summer. And that was when I discovered that there were those multiple logins. And at that point, Alain clarified that nobody has accessed to my account from this team or the forensic firm.

[00:59:40.99] TERESA AMABILE: So I was going to ask-- I guess I'll still ask it-- it kind of sounds like you didn't suspect that [redacted] was hacking into your Qualtrics account until just the end of October of this year. Is that true?

[01:00:03.08] FRANCESCA GINO: What-- I was-- from the very beginning when I received this allegation, I started thinking that there is somebody here who's trying to hurt me in some ways that I can't understand. What I have started thinking very deeply about in terms of how is this possible, is over the last few months when I sat down and trying to understand the anomalies.

[01:00:41.73] If you remember when we met in our last meeting before we started any investigation, I didn't have the time to look at whether there was discrepancies. So a lot of my thinking at that point is, this is in error. Again, I have done nothing wrong. And so, it is just possible that the allegations have no foundations whatsoever.

[01:01:07.87] It's when I sat down trying to repeat the same exercise that the forensic firm has done that I started asking a lot of questions of how is this possible, given that I didn't do anything wrong. And so, the two routes are the RAs preparing the data are making errors, or given my sharing of accounts, somebody is trying to be hurtful in some way that I don't understand.

[01:01:42.27] And as I thought more and more about that question, again, I might be wrong in the perceptions that I have of the environments and interactions that I create. But I think most of my collaborators are happy to work with me. I have many of them over the years across disciplines. And so, it's just hard to think about anyone else other than [redacted] or the Data Colada team.

[01:02:18.05] TERESA AMABILE: And can you say who specifically is on the Data Colada team who might be such a bad actor?

[01:02:26.89] FRANCESCA GINO: It's three individuals-- Uri Simonsohn, Leif Nelson, and Joe Simmons. I don't know, I think--

[01:02:40.66] TERESA AMABILE: Joe Simmons, right?

[01:02:41.73] FRANCESCA GINO: Yeah.

[01:02:42.01] TERESA AMABILE: Is that what you said? Yeah. OK.

[01:02:44.17] FRANCESCA GINO: So I don't know enough about their relationships. I coauthored with Uri on a paper back in 2011, I believe. So I don't know--

[01:02:59.83] TERESA AMABILE: OK.

[01:03:00.49] FRANCESCA GINO: --what I might have done to anger people. As I said, I am aware of the fact that, for the example of the paper that I mentioned earlier, Uri is a very good friend of [redacted]

[01:03:20.17] And when she was a collaborator on the paper, they reached out to her to see if there was an error that could be corrected. And so, I could expect the same thing if there was a problem that they saw in the data, why is it that they didn't reach out to me so that I could check?

[01:03:42.41] TERESA AMABILE: Thanks. Shawn or Bob, any follow-ups to that question two?

[01:03:49.22] SHAWN COLE: No.

[01:03:50.45] TERESA AMABILE: So Francesca, this is the last question on Allegation 1 that we have. Do you have any other evidence that could be helpful to us in determining whether research misconduct occurred with respect to this allegation, and if it did, who might have committed it?

[01:04:21.46] FRANCESCA GINO: Do I have any other evidence? I hope that one of the things that you have been seeing is that I've tried my best to provide evidence. So no, I don't think I have anything more to provide to the committee. I think you're asking a very good question.

[01:04:51.68] TERESA AMABILE: Thank you. Bob or Shawn, anything else before we have a short break here?

[01:04:57.78] ROBERT KAPLAN: No, I think a break would be welcome here.

[01:05:00.86] TERESA AMABILE: OK. We'll take a break. It'll probably be about five minutes. And it's my understanding that during the break, Francesca, you and Sydney will go into a breakout room. And then we'll reconvene in about five minutes. And we'll bring you back from that breakout room at that point. OK?

[01:05:18.26] FRANCESCA GINO: We'll wait for you to bring us back.

[01:05:20.78] TERESA AMABILE: You'll wait. Right. Just don't-- just leave your computer as it is. I mean, you can mute yourself, of course. But you're going to go into a breakout room now. And then you'll be brought back from the breakout room probably in about five minutes.

[01:05:34.16] FRANCESCA GINO: Perfect.

[01:05:34.91] TERESA AMABILE: OK. Thank you.

[01:05:49.86] OK. All right. Thank you. So Francesca, as you know, we're going to move on now actually to Allegation 4a, asking questions about that one. And just as a reminder to everybody, that's about Study 1 or Experiment 1 in the 2012 PNAS paper.

[01:06:17.02] So our first question: In comments about this allegation in your memo of November 11th on page 12, you said, "All the co-authors saw and reviewed the final drafts of the paper. And after the revisions, as thoroughly previously described, no one expressed any concerns with the way the description of the method was written, including those with knowledge of the actual study procedures."

[01:06:46.44] So can you specify who you were referring to when you said, quote, those with knowledge of the actual study procedures? And can you tell us when each of those people got involved in the project and what their involvement was?

[01:07:03.52] FRANCESCA GINO: Yes. So I am partly-- so we're talking about a study that was conducted in 2010. And so, we are going back 12 years with not a lot of proof that I can provide to the committee of what was a comment that was made on paper versus not.

[01:07:35.22] But this was research that at the time I was doing with [redacted] and [redacted] and then [redacted] and [redacted] joined later when we discovered that we were both going after the same research questions, and we joined forces. As it's common practice, we discussed the procedures of the studies that we are going to run.

[01:08:04.04] I don't think I can think of situations in my many collaborations where we decided to test an hypothesis, and then on my own I work with an RA or a team of RA to test the ideas without discussing the study procedures with my colleagues. It just seems implausible to me. And so, the people at that time when the study was conducted would be [redacted] and [redacted] in addition to the RAs who helped. And then, later on, [redacted] and [redacted] joined the team.

[01:08:45.64] TERESA AMABILE: So just to reiterate, it sounds like you're saying it would be [redacted] and [redacted] those people who did have knowledge of the study procedures and who were also co-authors on the paper, correct?

[01:08:56.37] FRANCESCA GINO: Yeah.

[01:08:57.72] TERESA AMABILE: OK. Thank you. Bob or Shawn, any follow-ups? Bob, could you mute your microphone just unless and until you have a question? OK.

[01:09:12.97] So I'm now, Francesca, going to ask some questions about specific changes in revisions of the manuscript in March and April 2011. If you'd like, we can do a screen share showing exact quotes of the relevant sections of the manuscript that I'm going to be referring to. So just ask if you'd like to see any of the specifics. And some of these questions are a little long, so no problem if you'd like me to repeat a question. OK?

[01:09:48.69] FRANCESCA GINO: OK.

[01:09:49.76] TERESA AMABILE: All right. Great. So your first draft of the manuscript was dated February 23, 2011. In the March 8, 2011, revision, which I believe was the next iteration, [redacted] added a statement stating that the dependent variable was the difference between actual performance on the matrix sheet and the self-report on the collection slip.

[01:10:30.52] Can you explain why [redacted] a doctoral student working with you at HBS and the first author of the paper, and as you just said, someone who was familiar with the procedures in the study, can you explain why she would have written this if it were not an accurate description of the study procedure?

[01:10:56.38] FRANCESCA GINO: I can't speak to what [redacted] was thinking in the moment. But what I can speak to is how I react to drafts of procedures when I receive them. I make changes that I think might track with my understanding of what happened. And so, I am not-- I don't fault [redacted] for making the change that she made.

[01:11:27.79] What I think is also important to note in regard to this particular task is that the matrix task is a task that we had used in prior research together. I mentioned some of the papers in my comments.

[01:11:46.18] It's also a task that has been used a lot in research on studying the reasons why and the conditions under which people might engage in unethical behavior as a measure of cheating. And usually, the measure is what is reported in a collection slip to the experimenter versus the actual performance on the task.

[01:12:13.72] TERESA AMABILE: So it sounds like you're saying, you and [redacted] specifically did collaborate on previous studies using this exact same task where the dependent variable of cheating on the self-report of performance came from the collection slip. And you're suggesting that that may account for the mistake that she in-- for the reason that she inserted this into the manuscript on March 8? Am I understanding that correctly?

[01:12:48.67] FRANCESCA GINO: I-- again, it's difficult for me to speak to the changes that others have made, especially in a context where this has happened so many years ago. I don't remember the conversations that we were having around this paper. But I would imagine, it's very possible given that we've used the task before, that she made the change based on how the task was used in the past.

[01:13:14.66] I believe that the only thing that I did not print it out is my comments. But I believe that in the papers that are referenced as ones that were published prior where we use the task, one if not two are with [redacted] But it's also well-known task. At least at the time it was a very well-known task since a lot of researchers have used it as a measure for cheating.

[01:13:43.24] TERESA AMABILE: Bob, Shawn, any follow-ups there? So the next question, question three: The next revision you made to the paper after [redacted] revised it on March 8 was dated March 15, 2011.

[01:14:09.28] In that revision, you deleted the material that [redacted] had added to the manuscript on March 8. That's what I just referred to, the material that had explicitly stated that the dependent variable of cheating on the puzzle performance self-report was the self-report made on the collection slip in room one.

[01:14:28.96] So you deleted that on March 15. You also added a new section to the study procedure description entitled "Opportunity to cheat." That section explicitly stated that the puzzle performance dependent variable came from the self-report that participants made on the tax form, which was also referred to as the payment form, in room two.

[01:14:57.35] Can you explain why you made those two changes, first of all deleting what [redacted] had written, and second, adding that section stating that the puzzle performance dependent variable came from the self-report on the tax form, which would have been line one of the tax form?

[01:15:23.26] FRANCESCA GINO: So I believe that the changes I made were in the spirit of clarifying the procedure. I don't have memory of sitting in my computer and making changes in regards to the passing on and off of this draft, since, again, unfortunately is-- too much time has passed. But I think that the changes that I were making were in the spirit of explaining the procedures as they happened.

[01:15:55.34] This was not an experiment where, as it's often the case for the cheating task, you fill out the task under time pressure, and then you provide the collection slip to the experimenter and get paid based on what is on your collection slip, and then we had the opportunity to look at the difference between the original and the collection slip. This was a case where you can see there were two rooms.

[01:16:24.18] And so, the idea was for people to do the puzzles in the first room, and then in the second room fill out the form with their taxes and receive a payment. And so, I believe the changes were to increase clarity on the procedure that was used since [redacted] made the changes that didn't seem to accurately describe what had happened.

[01:16:55.60] TERESA AMABILE: OK. Bob or Shawn, any follow-ups on that? No.

[01:17:01.78] FRANCESCA GINO: And I just want to clarify something that is really important to me since I spent a lot of time with the multiple drafts. The hesitation that you're hearing is really feeling a little uncomfortable with being precise especially when the questions are about intention for something that happened 12 years ago.

[01:17:23.09] The only thing that I can be 100% sure is that I have never written paper with the intention to mislead the reader or describe procedures that were inaccurate. In fact, I think that the example that

I provided of the collaboration with [redacted] is an important one, because we discovered an error in the procedure, in the way the field experiments was conducted by Shinsei, the firm in Japan we were working with, after we received an R&R.

[01:17:54.11] And it was really embarrassing to go back to the editor and explained the error and our misunderstanding of how the randomization was conducted. And we pulled the paper, even if it was on R&R state.

[01:18:10.64] TERESA AMABILE: Thank you for that clarification. And I understand. I actually had to do that myself with a paper once years ago. Call the editor and say, we've got to retract that. We've got to take that paper out of the review process because we just discovered a very serious error. Yeah. I get that. So I'd like to move on to question four now.

[01:18:36.14] FRANCESCA GINO: Yeah.

[01:18:37.19] TERESA AMABILE: Revisions you made on March 15 state that participants received a payment after completing the matrix task and before seeing the task form, and that they received a final payment in room two after filling out the tax form. So a final payment in room two.

[01:19:00.04] Also in your March 15 revision you added a phrase explicitly stating that participants were told to submit their collection slip to the experimenter in room one, quote, so that she could check their work and give them payment.

[01:19:17.20] We have two questions about these revisions you made on March 15. First, can you explain why you added those statements about when and where payments were made?

[01:19:40.69] FRANCESCA GINO: Can you explain why I added those statements?

[01:19:47.44] TERESA AMABILE: Yes. So I'm asking specifically now about the statements about when and where the payments were made.

[01:19:54.64] FRANCESCA GINO: And am I correct, Teresa, in following the modification. So I'm following through with table one. Are you also including table two in the way you're asking the question, or just following--

[01:20:08.44] TERESA AMABILE: You're talking about the tables in the forensic report? You know, Francesca, I actually have a simpler table that I put together. Because I found those tables in the MCG report helpful but incomplete.

[01:20:23.62] FRANCESCA GINO: OK.

[01:20:24.52] TERESA AMABILE: So I'm going to ask Alma to screen share a table that I created, partly from using what MCG did, but spending many, many hours doing what you did and going through the different drafts of the manuscript.

[01:20:39.47] So Alma, this screen, this is called "Allegation 4a screen share - manuscript changes and observations." Yeah. If you have that. OK great. So could you scroll down to the March 15 line. The date is in the first column on the left.

[01:21:05.30] FRANCESCA GINO: I'm already learning that they are way cleverer than me, since I had printed out and did the comparisons in the printouts. So I think this is much more--

[01:21:14.00] TERESA AMABILE: Yeah. It just-- I tried to do that, and it made me crazy. So Francesca, let me tell you what you're looking at here. So in the first column, I just put the date. I didn't put the full file name, just the date of the manuscript revision. The "last saved by" as indicated in the metadata. The next column is about payment, how many payments were mentioned in the manuscript.

[01:21:40.76] FRANCESCA GINO: Mm-hmm.

[01:21:42.57] TERESA AMABILE: The middle column is about the dependent measure, what the paper said about where the actual dependent variable of cheating on the matrix task came from. And the third column, or the last column on the right, is about the collection slip and what the purpose of it was and what participants believed the purpose of it was.

[01:22:06.42] So that's how I organized the information to just to try to wrap my head around it. And Shawn and Bob agreed with me that this was useful for them as well. So I hope it's useful for you.

[01:22:19.82] So what I'm asking about here is specifically about the statement you put into the manuscript about payment on March 15. So Alma, I'm going to ask you to just scroll down a little bit so we can see the highlighting--

[01:22:37.99] FRANCESCA GINO: Mm-hmm.

[01:22:39.49] TERESA AMABILE: --all of the yellow highlighting I have. Scroll back now. I'm looking at the yellow highlighting just in the third column. So you can stop there. Oh, up a little bit more, please. I'm sorry, Alma. Yeah, right there. So there was-- oh. So what you did here, Francesca-- Alma, just up a tiny, tiny bit more so we can read that one line-- there.

[01:23:07.62] So what you did, Francesca, among the many revisions you made on March 15, you deleted the instructions on the collection slip. Up to that point, the manuscript, starting with your first draft through the draft that [redacted] did on March 8, and then a version that [redacted] worked on on March 9, this draft of yours, which was the next draft, March 15, up until March 15 those collection slip instructions were included verbatim in an indented paragraph. You deleted all of that.

[01:23:53.17] And part of that was deleting the statement, "the experimenter will give you your payment and ask you to fill out a payment form." So that's the uppermost material we're seeing in the third column right now.

[01:24:08.50] And you altered the following sentence. The sentence had been, in the March 9 version, the version just before this, it had been, "once the five minutes were over, the experimenter asked participants to fill out the collection slip and then submit the collection slip to the experimenter."

[01:24:28.33] FRANCESCA GINO: Mm-hmm.

[01:24:29.59] TERESA AMABILE: And you altered that to say, "once the five minutes were over, the experimenter asked participants to fill out the collection slip and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment."

[01:24:50.47] And then, the next change has to do with what you added, that new section that you entitled "Opportunity to cheat." And that section included another sentence about payment in room one, "when participants received payment after completing the first part of the study," et cetera, et cetera. So I'm asking, can you explain why you added these two yellow highlighted statements about when and where payments were made?

[01:25:35.86] FRANCESCA GINO: So I don't remember the intent behind the changes. But if I use my usual mindset for when I work in trying to make revisions to paper is that I'm trying to clarify in points that seem unclear and that seems to be descriptive of the study procedures as I understand them.

[01:26:07.86] I think that in looking at all the versions back and forth, at some point there must have been a conversation with [redacted], who was the person who conducted the study, since I wasn't in the lab, to check on the procedure that was followed, given that there were so many back and forth.

[01:26:34.89] But in general, every time I make changes to paper is because I'm trying to increase accuracy or try to describe what is written in such a way that a person picking up the paper would be able to replicate it. Now, if I look with the 2022 eyes, that procedure seemed to make little sense given that the entire idea behind this experiment was to be in a room, have an opportunity to work on the task, and then receive payment in the second room.

[01:27:16.75] I think this is something that we talked about in the past. It's really difficult for me to even imagine an RA allowing me to run a study where you're paying participants and then ask for money back. It's just-- so practically it would be difficult to handle. In fact, I would use the word impossible to handle. So I don't know what the intent was there.

[01:27:50.84] But I think whenever I work on drafts I try to be accurate and improve on the understanding of the procedures. Whether my intent to be accurate was actually a description of something that was inaccurate, that's possible. I think I have done that on many drafts in the past. But what you want to make sure is by the time you get to the final draft you're actually describing the procedures as they occurred such that the paper can move forward.

[01:28:27.20] Again the summer of 2010 was a moment of transition. And I was in-- unless my memory fails me, I wasn't there conducting the study. And so, I would have had to have some conversation at some point with [redacted] about the procedures.

[01:28:49.53] TERESA AMABILE: Shawn and Bob, do you have any follow-ups on this particular part?

[01:28:53.55] SHAWN COLE: No.

[01:28:54.33] TERESA AMABILE: That was, in our planned questions, that was 4a. No? So this is question 4b.

[01:29:04.51] FRANCESCA GINO: Mm-hmm.

[01:29:05.59] TERESA AMABILE: Again, I'm still focusing on these yellow highlighted segments in the third column--

[01:29:16.24] FRANCESCA GINO: Mm-hmm.

[01:29:17.14] TERESA AMABILE: --about payment. Can you explain why you later deleted or altered those statements in your April 5 revision so that the manuscript no longer made any mention of a payment in room one?

[01:29:36.36] FRANCESCA GINO: I believe that the change was there because I don't think there was a payment in room one. So again, I think what I-- across the drafts, the entire goal was to be accurate in the procedures and understanding how they were-- how the study was conducted.

[01:30:06.92] TERESA AMABILE: It sounds like you're saying, these statements that you added on March 15, which was your second crack at the manuscript, I guess, you had a first draft and then this, and then it went through [redacted] it went through [redacted] and this was your second crack at going through the manuscript. It sounds to me like you're saying that what you added here on March 15 was a mistake that you later corrected on April 5?

[01:30:38.60] FRANCESCA GINO: So what I can't pinpoint to is at which point during this back and forth of drafts, that was the realization from me or the team that was enough confusion that it was time to go to the RA and say, hey, what actually happened in the experiment so that we can write the procedures of the study and giving the opportunity to whoever wants to run the study again to do so following the exact same procedure that was conducted.

[01:31:12.43] And so, I think that, as is true of many of my papers, sometimes my corrections are not accurate. But by the time they end up going off for publications, hopefully most of the error if not all, are in fact corrected.

[01:31:32.89] With exceptions, like I just gave you one with [redacted] where there was an error that we didn't correct it by the time the paper went out for review. But I think my intentions were good in trying to increase the understanding of the procedures in the back and forth.

[01:31:55.45] TERESA AMABILE: OK. Thanks. Bob, Shawn, any follow-ups on 4b?

[01:32:00.32] ROBERT KAPLAN: No, I want to just stay on this point. Because it seems that [redacted] did the first draft of taking the description of the procedure out of the boilerplate mode that had been used in previous studies and trying to make it specific to this study as it was actually performed, and that was the draft that Teresa explained-- described earlier.

[01:32:33.72] In the interim, now we're going between that late February draft and this March 15 draft, you had an opportunity and look at what [redacted] wrote and said, well, no, no, that's really not what was done at all, or that there were some gaps or errors there. Now that my mind is focused on this experiment and how it was designed to be executed and done, you write the sections that are now highlighted.

[01:33:01.62] I mean, you wouldn't have copied other boilerplate into here. It seems like now you're engaged with the material and you're making the statements that are highlighted that you submitted the test sheet and the collection slip in room one to the experimenter, where it was checked and the participants received payment.

[01:33:24.24] And then after they received payment after completing the first part of the study, now they move to the next part. So it seems like you were actively writing this based on your understanding of how you designed this experiment to be conducted and expected [redacted] to carry out for you.

[01:33:45.43] TERESA AMABILE: Bob, can you say what your specific question is?

[01:33:50.74] ROBERT KAPLAN: Yeah. It doesn't seem-- it seems in your search for truth, as you described it, this is the truth as you understood it as of March 15. And the question is, how did that truth change to the truth that shows up in the April 15 draft, which is a different description, or not as explicit a description.

[01:34:14.14] TERESA AMABILE: I think you mean April 5.

[01:34:15.61] ROBERT KAPLAN: April 5, I'm sorry. Yeah.

[01:34:18.89] FRANCESCA GINO: I think that there are a few assumptions in what you're stating that make me uncomfortable, since you're stating you have your full attention to the paper. I don't know that to be true.

[01:34:38.49] And I also know that it's now six plus-- it's 10 months after the study was conducted. So I'm not entirely sure of at what point did I actually check in with the person conducting this study to make sure that my understanding was accurate.

[01:35:04.35] And yes, I am attentive when I work on drafts. But probably, you get 100% or 300% of my attentions before I know the drafts go off to being published to make sure that everything is 100% accurate. So again, without a reconstruction of exactly what was happening in April, was I sitting with [redacted] was I talking to [redacted] it's really difficult to say yes to the assumptions that you seem to be making in your statement. The--

[01:35:48.55] TERESA AMABILE: [INAUDIBLE].

[01:35:49.95] FRANCESCA GINO: I just want to come back to the thing that I said earlier, since I've learned this in graduate school, actually, from a class taught by [redacted] that as part of being a good experimenter you always want to try to write procedures with enough details that if a person couldn't talk to you, they would be able to know what to do. And so, you want to be accurate and precise and give them the opportunity to run the study in the way it was actually conducted.

[01:36:24.57] ROBERT KAPLAN: Yeah, no, I think that's a very good process and fully concur that you want to write it as accurately as you can. And it seems that at March 15, we're looking at your description of how the procedure was actually done.

[01:36:42.98] And it's not the RA would not have had free will to go off and do it the way she wanted to do it. She would do it the way you had designed it and the way you understood it, which is what we believe-- that's what we are reading here in this March 15 draft. And so why-- it wouldn't seem to need any other change once you have written it as you designed it and as you instructed the RA to execute it.

[01:37:14.95] FRANCESCA GINO: Part of what makes it difficult for me to answer this question, react to your comments, is that I tried my best to see if I could find information on what was the procedure that was followed in that summer when these studies were conducted.

[01:37:38.80] And unfortunately, I don't think I can have 100% knowledge of all the details. And the reason being that, again, this was 2010 where the practices at UNC for the way you write IRB are different. Nowadays, in 2022, if I want to conduct a study at HBS, and the study, for example, is on Qualtrics, I submit my procedures, including the Qualtrics survey to the IRB. And so you can go back and check on all the details to make sure that the procedure were followed.

[01:38:13.36] In this case, that's not what the requirements of the IRB at UNC were. And I also don't have the IRB that was approved to go back and check on the procedures as they were stated in the IRB. What I have on the computer is something that was written that I don't know if it was the thing that got submitted.

[01:38:35.71] And I did call the IRB at UNC. And since this was a time where things were exchanged via paper, they don't have records of it either. And so, it's quite difficult to reconstruct the story as it is. Again, I can only speak to certainty about my intention when writing up procedures of studies is to be accurate such that others who want to replicate the research, they know what procedure to follow.

[01:39:05.88] ROBERT KAPLAN: Yeah, so what I'm asking--

[01:39:07.63] TERESA AMABILE: Bob, I'm going to ask if we can go on now, because we have so much to cover. Is it all right if we go on from this?

[01:39:17.10] ROBERT KAPLAN: I just wanted to clarify, we're not asking about the consistency between this description and the IRB. We're asking about-- this is the way you designed the experiment, the way you designed the RA to execute it.

[01:39:30.73] And it's not about the details of the experiment, it's really at the core of the experiment that we're addressing here and wondering why-- well, OK. And it would seem that therefore this March 15 description is your most accurate understanding of the way the experiment was both designed and executed.

[01:39:54.58] TERESA AMABILE: But Bob, can I just restate what I think I heard Francesca say earlier in answer to your question about this? I think I heard her say that although she tries to clarify with each draft that she works on, she does sometimes make mistakes in what she thinks is a clarification. She sometimes makes mistakes.

[01:40:15.87] And she speculates-- she cannot remember-- it was 11 years ago that she was working on this paper-- she speculates that it wasn't until after this March 15 draft and before the April 5 draft that

she actually checked in specifically with [redacted] about what the details of that procedure were. Francesca, I see you nodding your head. Are you agreeing that I'm interpreting correctly what you said?

[01:40:45.95] FRANCESCA GINO: Yes. You are interpreting correctly when I said.

[01:40:49.50] TERESA AMABILE: OK. Thank you. And Shawn, I noticed that-- I'm sorry, Francesca, were you done?

[01:40:56.39] FRANCESCA GINO: Yes, I'm done.

[01:40:58.41] TERESA AMABILE: Shawn, I noticed that you unmuted your microphone

[01:41:01.49] SHAWN COLE: No, yeah. No further comment.

[01:41:04.65] TERESA AMABILE: OK, great. So I'm going to move on. So Francesca, your April 5-- and Alma, just leave the screen share where it is right now. Your April 5 version of the manuscript had the following sentence in the procedure description.

[01:41:26.55] Hold on a second, let me look at this. Alma, can you now scroll down to that April 5 row? It's two rows down, I think. So we had a revision on April 4 by [redacted] and then April 5, Francesca. OK. And now, I'm focusing on-- I'm sorry. I'm getting myself confused here.

[01:42:00.01] FRANCESCA GINO: I think it's easy to be confused.

[01:42:01.20] SHAWN COLE: [INAUDIBLE]

[01:42:06.36] TERESA AMABILE: Ah, this is in the middle column. I'm sorry. It's in the second column from the right, and it's under number one. So this is about the dependent measure. And that's it. Thank you, Alma. You're a lifesaver.

[01:42:25.64] So this is the sentence in the procedure description that I want to start with: "Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work."

[01:42:53.10] So one change you made in this version was that sentence, until this version, had said, "so that she could check their work and give them payment." You deleted that phrase, "and give them payment." And that's pointed out in the column just to the left of the column we're looking at. If you see those-- the stricken-out in the screen share, if you see the stricken-out line, right there. Yeah. That's it, Alma.

[01:43:25.12] So you struck that phrase. But that's actually not what I'm focusing on in this question. We noticed that the sentence, Alma, if you could go back and just highlight the sentence that you had been-- yeah, that's it. We note that the sentence states, "the participants were told that the collection slip would enable the experimenter to check their work."

[01:43:52.51] So we'd like you to please explain why the final submitted version of the manuscript contains a statement saying, "note the sole purpose of the collection slip was for the participants to learn how many matrixes in total they have solved correctly."

[01:44:17.44] So what I'm getting at is, it looks like one-- a purpose of the collection slip, if not to enable the experimenter to give them payment at that time, the purpose was so that the experimenter could check their work. But the final version of the manuscript as it was submitted eliminates that version of checking-- it actually explicitly says there was only one purpose of the collection slip, and that was for the participants themselves to figure out how many matrices they had actually solved correctly.

[01:45:03.24] FRANCESCA GINO: Yeah. So the participants needed a vehicle as they moved from one room to the other to remember how many matrices they solved. And they reported that on the form in the second room. But again, your question is different. Your question is, what was the intent behind the change? Am I rephrasing?

[01:45:31.63] TERESA AMABILE: It's about this phrase-- Alma, could you, in that part you have selected, could you just select the last phrase, "so that she could check their work"? My question is about this. You had this in the paper through and including your April 5 version.

[01:45:52.95] And yet-- so it seems that one purpose of the collection slip was to have participants believe that the experimenter was going to check their work. And yet, the final submitted version of the manuscript says the only purpose was for the participants, presumably privately, to learn how many matrixes they had solved correctly.

[01:46:21.80] So I'm wondering if you can explain the discrepancy between this statement that you had in your April 5 version and the final submitted version, which was in May, the next month, that said something different about the purpose of the collection slip.

[01:46:46.09] FRANCESCA GINO: So I am going to sound repetitive, and my apologies for that. So I don't remember what was going on as I was working on these drafts in the different iterations. But what I would know is that by the time the paper gets submitted, I would like for the procedures and everything else that is in the paper to be accurate.

[01:47:13.73] And so, to the extent that there were changes, I think they were changes that were supposed to increase the clarity and the accuracy of the procedures as explained in the paper. I think that what makes it difficult with this particular task is that, as I said, it's a task that have been used in different ways in other studies.

[01:47:35.92] And so, I can imagine myself just transferring over the procedures because I'll deal with the details later once I talk to [redacted] and move on to the rest of the paper thinking about the theoretical contributions, how do we explain the findings, and more attention to the procedures coming later.

[01:47:58.61] So I don't know why that particular aspect of the description changed other than, again, I hope that as I do in all my papers I was trying to accurately describe what had happened in the experiment.

[01:48:24.05] TERESA AMABILE: I just wanted to ask about a phrase that you used a little bit in this a little bit earlier in your answer that you just gave. You said something about, I can imagine that I just transferred over certain descriptions of the procedure.

[01:48:39.92] Were you referring to possibly transferring over from other manuscripts with-- from other studies with the matrix tasks that you might have copied and pasted bits of the procedure sections from those papers into this paper at different points in the revision process?

[01:48:57.92] FRANCESCA GINO: I could imagine, again, it's a task that I used a lot. Or if you-- I think that is a task that is being used in my work or that I have used in my work so often that in describing it, I would probably say it in the way that it's written similarly in other papers.

[01:49:25.74] But again, I am tentative-- and the hesitation is an important one-- because I don't remember. I don't have memories of sitting down and being there, making the changes to this manuscript. Too much time has passed. What I am certain of is that my intention when I write papers are always good. When I was working on these many different revisions, and it makes you have a headache comparing across all of them and all the changes.

[01:49:58.50] I think that with the eyes of today, I will say, OK, let's pause. No more changes to the manuscript. We're going to have a call with the RA who's going to walk us through step by step what is actually happening. Everybody is hearing, and we move on. I don't think that that's what happened here. But it's probably something that I would do in light of all the back and forth.

[01:50:26.12] What I do know is that, as I wrote in my comments, first drafts are first drafts. And so, I think a lot about the contributions you want to make, other aspects of the paper, rather than the nitty gritty of the details. And so, especially when studies are not studies that I oversaw, I don't think that errors or changes stand out to me as problematic across drafts.

[01:50:58.37] TERESA AMABILE: Thank you. Bob or Shawn, any follow-ups on that?

[01:51:03.83] SHAWN COLE: No further questions.

[01:51:09.56] TERESA AMABILE: So this is the last question on Allegation 4a. And it's really the same as the last question I asked on Allegation 1. Francesca, do you have any other evidence that could be helpful to us in determining whether research misconduct occurred with respect to this allegation, and if it did, who might have committed it?

[01:51:39.88] FRANCESCA GINO: No. I think I worked really hard in trying to find as much information as possible to make sense of this allegation.

[01:51:53.90] TERESA AMABILE: Thank you. I'm going to call another brief break. I know the last one was more than five minutes. We'll try to make it just five minutes this time.

[01:52:05.08] And oh, it looks like somebody-- who's gone? Oh, I see. The screen share stopped. That's all that changed. So Francesca and Sydney, you'll go into a breakout room for five minutes. And hopefully we'll be calling you back in five minutes. Thanks.

[01:52:38.86] Hi, Francesca. Are you ready to get into the questions we have on Allegation 4b?

[01:52:45.16] FRANCESCA GINO: Yes.

[01:52:47.17] TERESA AMABILE: All right. And this is also about that Study 1 or Experiment 1 in the 2012 PNAS paper. So your memo of November 11 says this of the original data set for Experiment 1, and you were presumably referring here to your practices in 2010 when the data were collected.

[01:53:13.80] And this is a quote from your memo that you sent us on Friday: "Unfortunately, it was common practice in my lab for others, whether an RA or doctoral student, to enter data often using my computer or login, making it difficult to interpret the metadata for authorship."

[01:53:37.00] In the inquiry interview that Bob and I had with you on February 28 this year, you told Bob and me that [redacted], your RA, had entered the data for this study. And the metadata in the original data files show [redacted] as the sole creator. So we're confused by your statement questioning authorship of the data file. Can you clarify that for us?

[01:54:09.95] FRANCESCA GINO: So I think that my comments spoke about the general reference in the forensic reports to metadata and pointing to the fact that it's-- dangerous is the wrong word. It's not a good assumption to use the metadata to understand who did what. I think that they made note of that in their reports. I would have to go look back at my notes since there are many pages.

[01:54:48.15] But again, I just wanted to make clear what my practices were in general for data entry. So I don't see an inconsistency between the two things that I said.

[01:55:07.51] TERESA AMABILE: But just to be clear, you weren't questioning who had created that data file for experiment one in the 2012 paper?

[01:55:18.30] FRANCESCA GINO: No. What I believe that it's either [redacted] or the other RAs who helped her in the lab. There are other people thanked in the paper. So I assume that she got some help in running the study. And it would make sense, given that there were two rooms. But the RA entered the data, transferring it from the on-paper data into Excel.

[01:55:44.49] But again, if at some point I was visiting UNC with my computer open, she has used it in the past for entering the data. And so, whether the data set says [redacted] or Francesca, or another, I don't think that that's a good assumption on who did what on that specific file. I was making more of a general point. I'm sorry if I confused you.

[01:56:14.91] TERESA AMABILE: I'm a little confused.

[01:56:16.32] FRANCESCA GINO: Yeah, I'm sorry.

[01:56:17.53] TERESA AMABILE: I just want to make sure, you don't have any reason to believe that it was anybody other than [redacted] or somebody working directly under her supervision who entered the data for this-- entered the original data from paper into the Excel file in 2010?

[01:56:36.59] FRANCESCA GINO: That's correct.

[01:56:37.05] TERESA AMABILE: That's correct?

[01:56:37.68] FRANCESCA GINO: Yeah. That's correct. So [redacted] worked with other RAs that she was responsible in either hiring or getting help from for credits for class. And so, I don't know-- I haven't tracked that information. I usually, not something that I ask about. But RAs are entering data. And so, it's either [redacted] or somebody who helped her.

[01:57:05.53] TERESA AMABILE: OK. Thank you. Bob or Shawn, do you have any follow-ups on my question one?

[01:57:10.84] ROBERT KAPLAN: None.

[01:57:11.75] TERESA AMABILE: No? OK.

[01:57:15.21] FRANCESCA GINO: Apologies for the confusion.

[01:57:17.71] TERESA AMABILE: No. That's OK. So Alma, if you could be ready-- I don't need it right yet. But I'm going to in a moment ask you to bring up the screen share for Allegation 4b. So if you could just get ready for that. So Francesca, the MCG report on the data for this experiment, they called their report-- the file name is "Assessment of Allegation 4b."

[01:57:49.22] FRANCESCA GINO: Yeah. I have it.

[01:57:50.04] TERESA AMABILE: It compares the original data set with the OSF data set and carries out the same analyses on both. That report points to a large number of discrepancies between the two data sets.

[01:58:06.18] I'm going to go through these discrepancies and then ask if you can explain how they arose. And two are particularly notable. And that's going to be on the first page of this Allegation 4b screen share. So Alma, could you bring up that--

[01:58:25.88] [INTERPOSING VOICES]

[01:58:26.56] FRANCESCA GINO: --a clarifying questions?

[01:58:28.56] TERESA AMABILE: I'm sorry. What did you say?

[01:58:30.24] FRANCESCA GINO: A clarifying question for you. When you say original data, do you mean the data attached by [redacted]

[01:58:43.45] TERESA AMABILE: Yes. Yeah.

[01:58:44.53] FRANCESCA GINO: OK.

[01:58:45.46] TERESA AMABILE: Right. Alma, could you do the screen share of-- there we go. And could you just scroll. So Francesca, this is a page from the-- it's page 6 from-- in the MCG report on Allegation 4b. And Alma, could you scroll down so we can see both of the yellow highlights here? Thank you.

[01:59:12.79] So this is their summary of just basic differences that they found, Francesca, between the OSF data and the July 16 data. There were three different versions that [redacted] had, as you might remember, from the forensic report.

[01:59:33.58] And the forensic firm was able to determine that it's the July 16 data that match most closely with the OSF data set in terms of the number of participants and other features of the data set. So they're using that one as what we're calling the original data file. So the first discrepancy is yellow highlighted in the fifth bullet point.

[02:00:11.15] FRANCESCA GINO: Mm-hmm.

[02:00:13.84] TERESA AMABILE: And that is that six participants' condition assignments differed in the two data sets. They give the participant IDs there.

[02:00:26.83] And the second discrepancy is the second bit that's yellow highlighted, 52% of the participants that could be confidently matched had data that were different in the two data sets with no clearly identified reason for the discrepancies. And that's this last bullet point highlighted here on this page. OK. And Alma, for us to go through-- show the next discrepancies, I'm going to ask you to scroll to table one.

[02:01:11.57] And I forgot to mention, Francesca, nearly all of the discrepancies of the forensic report points out-- support the hypothesized and the reported effects. So in this table one, they redid the basic chi-square, which is probably the most basic statistical analysis. Yeah, I see you nodding your head.

[02:01:39.83] And that's just overall participants who cheated on one or both of the dependent measures of cheating. And as you can see, the July 16 data set failed to replicate the finding of any significant differences between the conditions.

[02:01:58.54] FRANCESCA GINO: Yeah.

[02:01:59.75] TERESA AMABILE: So that's the first of the statistical analysis replications that they did. OK, thank you, Alma. Could you now scroll down to the page that shows table two and figure two? You could find a way to get them both on the screen. Yeah. That's good.

[02:02:24.24] And the figure at the bottom, it just depicts figurally the differences between the OSF data, which is the green line, and the July 16 data set, which is the blue line. So we can see some pretty notable discrepancies there.

[02:02:49.99] FRANCESCA GINO: Yeah.

[02:02:50.80] TERESA AMABILE: And Francesca, can we scroll to the next page? OK. And this is just the second dep-- oh, Alma, can you show us the legend at the bottom of that? There you go. And this is just the second measure. So what we just saw was the first measure, over-reporting of puzzle performance. And this is the second measure, over-claiming of deductions.

[02:03:21.25] FRANCESCA GINO: Yeah.

[02:03:22.83] TERESA AMABILE: And we see, again, very large discrepancies in the means between the two data sets.

[02:03:32.17] FRANCESCA GINO: Yeah.

[02:03:32.83] TERESA AMABILE: OK. And now let's scroll, Alma, to figure four. Oh, no. I'm sorry. We just did that. Go back. And the last thing we're going to screen share here, Francesca, is that the MCG report points to differences in the statistical results for both dependent variables that contradict the published paper.

[02:04:07.62] And that is in the more sophisticated statistical test, way more sophisticated than the chi-square, which is the F-test of overall differences between the conditions and the T-tests of the paired comparisons between the conditions. And that's, Alma, the table on the last page here. Right. "Additional statistical results."

[02:04:31.99] And we'll just take a minute to look at that and, again, see the large differences between the results obtained with the OSF data set, which perfectly replicate what's published in the paper between-- the discrepancies between that and the July 16 or original data set.

[02:04:56.35] So Francesca, the question we have on all of this is-- can we take down those screen share, or Francesca, do you want to leave it up?

[02:05:05.04] FRANCESCA GINO: No, and I have it. I was following with the report. So I have it.

[02:05:09.30] TERESA AMABILE: You've got it. OK. Thank you. So the question we have is a very basic one about all of these discrepancies, and that's, can you explain how these arose or how they could have arisen?

[02:05:21.46] FRANCESCA GINO: So I don't question the existence of discrepancies. What I do have questions about, is what the original data was. What I know for sure, as I said in the context of other studies, is that I did not alter nor fabricated data, because that's something that I would never nor have ever done in my own practices in the many years of being in this profession.

[02:05:52.99] And so, as I looked at the report and as I was going through the analysis myself and trying to understand the discrepancies, a lot of questions came to mind. One was why is that there are differences even in the number of participants? That seems really strange. The actions that I did take to try to understand what the original data was, are actions that didn't lead to certainty, simply because the original data is something that doesn't exist.

[02:06:30.39] What would have been super helpful to me is see the original data on paper as it was conducted during the summer of 2010. And as I said in my comments, I did reach out to UNC. And unfortunately, nobody in the lab, as much as they look, found the data on paper. And so, I am missing an important piece of information.

[02:06:58.67] When it comes to the emails for [redacted] one of the questions that I would ask is, could one look at the structure of the email, as IT people can look at, to make sure that the emails is in fact as it was when sent back in 2010.

[02:07:16.79] And the third question that I had, which, again, unfortunately I don't have certainty is, what happened after July 16, what happened in the days that followed? Were more sessions that were conducted? And I don't know. Because every time I tried to find answers, I wasn't able to know for sure.

[02:07:40.28] And again, the question that I asked earlier of, where was I in those days, I can't answer that question either since I was unable to reconstruct my calendar. What I would have loved is for me to come to you and say, here is with 100% certainty where I was. I was sitting with [redacted] We were looking at the data together. Or [redacted] was entering data on my computer, or whatever there was. It's information that unfortunately I don't have for you.

[02:08:15.01] TERESA AMABILE: OK. Bob or Shawn, do you have any follow-ups? No? OK. And this is the last question an Allegation 4b, same as the question we've been asking on the others. Francesca, do you have any other evidence that could be helpful to us in determining whether research misconduct occurred with respect to this allegation, and if it did, who might have committed it?

[02:08:45.10] FRANCESCA GINO: I think I tried all the routes that I could think of to provide more information. So unfortunately, I don't think I have anything else to provide.

[02:08:56.53] TERESA AMABILE: I just thought of something. Did you import any boxes of files from your lab at UNC up to HBS when you moved? I'm asking that because I remember that I did that when I moved from Brandeis to HBS back in 1995. I had boxes and boxes of on-paper data which, of course, was mostly how data were collected before 1995. And I kept them for many years until it was clear I wouldn't be needing them. Did you do that?

[02:09:31.43] FRANCESCA GINO: No. I don't remember doing that. But that doesn't mean that I didn't do it. I did check in my office. There is no data related to this study. The only data that I found was about a study that never got published. We never followed up on the research.

[02:09:55.27] I would be happy if we asked around-- I'm happy to go back to my email. If you can think of anything that I can do to be helpful to the committee to explore that possibility, I'd be super happy to help.

[02:10:12.76] TERESA AMABILE: You know, one thing I just thought of. When I was basically asked to give up my HBS office recently a couple of years ago when I went down to part-time and the school needed absolutely every single faculty office for full-time faculty.

[02:10:34.72] I took the last of the files that I had and sent them off to Baker Library. I went through them and got rid of anything that was just personal stuff and then organized the rest of them and sent them off to the Baker Library archives. And I had started archiving stuff as soon as I arrived, or in the first year or two after I arrived at HBS when I realized I had too much stuff to store in my own files.

[02:11:04.93] Is it possible that you've done that? Have you ever sent boxes of stuff to the Baker Library archives? I'm wondering if maybe there's a chance the paper data could be there?

[02:11:16.49] FRANCESCA GINO: I don't think I've ever been in touch with Baker Library archives. I think it'd be helpful to ask-- I actually don't remember who my FSS at the time was.

[02:11:38.06] TERESA AMABILE: We could-- that may be discoverable.

[02:11:41.12] FRANCESCA GINO: I want nothing more that to prove in any way possible that I didn't do anything wrong. So anything I can do, ask my FSS, ask whoever at HBS might know of boxes that get put somewhere with data. I'd be very happy to explore that possibility. I don't remember loading things in my car. I don't remember having boxes of data in my car when I drove up from UNC.

[02:12:17.30] TERESA AMABILE: Or putting them in a moving truck or anything like that? Well, I think that Alain can certainly work the channels at HBS to see if your FSS-- or I guess they were called FAs at that time-- is still at HBS, at Harvard. And if that person could possibly be consulted about whether they have a memory. I don't know if this is possible. But if-- they might remember having archived materials for you.

[02:12:56.20] FRANCESCA GINO: Yeah.

[02:12:57.61] TERESA AMABILE: Yeah. So I can't think of anything else at this point. Francesca, can you think of anything else on this one, on 4b? No?

[02:13:06.33] FRANCESCA GINO: No. Just thinking that unfortunately for many years it was [redacted] but I think there was a person before him, and I unfortunately don't remember their name. So we wouldn't--

[02:13:15.94] TERESA AMABILE: So this would be 2010, 2011, maybe 2012, around there?

[02:13:21.91] FRANCESCA GINO: Yeah, I think it was-- yeah.

[02:13:24.37] TERESA AMABILE: OK. Bob, Shawn, any follow-ups on 4b?

[02:13:28.24] ROBERT KAPLAN: No.

[02:13:30.22] TERESA AMABILE: We didn't spend too much time on that. I feel like I could go on. I don't need a break now. But Francesca, let me ask you, do you want a break?

[02:13:40.09] FRANCESCA GINO: Can you remind me of where we're going next?

[02:13:42.46] TERESA AMABILE: We're going next to Allegation 2, and then we'll finish up with Allegation 3.

[02:13:47.32] FRANCESCA GINO: I am happy to dive in.

[02:13:50.05] TERESA AMABILE: OK. Shawn and Bob, are you OK? OK. So Allegation 2 is about Study 4 in the 2015 Psychological Science paper.

[02:14:08.16] FRANCESCA GINO: Yeah.

[02:14:09.00] TERESA AMABILE: So we're clear on that allegation?

[02:14:11.40] FRANCESCA GINO: Yeah.

[02:14:13.76] TERESA AMABILE: So Francesca, the memo you sent us last Friday says, of this allegation, that it's impossible to know why data from some original participants might have been excluded from the OSF data set, because there are many reasons that participants might be excluded from consideration before data were analyzed. Reasons, such as the participant being obviously distracted during the study.

[02:14:42.44] However, there were some data in the OSF data set that do not appear in any of your original data sets. So this is the reverse problem. And those data appear to favor the hypothesized and reported effects. And there was a figure showing this in the MCG report. And we can do a screen share of that figure if you'd like, just to jog your memory. Do you want to see that?

[02:15:17.82] FRANCESCA GINO: No, I have it.

[02:15:19.26] TERESA AMABILE: You've got it. OK, I think it was called figure one? I think? Let me just--

[02:15:30.67] SHAWN COLE: Page 11, yeah.

[02:15:32.76] TERESA AMABILE: Page 11 Shawn?

[02:15:34.86] FRANCESCA GINO: Yeah. I have it.

[02:15:36.39] TERESA AMABILE: Right, figure one on page 11. So the question is, can you explain this? These data points that are only in OSF and can't be found anywhere in what seem to be the original data?

[02:15:56.40] FRANCESCA GINO: Yeah. I want to clarify, because it's important to restate as I've done before, I did not alter nor fabricated data for this study or any other studies in my research. As I sat with the data myself, again, same of what happened in the case of the 2020 paper, when the committee asked me to go and find the original data, I went into my Qualtrics account and found what I believe is the original surveys as it was conducted. There are two that added to be merged.

[02:16:46.22] Again, if, in fact, somebody access my account, the difference for data points that are present in the OSF data versus the ones that are part of Qualtrics might be due to deletions of data points. So one possibility is that somebody went into my account and altered the data.

[02:17:11.58] The second possibility is, that seems less plausible to me, is that something happened in the data cleaning process. But I had a hard time understanding where the additional data points came from. I don't think there is a third version of the Qualtrics survey, or not one that I could find. And so, I can't make sense of those.

[02:17:47.32] TERESA AMABILE: OK. Thanks. Bob or Shawn, do you have any follow-ups there on question one?

[02:17:55.56] ROBERT KAPLAN: No.

[02:17:56.67] TERESA AMABILE: No? OK. Bob, just-- thank you. Shawn would like to bring up a question here, which I didn't put into my--

[02:18:09.99] SHAWN COLE: Yeah, it's sort of a related question, which was, in the original complainant report, it was pointed out that a number of the participants apparently entered Harvard when asked for their class year.

[02:18:21.36] FRANCESCA GINO: Yeah.

[02:18:22.20] SHAWN COLE: Answers provided by those participants line up in a manner that's extremely consistent with the hypothesized effect. And so, my question was, as you have now had a longer period of time to examine the data relative to the previous inquiry-- interview, are you able to offer any additional information about how these observations could be explained?

[02:18:49.48] FRANCESCA GINO: I'm not sure I have anything else to offer other than the participants answering Harvard to their year in school didn't stand out to me as something that would necessarily have caught my attention when looking at the data. I think, I said this to Bob. I think when the allegation came, one of the questions that I asked myself is if there are these irregularities in the data, and I receive it, and looking at it, would a reasonable person who's a good scientist notice the issue? And so, I guess that's a question that I shouldn't be answering. But I did not notice the repeated Harvard to that type of question.

[02:19:48.91] TERESA AMABILE: And so, Bob, did you have a follow-up to that? I don't. Bob, no? I see you shaking your head. Thank you.

[02:20:00.99] So this is question two in my set of questions. The MCG report contains a table showing that when the analyses reported in the published paper were run on the original data, the key result that participants in the pro-attitudinal condition expressed significantly lower desirability of the cleaning products, that key result failed to replicate.

[02:20:29.37] FRANCESCA GINO: Mm-hmm.

[02:20:29.94] TERESA AMABILE: And that was table two in the MCG report. Do you want to have a screen share of that, Francesca?

[02:20:36.48] FRANCESCA GINO: I have it here.

[02:20:37.92] TERESA AMABILE: You've got it. OK. Can you explain that?

[02:20:48.61] FRANCESCA GINO: I don't think-- I don't question the results that come from the combined data sets other than, again, I can't quite make sense of why is there a difference in the N other than there were some exclusions that were done that reduced the sample size. And given that some of the data was conducted in CLER, maybe that's the difference.

[02:21:25.58] I think that the-- I'm not sure what else to add other than repeating what I said earlier, that I see two possibilities. RA error, but I would have had to create the conditions to somehow make

RAs believe that when I conduct studies I want to see certain results in the data. And I don't think I've ever done that.

[02:21:57.76] As I said earlier, I walked away from so many studies. There is an entire folder on my computer that is dropped studies because we try to test the idea, and the hypotheses were not supported. I think that my RAs would have seen that.

[02:22:14.75] And the second hypothesis is that somebody edited the data in Qualtrics. I can't be sure of which alternative is the truth. But what I am certain is that I did not alter the data nor fabricated data in any of my studies, including this one.

[02:22:37.36] TERESA AMABILE: Just to clarify, Francesca, you said, it could be RA error. But it sounds like the scenario you described would be actually research misconduct by an RA. Am I hearing that correct, where they falsified or fabricated data to support the hypothesis?

[02:23:03.36] FRANCESCA GINO: I don't think I can speak to whether one is more likely than the other. I don't think I know enough about when you're cleaning or merging data sets what's to be expected from an RA to the extent that they're making choices on how that merging of data set or cleaning of data set happens. So I don't think I can speak to that.

[02:23:31.26] TERESA AMABILE: So you're saying you don't think you could speak to whether it could be an innocent error on the part of an RA or a motivated data fabrication or falsification. Is that what you meant when you said, you can't judge between the two?

[02:23:47.98] FRANCESCA GINO: That's right. I think I was making a broader statement about the conditions that I believe I create in my lab for people who work with me. And I don't believe I put people under pressure. I think that people have seen me walk away from tons of projects. And that's just part of learning. I also know that they've seen many studies failing, and that is OK. It's part of science.

[02:24:13.21] And so, I can't think of a situation where I got upset for an error that an RA made or for a study that has failed. I think I was just trying to convey what I believe I'm doing when I'm working with RAs or collaborators.

[02:24:34.09] TERESA AMABILE: Thank you. That was a really clear clarification. And the second-- so the second possibility-- you talked about two possibilities. One it was something that an RA did or RAs did.

[02:24:49.05] And the second possibility, which is what you've talked about before today in your answers to our earlier questions, is that there was a bad actor who got into your Qualtrics account. And that would be research misconduct by this other person, correct? Am I interpreting that correct?

[02:25:11.97] FRANCESCA GINO: Yeah.

[02:25:12.96] TERESA AMABILE: OK, thank you. Bob or Shawn, follow-ups at all?

[02:25:21.36] ROBERT KAPLAN: No.

[02:25:22.98] TERESA AMABILE: OK, thank you. And last question on this allegation, Francesca, same as on the others.

[02:25:32.49] FRANCESCA GINO: Yeah.

[02:25:33.91] TERESA AMABILE: Do you have any other evidence that could be helpful to us in determining whether research misconduct occurred with respect to this allegation, and if it did, who might have committed it?

[02:25:49.37] FRANCESCA GINO: I don't think I have anything more to offer.

[02:25:55.01] TERESA AMABILE: OK. All right. Thank you. I'm going to call for just a short break before we go to our last allegation, which is Allegation 3. So again, Francesca, you and Sydney will be in a breakout room. And it'll be about five minutes, OK? All right. Thank you.

[02:26:35.02] OK, Francesca. Are you ready to head into our questions about Allegation 3?

[02:26:39.52] FRANCESCA GINO: Yes.

[02:26:40.48] TERESA AMABILE: OK. And this is about study four in the 2014 Psychological Science paper.

[02:26:48.43] FRANCESCA GINO: Yes.

[02:26:52.12] TERESA AMABILE: So our first question, concerning this allegation, the memo you sent last Friday suggests that data cleaning or errors made by the RAs who coded the creativity tests could account for the anomalies noted in the MCG report. We're going to go through three anomalies, and we'd like you to explain how data cleaning, coding errors, or other errors could account for them.

[02:27:24.67] FRANCESCA GINO: May I make a clarification to my statement--

[02:27:29.71] TERESA AMABILE: Sure.

[02:27:30.46] FRANCESCA GINO: --that I think is important is, I am comparing the data set that I worked on for analysis, which is the DAC data set. And the data set that I don't know where it is, which is the raw data from the study. And so, I am making assumptions about that process, not necessarily what we see reported here in the report, since the forensic firm didn't have the original data either. And so--

[02:28:15.69] TERESA AMABILE: I believe-- I'm sorry, Francesca. I'm confused. The forensic firm didn't have data from Qualtrics. Is that what you mean by the original data?

[02:28:29.99] FRANCESCA GINO: Yes. So I don't know where the raw data-- sorry, raw data would be.

[02:28:34.88] TERESA AMABILE: The raw data, OK.

[02:28:36.14] FRANCESCA GINO: --the raw data is.

[02:28:38.24] TERESA AMABILE: OK. What they did work with were files right from your hard drive. They worked with--

[02:28:45.70] FRANCESCA GINO: Yeah.

[02:28:46.06] TERESA AMABILE: --basically two Excel files from your hard drive.

[02:28:49.66] FRANCESCA GINO: Yeah.

[02:28:50.95] TERESA AMABILE: One with a 2012 date on it and one with a 2014 data on it.

[02:28:58.23] FRANCESCA GINO: Yeah.

[02:28:58.51] TERESA AMABILE: And the 2014, I think, is the one that they call DAC?

[02:29:03.07] FRANCESCA GINO: Yeah.

[02:29:03.79] TERESA AMABILE: Yeah, OK. And that one matches the data that were analyzed and reported in the 2014 Psych Science paper, correct?

[02:29:20.73] FRANCESCA GINO: That's exactly right.

[02:29:22.08] TERESA AMABILE: OK. So what these questions are about is whether and how you can explain discrepancies between the 2012 Excel data set on your computer and the 2014 data set on your computer. OK?

[02:29:46.33] FRANCESCA GINO: Yeah.

[02:29:47.35] TERESA AMABILE: OK. So Alma, could you please bring up the screen share for Allegation 3 and just show us the first page, please. OK. So Francesca, the first anomaly is shown in this screen share of table one--

[02:30:11.08] FRANCESCA GINO: Yeah.

[02:30:12.19] TERESA AMABILE: --is that in the 2012 Excel data set there are 12 lines of data that had gray highlighting--

[02:30:23.03] FRANCESCA GINO: Mm-hmm.

[02:30:24.02] TERESA AMABILE: --in the cheat column. It appears that these 12 participants' conditions were manually switched after data collection from the non-cheating to the cheating condition. The gray highlighting is absent in the 2014 data set, which is here called DAC, and that's the rightmost column.

[02:30:47.58] So in the 2012 Excel file, MCG took as the correct condition assignment what was entered in the column called "reported guessed correctly." And that value was a one, indicating that the person said they guessed the coin toss correctly, which would have been cheating. And zero means that they

did not say that they guessed it correctly. So the gray highlighted cells-- and that gray highlighting did exist in the Excel file that was found on your computer.

[02:31:33.83] FRANCESCA GINO: Yeah.

[02:31:35.24] TERESA AMABILE: Those gray highlighted cells are exactly the ones where there's a discrepancy between the "reported guessed correctly" column and the "cheat" column, which did end up then being the condition assignment for the participant, right?

[02:31:50.81] FRANCESCA GINO: Yeah.

[02:31:51.83] TERESA AMABILE: OK. So can you explain this discrepancy?

[02:31:56.04] FRANCESCA GINO: So as I said before, which I want to restate here, I did not alter any data that is-- of studies that I conducted, including this one. This data set required merging that came from two different data sets, one of which was for the cheating task.

[02:32:19.29] And this was something that a software person created that would record the cheating versus no cheating. And so, I don't know why the values change between 2012 and 2014 other than something might have happened with the data received from the program that was created for the coin toss. I would--

[02:32:52.85] TERESA AMABILE: I'm sorry, just a quick clarification. I'm not asking right now about the discrepancy between the 2012 and the 2014. I'm actually asking about the discrepancy between these two columns in the 2012 Excel.

[02:33:06.29] FRANCESCA GINO: I see what you're saying. Apologize.

[02:33:08.05] TERESA AMABILE: Yeah.

[02:33:18.00] FRANCESCA GINO: Again, I'm not the person who does coding. And so, I'm not sure why they're different. I don't know what the program from the original task spit out and whether it require an RA to go into a data file and check for values. So I'm not entirely sure. I can't explain this difference for you--

[02:33:51.37] TERESA AMABILE: OK.

[02:33:52.21] FRANCESCA GINO: --without the knowledge of the original program and what it deliver in terms of the raw data.

[02:34:00.11] TERESA AMABILE: Shawn, you've unmuted. Did you want to ask a follow-up? OK. Bob? No? OK.

[02:34:09.52] So the second anomaly we wanted to point out is on the next page. Alma, if you could scroll down. Yeah. I guess it's not possible to get both the top part and the bottom part. That's OK. So there are four lines of data in the cheat condition--

[02:34:34.49] FRANCESCA GINO: Yeah.

[02:34:35.18] TERESA AMABILE: --with gray highlighting. And that gray highlighting was in the original 2012 Excel file on your computer. And it appears from this screen share table two that those four participants' scores on the RAT, the creativity test called RAT, were manually entered rather than being computed values. So what I'm referring to here is the column called RAT underscore PERF in quote, Show Formulas mode.

[02:35:18.64] FRANCESCA GINO: Yeah.

[02:35:19.70] TERESA AMABILE: And that column shows that all values except for those four were computed. There was a compute statement there that computed these values from certain other columns in the data file.

[02:35:37.79] FRANCESCA GINO: Yeah.

[02:35:38.64] TERESA AMABILE: But these four did not use a formula. These values were apparently manually inserted. And they differ notably from the rightmost column, which is in red, which is the values that MCG calculated based on the columns from which the other non-gray lines of data were calculated.

[02:36:12.11] And now, Alma, if you could scroll down to table three, I think that's probably on the same page in the forensic report. Francesca, I'm sorry, I don't have the page numbers.

[02:36:22.11] FRANCESCA GINO: Yeah. No, I have it on-- in front of me. Yeah.

[02:36:25.54] TERESA AMABILE: So the screen share table three shows those four lines of data. And it shows the specific columns where the computations were taken from along with the apparent modifications. The apparently manually entered values do not derive from underlying data in any discernible way.

[02:36:57.82] And again, the gray highlighting is absent in the 2014 data set. It's only there in the 2012 data set. So again, the question is, same as before--

[02:37:10.84] FRANCESCA GINO: Yeah.

[02:37:12.00] TERESA AMABILE: Can you explain?

[02:37:15.21] FRANCESCA GINO: Yeah. So and again, I am trying to work through the perspective of a person who doesn't do coding, which would be the case for this particular DV, since the RAT performance is looking at the answer that the person gave to a question regarding associations and then checking that-- I would actually question why this sum formula was used since it's something that you need to go and count to check for answer being accurate rather than random.

[02:37:55.20] And so, I could imagine that if the RA was doing the work of coding, that's why some of it are not in the sum versus some of them are enter as they are. As I said, I'm not the one doing the

coding. And so, I am unable to explain the reasoning behind that. What I can speak to is the DAC file, since that's the one that I used for analysis.

[02:38:26.55] The assumption that seems to be embedded in this report is that, again, is one of the meta file analysis, it's almost as if the 2012 file is being used as the raw data. That makes me uncomfortable.

[02:38:49.05] And what also makes me uncomfortable is the fact that it's associated to me simply because it was on my machine when I know for a fact that I wouldn't do coding. I wouldn't be doing mergers of data files. That's not something that I generally work with because it's part of RA type of work.

[02:39:14.26] TERESA AMABILE: It's my understanding that-- and I'll ask Bob and Shawn to correct me if they think I'm wrong here, especially Shawn, whom I know studied the underlying Excel files--

[02:39:27.80] FRANCESCA GINO: Mm-hmm.

[02:39:28.79] TERESA AMABILE: It's my understanding that the DAC data file that you referred to as the one that you used when you analyzed the data and wrote up the paper, that that matches the 2012 Excel file--

[02:39:44.21] FRANCESCA GINO: Mm-hmm.

[02:39:45.56] TERESA AMABILE: --in the columns and other respects. It's just that there are these discrepancies in these-- well, those first 12 lines of data that seem to have the condition switched and these four lines of data.

[02:40:06.47] FRANCESCA GINO: Yeah.

[02:40:08.21] TERESA AMABILE: That in other respects, those data files are quite similar.

[02:40:14.20] FRANCESCA GINO: Yeah. And I'm with you, Teresa. I understand the question and I understand the presence of a discrepancy. What I wish I could do is see what the data coming from the, I believe Qualtrics survey, as well as the program that was created so that we can make sense of what exactly explained the discrepancy.

[02:40:43.03] And unfortunately, I can't pinpoint with 100% certainty rather than, again, being 100% sure that I did not alter any data to favor any hypothesis. In fact, I didn't alter any data whatsoever.

[02:41:00.97] TERESA AMABILE: Believe me, we also wish that the Qualtrics--

[02:41:03.82] FRANCESCA GINO: I think--

[02:41:04.54] TERESA AMABILE: [INAUDIBLE] was there. And so

[02:41:05.89] FRANCESCA GINO: Yeah. It's very--

[02:41:07.34] TERESA AMABILE: it's frustrating that it's not.

[02:41:08.83] FRANCESCA GINO: It is frustrating. It is frustrating.

[02:41:11.47] TERESA AMABILE: But let me just rephrase what I think I heard you say before when we're talking specifically about these four lines of data, these four participants. And specifically, we're talking about the RAT.

[02:41:26.31] And just for Shawn and Bob who are not creativity researchers, I'm going to describe this test. It's a test that was created by Mednick and Mednick, originally published in something like 1961.

[02:41:40.47] FRANCESCA GINO: I was going to say '72, but I think you're more accurate. Yeah.

[02:41:44.91] TERESA AMABILE: Yeah. I think it first came into use in some of their papers in '61, and then it was published as a test that could be widely used, I think, in the early '70s. Anyway, it existed before I became a creativity researcher in 1975. I can say that for sure. It was talked about in the literature a lot. And the test is-- it seems a little strange as a creativity test. Because each item, each question has a correct answer.

[02:42:15.21] And the answer is supposedly a measure of-- and it's generally taken in the field as a measure of the creativity with which a person can make associations between things that are not commonly associated. So one item is-- every item gives the individual three words and asks them to come up with, fill in the blank, with a fourth word that somehow connects the other three words-- conceptually or in any way at all. Find that right answer.

[02:42:55.59] So one example of a pretty easy one is that the three items are cottage, rat, and blue. And the correct answer is cheese.

[02:43:08.21] So I think what Francesca was saying before is that the RA would need to actually look at what the person wrote on their survey and say, OK, is this answer cheese? If somebody misspelled cheese, but it was clearly cheese, like they put a z instead of an s, they would have to count that as a correct answer. Am I doing OK, Francesca? I see you nodding your head.

[02:43:36.29] FRANCESCA GINO: Yeah.

[02:43:36.82] TERESA AMABILE: Yeah. So the RA would need to-- and I think that's what Francesca was referring to when she said coding.

[02:43:42.20] FRANCESCA GINO: Mm-hmm. Yeah.

[02:43:43.49] TERESA AMABILE: The RA would have to look at those handwritten-- or I guess typed-in answers if it was done in Qualtrics-- and indicate in the data file, this is a one for a correct answer or this is a zero, incorrect answer. So every item-- and it looks here like 17 items on the RAT were used, every item gets scored as a one or zero, every answer to every item. Right.

[02:44:11.79] So the discrepancies here are-- as highlighted, I guess, with the red boxes are correct answers that don't square with the underlying data in the 2012 Excel file. I'm sorry, that was a very long-winded explanation--

[02:44:39.38]

[02:44:40.03] FRANCESCA GINO: No, I think that that was very helpful.

[02:44:42.56] TERESA AMABILE: OK. So Francesca, that is a fair description of what you were referring to as coding?

[02:44:49.25] FRANCESCA GINO: Yes.

[02:44:50.42] TERESA AMABILE: OK. And--

[02:44:54.44] FRANCESCA GINO: I went back to try to understand often for coding, like this one, you would have not one RAs but two in case there is judgment. And then for codings that where there are inconsistency, you have them talk to each other. But again, I don't have that information.

[02:45:15.04] TERESA AMABILE: Right. But presumably, it wouldn't be too hard for even one person to tell is this word cheese or is it not cheese.

[02:45:21.17] FRANCESCA GINO: Yeah.

[02:45:22.52] TERESA AMABILE: But yes, you might have had two people discuss it if there was really some question about it, right?

[02:45:29.54] FRANCESCA GINO: Yep.

[02:45:30.50] TERESA AMABILE: So it sounds like I believe your answer to trying to explain this discrepancy is that you can't?

[02:45:40.25] FRANCESCA GINO: Mm-hmm.

[02:45:44.54] TERESA AMABILE: Is that correct, Francesca?

[02:45:47.84] FRANCESCA GINO: I think that without the raw data it's difficult to speak with confidence about why the discrepancies exist.

[02:46:02.31] TERESA AMABILE: OK. Bob or Shawn, did you have follow-ups on that? I'm about to move on to the third anomaly. But no? No? OK. So Alma, could you move us to the next page, please? Yeah. Good. Can you go up a little? Yeah, great. So the third anomaly--

[02:46:28.99] FRANCESCA GINO: Mm-hmm.

[02:46:31.72] TERESA AMABILE: --as shown in the screen share tables four and five--

[02:46:35.68] FRANCESCA GINO: Yeah.

[02:46:36.41] TERESA AMABILE: Again, this is from the MCG report-- recalculation of a statistical analysis of differences between conditions using the original condition assignments and the original RAT scores apparent in the 2012 Excel file reveals that the key result for the study as reported in the published paper disappears.

[02:47:01.40] FRANCESCA GINO: Mm-hmm.

[02:47:02.93] TERESA AMABILE: And we're looking specifically here at RAT performance--

[02:47:07.69] FRANCESCA GINO: Yeah.

[02:47:08.90] TERESA AMABILE: --or number of RAT items solved. In fact, recomputed means reveal the reverse. Non-cheaters scored higher on the RAT than cheaters did. Again, same question, can you explain how data cleaning, or coding errors, or other errors, or anything else could account for this anomaly?

[02:47:40.12] FRANCESCA GINO: I think that these are statistics that come from the way the data differences exist between the two data sets. And so, in a sense, I see this as the result of the fact that the previous anomaly exist. When you run the analysis, this is what you end up with.

[02:48:04.16] I think that from the perspective of a person who published a paper with these findings, there are many different questions for me to answer. Again, I start from the standpoint of, I didn't do anything wrong from the perspective of altering data or fabricating data or anything to that extent.

[02:48:26.31] And so, I'm left with a lot of questions about what does this say about the validity of the research. And so, I started doing meta analysis without this study being considered. But I feel like that's beyond the point of the investigation and more for me as a researcher.

[02:48:44.36] I think that in no matter what happens, I am going to make sure that I investigate these relationships further such that I understand whether the results of the research that is published are, in fact, correct.

[02:49:03.86] As a scientist, that's why we're in science. We want to publish research that is robust and gives us important insights about people's behavior. But I feel like I am going beyond the question that you asked.

[02:49:20.87] TERESA AMABILE: No, I really appreciated that. And of course, I strongly agree with that most recent statement you made about the business that we're in as scientists.

[02:49:32.57] Francesca, I wanted to follow up on something you said in one of your last few sentences there. You said, looking at this, you did question the validity of this particular study. Did I hear that right as it was published?

[02:49:56.19] FRANCESCA GINO: No. I am sorry if I misspoke. I don't question the validity without knowing what the raw data is. I think that there is a question mark in my own head of it's-- what I would

love the most for me to have showed up at this meeting, but even before this meeting, with every single detail possible that would prove that I've done nothing wrong in relationship to any of the allegations.

[02:50:31.65] But to the extent that that is not possible, again, as a scholar, I want to make sure that everything that I publish is correct. So far, if I leave this study to decide the meta analysis suggests that based on the previous studies the result is robust, which give me confidence that the DAC file here is the accurate one. But I want to have certainty.

[02:50:58.32] And I think as a scientist, I want certainty about what I published. And so, I think that in the months and years following, I'm going to revisit some of the hypotheses that I feel I spoke about, provided evidence for, and make sure that everything is robust.

[02:51:22.17] I think it's a comment that I had also in my responses to you. I can't question the validity of this data without having access to the raw data set. I do know that it's tricky sometimes when you merge data sets, probably easier for experimental studies.

[02:51:43.56] But I do know that the cheating data was coming from a different software and also that the dependent variables here required coding. And so, I can't be certain about how to explain the discrepancies.

[02:52:02.42] TERESA AMABILE: I did clearly hear you say that you did not alter any data, fabricate any data for any reason, let alone to support a hypothesis. And you're nodding your head.

[02:52:18.02] FRANCESCA GINO: Yes, I did not.

[02:52:20.10] TERESA AMABILE: But I believe I also heard you say, even just now, that in the absence of the raw data in Qualtrics, which are undiscoverable for whatever reason. They're just not there. In the absence of that, you do have questions about these discrepancies and how they might have arisen.

[02:52:47.89] So it sounds like you're saying you did not commit research misconduct, but research misconduct or serious errors could have occurred here. Am I right? Am I hearing that correctly from you?

[02:53:04.61] FRANCESCA GINO: I think what I'm trying to say, and I'm sorry if I'm unclear, this is, you all know it's a really hard process. What I'm--

[02:53:14.24] TERESA AMABILE: Excuse me. Alma, could you take down the screen share now, please? Thanks.

[02:53:21.31] FRANCESCA GINO: I think I'm trying to convey two messages. And one is specific to this paper and one is about how I see myself as a researcher. Specific to this paper, I-- and again, I think that in a sense the forensic firm made the same conclusions without access to the raw data. I can't explain with certainty why certain discrepancies exist.

[02:53:52.03] Again, it does require-- it's a data set that requires some work on the part of the RA handling it-- in the merging of it, in the coding of certain dependent variable. So that's a statement

about the paper per se. A more general statement, for me as a researcher, again, as hard as this can be as a process, I think it taught me real lessons about how I want to set up my practices going forward.

[02:54:25.44] But also, making sure that if there is any doubt that anybody has on the research that I do what I can to show that the results are robust. I think it breaks my heart to know that you might have doubts, since you're my colleagues in the end, when I know for a fact that I didn't do anything wrong.

[02:54:53.68] TERESA AMABILE: Understood. Understood. Thank you. Bob or Shawn, do you have follow-ups at this point? No.

[02:55:06.05] ROBERT KAPLAN: No.

[02:55:07.16] TERESA AMABILE: So Francesca, I'm going to ask that last question that we have for the other allegations. Do you have any other evidence that could be helpful to us in determining whether research misconduct occurred with respect to this allegation, and if it did, who might have committed it?

[02:55:26.69] FRANCESCA GINO: No. No additional evidence.

[02:55:31.84] TERESA AMABILE: OK. Well, that concludes our questions for you, Francesca. Thank you, again, so much for spending this time speaking with us. Do you have anything else you'd like to say at this time?

[02:55:47.30] FRANCESCA GINO: I think I'm going to end with where I started, just thanking you for spending time doing this and doing so so carefully. And then sad that that's how we are seeing most of each other these days.

[02:56:06.93] TERESA AMABILE: Yeah. Thank you. So I'm going to turn it over to Alain right now. We're not quite finished. There's one last bit that Alain needs to do. Yeah. So Alain, do you want to-- are you there?

[02:56:26.04] ALAIN BONACOSSA: I am here.

[02:56:29.63] TERESA AMABILE: Can we see you?

[02:56:35.96] ALAIN BONACOSSA: I'm sorry, Teresa. What is the ask of me?

[02:56:39.02] TERESA AMABILE: My understanding was at this point when we're done with our questions and Francesca's done answering our questions, that you would ask Alma to have-- for Francesca and Sydney to go into a breakout room so that we the committee can see are there any final questions that we might have. Am I remembering that right, Alain?

[02:57:02.97] ALAIN BONACOSSA: Yes. If you think that that's what the committee could use, yes. Let's take a break, and [INAUDIBLE].

[02:57:08.64] TERESA AMABILE: Sure. Why don't we just, yeah, take a few minutes to do that. And then, Francesca, if we don't have any further questions, Alain, is there any reason to bring them back?

[02:57:20.75] ALAIN BONACOSSA: I would just bring them back to say goodbye and say we don't have any additional questions. It would just take a minute.

[02:57:26.18] TERESA AMABILE: Yeah. So is that OK, Francesca? We'll do that. So if you and Sydney could hang out together for just another few minutes. We'll then bring you back so we can say goodbye, or ask any additional questions we have. All right. Thanks. OK. Bye-bye. So we'll see you in a few minutes.

[02:57:46.06] ALAIN BONACOSSA: Thanks.

[02:58:13.53] TERESA AMABILE: Hi, Francesca. We don't have any more questions for you.

[02:58:19.14] And we just want to tell you, of course, if you think of additional information, if you are able to come across an FA or FSS who was working with you in those years that we were talking about for the 2012 paper who might have some memory of those-- of paper files that could have the paper data, or any other information on any of these allegations, please send it immediately to Alain so he can get it to us, OK?

[02:58:52.57] FRANCESCA GINO: Appreciate it.

[02:58:53.84] TERESA AMABILE: OK. Sure. For sure. And we-- all three of us as we were talking just now, and this was explicitly emphasized by Bob, please tell Francesca we really, really appreciate her hanging in there with us through all these hours in this very difficult and emotional process. So Francesca, we're sorry for the distress. We understand it. We share it.

[02:59:27.62] FRANCESCA GINO: Thank you.

[02:59:28.61] TERESA AMABILE: So thank-- Thank you very much.

[02:59:32.59] FRANCESCA GINO: Thank you, everybody.

[02:59:35.77] TERESA AMABILE: Bye-bye, Francesca. Bye, Sydney.

[02:59:38.44] FRANCESCA GINO: Thank you. Bye.

[02:59:47.83] SHAWN COLE: You can stop the recording now.

Exhibit 23
Respondent's Additional Information to Investigation Committee received on November 19, 2022

Additional Information from the Respondent
November 14, 2022

1. In 2011, the FSS who supported Francesca was [redacted]. His LinkedIn page suggests he started working in this role in October 2010. The Respondent thinks there was another person (a woman) supporting her for a few months before [redacted] took the position. She may investigate who this person was and/or talk to [redacted] to try to understand whether they have any recollection of helping Francesca with files she may have moved from UNC to HBS.

2. Francesca found the following email in her [redacted] folder (Monday, May 2, 2011 at 9:58 PM). She thinks this may be potentially helpful to the committee because we have been reviewing drafts of the 2012 PNAS paper assuming "linearity" across versions – meaning, that each version improves on the previous one. According to Francesca, this email seems to suggests that "linearity" may not be a good assumption:

=========
Re: further revised draft of our "signature paper"

Hi [redacted],

Please find letter to editor attached - feel free to make any changes whatsoever. I suggested [redacted] as an AE though [redacted] would also be great.

While reading through the latest draft that Francesca sent, I realized that we exchanged so many drafts that at one point our wires got crossed and that some revisions got lost a few rounds ago! Comparing two drafts now - it will take just a bit longer to make sure all your good revisions got incorporated.

Thank you both!
[redacted]
=========

Additional Information from the Respondent
November 19, 2022

The Respondent reached out to colleagues at UNC again. They checked the lab storage and cabinets – they did not find any data for studies she conducted when she was there. Francesca also reached out to Imelda Dundas in DRFD at HBS and learned that [redacted] (her FA for a few years) did not help her with the move from UNC to HBS. [redacted], another FA, might have helped Francesca but Francesca can't figure out where [redacted] went after HBS so she doesn't know how to contact her and she doesn't see messages to her in my Sent folder related to the move.

Additional Information from the Respondent
November 19, 2022

During the interview, the committee asked a few questions I wanted to follow up on:

1. **Issue: Search for original data (conducted on paper) for the lab study in the 2012 PNAS paper.** The committee asked me whether it is possible the data is somewhere at HBS, assuming it was part of the materials I moved from UNC to HBS in the summer of 2010.
    a. In 2011, the FSS who supported me was [redacted]. I reached out to him on LinkedIn and he told me he did not help with the move since he started working as my FSS (FSA at that time) in November of 2010.
    b. I reached out to Imelda Dundas (happy to share the emails if helpful), who told me for a few months I was supported by [redacted], before she left HBS. I do not see any email in my folders that speak to the potential move of data. I do not have contact information for [redacted]. (Two of the faculty she was supporting had problems with her so she left without staying in touch. I am not sure where she went when she left HBS).
    c. The data is not in the Baker Archives. It is also not in the cabinets we have for NOM Faculty on the 4th floor of Baker. And it is not in my office – though I found in my office data of a study I never published and also materials used in other studies.
    d. I reached out to colleagues at UNC again. They checked the lab storage and cabinets – they did not find any data for studies I conducted when I was there.

2. **Issue: Changes to the description of the study procedures in the 2012 PNAS paper.** As I went through my emails again, I found the following email in my [redacted] folder (Monday, May 2, 2011 at 9:58 PM). I think this email is potentially helpful in making sense of the many changes across drafts. We have been reviewing drafts of the 2012 PNAS paper assuming "linearity" across versions – meaning, that each version improves on the previous one. This email seems to suggests that assuming "linearity" may not be a good assumption:

=========
Re: further revised draft of our "signature paper"

Hi [redacted],

Please find letter to editor attached - feel free to make any changes whatsoever. I suggested [redacted] as an AE though [redacted] would also be great.

While reading through the latest draft that Francesca sent, I realized that we exchanged so many drafts that at one point our wires got crossed and that some revisions got lost a few rounds ago! Comparing two drafts now - it will take just a bit longer to make sure all your

good revisions got incorporated.

Thank you both!
[redacted]
==========

3. **Issue: When is it that[redacted] [redacted] and I met at a conference?** It was the Society of Judgment and Decision Making conference in 2011. I found the program here: https://sjdm.org/programs/2011-program.pdf As it is shown on page 2, [redacted] presented the paper on "Signing Decreases Dishonesty." [redacted] was on the market the summer/Fall of 2011. This is when the disagreements around the field data in this paper started happening.

4. **Issue: Relationship with [redacted] getting worse over time.** The committee asked whether I have any written evidence that speaks to this. Many of my conversations with [redacted] for this project and others we had going in 2010-2012 were live conversations, as we regularly met at conferences and talked over the phone. I found the following email in my [redacted] folder (Tuesday, November 16, 2021 at 6:48 PM). I think this email may be helpful as it had a note from [redacted] in attachment (also attached here) – [redacted] was asking me to check the accuracy of the details in the note based on what I know. One of the inaccuracies I noted was in relationship to when [redacted] and [redacted] met (it was at SJDM in 2011 and then again at in early 2012).

==========
From: "[redacted]>
Date: Tuesday, November 16, 2021 at 6:48 PM
To: Francesca Gino <fgino@hbs.edu>
Subject: FW: Complicity in the Signing First paper

Dear Francesca,

May I ask you to review [redacted]'s response to my chapter, particularly her claim that she was no more connected to the field experiment than the rest of us. This is very different from my understanding. Any clarity that you can provide would be of value to me.

Was [redacted]'s name on the field experiment in [redacted]'s presentation of this data? Why was [redacted] involved?

With appreciation, and with the intent of telling the history accurately,

[redacted]

From: [redacted]
Sent: Tuesday, November 16, 2021 5:18 PM

To: [redacted]
Subject: Re: Complicity in the Signing First paper

[redacted]

Attached please find my comments to your chapter.

[redacted]

On Nov 11, 2021, at 8:29 AM, [redacted] wrote:

Authors of the two signing first papers:

I have spent much of 2021 writing a book entitled *Profiles in Complicity*. The book provides seven profiles of the ways in which many of us are complicit with wrongdoing. This is my honest personal account of our story. I have tried to use objective evidence in describing what happened – thus the use of emails. I would appreciate it if you would review my account for any errors you see in my description.

It is easiest for me to incorporate your feedback if I hear from you within the next week. But, I will have further chances to change actual errors at a later date.

In advance, thank you for your review of this material,

[redacted]
[redacted]
[redacted]
<PiC.Chapter7.11.11.21.docx>

=========

5. **Issue: Projects I dropped over the years.** I spoke about this in my comments before the interview, but I wanted to add that I also walked away from projects where the studies my colleagues and I conducted did not reliably show evidence consistent with the hypotheses we were testing. For instance, in a 2007 project on overconfidence with [redacted] and two other colleagues, I felt the data in support of our hypotheses was too weak and [redacted] and I ended up leaving the project (the two other colleagues continued working on the paper with additional co-authors and published it in OBHDP).
    a. For papers I published, I often tried to test hypotheses with multiple paradigms and with data from the field and the lab whenever possible – in an attempt to assure the hypotheses receive robust support. I conducted an internal meta-analysis for the 2014 Psych Science paper, the 2015 Psych Science paper and the 2020 JPSP paper we discussed during the interview, and I believe the tested relationships to be robust and the data from the studies in question to be valid.

Exhibit 24
Allegation 1 Email Correspondence

From: [redacted]
Subject: RE: Your JPSP: ASC Subm ss on PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]
Date: December 9, 2019 at 12:30 PM
To: Francesca G no fg no@hbs.edu, [redacted]

[redacted]

Hi team,

Just a quick note to confirm that the analyses I re-ran justify our responses to the reviewers' comments on study 3. Namely, controlling for legal practice and office location does not affect the results for our hypotheses. It does lower goodness of fit, however, whish supports our initial decision to exclude those controls from the analyses.

Cheers,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Thursday, December 5, 2019 8:04 AM
To: [redacted]
Subject: Re: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

Thank you [redacted]!!!
I'll start drafting the design later today
fran

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New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Wednesday, December 4, 2019 at 5:26 PM
To: [redacted] Francesca Gino <fgino@hbs.edu>
Subject: RE: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

Hi team,

Just a quick update. It took me a while to reconstruct the analyses for study 3, because the dataset I was using had been mislabeled when I shared it with a doctoral student. After much frustration, I've finally located the correct dataset and was able to replicate the

After much frustration, I've finally located the correct dataset and was able to replicate the analyses in the paper, and everything looks in order, based on the first few checks I've run. I need to go to an event tonight now, so I'll resume my checks tomorrow, but I am pretty confident already that the answers I've provided to the questions about study 3 are fine as is. I'll send you additional details tomorrow.

As for the new study, I still see the two main changes below as the ones to pursue. If you two put together a draft of the new design based on the revised, "neutral" phrasing "making professional connections" and the added control condition, I can then take a close look vis-a-vis the reviewer comments.

Talk soon,
[redacted]

From: [redacted]
Sent: Monday, December 2, 2019 3:06 PM
To: Gino, Francesca <fgino@hbs.edu>; [redacted]
Subject: Re: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

That is great. Thanks. let me know how I can help
Two changes so far 1. Adding a control condition (we can measure people's reg focus at the end of study if needed) 2.editing the networking definition to make it more neutral

---

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Monday, December 2, 2019 at 2:03 PM
To: [redacted]
Subject: Re: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

Hi [redacted],
The IRB at HBS promised to review the study quickly knowing about the deadline, so I can also be in charge of running the study. I could use your help in the theorizing
fran

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New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Monday, December 2, 2019 at 2:49 PM
To: Francesca Gino <fgino@hbs.edu>, [redacted]
Subject: Re: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

I went through this; I agree that the AE and reviewer are concerned about the way we define networking in our instructions so we should reword to make it more neutral, in addition we can do a 2 by 3 design to add a control condition; in addition, we can rerun the analyses and test each dimension separate in addition to the difference score

[redacted] I added my comments; I think you can continue working on this and my plan is to run the study early next week after we make sure we have spent enough time thinking very carefully about its deign

[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Monday, December 2, 2019 at 1:09 PM
To: [redacted]
Subject: Re: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

It'd be helpful to know your reactions to the issues the reviewers brought up about our manipulations and measures
[redacted] shared her comments on them

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From: [redacted]
Date: Monday, December 2, 2019 at 1:02 PM
To: [redacted] Francesca Gino <fgino@hbs.edu>
Subject: Re: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

[EMID:ee729b732dbb3efc]

Hi [redacted]
Is there anything specific on the letter (besides new study design) that needs my attention? I do not want to slow us down
[redacted]

From: [redacted]
Date: Monday, December 2, 2019 at 9:42 AM
To: [redacted] "Gino, Francesca" <fgino@hbs.edu>
Subject: RE: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

No worries, [redacted] I can set aside another day later this week or next for the revision. It doesn't have to be tomorrow.

From: [redacted]
Sent: Monday, December 2, 2019 10:40 AM
To: Gino, Francesca <fgino@hbs.edu>; [redacted]
Subject: Re: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

I am still in California and fly back later today so unfortunately can't work on this today

[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Monday, December 2, 2019 at 7:50 AM
To: [redacted]
Subject: Re: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

Thank you [redacted]!
[redacted] – do you have time to have a look and then send it back to [redacted] today, with your thoughts added?
That way we can speed things up 😊 and make the 1/26 deadline
fran

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New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Sunday, December 1, 2019 at 8:17 AM
To: Francesca Gino <fgino@hbs.edu>, [redacted]
Subject: RE: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

Hi Francesca,

Thanks a lot for getting this started. I've started answering the comments about study 3, and have also responded to your comments in the letter. I'll stop now because I have an urgent deadline tomorrow, but on Tuesday I will take another stab at the letter (including re-running the study 3 analyses to double-check what I wrote in the initial response) and the design of the new study.

As for the Jan 26 resubmission timeline JPSP suggested, I too would love to meet it. Heads up that my work schedule is completely packed until the end of December, but come January I'll be all over this revision, including the important theory development.

Talk soon,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: November 30, 2019 10:56 AM
To: [redacted]
Subject: Re: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

Hi team,

I started working on a letter with our responses. Before we decide on the study to run, I think we need to do the additional analyses the reviewers ask for. [redacted] could you please respond to the comments I highlighted on page 3 and 7? And could you your thoughts as you go through the letter?

Then you can pass it to [redacted] and then I think we'll be able to go ahead and run the additional study.
We do not have a lot of time for the R&R. the deadline is 1/26. And it'd be great to stick to it

fran

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New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Wednesday, November 27, 2019 at 7:26 PM
To: Francesca Gino <fgino@hbs.edu>, [redacted]
Subject: Fwd: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]

Finally some good news for us!
Happy thanksgiving!

[redacted]

Sent from my iPhone

Begin forwarded message:

> **From:** "Journal of Personality and Social Psychology: Attitudes and Social Cognition" <em@editorialmanager.com>
> **Date:** November 27, 2019 at 6:15:39 PM CST
> **To:** [redacted]
> **Subject: Your JPSP: ASC Submission PSP-A-2019-0814 - [EMID:ee729b732dbb3efc]**
> **Reply-To:** "Journal of Personality and Social Psychology: Attitudes and Social Cognition" [redacted]
>
> CC: [redacted]
>
> 11/27/2019
>
> Re: PSP-A-2019-0814
> Why Connect? Moral Consequences of Networking Motives
> Journal of Personality and Social Psychology: Attitudes and Social Cognition
>
> Dear [redacted]
>
> I have received three reviews of the manuscript that you and your co-authors recently submitted to JPSP-ASC, titled "Why Connect? Moral Consequences of Networking Motives" (PSP-A-2019-0814). Furthermore, I read your paper carefully and independently, before looking at the reviews. As you can see when you have had a chance to see the reviewer comments, all of us find some aspects of the paper quite innovative and commendable. At the same time, they also raise some important questions about your work while making insightful suggestions for how you might improve the paper. My own reading of the work places me in agreement with this general assessment of your work

by the reviewers. Although I cannot accept this version of the paper for publication in JPSP-ASC, I invite you to revise and resubmit the paper after addressing all the concerns raised in the reviews.

The reviewers clearly expressed their concerns and thus I will not reiterate them. However, let me highlight a few points that are most important.

The reviewers were enthusiastic about the research question tested here and in particular the manner in which the ideas were tested, using correlational, experimental, and field data, and by testing meaningful behavioral outcomes with varied and difficult to get samples. Your agreement to follow open-science practices is also noted. This paper has the potential to make a strong contribution to JPSP, but the reviews have noted some places where there are theoretical holes to fill, additional statistical tests that need to be conducted, and I feel that one more study may need to be conducted to shore up a deficit in the ability to make causal statements about the nature of the effect. I do believe that these can be addressed in a revision that carefully addresses all of the very clear and detailed comments offered by the reviewers—I found all of their reactions appropriate and necessary to address to position this paper for maximal contribution. I highlight the most substantive points (though none are inconsequential) raised by reviewers that require serious attention.

THEORIZING ON MECHANISM.

1. As noted by Reviewer 2, point 1a, please flesh out the theoretical mechanism more in the introduction.
2. Please also consider Reviewer 3's concern that I also shared: the theorizing on moral self-regard is too thin. Increase discussion of that concept in literature review, as it relates to promotion and prevention.
3. I, like Reviewer 2 (point 1b), wondered whether reg. focus affects the frequency of networking attempts or the appraisal of the act of networking holding constant frequency and manner? I agree that it seems plausible to analyze the open-ended responses to offer data to that end, complimenting the strength of this paper – which is the multi-methods used to explore this topic.

CONFOUNDED INSTRUCTIONS AND MANIPULATIONS.

4. Please address the concerns raised about regulatory non-fit with the possible confound given the definition supplied to all participants of what constitutes networking and the primes to induce prevention and promotion (Reviewer 2, point 2). This could be done through argumentation. It may also be addressed in a single additional study (see also note below about what this study could address).

CONTROL CONDITION

5. The choice to exclude a control condition is problematic for claiming effects of promotion and prevention (Reviewer 3, second paragraph). I could envision one additional study positioned early on in the manuscript that includes promotion, prevention, and control conditions, that experimentally establishes the unique effects of promotion and prevention. When coupled with Point 7 below, you would have two means by which you could comment on the effect of promotion separately from prevention.

STATISTICAL TESTS.

6. The correlational study (Study 1) should simultaneously model

prevention and promotion to adjust for their covariation, and so you can comment on their unique effects on outcomes. See point 8 below, but does the path analysis in Study 3 simultaneously control for promotion, when modeling the effect of prevention? If yes, please highlight this and note that it is a third way in which you explore the unique effects of each orientation.

7. Study 3 should model the data using multilevel analyses.
8. I found the results presented in Table 3 difficult to understand. I request that you provide a more comprehensive and illustrative Table caption that explains how the columns should be interpreted as they relate to your research question. You should also more clearly articulate in the results text which direct and indirect paths test your primary and secondary research questions. Or find some other means of orienting readers not familiar with SEM output presented this way to how to read the results in the table. I will send the paper to an expert in statistics to review the model here in addition to the way in which you describe it for both a knowledgeable audience but also one unfamiliar with this approach.

Once the paper has been revised, submit it through the manuscript submission portal. Make sure to check the appropriate box in the portal to indicate that the paper is a revision rather than a first submission. If possible, I would like to receive your revision by 01/26/2020. If this is not feasible, please email our Peer Review Coordinator, [redacted], at the main editorial office ([redacted]) with an estimate of when you will resubmit. Longer timeframes are fine.

Your resubmission must be accompanied by a detailed cover letter explaining which specific changes you made and which recommendations you did not follow and why. This letter should address all of the points raised in my decision letter plus any other major, non-redundant points mentioned by each reviewer.

In closing, thank you for submitting to **JPSP-ASC**. I would also like to thank the reviewers for their service to the field. Their thoughtful comments and suggestions were very helpful in reaching my decision.

I enjoyed reading this paper and I hope you decide to undertake the revision.

Sincerely,
Emily Balcetis
Associate Editor
Journal of Personality and Social Psychology: Attitudes and Social Cognition

Reviewer #1: I have long been interested in research on networking behavior, and read this manuscript with great interest. I was extremely impressed with the high quality of the work, ranging from appropriate utilization of theory to support the predicted associations, to the design of multiple studies using different samples and both laboratory and field studies, as well as the conciseness and clarity of the writing. The methods were rigorous, clear, and well-articulated. I consider this a rather remarkable feat to tell the story of 4 studies, each building upon the other, in 43 pages. It is accepted that networking is important for career success, yet we know that networking has a "taint". Examining this taint, and how it could possibly be alleviated through a self-regulatory focus on promotion rather than prevention, has strong implications for organizations and for individuals in managing their careers. This is a most impressive work, and I have no substantive comments to add that would need to be addressed in a revision.

Reviewer #2: The manuscript presents four studies testing the relations between regulatory focus and feelings of moral impurity in instrumental networking. As the results suggest, promotion focus predicted less and prevention focus predicted more feelings of moral impurity (e.g., dirty, inauthentic) when people network instrumentally; stronger feelings of moral impurity in instrumental networking were linked to lower self-report frequency of networking (Studies 3 & 4) and job performance (Study 3).

Networking is an important and understudied topic. In my opinion, the article has made a reasonable and unique case that reg focus can contribute to the understanding of instrumental networking. The article also has quite a few notable methodological strengths, e.g., the use of mixed study designs (e.g., correlational, lab experiment, field experiment) and the recruitment of study samples from different occupations and cultures. The hypothesized effects were consistent across samples and settings. Overall, I believe the article has a potential to make a meaningful

were consistent across samples and settings. Overall, I believe the article has a potential to make a meaningful contribution to the literature.

Despite the above merits, I did observe some critical issues (which I will elaborate below) and will make suggestions accordingly.

1. Depth of the theory and evidence.

a. One of the goals of the paper is to "further develop the theoretical link between regulatory foci and morality..." (p.3), but I find the current arguments that support the theory of the links between reg focus and feelings of moral impurity in instrumental networking quite disappointing. In the two paragraphs that argues for the links (p. 5-6), the manuscript seems to propose that prevention focus is linked to moral impurity because fulfilling the ought-self compromises authenticity; promotion focus is linked to less moral impurity because fulfilling the ideal-self does not compromise authenticity. While I don't disagree that these are possible mechanisms, I think the current version of the manuscript does not go deep enough in the arguments (e.g., how do the pursuits of ought-self and ideal-self relate to moral impurity? What buffers promotion-focus people from feeling 'dirty' about instrumental networking? Why do prevention-focused people feel 'dirty' when they are doing what they are supposed to do, i.e., fulfilling a social obligation? Do promotion- and prevention-focused people differ in their moral (and amoral) standards? How do they relate to the feeling of moral (im)purity?). The arguments need to be expanded, and more concrete examples or evidence would also help.

b. In addition, it is unclear whether the theory assumes the act of instrumental networking to be qualitatively the same across people who have different reg foci. Does the difference in feelings of moral impurity come from how they view the same act of instrumental networking differently? Or does it come from people who have different reg foci approaching instrumental networking differently (e.g., with different strategies)? The current version of the manuscript is quite ambiguous on this issue, but how it addresses the issue matters theoretically. For instance, the answer to the above questions directly affects the interpretation of the effects of the reg focus manipulation in Studies 2 and 4. The answer also determines what it means when the paper advocates that "promotion regulatory focus is beneficial to instrumental professional networking." (on p.33). Relatedly, since Study 1 has collected open-ended responses, I'm wondering if the responses will shed light on this issue and add theoretical depth to the argument.

2. Potential alternative explanation (i.e., regulatory non-fit) in study instructions and conditions.

a. The instructions of the reflection task (Study 1) don't seem reg-focus-neutral. On p.12 it says, "Please recall a time in your professional life where you did something with the intention of strategically building or nurturing a professional relationship." The words 'building' and 'nurturing' appear very promotion-focused (i.e., concerning nurture need). Could the stronger feelings of moral impurity among those who have a prevention focus be a result of a regulatory non-fit between the instructions and dispositional prevention focus?

b. The instructions of the reg focus manipulation (Study 4) also don't seem to be a pure comparison of promotion and prevention focus. Prevention focus concerns losses and non-losses, and duties and obligations; promotion focus concerns gains and non-gains, and hopes and aspirations. The current prevention-focus condition has a mix of both prevention- and promotion-focused words. In addition to prevention-focused words, it highlights many promotion-focused words and phrases: "we are interested in how people create and nurture relationships at work." "focus on opportunities they will miss if they do not network" (i.e., a non-gain), and "approach your next opportunity" (i.e., a gain). In short, I don't think the prevention focus condition is a clean manipulation. And similar to point 3a, could the stronger feelings of moral impurity (among other effects) in the prevention focus (vs. promotion focus) condition driven by a non-fit effect?

c. Most of the items of moral impurity appear to be prevention-focused words (e.g., dirty, tainted, ashamed). Is it possible that the result is driven by prevention-focus people being more likely to endorse prevention-focused words? Would you expect the same results if the impurity items are more reg focus neutral (e.g., wrong, unnatural, impure; words from moral foundation questionnaire), or if the analysis used only the item "inauthentic"?

3. Precision and consistency in theorizing.

Throughout the paper, I wish the manuscript could be more precise and consistent in its theorizing. I have listed here the two places that stand out and I find the most problematic.
a. Reg focus as a predictor or moderator. I found myself confused a few times reading the introduction about the role of reg focus. I first thought it was a moderator because the introduction first discussed the link between networking and moral feelings, and then introduce reg focus as a factor that may influence the relation (like a moderator). Some ambiguous wordings throughout also did not help (e.g., "we theorize that people's motivational approach---promotion versus prevention---influences how morally impure they feel from instrumental networking for professional goals" on p.2). Although Figure 1 makes it clear that reg focus is supposed to be a predictor, to me, that clarification came a bit too late. More precision in theorizing is needed early on to address the role of reg focus.

b. Figure 2 - Studies 2 and 4. As a whole, I think the figure illustrates what each study tries to accomplish very well. It definitely helps readers appreciate the coherence across studies. But I also think the illustrations have over-simplified what is different in the experimental studies. Studies 2 and 4 each have two conditions of reg focus (prevention and promotion), and they tested the difference between the two conditions. This inaccurately portrays

(prevention and promotion), and they tested the difference between the two conditions. This inaccurately portrays two separate effects of prevention and promotion in the figure. The current figure would be accurate if there was an additional control condition (i.e., prevention vs. control, promotion vs. control). The choice of the comparison group(s) affects the conclusion a study can make, so it is critical to communicate the information accurately throughout the paper.

Other suggestions.
1. Study 3 has data from different law firms, and the survey responses from each law firm are non-independent. A more proper way to analyze the data is to do multilevel analysis, nesting participants' responses within firms.

2. Increase clarity. There is room to increase clarity in writing throughout the paper.
a. Some of it is about a more careful choice of words. Here are some examples. Study 3 used "power" and "seniority" interchangeably, but they are not conceptually the same thing, which can cause confusion. Another example is the short title of the paper: "the right approach to networking"—is that what the paper tries to study? Study 4 described the experimental condition as an 'intervention' - is that what the study is supposed to be about? By "contextual robustness" (on p. 14), does it just mean generalizability?
b. Should the title be more explicit about the study of reg focus? Networking motives seem way too general for a paper that applies reg focus to
c. Power analysis needs to specify whether it's a one-tailed or two-tailed test.

3. More detailed explanations regarding study decisions are needed. Many places have left readers hanging about how the researchers decided to do what they did. For instance, why did the study measure moral self-regard? why did it measure negative and positive affect? Were they part of the hypotheses?

4. Different measures of reg focus (trait, state, domain-specific) yielded different sizes of effects. I think this is an interesting and important point to discuss in the general discussion, as I suspect many would expect domain-specific measures to show the strongest effect but that is not true in the results.

I hope the above observations and suggestions help further improve the quality of the manuscript.

Reviewer #3: The authors present a multi-study paper examining regulatory focus as a moderator of networking experience and outcomes. The paper has several features to commend it: the authors present correlational, experimental, and field data, and they include meaningful behavioral outcomes. I believe the central hypotheses of the paper (that promotion can facilitate instrumental networking and that prevention can inhibit it) are compelling and have important implications. Thus, I believe the authors have chosen important research questions and that this paper could make a valuable contribution to the field. Despite my enthusiasm, I had several concerns while reading the manuscript, and describe the main points below.

Although the authors lay out two separate hypotheses regarding promotion and prevention, they do not test whether their results are indeed due to these two independent effects. For example, in the experimental studies, no control condition is included. Is the effect of the "promotion condition" simply an effect of the "absence of prevention"? (Especially given that in study 1, only an effect of prevention on moral impurity was found.) A control condition would allow the authors to conclude BOTH that promotion is beneficial for networking and that prevention is harmful, assuming the outcome in this condition was significantly different from either other condition. Similarly, in the correlational studies, it would be useful for the authors to control for prevention when they look at the effect of promotion and vice versa, especially given that promotion and prevention are significantly correlated in some of their studies. This would confirm that these are actually independent effects.

The introduction section focuses heavily on moral impurity as a mechanism, however, moral self-regard is also included as a central measure in Study 1. "Moral self-regard" appears for the first time in the Overview of Studies and I could not find a definition throughout the introduction. What exactly is moral self-regard, and how is it different from moral impurity? Why was it included in the methods of the studies - what did the authors expect to find? More importantly, from my understanding the authors seem to hypothesize that moral impurity would be the mechanism for both promotion and prevention, when in fact their results suggest that moral impurity is the mechanism for prevention but moral self-regard may be the mechanism for promotion, at least judging from the results of Study 1. It would be beneficial to for the authors to flesh this out in the discussion.

On this note, I generally found the section in which the authors outlined their central theorizing and predicted mechanisms (p. 5-6) to be difficult to follow. I appreciate the inclusion of Hegel and Golomb (and am not suggesting these ideas should be removed) but I think this section would benefit from greater clarity and the logic of the reasoning could be spelled out more precisely.

I also wonder whether promotion and prevention relate to moral self-regard and moral impurity (respectively) outside of the networking context. Are these effects unique to networking, or would prevention increase moral impurity about various instrumental activities? I think the author's thoughts on the contextual specificity of the effect of focus on moral impurity should be discussed at some point in the paper, if not examined empirically.

More minor points:
- The authors justify their use of the Composite Reg Focus Scale by stating that "the Regulatory Focus Questionnaire (RFQ; Grant & Higgins, 2003; Higgins et al., 2001) collapses the two promotion and prevention

scales to compute a difference score". (p. 11) This is incorrect - the RFQ is used to calculate two separate variables. Some researchers who wish to examine predominance compute a difference score, but otherwise, researchers do not compute a difference score and instead look at the measures separately.
- I think it would be worthwhile to add "in networking context" to studies 1 and 2 in the overview table (so skimming readers don't incorrectly assume these were examined outside of that context)
- Other control variables might be beneficial to include in the correlational work. Could promotion relate to moral self-regard simply because both are related to self-esteem?
- Alex Browman's work on situation-specific regulatory focus (Browman, A. S., Destin, M., & Molden, D. C. (2017). Identity-specific motivation: How distinct identities direct self-regulation across distinct situations. Journal of personality and social psychology, 113(6), 835) seems relevant to cite w/ regards to networking-specific focus.
- There is a typo in the word completion examples, & then another on p26
- In the study conducted in Italy, was the word completion task in Italian or English? I think it would be useful to specify.

In compliance with data protection regulations, you may request that we remove your personal registration details at any time. (Remove my information/details). Please contact the publication office if you have any questions.

From: **Francesca Gino** fg no@hbs.edu
Subject: Re: he p w th an IRB app cat on
Date: January 7, 2020 at 9:53 AM
To: [redacted]

FG

[redacted],
Here is the revised protocol, and the surveys from Qualtrics.
Let me know if you have any questions
fran

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Chair, Negotiation, Organizations and Markets (NOM) Unit
Co-Chair, *Behavioral Economics Executive Education Program*
Co-Chair, *Driving Profitable Growth Executive Education Program*
Website: http://francescagino.com/
Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Monday, January 6, 2020 at 5:44 PM
To: Francesca Gino <fgino@hbs.edu>
Subject: RE: help with an IRB application

Hi Fran,

I just finished drafting a protocol for these studies (attached here).

I included some questions in the margins. Also, I used brackets and yellow highlighting to indicate uncertainty (e.g., I don't know if you want to use Dropbox or OneDrive to store the study data, so I wrote "Harvard [Dropbox] for question 12.27).

Also, we still need to put together:

1. Consent form documents for the three different studies
    a. Do you have Qualtrics/MTurk versions available? If so, I can make them into Word documents for the IRB.
2. A measures document (just Word exports of the three different Qualtrics surveys should suffice).

One more thing: I created a draft ESTR submission for this study (which can be found here -> IRB20-0016: Networking Motives). I'll upload the finalized protocol, measures, consent forms, etc. when we've finished those.

If there's anything else I can do to help with this, please let me know.

Best

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Monday, January 6, 2020 10:07 AM
To: [redacted]
Subject: Re: help with an IRB application

THANK YOU!
I'm re-taking the CITI certification now

PS – let me know if you can reach [redacted] today. I am planning to use the case study in March so it'd be great to have it in the system soon

---

Francesca Gino
Tandon Family Professor of Business Administration
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New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Monday, January 6, 2020 at 10:04 AM
To: Francesca Gino <fgino@hbs.edu>
Subject: RE: help with an IRB application

Hi Fran,

Sure thing, I'll start working on the application today and will send you an update on my progress before EOD.

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Monday, January 6, 2020 10:02 AM
To: [redacted]
Subject: help with an IRB application

Hi [redacted]
I am wondering if you could help me prepare an IRB application that mention 3 different studies, explained in the attached.

Rational for the studies:
Networks are a key source of social capital for achieving goals in professional and personal settings. Yet, despite the clear benefits of having an extensive network, individuals often shy away from the opportunity to create new connections because engaging in instrumental networking can make them feel inauthentic and physically dirty. In this research, we explore how the motives people have when engaging in networking can reduce these feelings and lead them to network more often. Specifically, we examine how self-regulatory focus, whether promotion or prevention, affects people's experience of and outcomes from networking. We predict that a promotion focus is beneficial to professional networking. People who approach networking with a promotion focus experience lower levels of moral impurity when engaging in instrumental networking than those who approach networking with a prevention focus. As a result, networking with a promotion focus increases the frequency of instrumental networking as compared to networking with a prevention focus, with positive consequences for job performance.

I can fill in the blanks for things you do not know how to fill in.
I'll have the Qualtrics ready by EOD

Thanks!
fran

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
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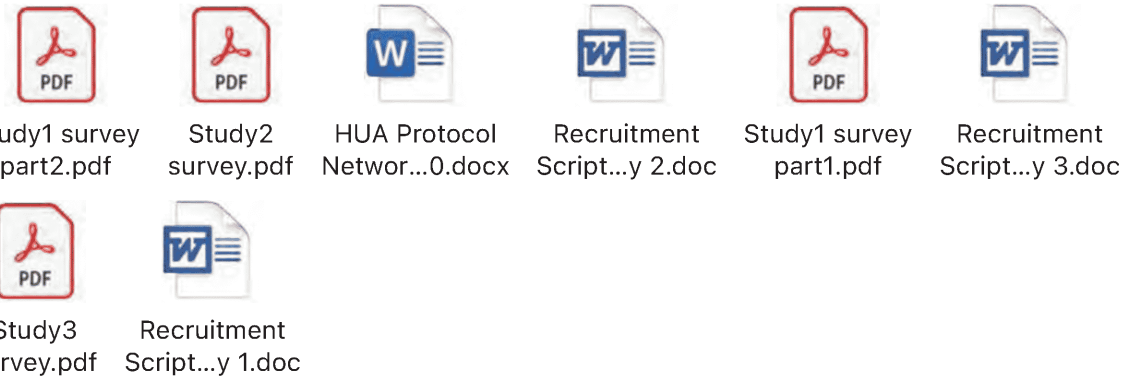

From: **Francesca Gino** fg no@hbs.edu
Subject: test ng
Date: January 14, 2020 at 7:45 AM
To: [redacted]

FG

[redacted]

Before I post the studies, can you check each of the following links (going through them a couple of times) to see if anything seems off?

Study 1, Part 1
https://hbs.qualtrics.com/jfe/form/SV_bILkcjYj2cHAKWh

Study 2
https://hbs.qualtrics.com/jfe/form/SV_8jeI9PXvlowBnRr

Study 3
https://hbs.qualtrics.com/jfe/form/SV_1GQY6ZpnsaVKDJ3

thanks!
fran

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Chair, Negotiation, Organizations and Markets (NOM) Unit
Co-Chair, *Behavioral Economics Executive Education Program*
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New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: **Francesca Gino** fg no@hbs.edu
Subject: Re: test ng
Date: January 14, 2020 at 12:17 PM
To: [redacted]

FG

Super he pfu !!! Thank you

fran

> On Jan 14, 2020, at 9:56 AM, [redacted] wrote:
>
> Hi Fran,
>
> Just a few things to note (sorry for the delay, had to organize my notes):
>
> - Study 1, Part 1
> - The question "How many years have you been speaking English on a daily basis?" actually threw me off a bit.
> - I wasn't sure if I should just list my age or if I should account for how long it took me to actually start speaking. I'm probably overthinking this, though.
> - It's possible to enter nonsensical values (long text, long numbers) for the last few demographic questions about how long you've lived in the U.S., your age, etc.
> - Dropdown questions might be a bit safer.
> - The formatting in the question, "How many years have you been speaking English on a daily basis?" looks a bit strange. I think there's an extra space between the word "How" and the word "many."
> - In the prompt for the first measure ("First, we want to ask you a few questions about yourself. For each of the questions below, please indicate the extent to which you agree"), you say "indicate the extent to which you agree", but in the prompt for the second measure ("Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement"), you say "indicate how strongly you agree or disagree" in the prompt.
> - This isn't a problem per se; it's just a difference I noticed.
> - Study 2
> - After participants are asked to list an aspiration, the next instruction ("In this next task, you will read a story and asked to imagine yourself in the situation described") should say, "you will read a story and be asked". Just a minor typo.
> - There's a typo in the instructions that show up after the moral purity measure:
> - "Now please take a minute and think about the what you wrote about earlier, about something ideally would like to do, in other words, think about a hope or aspiration that you currently have. Please reflect on your experience for 1-2 minutes and then proceed to the next task" -> Should be, "Now please take a minute and think about what you wrote about earlier, about something ideally you would like to do. In other words, think about a hope or aspiration that you currently have…"
> - Though I understand what you're trying to get participants to do when you ask, "Please write a few words that came to mind?", I wonder if it would be helpful to remind them about what they're supposed to write about (e.g., "Please write a

few words that came to mind while you were reflecting?" *[also applies to Study 3]*

- Study 3
  - The field beneath the question 'Please enter the initials of your contact' allows you to input a lengthy combination of characters, probably more characters than participants will need in order to enter initials.
  - There's a typo in the instructions that show up after the moral purity measure:
    - "Now please take a minute and think about the what you wrote about earlier, about something you ought to do, in other words, think about a duty or obligation that that you currently have. Please reflect on your experience for 1-2 minutes and then proceed to the next task." -> Should be, "Now please take a minute and think about the what you wrote about earlier, about something you ought to do. In other words, think about a duty or obligation that you currently have…"
  - There's no text verification for the "reflection" 'write 5-6 words' questions; I was able to proceed without writing any words in those reflection questions.
- Across all three surveys:
  - In the consent forms:
    - I'd change the phrase (underneath the headings ***Why is this research being done*** and ***What is the purpose of this research***) "We are interested in understanding how people interact with others in a professional setting, e.g., when they try to create new professional connection or nurture existing relationships" to say "connection**s**".
    - The formatting for the last bullet point ("You can ask all the questions you want before you decide") in the list beneath the "***What should I know about a research study?***" heading is different from the formatting for the rest of the bullets.
    - The formatting of the text beneath the heading "***What is the purpose of this research?***" makes the text light gray (while the rest of the consent form is black) and a bit difficult to read.
  - I think there's something odd going on with the survey flow for the attention/comprehension checks at the beginnings of the surveys.
    - Study 1:
      - I said "No" to the question "Are you fluent in English?" but was still allowed to proceed.
      - On my second or third test of Study 1 Part 1, I intentionally failed all of the attention/comprehension checks at the beginning of the survey (wrong letter "g", said "Cat", didn't choose the last option) but was still allowed to proceed.
      - On my third or fourth test run of Study 1, I didn't enter a real email address after the consent form and was kicked out the survey without explanation.
        - This was a run during which I intentionally answered all of the attention/comprehension check questions incorrectly.
        - **Maybe the survey is kicking me out for answering those attention check questions incorrectly *after* the consent form instead of kicking me out before the consent form?**
          - **If participants answer the attention check**

        - **If participants answer the attention check questions incorrectly, I think they should be kicked out before the consent form.**
    - Study 2:
        - I intentionally failed one of the attention/English comprehension check questions (the first one, 'Please select the letter that's missing in this chain'), but I was still allowed to start the survey.
    - Study 3:
        - I intentionally failed two of the attention check/English comprehension questions (gave answers of "b" and "Tree"), but I was still allowed to start the survey.
- For the "Gender" demographic questions, some participants might not like the fact that there's not a third "Other" option.
- The free response questions generally allow you to proceed without entering much text.
    - Not a problem, but I wonder if some participants will try to cheat the surveys by entering short, bogus responses.

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Tuesday, January 14, 2020 8:46 AM
To: [redacted]
Subject: testing

[redacted],

Before I post the studies, can you check each of the following links (going through them a couple of times) to see if anything seems off?

Study 1, Part 1
https://hbs.qualtrics.com/jfe/form/SV_bILkcjYj2cHAKWh

Study 2
https://hbs.qualtrics.com/jfe/form/SV_8jeI9PXvlowBnRr

Study 3
https://hbs.qualtrics.com/jfe/form/SV_1GQY6ZpnsaVKDJ3

thanks!
fran

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Chair, Negotiation, Organizations and Markets (NOM) Unit

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New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Subject: RE: R&R network ng
Date: March 16, 2020 at 4:57 PM
To: [redacted], Francesca G no fg no@hbs.edu

Agreed, it's one of those "no stone left unturned" reactions.

The question for us is whether to make the most of this additional digging in the data or just to the minimum requested, even while knowing that there can't be much there. I lean toward the former, since Francesca is kindly putting her RA resources toward this additional analysis.

From: [redacted]
Sent: March 16, 2020 4:28 PM
To: [redacted]; Gino, Francesca <fgino@hbs.edu>
Subject: Re: R&R networking

i agree, the old vs new is the only insightful coding; I think they just want to make sure those essays are not left with no analyses

---

From: [redacted]
Date: Monday, March 16, 2020 at 3:22 PM
To: [redacted]
Subject: RE: R&R networking

Absolutely, it would be very helpful as a manipulation check.

Let me add that since we explicitly told participants "Your intention in sending the message should be to strategically make a professional connection. With this message, you are trying to create a connection that would aid the execution of work tasks and your professional effectiveness", variation on the "professional/social" question will be zero, by definition. If we only coded for what the editor suggested, that would leave us coding usefully only for the "existing/new contact" question, which is somewhat interesting but not earthshattering because our theory concerns both types of ties and does not make a distinction between them.

From: [redacted]
Sent: March 16, 2020 4:19 PM
To: [redacted] Gino, Francesca <fgino@hbs.edu>
Subject: Re: R&R networking

Great suggestion; I agree, and this can be a manipulation check

---

From: [redacted]
Date: Monday, March 16, 2020 at 3:00 PM
To: [redacted] "Gino, Francesca"

[redacted]
<fgino@hbs.edu>
Subject: Re: R&R networking

I know that the two variables the editor suggested are simple yes/no questions, and I don't mean to complicate the process unnecessarily. But since we're going down the coding route now, I wonder if it's worth also coding for promotion vs prevention focus. That's the more interesting question, theoretically, in my view. It would be a matter of coding for messages related to growth, advancement, and accomplishment, and striving toward wishes and aspirations (for promotion); and those concerned about missing opportunities and meeting their responsibilities and duties (for prevention).

From: [redacted]
Sent: Monday, March 16, 2020 3:06:54 PM
To: Gino, Francesca <fgino@hbs.edu>; [redacted]
Subject: Re: R&R networking

Thanks

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Monday, March 16, 2020 at 2:05 PM
To: [redacted]
Subject: Re: R&R networking

On it. I'll ask my RA now. They are "YES" or "NO" answers.
She is super thoughtful. I like that.

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Chair, Negotiation, Organizations and Markets (NOM) Unit
Co-Chair, *Behavioral Economics Executive Education Program*
Co-Chair, *Driving Profitable Growth Executive Education Program*
Website: http://francescagino.com/
Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Monday, March 16, 2020 at 3:01 PM
To: [redacted], Francesca Gino <fgino@hbs.edu>
Subject: Re: R&R networking

Here is her response. We should ask RAs to code for two things (old vs new contact; professional vs. personal).

I understand that the change from 3a to 3b might seem small – hypothetical consideration of a networking scenario to actual engagement in a networking behavior (sending a message through Linkedin), but the change is more than trivial because it was proceeded by a manipulation and you have content reflecting real behavior. I see two ways of approaching my question:

1. You focus FREQUENCY of instrumental networking and all participants likely followed your instructions and complied with the Linkedin message writing task. As a result, frequency of messaging someone in Linkedin in this study likely doesnn't vary. So, I could see you arguing that there is no variation in behavior and as a result it was simply a constant manipulated induction of instrumental networking. If this is the case, you could consider my comment regarding the coding of the Linkedin messages an example of just a place for greater clarity. You could clarify for the reader what the primary goal of this task was within your research paradigm and offer evidence that in fact there is little variation in behavior which implies that participants followed the instructions as given and as a result the instructed task did in fact do XXX (where XXX is a clearer statement of what the point was). Because you are hypothesizing that promotion vs prevention affects networking behavior and you had participants engage in networking behavior and there is likely variation of some form in how they approached the networking opportunity, I believed that you intended for their reactions to your prompt to write Linkedin messages to serve as a dependent outcome. Please consider how you could prevent that interpretation for the reader.
2. However, I do see it as possible for you to could code for the following two things in those Linkedin messages. These things might vary as a function of promotion vs prevention mindsets.
    a. Networking attempts: Did they message someone they already had a connection to (not a networking attempt) or someone who would be a new connection (a networking attempt). Whether you position this as informs on the primary hypotheses or not, it does seem important to report on. Please offer the percent of people who connected with "old" contacts or who attempted to make a new one, if you have those data. If you do not, please report that you do not have those breakdowns.
    b. Code whether the message was aimed at forming a connection to meet a professional goal, as you have defined instrumental networking, or whether they were using the assigned task to just make a social connection (saying hello to a friend).

Emily Balcetis

From: [redacted]
Date: Monday, March 16, 2020 at 1:29 PM
To: [redacted], "Gino, Francesca" <fgino@hbs.edu>
Subject: RE: R&R networking

Hi there,

Re-merging now from a string of conference calls…

I suppose that the one thing we could code for in the LinkedIn message is their promotion focus vs prevention focus content. That is, people in the prevention focus condition might have drafted messages concerned more with loss of opportunity and sense of responsibility, while people in the promotion focus might have drafted messages concerned with pursuing opportunities and professional aspirations. I don't think there's a way to code that level of nuance in LIWC, but in theory an RA could code for promotion vs prevention focus content.

Let's wait and see whether the editor recommends a specific approach to coding (whether the above or something else). If not, I think it's completely fine not to code these messages.

Thanks,
[redacted]

From: [redacted]
Sent: March 16, 2020 1:30 PM
To: Gino, Francesca <fgino@hbs.edu>
Cc: [redacted]
Subject: Re: R&R networking

Will email her right now
[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Monday, March 16, 2020 at 12:29 PM
To: [redacted]
Cc: [redacted]
Subject: Re: R&R networking

Do you want to send her the letter via email? So that we save some time?
If she agrees with our approach we can go ahead and submit the paper.
I just need to send you the data and materials to post and then we're all set. So we can do that while she is evaluating the answers

---

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New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Monday, March 16, 2020 at 1:28 PM
To: Francesca Gino <fgino@hbs.edu>
Cc: [redacted]
Subject: Re: R&R networking

Reads well
Lets see if there any specific things she wants us to code for

---

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Monday, March 16, 2020 at 12:24 PM
To: [redacted]
Cc: [redacted]
Subject: Re: R&R networking

Here is what I would say in the letter. (I edited throughout)

Francesca Gino
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Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Monday, March 16, 2020 at 11:59 AM
To: Francesca Gino <fgino@hbs.edu>
Cc: [redacted]
Subject: Re: R&R networking

Do you want us to email the AE before resubmission?
[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Monday, March 16, 2020 at 10:57 AM
To: [redacted]
Cc: [redacted]
Subject: Re: R&R networking

My sense is that we should tell the AE we do not know what to code for but that we are open to suggestions? I don't think she'll ask us to do anything with that data if we explain why we used this paradigm better. I can add a couple of sentences to the paper

fran

On Mar 16, 2020, at 11:43 AM, [redacted]

We can use LIWC for content analysis but I am not sure we really get any differences back; coding them by coders will take long and I am not sure what categories we want to code for. Also, I am not sure we have hypotheses as why the content of messages would be different

[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Monday, March 16, 2020 at 10:03 AM
To: [redacted]
Subject: Re: R&R networking

[redacted]
For Study 3B. We did record their messages, but we have no way of saying whether they sent them for sure. We trusted people they would do so. As for coding, I read a few of them over the weekend. I am really not sure what to code for… here an example of the type of msg:

==========

Hey Steph,

It's been awhile. Just wanted to let you know that I enjoyed working with you during our time with Distribution. I'm currently with LUS still at the GSC and we are looking for some people interested in Part-Time positions. Let me know if you would still be interested. Hope all is well.

==========

My RA can help with the coding. The writing of the message was meant to make people experience networking (in real terms). Usually LinkedIn messages are not super long, so the above is not starnge, length wise.

Francesca Gino
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Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Thursday, March 12, 2020 at 2:11 PM
To: Francesca Gino <fgino@hbs.edu>, [redacted]
Subject: R&R networking

Francesca,

Attached is the final draft (after my edits) and the short response letter. There were all minor edits.

Two things for you to take care of

1. **Study 3b. Do you have the letters that they drafted for their Linkedin networking task? Are those analyzed or can they be? I was expecting that some content analysis of these letters would serve as a DV as I was reading the methods. That the content of their letters, whether they were sent, etc is not considered or modeled as a DV strikes me as odd. Please either analyze those data, or explain in a cover letter why you could not. Also clarify in the manuscript what the experience of letter writing was meant to do, in order to more clearly conceptualize it within this paradigm.*
   Did we ask them to copy their message for us. For ASQ paper we did not ask them so we did not have the messages. Do you have them here?? if we do not have them we can simply say we encouraged them to do so and have time to make it more real but did not ask them to share their messages with us.
2. Can you upload all data, I have Study 5 data and will send you the data to be uploaded. If you want you can send me and I can upload them if you have the data ready. We are not uploading Study 4 data.
   I attached the data for Study 5. I can upload all data if you share the data with me.

Let me know if I can help.

[redacted]

From: [redacted]

[redacted]
Date: Wednesday, March 11, 2020 at 10:53 PM
To: "Gino, Francesca" <fgino@hbs.edu>, [redacted]
Subject: R&R: Your Submission PSP-A-2019-0814R1 - [EMID:1460b967a844c21b]

[redacted], can you send me our response to "Motivation for being unable to provide the data from the law firm (NDA)"

Francesca: can you upload all data, I have Study 5 data and will send you the data to be uploaded. If you want you can send me and I can upload them if you have the data ready. We are not uploading Study 4 data.

The second comment you need to address
**Study 3b. Do you have the letters that they drafted for their Linkedin networking task? Are those analyzed or can they be? I was expecting that some content analysis of these letters would serve as a DV as I was reading the methods. That the content of their letters, whether they were sent, etc is not considered or modeled as a DV strikes me as odd. Please either analyze those data, or explain in a cover letter why you could not. Also clarify in the manuscript what the experience of letter writing was meant to do, in order to more clearly conceptualize it within this paradigm.*

Let me know if I can help in any way. I have the letter ready and will add your responses. I am making small edits the manuscript based on the comments.

[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Wednesday, March 11, 2020 at 3:57 PM
To: [redacted]
Subject: Re: Your Submission PSP-A-2019-0814R1 - [EMID:1460b967a844c21b]

Awesome! Happy to put data online. OSF? Or do you have a different preference?

Francesca Gino
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Harvard Business School
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Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Wednesday, March 11, 2020 at 3:54 PM
To: [redacted], Francesca Gino <fgino@hbs.edu>
Subject: RE: Your Submission PSP-A-2019-0814R1 - [EMID:1460b967a844c21b]

Yay indeed!

In the midst of COVID-19 disaster, finally a piece of good news!

I looks like what I can contribute to the final edits are:

1. Motivation for being unable to provide the data from the law firm (NDA)
2. Tweaking Figure 2 to align like concepts horizontally.

Any thing else that you'd like me to do?

[redacted]

From: [redacted]
Sent: Wednesday, March 11, 2020 12:43 PM
To: Gino, Francesca <fgino@hbs.edu>; [redacted]
Subject: FW: Your Submission PSP-A-2019-0814R1 - [EMID:1460b967a844c21b]

Yay!

I'll see what changes we need to make and get back to you. Francesca you have the data so we need to make some of the data available

[redacted]

From: <em.asc.0.69ddb2.e703261d@editorialmanager.com> on behalf of "Journal of Personality and Social Psychology: Attitudes and Social Cognition" <em@editorialmanager.com>
Reply-To: "Journal of Personality and Social Psychology: Attitudes and Social Cognition" [redacted]
Date: Wednesday, March 11, 2020 at 10:22 AM
To: [redacted]
Subject: Your Submission PSP-A-2019-0814R1 - [EMID:1460b967a844c21b]

CC: [redacted]

CC: [redacted]

RE: Journal of Personality and Social Psychology: Attitudes and Social Cognition submission PSP-A-2019-0814R1, titled Why Connect? Moral Consequences of Networking with a Promotion or Prevention Focus

Dear [redacted],

Two of the original reviewers returned to your revision and were pleased with all the changes you made. I concur. This is a very strong revision. As I originally and continue to think, the breadth of methods and samples used here is a great strength and increases the evidentiary value of the package as a whole. There is much our academic community can take from this work. Below I outline a few minor revisions that need to be addressed before I could accept the manuscript for submission, though I do not foresee these being a major source of concern. As a result, I am pleased to tell you that your work has now been accepted for publication in Journal of Personality and Social Psychology: Attitudes and Social Cognition pending the following minor revisions:

At submission, you agreed to share data, analytic methods and code, and research materials upon acceptance of the paper or otherwise provide reasons for not doing so for each study. Please provide either:

1. Links to the data, analytic methods, and research materials OR
2. A statement to explain why you are not sharing this information.

Figure 2. Overview of studies. A small aesthetic change, but something I thought would help me is from one row to the next, can the blocks that reference the same concept be aligned horizontally? That is, for example, can “moral impurity from instrumental networking” always appear in the same location left-to-right (as if in the same column) regardless of which row it appears in? That will visually convey when studies test content that is a consequence or predictor of impurity.

Study 1, Table 1. The “RF neutral” label is not explained. Reference this label in the results and methods.

Study 3b. Do you have the letters that they drafted for their Linkedin networking task? Are those analyzed or can they be? I was expecting that some content analysis of these letters would serve as a DV as I was reading the methods. That the content of their letters, whether they were sent, etc is not considered or modeled as a DV strikes me as odd. Please either analyze those data, or explain in a cover letter why you could not. Also clarify in the manuscript what the experience of letter writing was meant to do, in order to more clearly conceptualize it within this paradigm.

Study 5. Please report the mediation analyses predicting new connections and existing ties as outcome variables, as well as the mediation analysis you do report.

(Please note: authors may easily deposit data, codes, and materials into APA's own repository hosted by the Center for Open Science at https://osf.io/view/apa/.)

Your revision is due by 05/10/2020.
To submit the revision, please visit https://www.editorialmanager.com/asc/. You should see a menu item called "Submissions needing revision." You will find your submission record there.

Thank you for submitting your work to this journal! I have enjoyed the process of reviewing your work very much.

Sincerely,
Emily Balcetis
Associate Editor
Journal of Personality and Social Psychology: Attitudes and Social Cognition

******
Comments from the Editors and Reviewers:
Reviewer #2: I have read the revised manuscript with particular attention to areas I had concerns about in the original submission. I am thoroughly impressed by the authors' comprehensive and thoughtful actions taken to address the concerns. I especially enjoy the improvements in theoretical richness and precision, clarity in argumentation and the theoretical/study models, and thoughtfulness in analyses (e.g., including a control condition in Studies 3; highlighting study contexts, such as how lawyers work across office locations, that justify analytical decisions in Study 4).

Overall, I think the revised manuscript is strong, and the additional study results have substantially strengthened the contributions that the article aims to make. Therefore, I have no further comments or suggestions. I believe that the article will make a unique and meaningful contribution to the literature.

article will make a unique and meaningful contribution to the literature.

Reviewer #3: The new manuscript is highly responsive to our comments and suggestions. I found the new product clear and a pleasure to read. The novel studies and revised introduction addressed my prior concerns. I think it makes an important contribution to the field and recommend it for publication.

APA asks that authors please take a moment to give us your feedback on the peer review process as you experienced it, by completing a short survey, available at http://goo.gl/forms/qzKP6Zkqx9.

In compliance with data protection regulations, you may request that we remove your personal registration details at any time. (Remove my information/details). Please contact the publication office if you have any questions.

Exhibit 25
Allegation 4a Email Correspondence

From: [redacted]
Subject: Re: tax data
Date: January 20, 2011 at 7:04 AM
To: Francesca Gino fgino@hbs.edu
Cc: [redacted]

[redacted]

You are both too generous to insist on giving me this much credit! I am more than happy with any order of authorship in this cast of researchers on a cool project. And I especially do not want to put you in an uncomfortable position with good colleagues and friends.

I do think that two lab studies + field car insurance study makes a nice package for an OB journal. I could see the field tax study we hope to run might be well-suited for a top economics journal (like the Ariely, Bracha, Meier paper on cycling and image motivation)-in which case the order of authorship would be a meaningless decision.

I think the question is big and impactful enough so that it could make sense to do both - but I do not insist that I should be first or second author on these papers!

Thank you both for being such incredibly generous advisors and people,
[redacted]

On 20 January 2011 07:53, Gino, Francesca <fgino@hbs.edu> wrote:

> I have the same goal. So, what about if I write to[redacted] and suggest the following authorship –[redacted], [redacted]r, and the remaining authors in whatever order?
>
> francesca
>
> ---
> Francesca Gino
> Associate Professor of Business Administration
> Negotiation, Organizations & Markets
> Harvard Business School
> Phone: 617.495.0875
> Fax: 617.495.5672
> Email: fgino@hbs.edu
> Website: http://www.francescagino.com
>
> From:[redacted]
> Sent: Thursday, January 20, 2011 7:28 AM
> To: Gino, Francesca[redacted]
> Subject: RE: tax data
>
> I want what is best for[redacted], and secondarily what is best for Francesca.
>
> I remain happy to be last author, and prefer that[redacted] be first
>
> [redacted]

From: Gino, Francesca
Sent: Thursday, January 20, 2011 6:20 AM
To: [redacted]
Subject: tax data

Hi [redacted] and [redacted],

Following up on [redacted] suggestion, I wrote to [redacted] to see what he ended up doing with his data from the field study with the insurance company. As [redacted] suspected, he never published it but he is interested in publishing it. [redacted] [redacted]r helped him collect the data. So I suggest we add them as co-authors and write up the paper for a top tier journal. Would this plan work with both of you?

We can then work on extensions of the paper with [redacted] or [redacted]

francesca

Francesca Gino
Associate Professor of Business Administration
Negotiation, Organizations & Markets
Harvard Business School
Phone: 617.495.0875
Fax: 617.495.5672
Email: fgino@hbs.edu
Website: http://www.francescagino.com

From: [redacted]
Subject: Re: when signatures increase the saliency of ethicality
Date: January 21, 2011 at 8:23 AM
To: Francesca Gino fgino@hbs.edu
Cc: [redacted]

Hello Francesca,

I agree. it's a good idea to combine forces.
the choice of outlets sounds good. another one to consider -- but not up an running yet -- is the new electronic RAND journal "Behavioral Science and Policy" (to be launched 2011).

Looking forward to working with your team on it!

[redacted]

On Jan 21, 2011, at 2:23 AM, [redacted] Ariely wrote:

And since we are in the same mindset I am always in favor of working together rather than compete

Irrationally yours,

[redacted]
———•••———•••
Slow fingers, sorry for the short email

On Jan 20, 2011, at 11:13 PM, "Gino, Francesca" <fgino@hbs.edu<mailto:fgino@hbs.edu>> wrote:

Hi [redacted],

How are you?

I am writing with a question. [redacted], [redacted] and I had several meetings over the last year with a colleague at HBS in the Finance department who does work for the IRS. He was intrigued by some of the data we included in one of our papers where we were using a signature manipulation (and examining its effects on cheating), building on your work with [redacted]. He wanted us to replicate the study using procedures more similar to filling out tax forms so that we could convince the IRS to let us run a field experiment with them. To make the story short, [redacted], [redacted] and I collected the data from three different studies (four really, but two are somewhat similar) which very convincingly showed that signing at the top of a form raises the saliency of people's ethical standards, and, as a result, reduces cheating compared to when people sign at the bottom of the form. In the end, our colleague backed out – and decided not to help us bring these results to the IRS's attention (at least for now). But [redacted], [redacted] and I love the idea and we think it is really important.

So, I asked [redacted] whether we could combine forces (add to our studies the field data you have from the study with the insurance company) and he said he thinks it is a good idea. Are you ok with this idea?

I don't care about order of authorship (other than I would love if [redacted] could be first given that she'll be on the market very likely next year) – I would just love to write the paper combining our lab data with your field study. I think the message is a really important one.

If you agree, then we could exchange an outline, and I would just ask you to write up the field data / method / results and we'll take care of preparing a first draft. I think this paper could go to an outlet like Management Science or also OBHDP but I am also open to your suggestions.

I hope you'll think this is a good idea. It'd certainly be quite a fantastic team and a wonderful idea!

francesca

Francesca Gino
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Harvard Business School
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Fax: 617.495.5672
Email: <mailto:fgino@hbs.edu> fgino@hbs.edu<mailto:fgino@hbs.edu>
Website: <http://www.francescagino.com/> http://www.francescagino.com<http://www.francescagino.com/>

==========
[redacted]

[redacted]

From: [redacted]
Subject: tax study
Date: February 15, 2011 at 10:23 AM
To: Francesca Gino fgino@hbs.edu

[redacted]

Hi Francesca,

I promised you this would be in your inbox before the next GiNorton lab check-in - so here it is :) I did not add an extensive literature section, partly because I'm not sure how [redacted] studies would fit just yet. But I do think that framing in terms of activating the self-concept in addition to increasing moral salience might make this a more generalizable finding. It would also help us easily design a mediation study should we need one - the mediator would be self-concept activation, and I can think of several easy ways to measure it.

For the study descriptions, I think it's great that we have the tax form differences in Study 1 and Study 2. We can frame Study 1 as "overclaiming credit" and Study 2 as "cheating on deductions." What do you think?

Thanks for your patience Francesca!
[redacted]

Tax Study 2011-0...2.docx

From: [redacted]
Subject: Re: moral saliency: working draft
Date: March 8, 2011 at 3:09 PM
To: [redacted]
Cc: [redacted], Francesca Gino fgino@hbs.edu, [redacted]

Hi [redacted],

Please find attached our latest draft. Many thanks to Francesca for stitching these studies together so beautifully!

Changes I've made:
- added sections on Theoretical Contributions, Limitations and Venues for Future Research, Implications for Practice, and Conclusion
- rewording throughout the whole paper: instead of framing our effect as one of "signing a pledge of honesty at the top/bottom of a form," I've veered towards framing our effect to be as minimal as possible: signing one's name before reporting as opposed to after reporting leads to more honesty. I wanted to shift the emphasis from our specific tasks/forms/materials to the more general phenomena - but I am open to leaving the wording as it was before (thus, all changes are tracked - please accept and reject whatever).
- incorporated [redacted] suggestions, including making him last author, as per his insistence

I think our studies are piecing together quite nicely - and I still remain entirely flexible as to where we send it, whose name goes where, and how we frame it. Thank you all for your contributions!

[redacted]

On 6 March 2011 18:06, [redacted] wrote:

> Wow - looks like a bias by me - based on walking t work for so many years?
>
> [redacted]
>
> -----Original Message-----
> From: [redacted]
> Sent: Sunday, March 06, 2011 6:02 PM
> To: [redacted]
> Cc: [redacted]; Gino, Francesca; [redacted]
> Subject: Re: moral saliency: working draft
>
> The milage are correct.
>
> Irrationally yours,
>
> [redacted]
> ———•••———•••
> Slow fingers, sorry for the short email
>
> On Mar 6, 2011, at 2:43 PM, [redacted] > wrote:
>
> > Thanks [redacted] for the good comments! I'll be sure to incorporate them into my edits. [redacted], you can expect a draft coming your way in the next two days!
> >
> > [redacted]
> >
> > On 6 March 2011 17:35, [redacted] wrote:
> >
> > ---
> > From: Gino, Francesca
> > Sent: Sunday, March 06, 2011 5:35:12 PM
> > To: [redacted]
> > Cc: [redacted]
> > Subject: RE: moral saliency: working draft
> > Auto forwarded by a Rule

Thanks[redacted], these are all good points, [redacted] -- do you want to try to address them as you revise the current draft?

francesca

Francesca Gino
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Fax: 617.495.5672
Email: fgino@hbs.edu
Website: http://www.francescagino.com

-----Original Message-----
From: [redacted]
Sent: Sunday, March 06, 2011 4:40 PM
To: [redacted]
Cc: Gino, Francesca; [redacted]
Subject: RE: moral saliency: working draft

Hi all:

I read through our paper on a flight on Friday. I have some minor editing to do when it is my turn, but here are a couple of things that need attention by those of you with more knowledge and skills:

1) page 4: I hate motivating a paper with the "gap" positioning. Let's motivate by what it does, not by the fact that someone hasn't done it before.

2) page 8: The means for the number of miles driven in a year seem enormous - twice what I would have expected. Am I simply wrong, is the sample unusual, or is there an error in recording the data?

3) In multiple lab studies, we need to clarify how we know when someone cheats - I couldn't find that in the paper - again, this may be my error.

4) Why do we report the SEM instead of the standard deviation?

5) study 4: We could use a bit more intro on "ethical saliency". What is it? Why did we pick this variable.

6) study 4: explain why it is "sign first" vs. control, rather than have sign later. I am ok with this, but it could use a sentence.

Thanks for all of the work.

[redacted]

-----Original Message-----
From: [redacted]]
Sent: Friday, February 25, 2011 5:11 PM
To: [redacted]
Cc: Gino, Francesca; [redacted]
Subject: Re: moral saliency: working draft

Hello Team,

sorry for not being very responsive, I am travelling at the moment.

[redacted] being first author is definitely a no-brainer.

Francesca: It is very nice of you to offer the second spot to me but at this point, I don' think I deserve it, unless I end up contributing more. In any event, i just wanted to let you know that i am happy with any order you guys think is fair.

OBHDP sounds like the right target-outlet for this work.

Looking forward to take over the draft after [redacted] has worked on it.

Cheers,
[redacted]

On 2011-02-24, at 6:27 PM, [redacted] wrote:

Hi all:

I claim the last spot in the order - it provides a good excuse for loafing.

I am happy to read and edit when it seems to fit.

Thanks to all of you for your work on this project.

[redacted]

From: Gino, Francesca
Sent: Wednesday, February 23, 2011 8:20 PM
To: [redacted]
Cc: [redacted]
Subject: moral saliency: working draft

Hi [redacted],

As promised, here is the current draft of the moral saliency paper. Here is what I've done:

- I wrote an intro to the paper (I am not sure I like it so you should feel free to change it if you have better ideas :))
- I extended the "theoretical development section - I think this section still needs some work
- I added the field study (which is really nice!), and the description of each of the lab studies (with results)
- I started working on the general discussion section (but a few subsections are still missing...)

For now I left all the three figures in the paper, but I am not sure we really need them. Same thing for the appendix (maybe we can just leave an example of the form we have used?).

I hope this is a good start. Do you want to work on the paper next?

I think your idea of targeting OBHDP is a good one - if everybody on the team thinks that's the right outlet to target. Also, I just listed authors without paying too much attention - the only "right" order in my view is you first and then [redacted] second. And then the rest of us can fight on what happens after that... the important thing in my view is to work on this nice set of findings!!! :)

Looking forward to doing more work on the draft when it is my turn again.

francesca

Francesca Gino
Associate Professor of Business Administration
Negotiation, Organizations & Markets
Harvard Business School
Phone: 617.495.0875
Fax: 617.495.5672
Email: fgino@hbs.edu<mailto:fgino@hbs.edu>
Website: http://www.francescagino.com

****

[redacted]

Making Ethics Salient...8.docx

From: [redacted]
Subject: moral saliency: working draft 4 Francesca
Date: March 9, 2011 at 9:15 PM
To: Francesca Gino fgino@hbs.edu
Cc: [redacted]

[redacted]

HI All,
attached is my first pass.

A few comments as we move forward:
1) In studies 2&3 it's unclear why we find differences in cheating in the matrix task, since the collection slip is supposedly submitted before the tax form with the signature manipulation. could it be that there was no collection slip as participants also had to indicate their performance on the tax form? could you clarify that part.
2) I have changed most of the time "saliency of self-concept" to "saliency of ethics" as we don't have any evidence for a heightened self-conept. we only have evidence that ethics/morality is more salient.
3) we need to work some more on the general discussion and do a better job promoting the contribution of our paper. It might be good to have a quick chat on what we think are our contributions.
4) Once we have a better idea of the general discussion, we need to stress the findings of study 1(the field study) more. I think we are underselling those results.

Cheers,
[redacted]

Making Ethics Salient...2.docx

On 2011-03-08, at 4:09 PM, [redacted] wrote:

> Hi [redacted],
>
> Please find attached our latest draft. Many thanks to Francesca for stitching these studies together so beautifully!
>
> Changes I've made:
> - added sections on Theoretical Contributions, Limitations and Venues for Future Research, Implications for Practice, and Conclusion
> - rewording throughout the whole paper: instead of framing our effect as one of "signing a pledge of honesty at the top/bottom of a form," I've veered towards framing our effect to be as minimal as possible: signing one's name before reporting as opposed to after reporting leads to more honesty. I wanted to shift the emphasis from our specific tasks/forms/materials to the more general phenomena - but I am open to leaving the wording as it was before (thus, all changes are tracked - please accept and reject whatever).
> - incorporated [redacted] suggestions, including making him last author, as per his insistence
>
> I think our studies are piecing together quite nicely - and I still remain entirely flexible as to where we send it, whose name goes where, and how we frame it. Thank you all for your contributions!
>
> [redacted]
>
> On 6 March 2011 18:06 [redacted] wrote:
>> Wow - looks like a bias by me - based on walking t work for so many years?
>>
>> [redacted]
>>
>> -----Original Message-----
>> From: [redacted]
>> Sent: Sunday, March 06, 2011 6:02 PM
>> To [redacted]
>> Cc: [redacted]; Gino, Francesca; [redacted]

Subject: Re: moral saliency: working draft

The milage are correct.

Irrationally yours,

[redacted]
[redacted]
Slow fingers, sorry for the short email

On Mar 6, 2011, at 2:43 PM, [redacted] > wrote:

Thanks [redacted] for the good comments! I'll be sure to incorporate them into my edits. [redacted], you can expect a draft coming your way in the next two days!

[redacted]

On 6 March 2011 17:35, [redacted] > wrote:

From: Gino, Francesca
Sent: Sunday, March 06, 2011 5:35:12 PM
To: [redacted]
Cc: [redacted]
Subject: RE: moral saliency: working draft
Auto forwarded by a Rule

Thanks [redacted], these are all good points. [redacted] -- do you want to try to address them as you revise the current draft?

francesca

Francesca Gino
Associate Professor of Business Administration
Negotiation, Organizations & Markets
Harvard Business School
Phone: 617.495.0875
Fax: 617.495.5672
Email: fgino@hbs.edu
Website: http://www.francescagino.com

-----Original Message-----
From: [redacted]
Sent: Sunday, March 06, 2011 4:40 PM
To: [redacted]
Cc: Gino, Francesca; [redacted]
Subject: RE: moral saliency: working draft

Hi all:

I read through our paper on a flight on Friday. I have some minor editing to do when it is my turn, but here are a couple of things that need attention by those of you with more knowledge and skills:

1) page 4: I hate motivating a paper with the "gap" positioning. Let's motivate by what it does, not by the fact that someone hasn't done it before.

2) page 8: The means for the number of miles driven in a year seem enormous - twice what I would have expected. Am I simply wrong, is the sample unusual, or is there an error in recording the data?

3) In multiple lab studies, we need to clarify how we know when someone cheats - I couldn't find that in the paper - again, this may be my error.

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Thanks for all of the work.

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-----Original Message-----
From: [redacted]]
Sent: Friday, February 25, 2011 5:11 PM
To: [redacted]
Cc: Gino, Francesca; [redacted]
Subject: Re: moral saliency: working draft

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[redacted] being first author is definitely a no-brainer.

Francesca: It is very nice of you to offer the second spot to me but at this point, I don' think I deserve it, unless I end up contributing more. In any event, i just wanted to let you know that i am happy with any order you guys think is fair.

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Looking forward to take over the draft after [redacted] has worked on it.

Cheers,
[redacted]

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Hi all:

I claim the last spot in the order - it provides a good excuse for loafing.

I am happy to read and edit when it seems to fit.

Thanks to all of you for your work on this project.

[redacted]

From: Gino, Francesca
Sent: Wednesday, February 23, 2011 8:20 PM
To: [redacted]
Cc: [redacted],
[redacted]
Subject: moral saliency: working draft

Hi [redacted],

As promised, here is the current draft of the moral saliency paper. Here is what I've done:

- I wrote an intro to the paper (I am not sure I like it so you should feel free to change it if you have better ideas :))
- I extended the "theoretical development section - I think this section still needs some work
- I added the field study (which is really nice!), and the description of each of the lab studies (with results)
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For now I left all the three figures in the paper, but I am not sure we really need them. Same thing for the appendix (maybe we can just leave an example of the form we have used?).

I hope this is a good start. Do you want to work on the paper next?

I think your idea of targeting OBHDP is a good one - if everybody on the team thinks that's the right outlet to target. Also, I just listed authors without paying too much attention - the only "right" order in my view is you first and then [redacted] second. And then the rest of us can fight on what happens after that... the important thing in my view is to work on this nice set of findings!!! :)

Looking forward to doing more work on the draft when it is my turn again.

francesca

Francesca Gino
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Harvard Business School
Phone: 617.495.0875
Fax: 617.495.5672
Email: fgino@hbs.edu<mailto:fgino@hbs.edu>
Website: http://www.francescagino.com

****

[redacted]

<Making Ethics Salient 2011-03-08.docx>

****

[redacted]

From: [redacted]
Subject: revision
Date: April 4, 2011 at 6:48 PM
To: Francesca Gino fgino@hbs.edu, "[redacted]"

Hello [redacted] and Francesca,

great job!
As you might recognize when reading, I made a few more changes to the writing. Most importantly, however, there are still a few things that seem unclear. I have commented on them. I've also put my responses under Francesca's comments.
Why don't you have a look and see if you find any of my comments important. If yes, it might be good to try and address them before sending the paper off to [redacted].
Finally, I found a cite for the lower bound calculation of the insurance costs (it's not 5 cents, I found 4 cents in texas). See this link: http://www.centspermilenow.org/652Garma.pdf

ciao,
[redacted]

Making Ethics Salient...m.docx

****

[redacted]

Exhibit 26
Allegation 4a Table Showing 2012 PNAS Manuscript Changes

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
2011-02-23	Francesca Gino	Two: (1) Room 1 for puzzle performance: *"The experimenter will give you your payment and ask you to fill out a payment form."* (p. 10) (2) Room 2 for final payment *("These costs were "credited" to compute their final payment."* p. 10).	Two times; unclear which is the dependent variable: (1) Collection slip, in Room 1, for payment by experimenter there. *"For this task, participants received a worksheet with 20 matrices […] and a collection slip on which participants reported their performance at the end of this part of the study." (p. 9) "We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time. The experimenter will give you your payment and ask you to fill out a payment form."* (p. 10) (2) On Line 1 of tax form in Room 2. (Tax form, in Appendix) *"Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax…"* (p. 10)	Purpose: Collect participants' self-report of puzzle performance. "*…and a collection slip on which participants reported their performance at the end of this part of the study." (p. 9)* Participants' beliefs about purpose: To *"… enable the experimenter to quickly calculate your payment..."* (p. 10)
2011-03-08	[redacted]	Two: (1) Room 1 for puzzle performance: *"The experimenter will give you your payment and ask you to fill out a payment form."* (p. 10)	Two times; the first (Room 1) is explicitly identified as the cheating measure: (1) Collection slip, in Room 1, for payment by experimenter there. Clear statement in manuscript that	Purpose: Collect participants' self-report of puzzle performance. "*…and a collection slip on which participants reported their performance at the end of this part of the study." (p. 10)*

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 769 of 1282

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
		(2) Room 2 for final payment: *"These costs were "credited" to their post-tax earnings from the matrix task compute their final payment."* (pp. 10-11).	this was the dependent variable. *"For this task, participants received a worksheet with 20 matrices [...] and a collection slip on which participants reported their performance at the end of this part of the study." (pp. 9-10) "We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time. The experimenter will give you your payment and ask you to fill out a payment form."* (p. 10) Added in this version (subsequently revised in the 2011-03-09_vs2 version, then deleted from the 2011-03-15 version): "*We can later extract participant worksheets from the recycling bin and match them to their collection slips. As a result, we can compare actual to reported performance. If these numbers differ for an individual, that difference represents that individual's level of cheating. Thus, this task allows us distinguish between cheaters and non-cheaters.*" (p.10) (2) On Line 1 of tax form in Room 2. (Tax form, in Appendix) *"Participants filled out the form by*	Participants' beliefs about purpose: To *"... enable the experimenter to quickly calculate your payment..."* (p. 10)

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 770 of 1282

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
			reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax…" (p. 10)	
2011-03-09_vs2	[redacted] – Who, in the accompanying email and in a comment in the manuscript, raised concerns about the puzzle-performance dependent measure of cheating coming before the independent variable manipulation on the tax form.	Two: (1) Room 1 for puzzle performance: *"The experimenter will give you your payment and ask you to fill out a payment form."* (p. 10) (2) Room 2 for final payment: *"These costs were "credited" to their post-tax earnings from the matrix search task to compute their final payment."* (p. 11).	Two times; the first (Room 1) is explicitly identified as the cheating measure: (1) Collection slip, in Room 1, for payment by experimenter there. *"For this task, participants received a worksheet with 20 matrices […] and a collection slip on which participants later reported their performance in this part of the study." (p. 10) "Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit the collection slip to the experimenter." (p. 10) "We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time. The experimenter will give you your payment and ask you to fill out a payment form."* (p. 10) "*We later took out participants worksheets from the recycling bin and matched them to their collection slips. As a result, we were able to compare actual to reported performance. If those numbers differed for an*	Purpose: Collect participants' self-report of puzzle performance. "*…and a collection slip on which participants later reported their performance in this part of the study." (p. 10)* Participants' beliefs about purpose: To *"…enable the experimenter to quickly calculate your payment..."* (p. 10)

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 771 of 1282

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
			individual, that difference represented that individual's level of cheating." (p. 10) (2) On Line 1 of tax form in Room 2. (Tax form, in Appendix) *"Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax… "* (pp. 10-11)	
2011-03-15	Francesca Gino	Two: (1) Room 1 for puzzle performance. Deleted from this version: The instructions on the collection slip, including *"~~The experimenter will give you your payment and ask you to fill out a payment form.~~"* This sentence was altered: "*Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit the collection slip to the experimenter.*" (2011-03-09_vs2, p. 10) It was altered to: "*Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit both the test sheet and the*	One time; the second self-report (Room 2) is explicitly identified as the cheating measure: (1) Collection slip, in Room 1, for payment by experimenter there. *"For this task, participants received a worksheet with 20 matrices […] and a collection slip on which participants later reported their performance in this part of the study." (p. 11)* Deleted from this version, directly altering the description of the self-report in Room 1 as the dependent variable: "*~~We later took out participants worksheets from the recycling bin and matched them to their collection slips. As a result, we were able to compare actual to reported performance. If those~~*	Purpose: Collect participants' self-report of puzzle performance. "*…and a collection slip on which participants later reported their performance in this part of the study." (p. 11)* Participants' beliefs about purpose: To allow the experimenter to check participants' work and give them payment. "*Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment.*" (p. 11) (In the previous version, that sentence had ended, *"… asked participants to fill out the collection slip, and then submit the collection slip to the experimenter.*" (p. 10))

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 772 of 1282

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
		collection slip to the experimenter so that she could check their work and give them payment." (2011-03-15, p. 11) Added in this version, immediately after the "Payment structure" section: A section entitled "*Opportunity to cheat*" which included this sentence: *"When participants received payment after completing the first part of the study, the experimenter gave them a payment form and asked each participant to go to a second room to fill it out and ask the other experimenter questions if they had any.*" (p. 12) (2) Room 2 for final payment: *"These costs were "credited" to their post-tax earnings from the matrix search task to compute their final payment."* (p. 11).	~~*numbers differed for an individual, that difference represented that individual's level of cheating.*~~*"* (2) On Line 1 of tax form in Room 2. (Tax form, in Appendix) *"Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax… "* (pp. 10-11) A new section, entitled "*Opportunity to cheat,*" was added in this version, immediately after the "Payment structure" section, altering the description of this dependent variable from being collected in Room 1 to being collected in Room 2: "*The study was designed such that participants could cheat by overstating their "income" on the payment form (i.e., they could overstate their performance on the matrix search task) and by inflating the expenses they incurred in order to participate in the study. […] When participants received payment after completing the first part of the study, the experimenter gave them a payment form and asked each participant to go to a second room to fill it out and ask the other*	Deleted from this version: The instructions on the collection slip, including, *"*~~*To enable the experimenter to quickly calculate your payment…*~~*"*

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 773 of 1282

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
			experimenter questions if they had any. The payment form included a one digit identifier as well (one digit in the top right of the form, in the code OMB No. 1555-0111). As a result, at the end of each session, we were able to compare actual performance on the matrix search task and reported performance on the payment form. If those numbers differed for an individual, that difference represented that individual's level of cheating." (p. 12)	
2011-04-04_2nm	[redacted] – Who again raised concerns about the dependent measure of cheating on the puzzle task (and payment for that task) coming before the independent variable manipulation.	Two: (1) Room 1 for puzzle performance: *"…the experimenter asked participants to count the number of correctly solved matrixes, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment."* (p. 13) (2) Room 2 for final payment: *"These costs were "credited" to their post-tax earnings from the matrix search task to compute their final payment."* (p. 13).	One time; the second self-report (Room 2) is explicitly identified as the cheating measure: (1) Collection slip, in Room 1, for payment by experimenter there. *"For this task, participants received a worksheet with 20 matrices […] and a collection slip on which participants later reported their performance in this part of the study." (p. 12)* (2) On Line 1 of tax form in Room 2. (Tax form, in Appendix) *"Participants filled out the form by reporting their income (i.e., their*	Purpose: Collect participants' self-report of puzzle performance. "*…and a collection slip on which participants later reported their performance in this part of the study." (p. 12)* Participants' beliefs about purpose: To allow the experimenter to check participants' work and give them payment. "*Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment.*" (pp. 12-13)

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 774 of 1282

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
		"When participants received payment after completing the first part of the study, the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their additional payments (if any)." (p. 14)	*performance on the matrix task) on which they paid a 20% tax…* " (p. 13) *"…we were able to compare actual performance on the problem-sovling task and reported performance on the tax return form. If those numbers differed for an individual, that difference represented that individual's level of cheating on the problem-solving task.*" (p. 14)	
2011-04-05	Francesca Gino	One: Room 2 for (the only) payment Payment not mentioned in connection with Room 1. Deleted: *"…* ~~*and give them payment*~~" was deleted from description of what the experimenter did in Room 1. Changed: The sentence "*When participants received payment after completing the first part of the study the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their additional payments (if any)*" in the 04-04 version was changed, in the 04-05 version, to begin "*When participants*	One time; the second self-report (Room 2) is explicitly identified as the cheating measure: (1) Collection slip, in Room 1. *"For this task, participants received a worksheet with 20 matrices […] and a collection slip on which participants later reported their performance in this part of the study." (p. 12)* "*Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work.*" (p. 13) (2) On Line 1 of tax form in Room 2. (Tax form, in Appendix)	Purpose: Collect participants' self-report of puzzle performance. "*…and a collection slip on which participants later reported their performance in this part of the study." (p. 13)* Participants' beliefs about purpose: To allow the experimenter to check participants' work (only). "*Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work.*" (p. 13) Deleted from the end of this sentence: "and give them payment."

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 775 of 1282

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
		completed the first part of the study," and the ending of the sentence was changed to, "*… and receive their payments*."	*"Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax…"* (p. 13) *"…we were able to compare actual performance on the problem-sovling task and reported performance on the tax return form. If those numbers differed for an individual, that difference represented that individual's level of cheating on the problem-solving task.*" (p. 14)	
2nm 2011-05-08	[redacted]	One: Room 2 for (the only) payment Payment not mentioned in connection with Room 1. [Same as 2011-04-05 version]	One time; the second self-report (Room 2) is explicitly identified as the cheating measure: (1) Collection slip, in Room 1. *"For this task [...] participants received a worksheet with 20 matrices […] and a collection slip on which participants later reported their performance in this part of the experiment." (p. 12)* Final phrase deleted from this sentence: "*Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes, note that number on the collection slip, and then submit both the test sheet and the collection slip*	Purpose: Solely for participants themselves to learn how many puzzles they had solved correctly. Deleted: "~~so that she could check their work~~" from the sentence "*Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work.*" (p. 13) Added: "Note, the sole purpose of the collection slip was for the participants to learn how many matrixes in total they have solved correctly."

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 776 of 1282

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
			to the experimenter ~~so that she could check their work.~~" (p. 13) (2) On Line 1 of tax form in Room 2. (Tax form, in Appendix) *"Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax…"* (p. 13) "…we were able to compare actual performance on the problem-solving task and reported performance on the tax return form. If those numbers differed for an individual, that difference represented that individual's level of cheating." (p. 14)	Participants' beliefs about purpose: Unclear.
Published (PNAS)		One: Room 2 for (the only) payment Payment not mentioned in connection with Room 1. "*These expenses were "credited" to their posttax earnings from the problem-solving task to compute their final payment.*" (p. 15199) "*When participants completed the first part of the experiment (problem-solving task), the*	One time; the second self-report (Room 2) is explicitly identified as the dependent variable (the cheating measure): (1) Collection slip, in Room 1. *"For this task (3), participants received a worksheet with 20 math puzzles, each consisting of 12 three-digit numbers (e.g., 4.78) and a collection slip on which participants later reported their performance in this part of the experiment."* (p. 15199)	Purpose: Solely for participants themselves to learn how many puzzles they had solved correctly. *"Once the 5 min were over, the experimenter asked participants to count the number of correctly solved puzzles, note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter. […] The sole purpose of the collection slip was for the participants themselves to learn*

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 777 of 1282

Allegation 4a: Manuscript changes and observations

		Topic		
Version of manuscript (Date/filename)	**Manuscript last saved by (Metadata)**	**Number, location, & timing of payment(s)**	**Participants' self-report of puzzle performance to experimenter (used as dependent variable)**	**Purpose of collection slip and participants' beliefs about it**
		experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments." (p. 15199)	(2) On tax form in Room 2. *"All of the instructions and dependent measures appeared on one page [the tax form] to ensure that participants knew from the outset that a signature would be required."* (p. 15199)	*how many puzzles in total they had solved correctly.*" (p. 15199) Participants' beliefs about purpose: Unclear.

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 778 of 1282

Exhibit 27
Allegation 4a 2012 PNAS Manuscripts

Manuscript Version - 2011-02-23

Running Head: RAINSING ETHICAL SALIENCY

Raising the Saliency of Ethical Standards:

How Signing on the Dotted Line Turns Moral Gaze Inward

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Abstract

Although people care about being moral and being seen as ethical by others, they often give in to the temptation to behave dishonesty for short-term monetary gains. Prior work has examined the psychological and situational forces that swing people's moral compass. In this paper, we extend this body of research by examining an implementable mean to discourage dishonesty: raising the saliency of ethical standards in the moment of temptation. Using both field and lab experiments, we find that signing a pledge of honesty prior to having the opportunity to cheat rather than afterwards raises the saliency of one's own moral standards and, in turn, discourages cheating. Implications for both research on behavioral ethics and practice are discussed.

Keywords: Signing; Ethics; Dishonesty; Saliency; Cheating

Raising the Saliency of Ethical Standards:

How Signing on the Dotted Line Turns Moral Gaze Inward

In December 2010, Timothy Schetelich – who had been working as a Certified Public Accountant in Springfield for years – pleaded guilty to preparing false tax returns for several clients. Over the years, he claimed some of them had legitimate business expenses when in fact they did not own a business, or he fabricated and inflated deductions for expenses to obtain larger refunds the clients were not entitled to receive. Although this case may come as a surprise to some, it is just one example of the many situations in which people cross ethical boundaries to advance their own self-interest. In fact, most businesses as well as taxpayers regularly cheat on their taxes (Morse, 2009), and this unpaid tax amounts to roughly $150 billion every year. Similarly, other forms of unethical behavior have been covered in the news in recent years, including stories of executives inflating their business expenses, employee stealing from their own employers, professionals overstating their hours, and managers inflating performance to superiors to mention just a few (Mazar & Ariely, 2006; Gino & Pierce, 2010).

The pervasiveness of these common unethical practices in organizations and society more broadly has generated considerable interest among scholars in a variety of disciplines, including organizational behavior, psychology, philosophy, and economics (e.g. Brown & Treviño, 2006; Gneezy, 2005; Haidt, 2001; Nichols & Knobe, 2007; Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2011; Tenbrunsel & Smith-Crowe, 2008; Treviño, Weaver, & Reynolds, 2006). This body of work has found that while some individuals plan to act unethically for monetary gains (Brief, Buttram, & Dukerick, 2001; Lewicki, Poland, Minton, & Sheppard, 1997), many others start with good intentions but ultimately behave dishonestly due to subtle situational influences.

For instance, in a recent investigation, Zhong, Bohns and Gino (2010) found that ambient darkness leads people to behave unethically. Although insightful, this prior research has focused primarily on the motives and characteristics of the wrongdoers or on the organizational and environmental pressures that influenced their actions (Gino & Pierce, 2010). Yet, to date, little is known about effective ways of reducing or eliminating unethical behavior.

In this paper, we address this gap in the literature and examine the effects of raising the saliency of one's own ethical standards when one faces the decision of whether to act unethically or not. We focus on a particular way to raise ethical saliency: signing a pledge of honesty. Using both field and laboratory studies, our research explores how signing a pledge of honesty before having the opportunity to cheat can be an effective way to discourage dishonesty since it raises the saliency of one's own moral standards. There are many situations in which signing a form is required, such as signing insurance forms or one's tax forms. In most contexts, the act of signing occurs after rather than before having completed the form. We suggest that simply moving the signature from the bottom to the top of a form will make one's own moral standards salient, and will discourage cheating as a result.

The Impact of Signing on the Dotted Line

We hypothesize that signing on the dotted line brings the self into clearer view, and that activating one's self-concept can change people's behavior for the better. Researchers have demonstrated how even subtle cues that activate the self can lead to surprising and powerful effects on consequent behavior. For example, when playing an anonymous economic game, people respond by being more generous to even the nuanced presence of eye-like shapes in the computer background (Haley & Fessler, 2005). In a more naturalistic setting, researchers have examined the effect of an image of a pair of eyes on the amount of money people put in a

contributions box for supplies in a communal coffee room. When an image of eyes were displayed on the contributions box instead of an image of flowers, nearly three times the amount of money was collected (Bateson, Nettle, & Roberts, 2006). The authors attributed the effect of the eyes to the perception that people feel as if they are being watched and subsequently turn their own gaze inward toward their own behavior.

Different aspects of the self can be selectively activated. For example, Shih, Pittinsky, and Ambady (1999) found that implicit activation of different social identities within an individual can help or hinder performance on a given task. Using an all Asian-American female sample, the authors found that participants performed better on a quantitative task when their ethnic identity was activated; however participants from the same sample performed worse when their gender was made salient. The authors demonstrate that merely framing a question about identity as asking about gender versus ethnicity impacted quantitative performance by inducing a self-stereotype. This work suggests that the self is malleable and prone to even subtle primes in the environment. Here, we focus on a specific type of prime – signing a pledge of honesty. We propose that the act of signing one's own name raises the salience of one's own moral compass and ethical standards, thus discouraging dishonest actions afterwards.

Previous research has shown that when the moral categorization of a particular behavior is not clear-cut, people can, and in fact often do, categorize their own actions in positive terms, thereby avoiding the need to negatively update their moral self-image (Baumeister 1998; Schweitzer & Hsee, 2002). However, Mazar, Amir, and Ariely (2008) found that drawing people's attention to moral standards reduces dishonest behaviors. For example, after being asked to recall the Ten Commandments, participants who were given the opportunity to cheat and to gain financially from this action did not cheat at all; by contrast, when given the same

opportunity to cheat, those who had not been reminded of the Ten Commandments cheated substantially. Similarly, when participants were asked to read and sign and honor code prior to engaging in a task where they could over-reported performance and thus earn more money they did not deserve, they were less likely to then cheat on the task itself (see also Shu, Gino, & Bazerman, 2011). When unethical behavior is made salient, people may pay greater attention to their own moral standards and categorize the ethicality of their own behavior more rigidly. As a consequence, moral saliency may decrease people's tendency to engage in dishonest acts and increase the rigidity of their judgments of ethicality.

To summarize, we propose and test the following hypotheses:

Hypothesis 1. Signing a pledge of honesty before filling out a form where one can overstate performance will lead to lower levels of cheating than signing it after having completed the form.

Hypothesis 2. Signing a pledge of honesty before filling out a form where one can overstate performance will be more likely to increase the saliency of moral standards compared to signing it after having completed the form.

Hypothesis 3. Heightened saliency of moral standards mediated the effect of signing a pledge of honesty before filling out a form where one can overstate performance and the level of cheating on the form.

Overview of the Research

We tested these hypotheses in four studies in which participants had the opportunity to cheat by over-reporting performance on a task. In each study, we varied whether moral standards were salient to participants by asking them to sign a pledge of honesty. Participants either signed the form before or after having the opportunity to cheat. In Study 1, we conducted a field experiment in collaboration with an automobile insurance company, and found that ethical saliency produced significant differences in the number of miles participants reported driving during the prior year. In Studies 2 and 3, we replicated the same findings using a controlled,

laboratory study. As before, the results of these studies show that having the opportunity to sign a pledge of honesty before having the opportunity to cheat discourages unethical behavior. Finally, Study 4 examines the psychological process explaining the link between the act of signing and people's likelihood of over-reporting performance and shows that the act of signing a pledge of honesty raises the salience of participants' ethical standards.

Study 1: A Field Experiment with Automobile Insurance

We first tested the effect of signing a pledge of honesty before having the opportunity to behave dishonesty in a field study involving automobile insurance.

Procedure

We ran a field experiment with an insurance company in the U.S. in which we manipulated the automobile policy review-form that was sent out to customers at the end of the year. The review form asked customers among others to record the exact current odometer mileage of all cars that were currently registered to them and/or their spouse or domestic partner. We randomly assigned customers to receive a form that either asked them at the top (i.e. before filling out the form) or the bottom (i.e. after having completed the form) of the form to sign the following pledge of honesty: "I promise that the information I am providing is true". Other than that, the forms were identical across conditions.

Filled-out forms were received from 13,488 policies for a total of 20,741 cars. A car policy could have up to 4 cars; 52% of policies had one car, 42% had two cars, 5% had three cars and less than 0.3% had four cars. We compared the difference between the current odometer mileage as indicated in the manipulated forms to the odometer mileage that customers had indicated the year before. If a policy had more than one car, we averaged that difference. The mileage difference represents the yearly usage of a car, which in turn influences a customer's

yearly insurance costs. The fewer miles a car is driven, the lower the insurance costs. Thus, when filling out the automobile policy review-form customers faced a dilemma between truthfully indicating the current odometer mileage and dishonestly indicating a lower mileage in order to reduce their insurance premium.

Since we hypothesized that signing a pledge of honor before filling out the form raises the saliency of people's ethical standards, we expected that customers, who had to sign the pledge of honor before filling out the form would be more truthful and thus, show a higher usage than those who had to sign the pledge of honor at the end.

Results and Discussion

As expected, controlling for the number of cars per policy (F[1,13485]=2.184, p=.14) the average yearly usage per car was significantly higher among customers who signed the pledge of honor at the top of the form (M=26,098.4, SEM=148.3) than those who signed the pledge of honor at the bottom of the form (M=23,670.6, SEM=154.6; F[1,13485]=128.631, p<.001). The difference between our two treatments was on average 2,427.8 miles per car per year. Note that the results hold for the odometer difference for the first car only (signing at the top: M=26,204.8, SEM=172.2, signing at the bottom: M=23,622.5, SEM=177.7; t[13486]=10.438, p<.001).

These results provide initial support for our first hypothesis which suggested that raising the saliency of ethical standards by asking people to sign at the top rather than at the bottom of a form would lower the likelihood that they would cheat by misreporting the number of miles driven the year before.

Study 2: A Lab Experiment with Tax Returns

To test the robustness of our findings, we conducted a second study in the laboratory using a similar signing manipulation. In this study, we also added a control condition to examine

whether signing at the top of the form (i.e., prior to having the opportunity to cheat) discourages dishonesty, or whether signing at the bottom of the form actually encourages unethical behavior.

Method

Participants. One-hundred-and-one students and employees at local universities in the Southeastern United States (M_{age}=22.10, SD=4.98; 45% male; 82% students) completed the study for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Design and Procedure. Participants were randomly assigned to one of three conditions: 1) Signature at the top of the form; 2) Signature at the bottom of the form; or 3) No signature (our control condition). At the beginning of each session, participants were given instructions to the study. The instructions informed them that their first task was to complete a problem-solving task under time pressure (i.e., they would have five minutes to complete the task), and that the experimenter would keep track of the time. In addition to providing information about the payment for the problem-solving task, the instructions informed participants that upon completion of this task, they would be asked to compute their performance and then fill out a payment form. The instructions also included the following information, "For the problem-solving task, you will be paid a higher amount than what we usually pay participants in a regular study because you will be taxed on your earnings. You will receive more details after the problem-solving task."

Problem-solving task. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; Mazar, Amir, & Ariely, 2008) and a collection slip on which participants reported their performance at the end of this part of the study. Participants were told that they would have 5 min to find two numbers in each matrix that

added up to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), people were able to find about 7 of the 20 pairs on average during this amount of time. Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit the collection slip to the experimenter. The instructions informed them that,

> In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and hand in ONLY your collection slip. We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time. The experimenter will give you your payment and ask you to fill out a payment form.

Payment form. Participants then went to a second room to fill out a payment form. The form we used mirrored a typical tax return form. We varied whether participants were asked to sign a pledge of honesty at the top or at the bottom of the form (see Appendix A). Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax (i.e. $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their estimated cost for their commute. These costs were "credited" to compute their final payment.

The instructions read, "We would like to compensate participants for extra expenses they have incurred in order to participate in the session." We included two costs: 1) Time to travel to the lab: $0.10 per minute (Max: 2 hours, $12); and cost of commute: (Max: $12).

Payment structure. Given the features of the study, participants could make a total of $42 – an amount computed as follows: $2 show up fee, $20 on matrix task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Results

We first examined the percentage of participants who cheated on the matrix task. This percentage varied across conditions, $\chi^2(2, N=101)=12.58$, $p=.002$. It was lowest in the signature-at-the-top condition (37%, 13 out of 35), and higher in the signature-at-the-bottom condition (79%, 26 out of 33) and in the no-signature condition (64%, 21 out of 33).

Both actual performance and reported performance on the matrix task by condition are depicted in Figure 1. We then computed the difference between the reported and actual performance on the matrix task. The number of matrices over-reported varied by condition, $F(2,98)=9.21$, $p<.001$, $\eta^2=.16$: it was lowest in the signature-at-the-top condition ($M=0.77$, $SD=1.44$), and higher in the signature-at-the-bottom condition ($M=3.94$, $SD=4.07$; $p<.001$) and in the no-signature condition ($M=2.52$, $SD=3.12$; $p<.05$). The difference between these two last conditions was only marginally significant ($p<.07$). Within-subjects analyses using both reported and actual performance revealed the same pattern of results.

The credits for extra expenses incurred that participants claim in the tax forms follow the same pattern and vary significantly by condition, $F(2,98)=5.63$, $p<.01$, $\eta^2=.10$ (see Figure 2): they were lowest in the signature-at-the-top condition ($M=5.27$, $SD=4.43$), and higher in the signature-at-the-bottom condition ($M=9.62$, $SD=6.20$; $p<.01$) and in the no-signature condition ($M=8.45$, $SD=5.92$; $p<.05$). The difference between these two last conditions was not significant ($p=.39$).

Discussion

The results of Study 2 provide further evidence for our main hypothesis suggesting that raising saliency of one's own ethical standards would lead to lower levels of cheating. Study 2 also included a control condition in which participants did not provide their signature. Our results indicate that the results observed in our first study are likely driven by reduced cheating

when ethical standards are made salient. In fact, it is signing a pledge of honesty before having the opportunity to cheat that discourages unethical behavior, rather than signing a pledge of honesty after having the opportunity to cheat that encourages it.

Study 3: Increased Saliency of Ethical Standards

So far, we have demonstrated that raising ethical saliency discourages unethical behavior. However, we have made an implicit assumption: that signing a pledge of honesty before having the opportunity to cheat rather than afterwards is more likely to raise the saliency of moral standards. We test this hypothesis directly in our third study by using a measure of the extent to which ethics-related constructs were vivid in people's mind. Following prior research measuring implicit cognitive processes (Bassili & Smith, 1986; Tulving, Schacter, & Stark, 1982), we used a word-completion task in which participants are asked to complete various word fragments with the first letters that come to mind. This task allows us to test whether signing a pledge of honesty before having the opportunity to cheat rather than afterwards leads people to be more likely to use words related to ethics and morality.

Method

Design and Procedure. Study 3 employed one between-subjects factor with two levels: signature at the top vs. signature at the bottom of the form. The study employed the same task and procedure of Study 2 but varied the tax forms participants completed. The tax forms were modified such that they mimicked the flow of actual tax reporting practices in the United States. Deductions are first subtracted from gross income to compute taxable income; then taxes are paid on this adjusted amount (see Appendix B).

In addition, participants were asked to complete a word-completion task as their final task in the study. The task instructions informed participants that they would have to convert word

fragments into meaningful words. Participants received a list of six word fragments with letters missing and were asked to fill in the blanks to make complete words by using the first word that came to mind. Three of these word-fragments (_ _ R A L, _ I _ _ _ E, and E _ _ _ C _ _) could be completed as ethics-related words (moral, virtue, and ethical) or as unrelated words (e.g., viral, tissue, and effects).

Participants. Sixty students and employees at local universities in the Southeastern United States (M_{age}=21.50, SD=2.27; 48% male; 90% students) completed the study for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Results

Level of cheating on the matrix task. We first examined the percentage of participants who cheated on the matrix task. This percentage was lower in the signature-at-the-top condition (37%, 11 out of 30) than in the signature-at-the-bottom condition (63%, 19 out of 30), $\chi^2(1, N=60)=4.27$, $p<.04$.

Both actual performance and reported performance on the matrix task by condition are depicted in Figure 3. We then computed the difference between the reported and actual performance on the matrix task. The number of matrices over-reported was lower in the signature-at-the-top condition (M=1.67, SD=2.78) than in the signature-at-the-bottom condition (M=3.57, SD=4.19), $t(58)=-2.07$, $p<.05$. Within-subjects analyses using both reported and actual performance revealed the same pattern of results.

The deductions participants reported in the tax forms follow the same pattern and vary significantly by condition, $F(1,58)=7.76$, $p<.01$, $\eta^2=.12$: they were lower in the signature-at-the-

top condition (M=3.23, SD=2.73) than in the signature-at-the-bottom condition (M=7.06, SD=7.02).

Word-fragment task. As we predicted, participants who signed the honesty pledge before having the opportunity to cheat generated more ethics-related words (M=1.40, SD=1.04) than did those who signed at the bottom of the form (M=0.87, SD=0.97), $F(1,58)=4.22$, $p<.05$, $\eta^2=.07$, suggesting that the act of signing up front increased the accessibility of ethics-related concepts.

Discussion

Using an implicit measure, our third study shows that signing a pledge of honesty before having the opportunity to cheat is more likely to raise the saliency of moral standards compared to signing the same form after having the opportunity to cheat. Furthermore, consistent with our hypotheses, raising ethical saliency discouraged cheating.

Study 4: Ethical Saliency and Reduced Cheating

We conducted a fourth study to more carefully examine the role of ethical saliency in explaining the results observed in Studies 1, 2 and 3. In addition, to extend the generalizability of our findings, in Study 4 we employed a different measure to assess cheating.

Method

Design and procedure. Participants were randomly assigned to one of two conditions: Ethical saliency versus control. Across both conditions, the instructions informed them that we were interested in people's performance under pressure across a variety of tasks. For this particular study, they would be asked to answer a 20-question general knowledge test of medium difficulty (e.g., "How many U.S. states border Mexico?" and "In which U.S. state is Mount Rushmore located?"), and that they would receive $1 for each correct question (in addition to a

$2 show-up fee). Participants were given 15 minutes to answer the 20 questions. Participants were given a study ID to use throughout the study.

Once the fifteen minutes were over, the experimenter distributed an answer sheet with the correct answers to the questions and a collection slip so that participants could report their performance after checking their answers. This final set of materials also included the word-fragment task employed in Study 3. Participants were asked to fill out this task prior to checking their answers and reporting performance on the collection slip.

Half of the participants received an extra page on top of this set of materials, which they were asked to read before solving the word-fragment task. The page included a pledge of honesty participants were asked to sign, "I promise that I will report information about my performance on the trivia test truthfully." The remaining half of the participants did not receive this extra page. Consistent with our hypotheses, we predicted that those who received and signed this pledge of honesty would be more likely to report their performance truthfully, and that signing this pledge would lead them to complete the word-fragment task with a higher number of ethics-related words.

Participants. Eighty-two college and graduate students at local universities in the Southeastern United States (M_{age}=22, SD=3.11; 52% male) completed the study for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Results and Discussion

We computed the difference between self-reported performance and actual performance on the general-knowledge task. This difference score was our main dependent variable. Positive

difference scores indicate that participants over-reported their performance and cheated on the task so that they could make more money.

When examining the difference between self-reported and actual performance on the trivia test, we found that cheating was greater in the control condition than in the ethical saliency condition (M=1.93, SD=2.15, vs. M=0.51, SD=1.42), $t(80)=3.52$, $p=.001$. Mirroring these results, the percentage of participants who overstated their performance was higher in the former condition than in the latter (53.7% [22/41] vs. 12.2% [5/41]), $\chi^2(1, N=82)=15.96$, $p<.001$). These results provide strong support for the predicted relationship between ethical saliency and cheating.

Signing before having the opportunity to over-report performance also influenced the number of ethics-related concepts participants used in the word-fragment task. Participants in the ethical salience condition used more ethics-related words (M=1.44, SD=0.95) than did those in the control condition (M=0.98, SD=0.88), $F(1,80)=5.25$, $p<.03$, $\eta^2=.06$.

Finally, we tested whether ethics-related concepts (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating on the trivia task. Both condition and the number of ethics-related concepts were entered into a linear regression model predicting extent of cheating. This analysis reveals that the effect of condition was significantly reduced (from $\beta=-.366$, $p=.001$ to $\beta=-.294$, $p<.01$), whereas the number of ethics-related concepts was a significant predictor of cheating ($\beta=-.290$, $p<.01$). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-.67, -.01), suggesting significant mediation. Thus, consistent with our predictions, the number of ethics-

related concepts significantly mediated the relationship between our manipulation and dishonest behavior.

Taken together, these results provide further evidence for the effect of raising ethical saliency on cheating.

General Discussion

Across four studies, we consistently found that raising the saliency of one's own moral standards is an effective mean to discourage dishonesty. In each of our studies, we manipulated whether moral standards were salient when participants faced the decision to behave dishonestly. In Study 1, we conducted a field experiment in which we varied whether individuals filling out a report of the number of miles they drove the year prior signed a pledge of honesty either before or after filling out the mileage number. Our results show that people reported a higher number of miles when they signed the pledge of honor before filling out the form than those who had to sign the pledge of honor at the end, indicating that raising the saliency of ethical standards led people to be more truthful. In Studies 2 and 3, we moved from a field setting to a controlled, laboratory setting. In both studies, participants had the opportunity to sign a tax form either before or after making claims regarding their performance on a task. Providing further support for the results of the field study, the findings of Studies 2 and 3 demonstrate that having the opportunity to sign a pledge of honesty before having the opportunity to cheat discourages dishonesty. Finally, Study 4 examines the psychological process explaining the link between the act of signing and people's likelihood of over-reporting performance. The study employed an implicit measure of ethical saliency: participants were asked to complete word fragments by using the first word that came to mind. We find that the act of signing a pledge of honesty raises the salience of participants' ethical standards, and this heightened ethical saliency explains the

relationship between signing a pledge of honesty before having the opportunity to cheat and subsequent dishonest behavior.

Theoretical Contributions

XX

Limitations and Venues for Future Research

XX

Implications for Practice

XX

Conclusion

XX

Appendix A

Forms used in Study 2

Form **3305** (Rev. June 2010) Center for Decision Research	**Research Study Tax Return** For the period June 1, 2010, through August 30, 2010	Keep a copy of this return for your records. OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... ..... ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶	7	

Sign Here

I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name	PID	For Administrative Use Only
Address (Number, street, and room or suite number)		T .....
City, State, and ZIP code		FF .....
		FP .....
		I .....
		TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... ..... ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶	7	

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here

I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Write Clearly

Name	PID	For Administrative Use Only
Address (Number, street, and room or suite number)		T ..... FF ..... FP ..... I ..... TL .....
City, State, and ZIP code		

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... ..... ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶	7	

Appendix B

Forms used in Study 3

Form **3305** (Rev. June 2010) Center for Decision Research	**Research Study Tax Return** For the period June 1, 2010, through August 30, 2010	Keep a copy of this return for your records. OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

a. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ..... ▶	1	

Part 2 In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.

a. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ..... ▶	2	
b. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	3	
	4	

Part 3 Please compute your taxable income and your taxes.

a. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income..... ..... ▶	5	
b. Please compute your taxes by multiplying the value specified in box 5 by 50%	6	

Part 4 Please compute your final payment.

a. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session..... ..... ▶	7	

Sign Here

I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ ▶ _____ Signature

Date

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here

I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Write Clearly

Name	PID	For Administrative Use Only
Address (Number, street, and room or suite number)		T ..... FF ..... FP ..... I ..... TL .....
City, State, and ZIP code		

Part 1 Please fill out the questions below to compute your taxed payment.

a. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ▶	1	

Part 2 In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.

a. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ▶	2	
	3	
b. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	4	

Part 3 Please compute your taxable income and your taxes.

a. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income ▶	5	
b. Please compute your taxes by multiplying the value specified in box 5 by 50%	6	

Part 4 Please compute your final payment.

a. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session ▶	7	

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Figure Captions

Figure 1. Reported and actual performance on the matrix task by condition, Study 2.

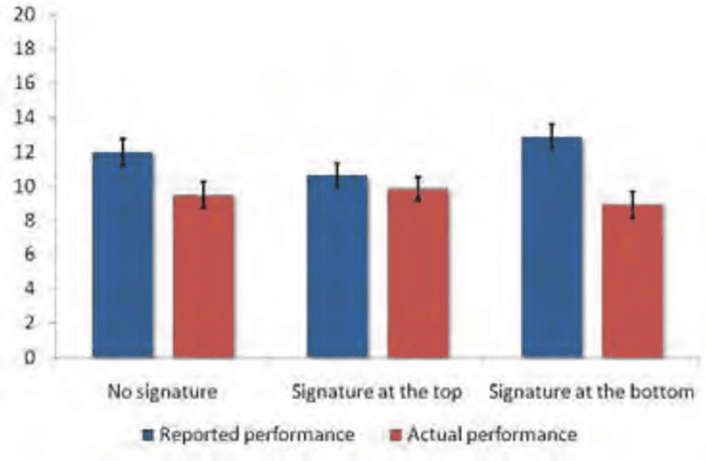


Figure 2. Reported deductions by condition, Study 2.

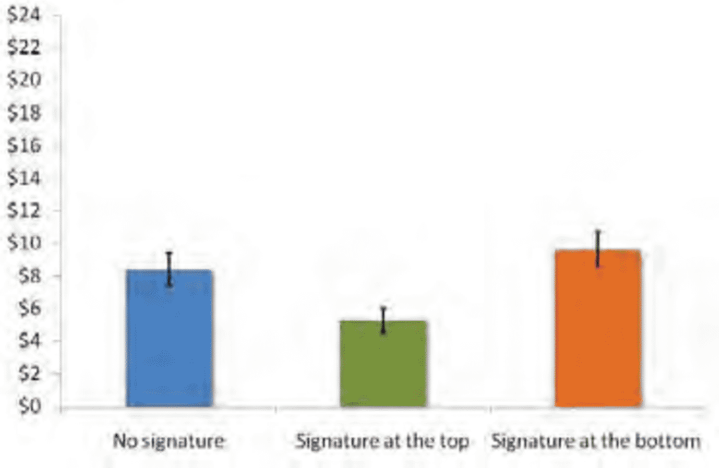
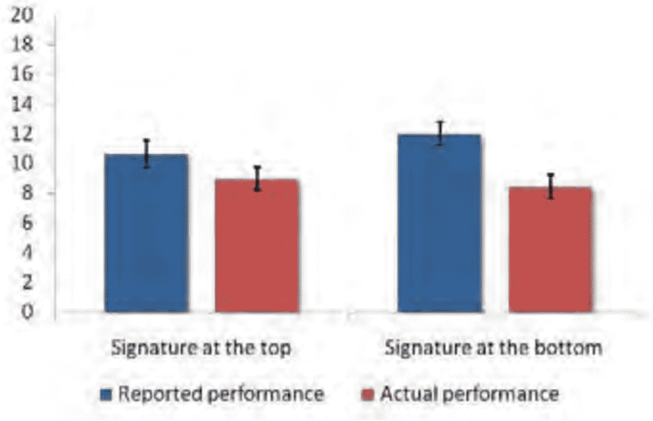


Figure 3. Reported and actual performance on the matrix task by condition, Study 3.



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Running Head: MAKING ETHICS SALIENT

Making Ethics Salient:

Signing on the Dotted Line Turns Moral Gaze Inward

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Abstract

Although people care about being moral and being seen as ethical by others, they often give in to the temptation to behave dishonesty for short-term monetary gains. Prior work has examined the psychological and situational forces that swing people's moral compass. In this paper, we extend this body of research by examining an implementable method~~mean~~ to discourage dishonesty: raising the saliency of ethical standards ~~in~~ prior to the moment of temptation. Using both field and lab experiments, we find that signing a pledge of honesty prior to having the opportunity to cheat rather than afterwards raises the saliency of one's own moral standards and, in turn, discourages cheating. Implications for both research on behavioral ethics and practice are discussed.

Keywords: Signing; Ethics; Dishonesty; Saliency; Cheating

Making Ethics Salient:

Signing on the Dotted Line Turns Moral Gaze Inward

In December 2010, Timothy Schetelich—who had been working as a Certified Public Accountant in Springfield for years—pleaded guilty to preparing false tax returns for several clients. Over the years, he claimed some of them had legitimate business expenses when in fact they did not own a business, or he fabricated and inflated deductions for expenses to obtain ~~larger~~ refunds the clients were not entitled to receive. ~~Although this~~This case ~~may come as a surprise to some, it is~~ just one example of the many situations in which people cross ethical boundaries to advance their own self-interest. ~~In fact,~~Beyond the level of the individual taxpayer, most businesses ~~as well as taxpayers~~ regularly cheat on their taxes (Morse, 2009), and this unpaid tax amounts to roughly $150 billion every year. Similarly, other forms of unethical behavior have been covered in the news in recent years, including stories of executives inflating their business expenses, employee stealing from their own employers, professionals overstating their hours, and managers inflating performance to superiors to mention just a few (Mazar & Ariely, 2006; Gino & Pierce, 2010).

The pervasiveness of these common unethical practices in organizations and society more broadly has generated considerable interest among scholars in a variety of disciplines, including organizational behavior, psychology, philosophy, and economics (e.g. Brown & Treviño, 2006; Gneezy, 2005; Haidt, 2001; Nichols & Knobe, 2007; Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2011; Tenbrunsel & Smith-Crowe, 2008; Treviño, Weaver, & Reynolds, 2006). This ~~body of~~ work has found that while some individuals ~~plan to act~~intentionally act unethically for monetary gains (Brief, Buttram, & Dukerick, 2001; Lewicki, Poland, Minton, & Sheppard,

1997), ~~many~~ others ~~start with good~~possess no such intentions but ultimately behave dishonestly due to surprisingly subtle situational influences. For instance, in a recent investigation, Zhong, Bohns and Gino (2010) found that ambient darkness leads people to behave unethically. ~~Although insightful~~While enlightening, ~~this~~ prior research has focused primarily on the motives and characteristics of the wrongdoers or on the organizational and environmental pressures that influenced their actions (Gino & Pierce, 2010). ~~Yet, to date, little is known about effective ways of reducing or eliminating unethical behavior.~~ To date, little is known about effective ways of reducing or eliminating unethical behavior—particularly behaviors that rely on self-monitoring in lieu of societal restraints. Filing taxes, claiming business expenses, reporting billable hours, and advertising a used product are all examples of such behaviors that rely on truthful self-reports. These behaviors assume full honesty on the individual level; any departure can lead to significant economic losses. Thus it is particularly important to identify interventions that promote honesty in these domains that rely on truthful self-reports.

~~In this paper, we address this gap in the literature and examine the effects~~This paper proposes one method of promoting honest self-reporting: through~~of raising the saliency of one's own~~ making ethical standards salient ~~when one faces the decision of whether to act unethically or not~~before facing a temptation. We ~~focus on a particular way to~~propose a specific method to raise ethical saliency: signing ~~a pledge of honesty~~one's name. ~~Using~~ In both field and laboratory ~~studies~~contexts, ~~our research explores~~we study how signing ~~a pledge of honesty~~one's name before ~~having the~~ an opportunity to cheat ~~can be an effective way to~~ discourages dishonesty ~~since it raises~~through raising the saliency of one's own moral standards. There are many ~~situations~~ domains in which signing to verify a report ~~a form~~ is already required, such as ~~signing~~ insurance ~~or forms or one's~~ taxes ~~forms~~. However, typically the signature is requested ~~In most~~

~~contexts, the act of signing occurs~~ after—~~—~~rather than prior to—reporting.~~before having completed the form~~. We suggest that simply moving the signature from the bottom to the top of a form will ~~make one's own~~bring one's moral standards ~~salient~~into focus, and subsequently promote honesty while~~will~~ discouraginge cheating ~~as a result~~.

The Impact of Signing on the Dotted Line

We hypothesize that signing on the dotted line brings the self into clearer ~~view~~focus, and that activating ~~one's~~ the self-concept can change people's behavior for the better. ~~Researchers have demonstrated how even~~ Even subtle cues that activate the self can lead to surprisingly ~~and~~ powerful effects on consequent behavior. For example, when playing an anonymous economic game, people ~~respond by being more generous to~~are more generous when there is even the nuanced presence of eye-like shapes in the computer background (Haley & Fessler, 2005). In a more naturalistic setting, researchers have examined the effect of an image of a pair of eyes on the amount of money people contribute to a pay-on-your-honor fund for coffee. When eyes were displayed on the contributions box instead of flowers, ~~put in a contributions box for supplies in a communal coffee room. When an image of eyes were displayed on the contributions box instead of an image of flowers,~~ nearly three times the amount of money was collected (Bateson, Nettle, & Roberts, 2006). The authors believe that eyes induce the feeling that one is being watched; thus we subsequently turn our gaze inward toward our own behavior.~~attributed the effect of the eyes to the perception that people feel as if they are being watched and subsequently turn their own gaze inward toward their own behavior.~~

Different aspects of the self can be selectively activated. For example, Shih, Pittinsky, and Ambady (1999) found evidence that implicit activation of different social identities within an individual can help or hinder performance on a given task. Using an all Asian-American female sample, the authors found that participants performed better on a quantitative task when

their ethnic identity was activated; however participants from the same sample performed worse when instead their gender ~~was made salient~~identity was activated. ~~The authors demonstrate that~~Thus, merely framing a question about identity as asking about gender versus ethnicity impacted quantitative performance through~~by~~ inducing a salient self-stereotype. This work suggests that the self is malleable and prone to even subtle primes in the environment. Here, we focus on a specific type of prime~~—~~: signing a pledge of honesty. We propose that the act of signing one's ~~own~~ name ~~raises the salience of~~brings into focus one's ~~own~~ moral compass and ethical standards, thus discouraging dishonest actions afterwards.

Previous research has shown that when the moral categorization of a particular behavior is ~~not clear cut~~ambiguous, people can~~,~~ and ~~in fact~~ often do~~,~~ categorize their own actions in positive terms, thereby avoiding the need to negatively update their moral self-image (Baumeister 1998; Schweitzer & Hsee, 2002). However, Mazar, Amir, and Ariely (2008) found that drawing people's attention to moral standards reduces ~~dishonest behaviors. For~~dishonesty For example, after being asked to recall the Ten Commandments, participants who were given the opportunity to cheat and ~~to gain financially from this action~~ earn undeserved money did not cheat at all; ~~by contrast, when given the same opportunity to cheat~~in contrast, those who had not been reminded of the Ten Commandments cheated substantially. Similarly, when participants had an opportunity to cheat by inflating their self-reported performance for financial gain, those who were asked to read and sign and honor code ~~prior to engaging in a task where they could over-reported performance and thus earn more money they did not deserve, they~~ were less likely to then cheat on the task ~~itself~~ (see also Shu, Gino, & Bazerman, 2011). When ~~unethical behavior is~~ethics are made salient, people may pay greater attention to their ~~own~~ moral standards and ~~categorize~~ scrutinize the ethicality of their own behavior ~~more rigidly~~. As a consequence, moral

saliency may decrease people's tendency to engage in dishonest acts and increase the rigidity of their judgments of ethicality.

To summarize, we propose ~~and test~~ the following hypotheses:

Hypothesis 1. Signing ~~a pledge of honesty before filling out a form where one can overstate performance will lead to lower levels of cheating than signing it after having completed the form.~~ one's name prior to a self-reporting task will promote more honest reporting relative to signing one's name after the task.

Hypothesis 2. Signing ~~a pledge of honesty before filling out a form where one can overstate performance will be more likely to~~ one's name prior to a self-reporting task increases the saliency of moral standards. ~~compared to signing it after having completed the form.~~

Hypothesis 3. Heightened saliency of moral standards will mediate~~d~~ the effect of signing one's name on honest self-reporting. ~~a pledge of honesty before filling out a form where one can overstate performance and the level of cheating on the form~~.

Overview of the Research

We tested these hypotheses in four studies in which participants had the opportunity to cheat ~~by over~~ through dishonest self-reporting ~~performance on a task~~. In each study, we varied when participants signed their name—prior to or after the task—to change the time at which~~whether~~ moral standards were made salient to participants ~~by asking them to sign a pledge of honesty~~. Participants either signed ~~the form~~ before or after having the opportunity to cheat.

In Study 1, we conducted a field experiment in collaboration with an automobile insurance company, and found ~~that ethical saliency~~signing prior to reporting produced significant differences in the number of miles participants reported driving during the prior year. In Studies 2 and 3, we replicated the same findings using a controlled~~,~~ laboratory environment~~study~~. ~~As before, the results of these~~ These studies show that ~~having the opportunity to~~ signing one's name prior ~~to a pledge of honesty before having~~ the opportunity to cheat ~~discourages~~ encourages ~~un~~ethical behavior. Finally, Study 4 examines the psychological ~~process explaining~~mechanism

underlying the ~~link~~ relationship between ~~the act of~~ signing one's name and ~~people's likelihood of over-reporting performance~~promotion of honest reporting, and shows that the act of signing ~~a pledge of honesty raises the salience of participants'~~heightens awareness of ethical standards.

Study 1: A Field Experiment with Automobile Insurance

We first tested the effect of signing ~~a pledge of honesty~~one's name before having the opportunity to behave dishonestly in a field study involving automobile insurance.

Procedure

We ran a field experiment with an insurance company in the ~~U.S.~~United States in which we manipulated the automobile policy review~~-~~ form that was sent out to customers at the end of the year. The review form asked customers ~~among others~~ to record the exact current odometer mileage of all cars that were currently registered to them and/or their spouse or domestic partner, in addition to other information. We randomly assigned customers to receive a form that either asked them at the top (i.e., before filling out the form) or the bottom (i.e., after having completed the form) of the form to sign the following pledge of honesty: "I promise that the information I am providing is true". Otherwise ~~than that~~, the forms were identical ~~across conditions~~.

~~Filled out~~Completed forms were received from 13,488 policies for a total of 20,741 cars. A ~~car~~ single policy could cover~~have~~ up to four~~4~~ cars; 52% of policies had one car, 42% had two cars, 5% had three cars and less than 0.3% had four cars. We compared the difference between the current odometer mileage as indicated in the manipulated forms to the odometer mileage that customers had indicated the year before. If a policy had more than one car, we averaged that difference. The mileage difference represents the ~~yearly~~annual usage of a car, which in turn influences a customer's ~~yearly~~annual insurance costs. The fewer miles ~~a car is~~ driven, the ~~lower the~~less insurance costs. Thus, when filling out the automobile policy review~~-~~ form, customers

faced a dilemma between truthfully indicating the current odometer mileage and dishonestly indicating a lower mileage in order to reduce their insurance premium.

Since we hypothesized that signing a pledge of honor before ~~filling out the form~~a self-reporting task raises the saliency of people's ethical standards, we expected that customers~~,~~ who ~~had to~~ signed the pledge of honor before filling out the form would be more truthful and thus~~,~~ ~~show a~~ report higher usage than those who ~~had to~~ signed the pledge of honor at the end.

Results and Discussion

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As expected, controlling for the number of cars per policy (F[1,13485]=2.184, p=.14) the average ~~yearly~~annual usage per car was significantly higher among customers who signed the pledge of honor at the top of the form (M=26,098.4, SEM=148.3) than those who signed the pledge of honor at the bottom of the form (M=23,670.6, SEM=154.6; F[1,13485]=128.631, p<.001). The difference between our two treatments was on average 2,427.8 miles per car per year. Note that the results also hold for the odometer difference for the first car only (signing at the top: M=26,204.8, SEM=172.2, signing at the bottom: M=23,622.5, SEM=177.7; t[13486]=10.438, p<.001).

These results provide ~~initial~~ support for our first hypothesis which suggested that raising the saliency of ethical standards by asking people to sign at the ~~top~~ start rather than at the ~~bottom~~ end of a ~~form~~ self-reporting task would lower the likelihood ~~that they would cheat~~of cheating ~~by~~ through misreporting the number of miles driven ~~the year before~~over the course of the year.

Study 2: A Lab Experiment with Tax Returns

To test the robustness of our findings, we conducted a second study in the laboratory using a similar signing manipulation. In this study, we also added a control condition to examine the actual effect of signing: whether signing ~~at the top of the form (i.e., prior to having~~ the

opportunity to cheat~~)~~ ~~discourages~~ encourages ~~dis~~honesty, or whether signing ~~at the bottom of the form~~afterwards actually encourages unethical behavior.

Method

Participants. One-hundred-and-one students and employees at local universities in the Southeastern United States (M_{age}=22.10, SD=4.98; 45% male; 82% students) completed the study for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Design and Procedure. Participants were randomly assigned to one of three conditions: 1) Signature at the top of the form; 2) Signature at the bottom of the form; or 3) No signature (~~our~~ control condition). At the beginning of each session, participants were given instructions to the study. The instructions informed them that ~~their first task was to~~they would first complete a problem-solving task under time pressure (i.e., they would have five minutes to complete the task), and that the experimenter would keep track of the time. In addition to providing information about the payment for the problem-solving task, the instructions informed participants that upon completion of this task, they would be asked to compute their performance and then fill out a payment form. The instructions also included the following information, "For the problem-solving task, you will be paid a higher amount than what we usually pay participants in a regular study because you will be taxed on your earnings. You will receive more details after the problem-solving task."

Problem-solving task. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; based on Mazar, Amir, & Ariely, 2008) and a collection slip on which participants reported their performance at the end of this part of the study. Participants were told that they would have ~~5 min~~five minutes to find two numbers in each

matrix that ~~added up~~summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), people were able to find about 7 of the 20 pairs on average ~~during~~ in this amount of time. Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit the collection slip to the experimenter. The instructions informed them ~~that:~~.

> In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and hand in ONLY your collection slip. We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time. The experimenter will give you your payment and ask you to fill out a payment form.

The matrix puzzle task allows us to directly measure each individual's level of cheating. All participants' matrix worksheets will be identical with the exception of one digit (in one number of one matrix) which will be unique to each individual's work station—a difference that will be completely imperceptible to participants. We can later extract participant worksheets from the recycling bin and match them to their collection slips. As a result, we can compare actual to reported performance. If these numbers differ for an individual, that difference represents that individual's level of cheating. Thus, this task allows us distinguish between cheaters and non-cheaters.

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Payment form. Participants then went to a second room to fill out a payment form. The form we used ~~mirrored~~ was based on a typical tax return form. We varied whether participants were asked to sign a pledge of honesty at the top or at the bottom of the form (see Appendix A). Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their estimated cost ~~for~~

~~their~~ of commute. These costs were "credited" to their post-tax earnings from the matrix task compute their final payment.

The instructions read~~:~~, "We would like to compensate participants for extra expenses they have incurred in order to participate in the session." We included two costs: 1) Time to travel to the lab at~~:~~ $0.10 per minute (~~Max:~~up to 2 hours, or $12 maximum)~~,~~ and monetary cost of commute~~:~~ (~~Max:~~up to $12 maximum).

Payment structure. Given the features of the study, participants could make a total of $42——an amount ~~computed~~ which breaks down as follows: $2 show up fee, $20 on matrix task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Results

We first examined the percentage of participants who cheated on the matrix task. This percentage varied across conditions, $\chi^2(2, N=101)=12.58$, $p=.002$. It was lowest in the signature-at-the-top condition (37%, 13 out of 35), and higher in the signature-at-the-bottom condition (79%, 26 out of 33) and in the no-signature condition (64%, 21 out of 33).

Both actual performance and reported performance on the matrix task by condition are depicted in Figure 1. We then computed the difference between the reported and actual performance on the matrix task. The number of matrices over-reported varied by condition, $F(2,98)=9.21$, $p<.001$, $\eta^2=.16$: it was lowest in the signature-at-the-top condition ($M=0.77$, $SD=1.44$), and higher in the signature-at-the-bottom condition ($M=3.94$, $SD=4.07$; $p<.001$) and in the no-signature condition ($M=2.52$, $SD=3.12$; $p<.05$). The difference between these two last conditions was only marginally significant ($p<.07$). Within-subjects analyses using ~~both~~ the difference between reported and actual performance revealed the same pattern of results.

The credits for extra expenses incurred that participants claimed in the tax forms revealfollow the same pattern and vary significantly by condition, $F(2,98)=5.63$, $p<.01$, $\eta^2=.10$ (see Figure 2).. Participants claimed the least expenses they were lowest in the signature-at-the-top condition ($M=5.27$, $SD=4.43$), and higher more expenses in the signature-at-the-bottom condition ($M=9.62$, $SD=6.20$; $p<.01$) and in the no-signature conditions ($M=8.45$, $SD=5.92$; $p<.05$). The difference between these two last conditions was not significant ($p=.39$).

Discussion

The results of Study 2 provide further evidence for our main hypothesis suggesting thathypothesis that raising saliency of one's ownmaking ethics salient through signing one's name prior to a taskal standards would lead to lower levels of cheating. Study 2 also included a control condition in which participants did not provide their signature. Our results indicate that signing prior to a self-reporting task promotes honest reporting—not that singing afterwards licenses cheating.the results observed in our first study are likely driven by reduced cheating when ethical standards are made salient. In fact, it is signing a pledge of honesty before having the opportunity to cheat that discourages unethical behavior, rather than signing a pledge of honesty after having the opportunity to cheat that encourages it.

Study 3: Increased Saliency of Ethical Standards

So far, weWe have so far demonstrated that raising ethical salienceysigning one's name before having an opportunity to cheat discourages unethical behavior. However, we have made an implicit assumption: that signing a pledge of honesty before having the opportunity to cheat rather than afterwards is more likely to raise the saliency of moral standards. We hypothesized that signing on the dotted line activates the self-concept, and because people are motivated to view themselves as good people, priming the self-concept through signing on the dotted line will

make ethics more salient. We test this hypothesis ~~directly~~ in our third study by using a direct measure of ethical saliency, or the extent to which people accessed ethics-related constructs ~~were vivid in people's mind~~. Following prior research measuring implicit cognitive processes (Bassili & Smith, 1986; Tulving, Schacter, & Stark, 1982), we used a word-completion task in which participants are asked to complete various word fragments with the first letters that come to mind. This task allows us to test whether signing ~~a pledge of honesty~~ before having the opportunity to cheat rather than afterwards leads people to ~~be more likely to use~~have greater access to words related to ethics and morality.

Method

Design and Procedure. Study 3 employed one between-subjects factor with two levels: signature ~~at the top~~ prior vs. signature ~~at the bottom of~~after the self-reporting form. The study employed the same task and procedure of Study 2 but varied the tax forms participants completed. The tax forms were modified such that they mimicked the flow of actual tax reporting practices in the United States. Deductions are first subtracted from gross income to compute taxable income; then taxes are paid on this adjusted amount (see Appendix B).

In addition, participants were asked to complete a word-completion task as their final task in the study. The task instructions informed participants that they would have to convert word fragments into meaningful words. Participants received a list of six word fragments with letters missing and were asked to fill in the blanks to make complete words by using the first word that came to mind. Three of these word-fragments (_ _ R A L, _ I _ _ _ E, and E _ _ _ C _ _) could be completed as ethics-related words (moral, virtue, and ethical) or as unrelated words (e.g., viral, tissue, and effects).

Participants. Sixty students and employees at local universities in the Southeastern United States (M_{age}=21.50, SD=2.27; 48% male; 90% students) completed the study for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Results

Level of cheating on the matrix task. We first examined the percentage of participants who cheated on the matrix task. This percentage was lower in the signature-at-the-top condition (37%, 11 out of 30) than in the signature-at-the-bottom condition (63%, 19 out of 30), $\chi^2(1, N=60)=4.27$, $p<.04$.

Both actual performance and reported performance on the matrix task by condition are depicted in Figure 3. We then computed the difference between the reported and actual performance on the matrix task; this performance inflation was our proxy for cheating. The ~~number of matrices over reported~~performance inflation was lower in the signature-at-the-top condition (M=1.67, SD=2.78) than in the signature-at-the-bottom condition (M=3.57, SD=4.19), $t(58)$=-2.07, $p<.05$. Within-subjects analyses using both reported and actual performance revealed the same pattern of results.

The deductions participants reported in the tax forms follow the same pattern and vary significantly by condition, $F(1,58)=7.76$, $p<.01$, $\eta^2=.12$: they were lower in the signature-at-the-top condition (M=3.23, SD=2.73) than in the signature-at-the-bottom condition (M=7.06, SD=7.02). Note that the signature-at-the-bottom condition is most similar to the current structure of tax reporting forms in the United States.

Word-fragment task. As we predicted, participants who signed the honesty pledge before having the opportunity to cheat generated more ethics-related words (M=1.40, SD=1.04) than did

those who signed at the bottom of the form (M=0.87, SD=0.97), $F(1,58)$=4.22, p<.05, η^2=.07, suggesting that the act of signing up ~~front~~ prior to starting the task increased the accessibility of ethics-related concepts.

Discussion

Using an implicit measure of ethical saliency, our third study shows that signing ~~a pledge of honesty~~ before having the opportunity to cheat ~~is more likely to~~ raises the saliency of moral standards compared to signing ~~the same form~~ after having the opportunity to cheat. ~~Furthermore,~~ Ceonsistent with our hypotheses, raising ethical saliency discouraged cheating.

Study 4: Ethical Saliency and Reduced Cheating

We conducted a fourth study to more carefully examine the role of ethical saliency in explaining the results observed in Studies 1, 2 and 3. In addition, to extend the generalizability of our findings, in Study 4 we employed a different measure to assess cheating.

Method

Design and procedure. Participants were randomly assigned to one of two conditions: Ethical saliency versus control. Across both conditions, the instructions informed them that we were interested in people's performance under pressure across a variety of tasks. For this particular study, they would be asked to answer a 20-question general knowledge test of medium difficulty (e.g., "How many U.S. states border Mexico?" and "In which U.S. state is Mount Rushmore located?"), and that they would receive $1 for each correct question (in addition to a $2 show-up fee). Participants were given 15 minutes to answer the 20 questions. Participants were given a study ID to use throughout the study.

Once the fifteen minutes were over, the experimenter distributed an answer sheet with the correct answers to the questions and a collection slip so that participants could report their

performance after checking their answers. This final set of materials also included the word-fragment task employed in Study 3. Participants were asked to fill out this task prior to checking their answers and reporting performance on the collection slip.

Half of the participants received an extra page on top of this set of materials, which they were asked to read before solving the word-fragment task. The page included a pledge of honesty participants were asked to sign~~:~~; "I promise that I will report information about my performance on the trivia test truthfully." The remaining half of the participants did not receive this extra page. These participants served as our control condition; as we ascertained in Study 2, it is signing before a task that promotes honest reporting—not that signing afterwards licenses cheating. Consistent with our hypotheses, we predicted that those who received and signed this pledge of honesty would be more likely to report their performance truthfully, and that signing this pledge would lead them to complete the word-fragment task with a higher number of ethics-related words.

Participants. Eighty-two college and graduate students at local universities in the Southeastern United States (M_{age}=22, SD=3.11; 52% male) completed the study for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Results and Discussion

We computed the difference between self-reported performance and actual performance on the general-knowledge task. This difference score served as our proxy for cheating~~was our main dependent variable~~. Positive difference scores indicate that participants over-reported their performance and cheated on the task so that they could make more money.

When examining the difference between self-reported and actual performance on the trivia test, we found that cheating was ~~greater in the control condition than~~significantly reduced in the ethical saliency condition (*M*=0.51, *SD*=1.42~~*M*=1.93, *SD*=2.15~~, vs. ~~*M*=0.51, *SD*=1.42~~*M*=1.93, *SD*=2.15), $t(80)=3.52$, $p=.001$. ~~Mirroring~~ Supporting these results, the percentage of participants who overstated their performance was higher in the ~~former~~ control condition than in the ~~latter~~ signature condition (53.7% [22/41] vs. 12.2% [5/41]), $\chi^2(1, N=82)=15.96$, $p<.001$). These results provide strong support for the predicted inverse relationship between ethical saliency and cheating.

Signing before ~~having~~ the opportunity to over-report performance also influenced the number of ethics-related concepts participants used in the word-fragment task. Participants in the ~~ethical salience~~signature condition used more ethics-related words (*M*=1.44, *SD*=0.95) than did those in the control condition (*M*=0.98, *SD*=0.88), $F(1,80)=5.25$, $p<.03$, $\eta^2=.06$.

Finally, we tested whether ethics-related concepts (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating on the trivia task. Both condition and the number of ethics-related concepts were entered into a linear regression model predicting extent of cheating. This analysis reveals that the effect of condition was significantly reduced (from $\beta=-.366$, $p=.001$ to $\beta=-.294$, $p<.01$), whereas the number of ethics-related concepts was a significant predictor of cheating ($\beta=-.290$, $p<.01$). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-.67, -.01), suggesting significant mediation. Thus, consistent with our predictions, the number of ethics-

related concepts significantly mediated the relationship between our manipulation and dishonest behavior.

Taken together, these results provide further evidence ~~for the effect of~~that raising ethical saliency ~~on~~ reduces cheating.

General Discussion

Across four studies, we consistently found that making ethics salient through requiring one's signature before a task ~~raising the saliency of one's own moral standards~~ is an effective mean to discourage dishonesty. In each of our studies, we manipulated when~~ther~~ moral standards were made salient when participants faced the decision to behave dishonestly. In Study 1, we conducted a field experiment in which we varied whether individuals filling out a report of the number of miles they drove the year prior signed a pledge of honesty either before or after ~~filling out~~ reporting the mileage number. Our results show that people reported a higher number of miles when they signed ~~the pledge of honor~~ before filling out the form than those who ~~had to~~ signed ~~the pledge of honor~~ at the end, indicating that raising the saliency of ethical standards led ~~people~~ to ~~be~~ more truthful self-reporting. In Studies 2 and 3, we moved from a field setting to a controlled, laboratory setting. In both studies, participants had the opportunity to sign a tax form either before or after making claims regarding their performance on a task. Providing further support for the results of the field study, the findings of Studies 2 and 3 demonstrate that having the opportunity to sign a pledge of honesty before having the opportunity to cheat discourages dishonesty. Finally, Study 4 examines the underlying psychological process ~~explaining the~~that links ~~between~~ the act of signing ~~and people's~~with the likelihood of over-reporting performance. The study ~~employed~~ included an implicit measure of ethical saliency: participants were asked to complete word fragments by using the first word that came to mind. We find that the act of

signing ~~a pledge of honesty raises~~one's name prior to a task the salience of participants' ethical standards, and this heightened ethical saliency explains the relationship between signing a pledge of honesty before having the opportunity to cheat and subsequent dishonest behavior.

Theoretical Contributions

Our findings contribute to the literature on how activating self-concept can nudge people's behavior for the better. We increased honesty in both laboratory and field settings by asking participants to sign their name prior to the start of a task. The act of signing activated a sense of self and increased the saliency of ethical standards. Just as Haley and Fessler promoted participants to give more generous offers in an anonymous economic game by introducing the subtle prime of eye-like shapes in the backdrop of the game (2005), we promoted honest behavior in our studies by leading participants to turn their moral gaze inward—to their own behavior—by asking them to sign their name prior to starting the tasks.

We also contribute to the ethics literature on effective ways to reduce dishonesty. By introducing a slight change in forms used in our studies (though moving the location of the signature) we observed a significant shift towards honest behavior in the forms of more truthful reporting, less performance inflation, less over-claiming of credits, and fewer deduction claims. A simple nudge at the beginning—rather than at the end—of our tasks was enough to produce a meaningful increase in honest reporting.

Limitations and Venues for Future Research

Our studies used a minimal treatment paradigm to induce the observed effects; we shifted the requirement and location of participant signature and then observed differences in levels of cheating. An extension of this paradigm that might better speak to the potential magnitude of the effect in real-world application would be to precede the signature line with a more extensive set

of rules that guide behavior. As an example, Shu, Gino, and Bazerman (2011) found that participants who read an honor code prior to an opportunity to cheat were less likely to cheat on the subsequent task relative to a control group who did not read an honor code. Among participants who read the honor code and also signed it after reading it, cheating was in effect eliminated on the subsequent task. Future research could investigate ways to super-charge the effect of requiring a signature prior to the start of a task—possibly through bundling it with some guidelines for behavior. Framing these guidelines in terms of prohibitions ("do not" rules) versus encouragements ("do" rules) might also alter the effect of signing on the dotted line.

Implications for Practice

Our findings suggest one effective way to reduce or eliminate unethical behavior is to ask people to sign their name prior to any opportunity wherein they may be tempted to evade the truth. Our findings apply to a large category of behaviors that rely on honest self-report on the part of the individual—any behavior in which it is impossible for another person or organization to continually monitor.

We believe one of the most important domains to which our findings may be applied is the domain of taxes. As the federal tax gap soars to over $150 billion each year (Morse, 2009), the amount spent on tax compliance and investigation has also seen dramatic increases. While the current structure of federal tax forms (and almost every state tax form) requires the tax-payer (or form-preparer) to sign at the end of the form, simply shifting the signature to the start of the form may help the federal and state governments close a significant portion of the tax gap, and realize enormous savings in tax compliance and investigation costs.

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Conclusion

By simply asking participants to sign on the dotted line prior to a task in which they have the opportunity to cheat, we found significant reductions in levels of cheating, extent of over-claiming credits, and exaggeration of deductions from taxable income. We found that moving the location of a required signature from the end to the start of a self-report form promoted more honest reporting. This is just a small subset of the extensive domain of behaviors which rely on honest self-reporting on the part of the individual. An intervention as simple as shifting the signature location can lead to a meaningful difference in behavior that follows. Signing on the dotted line can shift the moral gaze inward, raise the saliency of ethical standards, and spill over to promote more ethical actions going forward.

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Appendix A

Forms used in Study 2

Form 3305
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return
For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... .. .. ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	5	
	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶	7	

Sign Here

I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Form 3305
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return

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TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... .. .. ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	6	

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1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶	7	

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Center for Decision Research

Research Study Tax Return
For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here

I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned) ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session ▶	7	

Appendix B

Forms used in Study 3

Form 3305
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return
For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

a. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ..... ▶ | 1 |

Part 2 In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.

a. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ..... ▶ | 2 |

b. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶ | 3 | 4 |

Part 3 Please compute your taxable income and your taxes.

a. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income..... ..... ▶ | 5 |

b. Please compute your taxes by multiplying the value specified in box 5 by 50% | 6 |

Part 4 Please compute your final payment.

a. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session..... ▶ | 7 |

Sign Here

I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete.

▶_____ ▶_____ Signature
Date

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return
For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here

I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

a. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ▶	1	

Part 2 In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.

a. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ▶	2	
	3	
b. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	4	

Part 3 Please compute your taxable income and your taxes.

a. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income ▶	5	
b. Please compute your taxes by multiplying the value specified in box 5 by 50%	6	

Part 4 Please compute your final payment.

a. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session ▶	7	

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Figure Captions

Figure 1. Reported and actual performance on the matrix task by condition, Study 2.

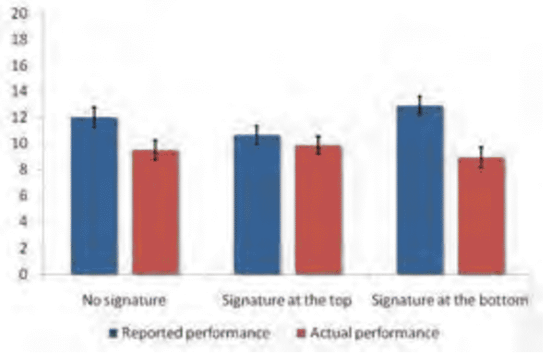


Figure 2. Reported deductions by condition, Study 2.

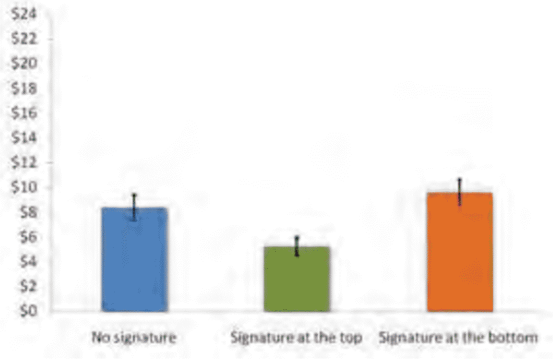
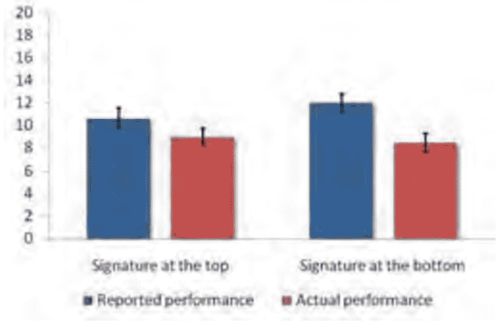


Figure 3. Reported and actual performance on the matrix task by condition, Study 3.



Manuscript Version - 2011-03-09_vs2

Running Head: MAKING ETHICS SALIENT

Making Ethics Salient:

Signing on the Dotted Line Turns Moral Gaze Inward

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Abstract

Although people care about ~~about being~~ morality and being seen as ethical by others, they ~~often~~ sometimes give in to ~~the~~ temptation to behave dishonestly ~~for short-term monetary gains~~when beneficial to them. Prior work has ~~examined~~ focused primarily on the psychological and situational forces that swing people's moral compass. ~~In this~~The current paper~~, we extend~~ builds upon this body of research to develop an easily-implementable method to discourage dishonesty: signing a pledge of honesty prior rather than after having the opportunity to cheat. ~~raising the saliency of ethical standards in prior to the moment of temptation.~~ Using both field and lab experiments, we find that signing a pledge of honesty prior to having the opportunity to cheat ~~rather than afterwards~~ raises the saliency of ~~one's own moral standards~~ethics and morality ~~and, in turn~~, which discourages cheating. Implications for both research on behavioral ethics ~~and~~ as well as practice are discussed.

Keywords: Signing; Ethics; Dishonesty; Saliency; Cheating

Making Ethics Salient:

Signing on the Dotted Line Turns Moral Gaze Inward

In December 2010, Timothy Schetelich—who had been working as a Certified Public Accountant in Springfield for years—pleaded guilty to preparing false tax returns for several clients, which earned him higher commissions. Over the years, he claimed some of them had legitimate business expenses when in fact they did not own a business, or he fabricated and inflated deductions for expenses to obtain refunds the clients were not entitled to receive. This case is just one example of the many situations in which people cross ethical boundaries to advance their ~~own~~ self-interest. ~~Beyond the level of the~~In addition to individual taxpayers, most businesses regularly cheat on their taxes (Morse, 2009), and this unpaid tax amounts to roughly $150 billion every year. Similarly, other forms of unethical behavior have been covered in the news in recent years, including stories of executives inflating their business expenses, employees stealing from their own employers, professionals overstating their hours, and managers inflating performance to superiors to mention just a few (Mazar & Ariely, 2006; Gino & Pierce, 2010).

Commented [NM1]: Is this true? I feel we need to show how cheating benefited him otherwise it s not a good example of "people corsing ethical boundaries to advance their self-interest" as claimed further below.

The pervasiveness of these common unethical practices in organizations and society more broadly has generated considerable interest among scholars in a variety of disciplines, including organizational behavior, psychology, philosophy, and economics (e.g. Brown & Treviño, 2006; Gneezy, 2005; Haidt, 2001; Nichols & Knobe, 2007; Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2011; Tenbrunsel & Smith-Crowe, 2008; Treviño, Weaver, & Reynolds, 2006). ~~This~~Together their work suggests that there are at least two types of individuals: those ~~work has found that while some individuals~~that only care about their self-interest and therefore will act~~intentionally act~~ unethically ~~for monetary gains~~ if beneficial and not

too costly to them (e.g., Brief, Buttram, & Dukerick, 2001; Lewicki, Poland, Minton, & Sheppard, 1997), and those ~~others~~that do care about morality but find ways to to permit unethical behavior without violating their moral standards (Mazar, Amir, & Ariely, 2008). In the latter case, ambiguity, general cultural orientations, as well as surprisingly subtle situational influences can facilitate moral transgressions. For instance, Schweitzer and Hsee (2002) as well as Baumeister (1998) have shown that when ambiguous, people can and often do categorize their own actions in positive terms, thereby avoiding the need to negatively update their moral self-image. Mazar and Aggarwal (2011) reported that collectivism promotes bribery by mitigating the perceived responsibility for one's actions.~~, in a recent investigation and~~n.~~ Zhong, Bohns and Gino (2010) found that ambient darkness ~~leads~~ can facilitate people's ~~to behave unethically~~transgressions~~,~~ by mitigating illusory anonymity.

~~While enlightening~~Building upon this~~,~~ prior research that has focused primarily on the motives and characteristics of the wrongdoers or on the organizational and environmental ~~pressures~~ factors that can influenced ~~their~~ one's actions (Gino & Pierce, 2010), the goal of the current paper is to develop and test an efficient and effective ~~(Gino & Pierce, 2010). Yet, to date, little is known about effective ways of reducing or eliminating unethical behavior. To date, little is known about effective ways~~implementation of a measure to ~~of~~ reduce~~ing~~ or eliminate~~ing~~ unethical behaviors—particularly behaviors that rely on self-monitoring in lieu of societal restraints. Filing taxes, claiming business expenses, reporting billable hours, and advertising a used product are all examples of such behaviors that rely on truthful self-reports. These behaviors assume full honesty on the individual level; any departure can lead to significant economic losses. Thus, it is particularly important to identify practical interventions that promote honesty in ~~these~~ domains that rely on truthful self-reports.

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This paper ~~proposes~~ tests ~~one~~the implementation of one specific ~~method~~measure ~~of~~ of promoting honest self-reporting: ~~of~~making ethical standards salient before facing a temptation to be dishonest. We propose a subtle but specific ~~method~~implementation to raise ethical saliency: signing one's name before rather than after filling out, for example, and insurance or tax form, as is the current general practice. In both field and laboratory contexts, we study ~~how~~ the effect of signing one's name before versus after an opportunity to cheat ~~discourages~~ on the saliency of one's own moral standards and displayed dishonesty ~~through raising the saliency of one's own moral standards~~. There are many domains in which signing a statement to ~~verify~~confirm the truthfulness of a report is already required, such as insurances or taxes. However, typically the signature is requested after—rather than prior to—reporting~~.~~. We suggest that simply moving the signature from the bottom to the top of a form will bring one's moral standards into focus, and subsequently promote honesty while discouraging cheating.

The Impact of Signing on the Dotted Line

We hypothesize that signing on the dotted line ~~brings the self into clearer view~~focusincreases attention to the self and one's standards, which in turn ~~, and that activating one's the self concept can~~ changes people's behavior ~~for the better~~. Previous research has shown that e~~E~~ven subtle cues ~~that~~ can activate the self ~~can~~ and lead to surprisingly powerful effects on consequent behavior. For example, when playing an anonymous economic game, people are more generous when there is even the nuanced presence of eye-like shapes in the computer background (Haley & Fessler, 2005; Rigdon, Ishii, Watabe, Kitayama, 2009). In a more naturalistic setting, researchers have examined the effect of an image of a pair of eyes on the amount of money people ~~contribute~~put into a pay-on-your-honor cash box ~~to a pay-on-your-honor fund for~~when purchasing coffee. When eyes were displayed on the contributions box instead of flowers, nearly three times the amount of money was collected (Bateson, Nettle, &

Roberts, 2006). Similarly, Mazar, Amir, and Ariely (2008) found that asking individuals to recall the Ten Commandments or sign and honor code were less likely to cheat and earn undeserved money when self-reporting their performance than those who had to recall then books or that were not asked to sign an honor code (see also Shu, Gino, & Bazerman, 2011 for signing versus reading an honor code).

In line with Duval & Wicklund's (1972) theory of objective self-awareness, t~~T~~hese papers suggested that their manipulations (eyes, honor code, etc.) made ethics more salient. And in such cases people would pay greater attention to their moral standards and would be more likely to scrutinize the ethicality of their own behavior. As a consequence, moral saliency decreases people's tendency to engage in dishonest acts and increases the rigidity of their judgments of ethicality. ~~authors believe that eyes induce the feeling that one is being watched; subsequently turn our gaze inward toward our own behavior.~~

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Building upon the research ~~Different aspects of the self can be selectively activated. For example, Shih, Pittinsky, and Ambady (1999) found evidence that implicit activation of different social identities within an individual can help or hinder performance on a given task. Using an all Asian-American female sample, the authors found that participants performed better on a quantitative task when their ethnic identity was activated; however participants from the same sample performed worse when instead their gender was made salientidentity was activated. The authors demonstrate that~~Thus, ~~merely framing a question about identity as asking about gender versus ethnicity impacted quantitative performance throughby inducing a salient self-stereotype. This work suggests~~ that the self is malleable (see e.g., Shih, Pittinsky, and Ambady, 1999) and prone to even subtle primes in the environment. ~~Here~~, we ~~focus~~ examine ~~on~~ a specific type of

prime that can be easily implemented in various real-world context to affect individuals' ethical conduct and aim to provide evidence of the process it evokes: -signing a pledge of honesty. We ~~propose~~ test that the act of signing one's name before rather than after a self-reported performance brings into focus one's moral compass and ethical standards, thus discouraging dishonest actions ~~afterwards~~.

~~Previous research has shown that when the moral categorization of a particular behavior is not clear cutambiguous, people can, and in fact often do, categorize their own actions in positive terms, thereby avoiding the need to negatively update their moral self-image (Baumeister 1998; Schweitzer & Hsee, 2002). However, Mazar, Amir, and Ariely (2008) found that drawing people's attention to moral standards reduces dishonest behaviors. Fordishonesty For example, after being asked to recall the Ten Commandments, participants who were given the opportunity to cheat and to gain financially from this action earn undeserved money did not cheat at all; by contrast, when given the same opportunity to cheatin contrast, those who had not been reminded of the Ten Commandments cheated substantially. Similarly, when participants had an opportunity to cheat by inflating their self-reported performance for financial gain, those who were asked to read and sign and honor code prior to engaging in a task where they could over-reported performance and thus earn more money they did not deserve, they were less likely to then cheat on the task itself (see also Shu, Gino, & Bazerman, 2011). When unethical behavior isethics are made salient, people may pay greater attention to their own moral standards and categorize scrutinize the ethicality of their own behavior more rigidly. As a consequence, moral saliency may decrease people's tendency to engage in dishonest acts and increase the rigidity of their judgments of ethicality.~~

To summarize, we propose and test the following hypotheses:

Hypothesis 1. Signing one's name prior to a self-reporting task will promote more honest reporting relative to signing one's name after the task.

Hypothesis 2. Signing one's name prior to a self-reporting task increases the saliency of moral standards.

Hypothesis 3. Heightened saliency of moral standards will mediate the effect of signing one's name on honest self-reporting.

Overview of the Research

We tested these hypotheses in four studies in which participants had the opportunity to cheat through dishonest self-reporting. In each study, we varied when participants signed their name—prior to or after the task—to change the time at which moral standards were made salient to participants. That is, pParticipants either signed before or after having the opportunity to cheat.

In Study 1, we conducted a field experiment in collaboration with an automobile insurance company, and found signing prior to reporting produced significant differences in the number of miles participants reported driving during the prior year – a noteworthy change in real behavior with substantial consequences for the insurance company. In Studies 2 and 3, we replicated the same findings ~~using~~ in a controlled laboratory environment. These studies show that signing one's name prior to the opportunity to cheat encourages ethical behavior. Finally, Study 4 examines the psychological mechanism underlying the relationship between signing one's name and promotion of honest reporting, and shows that the act of signing heightens awareness of ethical standards.

Study 1: A Field Experiment with an Automobile Insurance

We first tested the effect of signing one's name before having the opportunity to behave dishonestly in a field study involving an automobile insurance.

Procedure

We ran a field experiment with an insurance company in the United States in which we manipulated the automobile policy review form that was sent out to customers at the end of the year. The review form asked customers to record the exact current odometer mileage of all cars that were currently registered to them and/or their spouse or domestic partner, in addition to other information. We randomly assigned customers to receive a form that either asked them at the top (i.e., before filling out the form) or the bottom (i.e., after having completed the form) of the form to sign the following pledge of honesty: "I promise that the information I am providing is true". Otherwise, the forms were identical.

Completed forms were received from 13,488 policies for a total of 20,741 cars. A single policy could cover up to four cars; 52% of policies had one car, 42% had two cars, 5% had three cars and less than 0.3% had four cars. We compared the difference between the current odometer mileage as indicated in the manipulated forms to the odometer mileage that customers had indicated the year before. If a policy had more than one car, we averaged that difference. The mileage difference represents the annual usage of a car, which in turn influences a customer's annual insurance costs. The fewer miles driven, the less insurance costs. Thus, when filling out the automobile policy review form, customers faced a dilemma between truthfully indicating the current odometer mileage and dishonestly indicating a lower mileage in order to reduce their insurance premium.

Since we hypothesized that signing a pledge of honor before a self-reporting task raises the saliency of people's ethical standards, we expected that customers, who signed the pledge of honor before filling out the form, would be more truthful and thus report higher usage than those who signed the pledge of honor at the end.

Results and Discussion

As expected, controlling for the number of cars per policy (F[1,13485]=2.184, p=.14) the average annual usage per car was significantly higher among customers who signed the pledge of honor at ~~the top~~the beginning of the form (M=26,098.4, ~~*SEM*~~*SD*=~~148.3~~12,253.4) than those who signed the pledge of honor at the ~~bottom~~ end of the form (M=23,670.6, ~~*SEM*~~*SD*=~~154~~12,621.4~~.6~~; F[1,13485]=128.631, p<.001). The annual difference between our two treatments was on average 2,427.8 miles per car. Note that the results also hold for the odometer difference for the first car only (signing at the ~~top~~beginning: M=26,204.8, ~~*SEM*~~*SD*=~~172.2~~14,226.3, signing at the ~~bottom~~end: M=23,622.5, ~~*SEM*~~*SD*=~~177.7~~14,505.8; t[13486]=10.438, p<.001).

These results provide support for our first hypothesis, which ~~suggested~~ suggests that raising the saliency of ethical standards by asking people to sign a pledge of honor ~~at the start~~before rather than ~~at the end of~~after a self-reporting task ~~would~~ lowers the likelihood of cheating through misreporting the number of miles driven over the course of the year.

Study 2: A Lab Experiment with Tax Returns

To test the robustness of our findings, we conducted a second study in the laboratory using a similar signing manipulation. In this study, we also added a control condition to examine the actual effect of signing: whether signing prior to the opportunity to cheat encourages honesty, or whether signing afterwards ~~actually~~ encourages unethical behavior.

Method

Participants. One-hundred-and-one students and employees at local universities in the Southeastern United States (M_{age}=22.10, SD=4.98; 45% male; 82% students) completed the study for pay. They received a $2 show-up fee~~,~~ and had the opportunity to earn additional money throughout the study.

Design and Procedure. Participants were randomly assigned to one of three conditions: 1) Signature at the top of the form (i.e. before filling out a form); 2) Signature at the bottom of the form (i.e. after filling out a form); or 3) No signature (control condition). At the beginning of each session, participants were given instructions to the study. The instructions informed them that they would first complete a problem-solving task under time pressure (i.e., they would have five minutes to complete the task), and that the experimenter would keep track of the time. In addition to providing information about the payment for the problem-solving task, the instructions informed participants that upon completion of this task, they would be asked to compute their performance and then fill out a payment form. The instructions also included the following information, "For the problem-solving task, you will be paid a higher amount than what we usually pay participants in a regular study because you will be taxed on your earnings. You will receive more details after the problem-solving task."

Problem-solving task. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; based on Mazar, Amir, & Ariely, 2008) and a collection slip on which participants later reported their performance ~~at the end of~~in this part of the study. Participants were told that they would have ~~5 min~~five minutes to find two numbers in each matrix that ~~added up~~summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find ~~about~~ 7 of the 20 pairs ~~on average during~~ in ~~th~~the given~~is~~ amount of time. Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit the collection slip to the experimenter. The instructions on the collection slip ~~informed them~~read:

> "In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and hand in ONLY your collection slip. We are

Commented [NM2]: Where the instructions on the collection slip? I wasn t sure.

not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time. The experimenter will give you your payment and ask you to fill out a payment form."

The matrix ~~puzzle~~search task allow~~ed~~ us to directly measure each individual's level of cheating~~:~~. All participants' matrix worksheets ~~will be~~were identical with the exception of one digit (in one number of one matrix) which ~~will be~~was unique to each individual's work station—a difference that was completely imperceptible to participants. We later ~~extract~~took out participants worksheets from the recycling bin and matched them to their collection slips. As a result, we ~~can~~were able to compare actual to reported performance. If ~~these~~those numbers differed for an individual, that difference represent~~eds~~ that individual's level of cheating. ~~Thus, this task allows us distinguish between cheaters and non-cheaters.~~

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Payment form. After the problem-solving task p~~P~~articipants ~~then~~ went to a second room to fill out a payment form. The form we used was based on a typical tax return form. We varied whether participants were asked to sign a pledge of honesty at the top or at the bottom of the form (see Appendix A). Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their estimated cost of commute. These costs were "credited" to their post-tax earnings from the matrix search task to compute their final payment.

The instructions read: "We would like to compensate participants for extra expenses they have incurred ~~in order~~ to participate in the~~is~~ session." We included two costs: 1) Time to travel to the lab at $0.10 per minute (up to 2 hours or $12 maximum), and monetary cost of commute (up to $12 maximum).

Payment structure. Given the features of the study, participants could make a total of $42—an amount which breaks down as follows: $2 show up fee, $20 on matrix task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Results

First, w~~We first~~ examined the percentage of participants who cheated on the matrix task. This percentage varied across conditions, $\chi^2(2, N=101)=12.58$, $p=.002$; ~~. It was~~The number of cheaters was lowest in the signature-at-the-top condition (37%, 13 out of 35), ~~and~~ higher in the signature-at-the-bottom condition (79%, 26 out of 33), and ~~in t~~somewhat in between those two for the no-signature condition (64%, 21 out of 33).

Both actual performance and reported performances ~~on~~ in the matrix search task by condition are depicted in Figure 1. ~~We then computed the difference between the reported and actual performance on the matrix task.~~As can be seen, t~~T~~he number of matrices over-reported varied by condition, $F(2,98)=9.21$, $p<.001$, $\eta^2=.16$: it was lowest in the signature-at-the-top condition ($M=0.77$, $SD=1.44$) and ~~, and~~ higher in the signature-at-the-bottom condition ($M=3.94$, $SD=4.07$; $p<.001$) and in the no-signature condition ($M=2.52$, $SD=3.12$; $p<.05$). The difference between these two last conditions was only marginally significant ($p<.07$). Within-subjects analyses using the difference between reported and actual performance revealed the same pattern of results.

More important for our research question, t~~T~~he credits for extra expenses ~~incurred~~ that participants claimed in the tax forms ~~revealfollow the same pattern and~~ varied~~y~~ as well significantly by condition, $F(2,98)=5.63$, $p<.01$, $\eta^2=.10$ (see Figure 2). Participants claimed the least expenses in the signature-at-the-top condition ($M=5.27$, $SD=4.43$), and more expenses in

Commented [NM3]: This is odd. I might be misunderstanding but why would there be any differences in cheating on the matrix task which is done before the pledge of honor manipulation?

If we do find this, shouldn t we control for these differences in the anlysis of the signature effect ?

the signature-at-the-bottom c (M=9.62, SD=6.20; p<.01) and in the no-signature conditions (M=8.45, SD=5.92; p<.05). The difference between these two ~~last~~ latter conditions was not significant (p=.39).

Discussion

The results of Study 2 provide further evidence for our main hypothesis that making ethics salient through signing one's name prior to a task ~~would~~ leads to lower levels of cheating. Study 2 also included a control condition in which participants did not provide their signature. Our results indicate that our findings were driven by the signing-at-the-top condition: signing prior to a self-reporting task promoteds honest reporting but signing afterwards did not promote cheating. ~~— not that singing afterwards licenses cheating.~~

Study 3: Increased Saliency of Ethical Standards

Thus far, w~~W~~e have ~~so far~~ demonstrated that signing one's name before having an opportunity to cheat discourages unethical behavior. However, we made an implicit assumption: that signing before the opportunity to cheat rather than afterwards is more likely to raise the saliency of moral standards. ~~We hypothesized that signing on the dotted line activates the self-concept, and because people are motivated to view themselves as good people, priming the self-concept through signing on the dotted line will make ethics more salient.~~ We test this hypothesis in our third study by ~~using a direct~~ measuring ~~e of ethical saliency, or~~ the extent to which signing before rather than after the opportunity to cheat ~~which people~~increased the ~~accesse~~accessibility of~~d~~ words related to ethics and morality ~~related constructs~~. Following prior research measuring implicit cognitive processes (Bassili & Smith, 1986; Tulving, Schacter, & Stark, 1982), we used a word-completion task in which participants ~~are~~ were asked to complete various word fragments with the first letters that ca~~o~~me to mind. ~~This task allows us to test whether signing a pledge of~~

~~honesty before having the opportunity to cheat rather than afterwards leads people to be more likely to use~~have greater access to ~~words related to ethics and morality.~~

Method

Design and Procedure. Study 3 employed one between-subjects factor with two levels: signature at the top, that is, ~~prior~~before filling out a form, versus ~~vs.~~ at the bottom, that is, ~~signature~~ after ~~the~~ filling out a ~~self reporting~~ form. The study employed the same task and procedure of Study 2 but varied the tax forms participants completed. The tax forms were modified such that they mimicked the flow of actual tax reporting practices in the United States. Deductions are first subtracted from gross income to compute taxable income; then taxes are paid on this adjusted amount (see Appendix B).

Commented [NM4]: I know you want to change it to before versus after, but this could be misunderstood that the signatures are not on the form itself. Thus, I thought we could clarify that.

In addition, participants were asked to complete a word-completion task as their final task in the study. The task instructions informed participants that they would have to convert word fragments into meaningful words. Participants received a list of six word fragments with letters missing and were asked to fill in the blanks to make complete words by using the first word that came to mind. Three of these word-fragments (_ _ R A L, _ I _ _ _ E, and E _ _ _ C _ _) could be completed as ethics-related words (moral, virtue, and ethical) or as ethics-~~unrelated~~ neutral words (e.g., viral, tissue, and effects).

Participants. Sixty students and employees at local universities in the Southeastern United States (M_{age}=21.50, SD=2.27; 48% male; 90% students) completed the study for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Results

Level of cheating on the matrix task. We first examined the percentage of participants who cheated on the matrix task. This percentage was lower in the signature-at-the-top condition (37%, 11 out of 30) than in the signature-at-the-bottom condition (63%, 19 out of 30), $\chi^2(1, N=60)=4.27$, $p<.04$.

Both actual performance and reported performance on the matrix task by condition are depicted in Figure 3. ~~We then computed~~T~~-~~he difference between the reported and actual performance on the matrix task~~: this performance inflation~~ was our proxy for cheating. The performance ~~inflation~~ difference was lower in the signature-at-the-top condition ($M=1.67$, $SD=2.78$) than in the signature-at-the-bottom condition ($M=3.57$, $SD=4.19$), $t(58)=-2.07$, $p<.05$. Within-subjects analyses using both reported and actual performance revealed the same pattern of results.

Commented [NM5]: Aain, I m afraid I don t understand. Are these the results form the collection slip or from the form? Was there a collection slip in addition to the form? I think this needs to be clarified.

The deductions participants reported in the tax forms follow the same pattern and vary significantly by condition, $F(1,58)=7.76$, $p<.01$, $\eta^2=.12$: they were lower in the signature-at-the-top condition ($M=3.23$, $SD=2.73$) than in the signature-at-the-bottom condition ($M=7.06$, $SD=7.02$). ~~Note that the signature at the bottom condition is most similar to the current structure of tax reporting forms in the United States.~~

Word-fragment task. As we predicted, participants who signed the honesty pledge before having the opportunity to cheat generated more ethics-related words ($M=1.40$, $SD=1.04$) than did those who signed at the bottom of the form ($M=0.87$, $SD=0.97$), $F(1,58)=4.22$, $p<.05$, $\eta^2=.07$, suggesting that the act of signing ~~up~~ prior to starting the task increased the accessibility of ethics-related concepts.

Discussion

Using an implicit measure of ethical saliency, our third study shows that signing before having the opportunity to cheat raises the saliency of moral standards compared to signing after having had the opportunity to cheat. Consistent with our hypotheses, raising ethical saliency discouraged cheating.

Study 4: Ethical Saliency and Reduced Cheating

We conducted a fourth study to more carefully examine the role of ethical saliency ~~in explaining the results observed in Studies 1, 2 and 3~~on cheating. In addition, to extend the generalizability of our findings, in Study 4 we employed a different ~~measure to assess~~ cheating-task.

Method

Design and procedure. Participants were randomly assigned to one of two conditions: ~~Ethical saliency~~Signature-first versus control. Across both conditions, the instructions informed them that we were interested in people's performance under pressure across a variety of tasks. For this particular study, they would be asked to answer a 20-question general knowledge test of medium difficulty (e.g., "How many U.S. states border Mexico?", ~~and~~ "In which U.S. state is Mount Rushmore located?"), and that they would receive $1 for each correct question (in addition to a $2 show-up fee). Participants were given 15 minutes to answer the 20 questions. ~~Participants were given a study ID to use throughout the study.~~

Once the fifteen minutes were over, the experimenter distributed a set of materials consisting first, of the word-fragment task employed in Study 3, followed by an answer sheet with the correct answers to the questions, and ~~a~~ finally a collection slip so that participants could report their performance after checking their answers. ~~This final set of materials also included the word-fragment task employed in Study 3.~~ Participants were asked to read and fill out the set

of materials in the given order, that is, they filled out the word fragment ~~this~~ task prior to checking their answers and reporting their performance on the collection slip.

Half of the participants received an extra page on top of this set of materials, which they were asked to read before solving the word-fragment task. The page included a pledge of honesty participants were asked to sign: "I promise that I will report information about my performance on the trivia test truthfully.~~,~~" (signature first-condition). The remaining half of the participants did not receive this extra page (control). A~~These participants served as our control condition; a~~s we ascertained in Study 2, it is signing before a task that promotes honest reporting~~— not that signing afterwards licenses cheating. Consistent with our hypotheses,~~ W~~w~~e hypothesized ~~predicted~~ that those, who received and signed ~~this~~ the pledge of honesty, would be more likely to report their performance truthfully, and that signing ~~this~~ the pledge would lead ~~them~~ participants to complete the word-fragment task with a higher number of ethics-related words.

Participants. Eighty-two college and graduate students at local universities in the Southeastern United States (M_{age}=22, SD=3.11; 52% male) completed the study for pay. They received a $2 show-up fee~~,~~ and had the opportunity to earn additional money throughout the study.

Results and Discussion

Same as in the previous studies, w~~—W~~e computed the difference between self-reported performance and actual performance on the general-knowledge task by matching participants' unique study IDs that were denoted on each survey/form. ~~–~~This difference score served as our proxy for cheating. Positive differenc~~e-e~~ scores indicated~~-~~ that participants over-reported their performance and cheated on the task so that they could make more money.

When examining the performance difference-scores ~~between self reported and actual performance~~ on the trivia test, we found that in comparison to the control condition cheating was significantly reduced in the ~~ethical saliency~~signature first- condition (M=0.51, SD=1.42, vs. M=1.93, SD=2.15), $t(80)$=3.52, p=.001. Supporting these results, the percentage of participants, who overstated their performance, was higher in the ~~control~~control -condition than in the signature first--condition (53.7% [22/41] vs. 12.2% [5/41]), $\chi^2(1, N=82)=15.96$, $p<.001$). ~~These results provide strong support for the predicted inverse relationship between ethical saliency and cheating.~~

Signing before the opportunity to over-report performance also influenced the number of ethics-related concepts participants ~~used~~ came up with in the word-fragment task. Participants in the signature first--condition ~~used~~ found more ethics-related words (M=1.44, SD=0.95) than did those in the control condition (M=0.98, SD=0.88), $F(1,80)=5.25$, $p<.03$, $\eta^2=.06$.

Finally, we tested whether ethics-related concepts (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating on the trivia task. Both condition and the number of ethics-related concepts were entered into a linear regression model predicting extent of cheating. This analysis revealed~~s~~ that the effect of condition was significantly reduced (from β=-.366, p=.001 to β=-.294, $p<.01$), whereas the number of ethics-related concepts was a significant predictor of cheating (β=-.290, $p<.01$). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-.67, -.01), suggesting significant mediation. Thus, consistent with our prediction~~s~~,

the number of ethics-related concepts significantly mediated the relationship between our manipulation (i.e. signature-first) and dishonest behavior.

Together these results provide strong support for the predicted inverse relationship between ethical saliency and cheating.

~~Taken together, these results provide further evidence for the effect of~~that ~~raising ethical saliency on reduces cheating.~~

General Discussion

Across four studies, we consistently found that ~~making ethics salient through~~ requiring one's signature before ~~a~~facing a ~~task~~ temptation to cheat is an effective mean to discourage dishonesty because it makes ethics more salient. ~~In each of our studies, we manipulated when moral standards were made salient when participants faced the decision to behave dishonestly.~~ In Study 1, we conducted a field experiment with an automobile insurance company in which we varied whether ~~individuals~~ customers filling out a report of the number of miles they drove ~~the year prior~~in the past year signed a pledge of honesty ~~either~~ before or after reporting the mileage number. Our results showed that ~~people~~ customers reported having driven a higher number of miles when they signed a pledge of honor before filling out the form than those who signed at the end, ~~indicating~~ suggesting that raising the saliency of ethical standards subsequently led to more truthful self-reporting. In Studies 2 and 3, we moved from a field setting to a controlled, laboratory setting. In both studies, participants had the opportunity to sign a tax form either before or after making claims regarding their performance on a task. Providing further support for the results of the field study, the findings of Studies 2 and 3 demonstrated that ~~having the opportunity to~~ signing a pledge of honesty before having the opportunity to cheat discourages dishonesty. Finally, Study 4 examineds the underlying psychological process that links ~~-~~the act of

signing before filling out a form with the likelihood of ~~over-reporting performance~~cheating. The study included an implicit measure of ethical saliency: participants were asked to complete word fragments by using the first word that came to mind. We ~~find~~ found that the act of signing one's name prior to a task increased the saliency of~~e of participants'~~ ethical standards, and this heightened ~~ethical~~ saliency ~~explains~~ fully mediated the relationship between signing a pledge of honesty before having the opportunity to cheat and subsequent dishonest behavior.

Theoretical Contributions

Our findings contribute to the literature on how self-awareness (Duval & Wicklund, 1972) ~~how activating self-concept~~ can nudge people's behavior for the better. ~~We increased honesty in both laboratory and field settings by asking participants to sign their name prior to the start of a task. The act of signing activated a sense of self and increased the saliency of ethical standards.~~ Just as Haley and Fessler (2005) ~~promoted~~ increased sharing ~~participants to give more generous offers~~ in an anonymous economic game by introducing the subtle prime of eye-like shapes in the ~~backdrop~~ background of the ~~game~~computer screen ~~(2005)~~, we promoted honest behavior ~~in our studies~~ by leading participants to turn their moral gaze inward—to their own behavior—by asking them to sign their name under a pledge of honor prior to ~~starting the tasks~~filling out an insurance or tax form.

We also contribute to the ~~ethics~~ literature on how effectively ~~ways to~~ reduce dishonesty. By introducing a slight change ~~in~~ to the typical design of forms used for example by the IRS or insurance companies, ~~in our studies (though moving the location of the signature)~~ we observed a significant shift towards honest behavior. In particular, by moving the location of the signature from the end to the beginning of a form we found more ~~in the forms of more~~ truthful reporting, less performance inflation, less over-claiming of credits, and fewer deduction claims. A simple

nudge at the beginning—rather than at the end—of our tasks was enough to produce a meaningful increase in honesty ~~reporting~~.

Limitations and Venues for Future Research

Our studies used a minimal treatment paradigm to induce the observed effects; we shifted the requirement and location of participant signature and then observed differences in levels of cheating. An extension of this paradigm that might better speak to the potential magnitude of the effect in real-world application would be to precede the signature line with a more extensive set of rules that guide behavior. As an example, Shu, Gino, and Bazerman (2011) found that participants, who read an honor code prior to an opportunity to cheat, were less likely to cheat on the subsequent task relative to a control group who did not read an honor code (see Mazar~~,~~ Amir, and Ariely, 2008 for signing an honor code prior to an opportunity to cheat versus having no honor code and not signing anything). Among participants, who read the honor code and also signed it after reading it, cheating was in effect eliminated on the subsequent task. Future research could investigate ways to super-charge the effect of requiring a signature prior to the start of a task—possibly through bundling it with some guidelines for behavior. Framing these guidelines in terms of prohibitions ("do not" rules) versus encouragements ("do" rules) might also alter the effect of signing on the dotted line.

Implications for Practice

Our findings suggest that one effective way to reduce or eliminate unethical behavior is to ask people to sign their name *prior* rather than *after* ~~to any opportunity wherein they may~~ being tempted to ~~evade the truth~~cheat. ~~Our~~ These findings apply to a large category of behaviors that rely on honest self-report on the part of the individual—any behavior in which it is impossible for another person or organization to continually monitor.

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We believe one of the most important domains to which our findings may be applied is the domain of taxes. As the federal tax gap soars to over $150 billion each year (Morse, 2009), the amount spent on tax compliance and investigation has also seen dramatic increases. While the current structure of federal tax forms (and almost every state tax form) requires the tax-payer (or form-preparer) to sign at the end of the form, simply shifting the signature to the start of the form may help the federal and state governments close a significant portion of the tax gap~~,~~ and realize enormous savings in tax compliance and investigation costs.

Conclusion

By simply asking participants to sign on the dotted line prior to a task in which they have the opportunity to cheat rather than at the end, we found significant reductions in levels of cheating, extent of over-claiming credits, and exaggeration of deductions from taxable income. ~~We found that moving the location of a required signature from the end to the start of a self-report form promoted more honest reporting.~~ This is just a small subset of the extensive domain of behaviors, which rely on honest self-reporting on the part of the individual. An intervention as simple as shifting the signature location can lead to a meaningful difference in behavior that follows. Signing on the dotted line can shift the moral gaze inward, raise the saliency of ethical standards, and spill over to promote more ethical actions going forward.

Appendix A

Forms used in Study 2

Form 3305
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return
For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned) ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session ▶	7	

Sign Here

I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Form 3305
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... .. .. ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	5	
	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶	7	

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here

I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned) ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session ▶	7	

Appendix B

Forms used in Study 3

Form 3305
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return
For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only
T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

a. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ..... ▶ | 1 |

Part 2 In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.

a. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ..... ▶ | 2 |

b. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶ | 3 | 4 |

Part 3 Please compute your taxable income and your taxes.

a. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income..... ..... ▶ | 5 |

b. Please compute your taxes by multiplying the value specified in box 5 by 50% ..... ▶ | 6 |

Part 4 Please compute your final payment.

a. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session..... ..... ▶ | 7 |

Sign Here

I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return
For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here

I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ Date ▶ _____ Signature

Write Clearly

Name	PID	For Administrative Use Only
Address (Number, street, and room or suite number)		T ..... FF ..... FP ..... I ..... TL .....
City, State, and ZIP code		

Part 1 Please fill out the questions below to compute your taxed payment.

a. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ▶	1	

Part 2 In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.

a. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ▶	2	
	3	
b. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	4	

Part 3 Please compute your taxable income and your taxes.

a. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income ▶	5	
b. Please compute your taxes by multiplying the value specified in box 5 by 50%	6	

Part 4 Please compute your final payment.

a. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session ▶	7	

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Commented [NM6]: Some references are missing/incomplete

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Figure Captions

Figure 1. Reported and actual performance on the matrix search task by condition, Study 2.

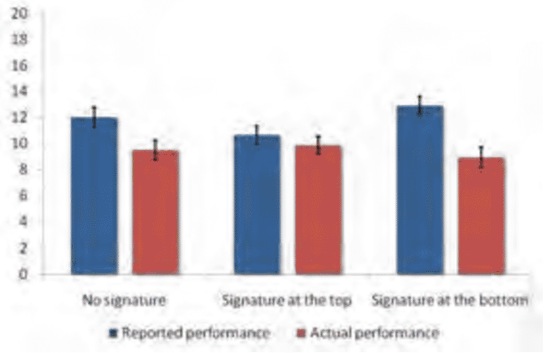


Figure 2. Reported deductions by condition, Study 2.

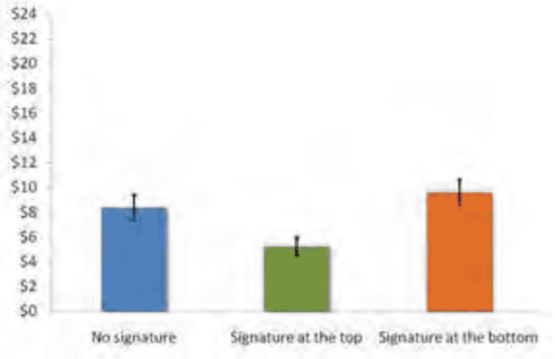
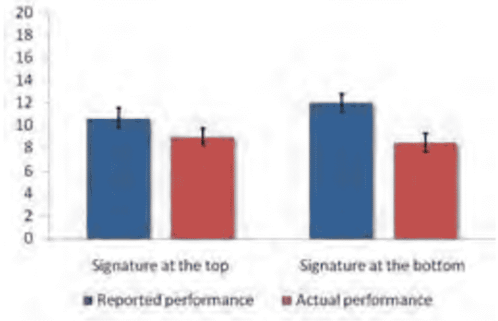


Figure 3. Reported and actual performance on the matrix search task by condition, Study 3.



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Running Head: MAKING ETHICS SALIENT

Making Ethics Salient:

Signing on the Dotted Line Turns Moral Gaze Inward

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Abstract

Although people care about morality and being seen as ethical by others, they sometimes give in to temptation to behave dishonestly when beneficial to them. Prior work has focused primarily on the psychological and situational forces that swing people's moral compass. The current paper builds upon this body of research to develop an easily-implementable method to discourage dishonesty: signing a pledge of honesty prior rather than after having the opportunity to cheat. Using both field and lab experiments, we find that signing a pledge of honesty prior to having the opportunity to cheat raises the saliency of ethics and morality, which discourages cheating. Implications for both research on behavioral ethics as well as practice are discussed.

Keywords: Signing; Ethics; Dishonesty; Morality; Saliency; Cheating

In December 2010, Timothy Schetelich—who had been working as a Certified Public Accountant in Springfield (USA) for years—pleaded guilty to preparing false tax returns for several clients, which earned him higher commissions. Over the years, he claimed some of them had legitimate business expenses when in fact they did not own a business, or he fabricated and inflated deductions for expenses to obtain refunds the clients were not entitled to receive. This case is just one example of the many situations in which people cross ethical boundaries to advance their self-interest. In addition to individual taxpayers, most businesses regularly cheat on their taxes (Morse, 2009), and this unpaid tax amounts to roughly $150 billion every year. Similarly, other forms of unethical behavior have been covered in the news in recent years, including stories of executives inflating their business expenses, employees stealing from their own employers, professionals overstating their hours, and managers inflating performance to superiors to mention just a few (Mazar & Ariely, 2006; Gino & Pierce, 2010).

The pervasiveness of these common unethical practices in organizations and society more broadly has generated considerable interest among scholars in a variety of disciplines, including organizational behavior, psychology, philosophy, and economics (e.g. Brown & Treviño, 2006; Gneezy, 2005; Haidt, 2001; Nichols & Knobe, 2007; Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2011; Tenbrunsel & Smith-Crowe, 2008; Treviño, Weaver, & Reynolds, 2006). Together the work of these scholars suggests that there are at least two types of individuals: those who only care about their self-interest and therefore will act unethically if beneficial and not too costly to them (e.g., Brief, Buttram, & Dukerick, 2001; Lewicki, Poland, Minton, & Sheppard, 1997), and those who do care about morality but find ways to permit unethical behavior without violating their moral standards (e.g., Ayal & Gino, 2011; Mazar, Amir, & Ariely, 2008; Tenbrunsel et al., 2011). In the latter case, even good people can find themselves crossing ethical

boundaries. Factors such as ambiguity, general cultural orientations, as well as surprisingly subtle situational influences can facilitate their moral transgressions. For instance, Schweitzer and Hsee (2002) as well as Baumeister (1998) have shown that when people engage in ambiguous actions, they can and often do categorize them in positive terms, thereby avoiding the need to negatively update their moral self-image. In related work, Mazar and Aggarwal (2011) reported that collectivism promotes bribery by mitigating the perceived responsibility for one's actions, and Zhong, Bohns and Gino (2010) found that ambient darkness can facilitate people's transgressions by mitigating illusory anonymity.

To date, most of this research has focused primarily on the motives and characteristics of the wrongdoers or on the organizational and environmental factors that can influence one's actions. Building on this body of work, the goal of the current paper is to develop and test an efficient and effective implementation of a measure to reduce or eliminate unethical behaviors—particularly behaviors that rely on self-monitoring in lieu of societal restraints. Filing taxes, claiming business expenses, reporting billable hours, and advertising a used product are all examples of such behaviors that rely on truthful self-reports. These behaviors assume full honesty on the individual level; any departure can lead to significant economic losses. Thus, it is particularly important to identify practical interventions that promote honesty in domains that rely on truthful self-reports.

This paper tests the implementation of one specific measure of promoting honest self-reporting: making ethical standards salient before facing a temptation to be dishonest. We propose a subtle but specific implementation to raise ethical saliency: signing one's name before rather than after filling out, for example, and insurance or tax form, as is the current general practice. In both field and laboratory contexts, we study the effect of signing one's name before

versus after an opportunity to cheat on the saliency of one's own moral standards and displayed dishonesty. There are many domains in which signing a statement to confirm the truthfulness of a report is already required, such as insurances or taxes. However, typically the signature is requested after—rather than prior to—reporting. We suggest that simply moving the signature from the bottom to the top of a form will bring one's moral standards into focus, and subsequently promote honesty while discouraging cheating.

The Impact of Signing on the Dotted Line

We hypothesize that signing on the dotted line increases attention to the self and one's own ethical standards, which, in turn, change people's behavior. Previous research has shown that even subtle cues can activate the self and lead to surprisingly powerful effects on consequent behavior. For example, when playing an anonymous economic game, people are more generous when there is even the nuanced presence of eye-like shapes in the computer background (Haley & Fessler, 2005; Rigdon, Ishii, Watabe, Kitayama, 2009). In a more naturalistic setting, researchers have examined the effect of an image of a pair of eyes on the amount of money people put into a pay-on-your-honor cash box when purchasing coffee. When eyes were displayed on the contributions box instead of flowers, nearly three times the amount of money was collected (Bateson, Nettle, & Roberts, 2006). Similarly, Mazar, Amir, and Ariely (2008) found that asking individuals to recall the Ten Commandments or sign and honor code were less likely to cheat and earn undeserved money when self-reporting their performance than those who had to recall then books or that were not asked to sign an honor code (see also Shu, Gino, & Bazerman, 2011 for signing versus reading an honor code).

These papers suggest that their manipulations (eyes, honor code, etc.) made ethics more salient. And in such cases people would pay greater attention to their moral standards and would be more likely to scrutinize the ethicality of their own behavior. As a consequence, moral

saliency decreases people's tendency to engage in dishonest acts and increases the rigidity of their judgments of ethicality. Yet, the effectiveness of these manipulations in making morality salient was not tested directly but assumed by observing differences in unethical behavior following the various manipulations. In the current work, instead, we test this link directly by employing an implicit measure of ethical saliency.

Our work differs from prior work on the effects of moral saliency on discouraging dishonesty also in another important way. Although prior work has focused on external factors that raise the saliency of ethical standards (such as the presence of a pair of eyes or of an honor code), here we focus on a manipulation that raises the saliency of one's own sense of moral self in line with Duval & Wicklund's (1972) theory of objective self-awareness. Objective self-awareness theory is concerned with the self-reflexive quality of the consciousness (Duval & Wicklund, 1972). "When attention is directed inward and the individual's consciousness is focused on himself, he is the object of his own consciousness – hence 'objective' self awareness" (Duval & Wicklund, 1972, p. 2). This is contrasted with "subjective self-awareness" that results when attention is directed away from the self and the person "experiences himself as the source of perception and action" (Duval & Wicklund, 1972, p. 3).

In its original formulation, the theory assumed that the orientation of conscious attention was the essence of self-evaluation. Focusing attention on the self brought about objective self-awareness, which initiated an automatic comparison of the self against standards. The self was defined very broadly as the person's knowledge of the person. A standard was "defined as a mental representation of correct behavior, attitudes, and traits ... All of the standards of correctness taken together define what a 'correct' person is" (Duval & Wicklund, 1972, pp. 3, 4). This simple system consisting of self, standards, and attentional focus was assumed to operate

according to gestalt consistency principles (Heider, 1960). Whenever a discrepancy between self and standards occurred, the decision maker experienced negative affect and, because of this aversive state, she was motivated to restore consistency.

Building upon the research that the self is malleable (see e.g., Shih, Pittinsky, and Ambady, 1999) and prone to even subtle primes in the environment, we examine a specific type of prime that can be easily implemented in various real-world context to affect individuals' ethical conduct and aim to provide evidence of the process it evokes: signing a pledge of honesty. We test that the act of signing one's name before rather than after a self-reported performance brings into focus one's moral compass and ethical standards, thus discouraging dishonest actions.

To summarize, we propose and test the following hypotheses:

Hypothesis 1. Signing one's name prior to a self-reporting task will promote more honest reporting relative to signing one's name after the task.

Hypothesis 2. Signing one's name prior to a self-reporting task increases the saliency of moral standards.

Hypothesis 3. Heightened saliency of moral standards will mediate the effect of signing one's name on honest self-reporting.

Overview of the Research

We tested these hypotheses in four studies in which participants had the opportunity to cheat through dishonest self-reporting. In each study, we varied when participants signed their name—prior to or after the task—to change the time at which moral standards were made salient to participants. That is, participants either signed before or after having the opportunity to cheat.

In Study 1, we conducted a field experiment in collaboration with an automobile insurance company, and found signing prior to reporting produced significant differences in the number of miles participants reported driving during the prior year – a noteworthy change in real

behavior with substantial consequences for the insurance company. In Studies 2 and 3, we replicated the same findings in a controlled laboratory environment. These studies show that signing one's name prior to the opportunity to cheat encourages ethical behavior. Finally, Study 4 examines the psychological mechanism underlying the relationship between signing one's name and promotion of honest reporting, and shows that the act of signing heightens awareness of ethical standards.

Study 1: A Field Experiment with an Automobile Insurance

We first tested the effect of signing one's name before having the opportunity to behave dishonestly in a field study involving an automobile insurance.

Procedure

We ran a field experiment with an insurance company in the United States in which we manipulated the automobile policy review form that was sent out to customers at the end of the year. The review form asked customers to record the exact current odometer mileage of all cars that were currently registered to them and/or their spouse or domestic partner, in addition to other information. We randomly assigned customers to receive a form that either asked them at the top (i.e., before filling out the form) or at the bottom (i.e., after having completed the form) of the form to sign the following pledge of honesty: "I promise that the information I am providing is true". Otherwise, the forms were identical.

Completed forms were received from 13,488 policies for a total of 20,741 cars. A single policy could cover up to four cars; 52% of policies had one car, 42% had two cars, 5% had three cars and less than 0.3% had four cars. We compared the difference between the current odometer mileage as indicated in the manipulated forms to the odometer mileage that customers had indicated the year before. If a policy had more than one car, we averaged that difference. The

mileage difference represents the annual usage of a car, which in turn influences a customer's annual insurance costs. The fewer miles driven, the less insurance costs. Thus, when filling out the automobile policy review form, customers faced a dilemma between truthfully indicating the current odometer mileage and dishonestly indicating a lower mileage in order to reduce their insurance premium.

Since we hypothesized that signing a pledge of honor before a self-reporting task raises the saliency of people's ethical standards, we expected that customers, who signed the pledge of honor before filling out the form, would be more truthful and thus report higher usage than those who signed the pledge of honor at the end.

Results and Discussion

As expected, controlling for the number of cars per policy (F[1,13485]=2.184, p=.14) the average annual usage per car was significantly higher among customers who signed the pledge of honor at the beginning of the form (M=26,098.4, SD=12,253.4) than those who signed the pledge of honor at the end of the form (M=23,670.6, SD=12,621.4; F[1,13485]=128.631, p<.001). The annual difference between our two treatments was on average 2,427.8 miles per car. Note that the results also hold for the odometer difference for the first car only (signing at the beginning: M=26,204.8, SD=14,226.3, signing at the end: M=23,622.5, SD=14,505.8; t[13486]=10.438, p<.001).

These results provide support for our first hypothesis, which suggests that raising the saliency of ethical standards by asking people to sign a pledge of honor before rather than after a self-reporting task lowers the likelihood of cheating through misreporting the number of miles driven over the course of the year. Using a field study, we were able to demonstrate that just a

simple change in the location of one's own signature can greatly influence people's likelihood to cheat by misreporting information to advance their own self-interest.

Study 2: A Lab Experiment with Tax Returns

To test the robustness of our findings, we conducted a second study in the laboratory using a similar signing manipulation. In this study, we also added a control condition to examine the actual effect of signing: whether signing prior to the opportunity to cheat encourages honesty, or whether signing afterwards encourages unethical behavior.

Method

Participants. One-hundred-and-one students and employees at local universities in the Southeastern United States (M_{age}=22.10, SD=4.98; 45% male; 82% students) completed the study for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the study.

Design and Procedure. Participants were randomly assigned to one of three conditions: 1) Signature at the top of the form (i.e. before filling out a form); 2) Signature at the bottom of the form (i.e. after filling out a form); or 3) No signature (control condition). At the beginning of each session, participants were given instructions to the study. The instructions informed them that they would first complete a problem-solving task under time pressure (i.e., they would have five minutes to complete the task), and that the experimenter would keep track of the time. In addition to providing information about the payment for the problem-solving task, the instructions informed participants that upon completion of this task, they would be asked to compute their performance and then fill out a payment form. The instructions also included the following information, "For the problem-solving task, you will be paid a higher amount than

what we usually pay participants in a regular study because you will be taxed on your earnings. You will receive more details after the problem-solving task."

Problem-solving task. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; based on Mazar et al., 2008) and a collection slip on which participants later reported their performance in this part of the study. Participants were told that they would have five minutes to find two numbers in each matrix that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment.

Payment form. After the problem-solving task, participants went to a second room to fill out a payment form. The form we used was based on a typical tax return form. We varied whether participants were asked to sign a pledge of honesty at the top or at the bottom of the form (see Appendix A). Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their estimated cost of commute. These costs were "credited" to their post-tax earnings from the matrix search task to compute their final payment.

The instructions read: "We would like to compensate participants for extra expenses they have incurred to participate in this session." We included two costs: 1) Time to travel to the lab

at $0.10 per minute (up to 2 hours or $12 maximum), and monetary cost of commute (up to $12 maximum).

Payment structure. Given the features of the study, participants could make a total of $42—an amount which breaks down as follows: $2 show up fee, $20 on matrix task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Opportunity to cheat. The study was designed such that participants could cheat by overstating their "income" on the payment form (i.e., they could overstate their performance on the matrix search task) and by inflating the expenses they incurred in order to participate in the study. All participants' matrix worksheets were identical with the exception of one digit (in one number of one matrix) which was unique to each individual's work station—a difference that was completely imperceptible to participants. When participants received payment after completing the first part of the study, the experimenter gave them a payment form and asked each participant to go to a second room to fill it out and ask the other experimenter questions if they had any. The payment form included a one digit identifier as well (one digit in the top right of the form, in the code OMB No. 1555-0111). As a result, at the end of each session, we were able to compare actual performance on the matrix search task and reported performance on the payment form. If those numbers differed for an individual, that difference represented that individual's level of cheating.

Results

First, we examined the percentage of participants who cheated by overstating their performance on the matrix task when asked to report it on the payment form. This percentage varied across conditions, $\chi^2(2, N=101)=12.58$, $p=.002$: The number of cheaters was lowest in the

signature-at-the-top condition (37%, 13 out of 35), higher in the signature-at-the-bottom condition (79%, 26 out of 33), and somewhat in between those two for the no-signature condition (64%, 21 out of 33).

Both actual performance in the matrix search task and reported performance for the same task as specified by the payment form are depicted in Figure 1 (by condition). As can be seen, the number of matrices over-reported varied by condition, $F(2,98)=9.21$, $p<.001$, $\eta^2=.16$: it was lowest in the signature-at-the-top condition ($M=0.77$, $SD=1.44$) and higher in the signature-at-the-bottom condition ($M=3.94$, $SD=4.07$; $p<.001$) and in the no-signature condition ($M=2.52$, $SD=3.12$; $p<.05$). The difference between these two last conditions was only marginally significant ($p<.07$). Within-subjects analyses using the difference between reported and actual performance revealed the same pattern of results.

The credits for extra expenses that participants claimed in the tax forms varied as well significantly by condition, $F(2,98)=5.63$, $p<.01$, $\eta^2=.10$ (see Figure 2). Participants claimed the least expenses in the signature-at-the-top condition ($M=5.27$, $SD=4.43$), and more expenses in the signature-at-the-bottom ($M=9.62$, $SD=6.20$; $p<.01$) and in the no-signature conditions ($M=8.45$, $SD=5.92$; $p<.05$). The difference between these two latter conditions was not significant ($p=.39$).

Discussion

The results of Study 2 provide further evidence for our main hypothesis that making ethics salient through signing one's name prior to a task leads to lower levels of cheating. Study 2 also included a control condition in which participants did not provide their signature. Our results indicate that our findings were driven by the signing-at-the-top condition: signing prior to a self-reporting task promoted honest reporting but signing afterwards did not promote cheating.

Study 3: Increased Saliency of Ethical Standards

Thus far, we have demonstrated that signing one's name before having an opportunity to cheat discourages unethical behavior. However, we made an implicit assumption: that signing before the opportunity to cheat rather than afterwards is more likely to raise the saliency of moral standards. We test this hypothesis directly in our third study by measuring the extent to which signing before rather than after the opportunity to cheat increased the accessibility of words related to ethics and morality. Following prior research measuring implicit cognitive processes (Bassili & Smith, 1986; Tulving, Schacter, & Stark, 1982), we used a word-completion task in which participants were asked to complete various word fragments with the first letters that came to mind.

Method

Design and Procedure. Study 3 employed one between-subjects factor with two levels: signature at the top, that is before filling out a form, versus at the bottom, that is, after filling out a form. The study employed the same task and procedure of Study 2 but varied the tax forms participants completed. The tax forms were modified such that they mimicked the flow of actual tax reporting practices in the United States. Deductions are first subtracted from gross income to compute taxable income; then taxes are paid on this adjusted amount (see Appendix B).

In addition, participants were asked to complete a word-completion task as their final task in the study. The task instructions informed participants that they would have to convert word fragments into meaningful words. Participants received a list of six word fragments with letters missing and were asked to fill in the blanks to make complete words by using the first word that came to mind. Three of these word-fragments (_ _ R A L, _ I _ _ _ E, and E _ _ _ C _ _) could

be completed as ethics-related words (moral, virtue, and ethical) or as ethics-neutral words (e.g., viral, tissue, and effects).

Participants. Sixty students and employees at local universities in the Southeastern United States (M_{age}=21.50, SD=2.27; 48% male; 90% students) completed the study for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Results

Level of cheating. We first examined the percentage of participants who cheated by overstating their performance on the matrix task when filling out the payment form. This percentage was lower in the signature-at-the-top condition (37%, 11 out of 30) than in the signature-at-the-bottom condition (63%, 19 out of 30), $\chi^2(1, N=60)=4.27$, $p<.04$.

Figure 3 depicts actual performance on the matrix task and reported performance as reported by participants on the payment form, by condition. The difference between the reported and actual performance on the matrix task was our proxy for cheating. This difference was lower in the signature-at-the-top condition (M=1.67, SD=2.78) than in the signature-at-the-bottom condition (M=3.57, SD=4.19), $t(58)=-2.07$, $p<.05$. Within-subjects analyses using both reported and actual performance revealed the same pattern of results.

The deductions participants reported in the tax forms follow the same pattern and vary significantly by condition, $F(1,58)=7.76$, $p<.01$, $\eta^2=.12$: they were lower in the signature-at-the-top condition (M=3.23, SD=2.73) than in the signature-at-the-bottom condition (M=7.06, SD=7.02).

Word-fragment task. As we predicted, participants who signed the honesty pledge before having the opportunity to cheat generated more ethics-related words (M=1.40, SD=1.04) than did

those who signed at the bottom of the form (M=0.87, SD=0.97), $F(1,58)=4.22$, $p<.05$, $\eta^2=.07$, suggesting that the act of signing prior to starting the task increased the accessibility of ethics-related concepts.

Discussion

Using an implicit measure of ethical saliency, our third study shows that signing before having the opportunity to cheat raises the saliency of moral standards compared to signing after having had the opportunity to cheat. Consistent with our hypotheses, raising ethical saliency discouraged cheating.

Study 4: Ethical Saliency and Reduced Cheating

We conducted a fourth study to more carefully examine the role of ethical saliency on cheating. In addition, to extend the generalizability of our findings, in Study 4 we employed a different cheating-task.

Method

Design and procedure. Participants were randomly assigned to one of two conditions: Signature-first versus control. Across both conditions, the instructions informed them that we were interested in people's performance under pressure across a variety of tasks. For this particular study, they would be asked to answer a 20-question general knowledge test of medium difficulty (e.g., "How many U.S. states border Mexico?", "In which U.S. state is Mount Rushmore located?"), and that they would receive $1 for each correct question (in addition to a $2 show-up fee). Participants were given 15 minutes to answer the 20 questions. Once the fifteen minutes were over, the experimenter distributed a set of materials consisting first, of the word-fragment task employed in Study 3, followed by an answer sheet with the correct answers to the questions, and finally a collection slip so that participants could report their performance after

checking their answers. Participants were asked to read and fill out the set of materials in the given order, that is, they filled out the word fragment task prior to checking their answers and reporting their performance on the collection slip.

Half of the participants received an extra page on top of this set of materials, which they were asked to read before solving the word-fragment task. The page included a pledge of honesty participants were asked to sign: "I promise that I will report information about my performance on the trivia test truthfully." (signature-first condition). The remaining half of the participants did not receive this extra page (control). As we ascertained in Study 2, it is signing before a task that promotes honest reporting. We hypothesized that those, who received and signed the pledge of honesty, would be more likely to report their performance truthfully, and that signing the pledge would lead participants to complete the word-fragment task with a higher number of ethics-related words.

Participants. Eighty-two college and graduate students at local universities in the Southeastern United States (M_{age}=22, SD=3.11; 52% male) completed the study for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the study.

Results and Discussion

Same as in the previous studies, we computed the difference between self-reported performance and actual performance on the general-knowledge task by matching participants' unique study IDs that were denoted on each survey/form. This difference score served as our proxy for cheating. Positive difference-scores indicated that participants over-reported their performance and cheated on the task so that they could make more money.

When examining the performance difference-scores on the trivia test, we found that in comparison to the control condition cheating was significantly reduced in the signature first-condition (M=0.51, SD=1.42, vs. M=1.93, SD=2.15), $t(80)=3.52$, $p=.001$. Supporting these results, the percentage of participants, who overstated their performance, was higher in the control condition than in the signature-first condition (53.7% [22/41] vs. 12.2% [5/41]), $\chi^2(1, N=82)=15.96$, $p<.001$).

Signing before the opportunity to over-report performance also influenced the number of ethics-related concepts participants came up with in the word-fragment task. Participants in the signature first-condition found more ethics-related words (M=1.44, SD=0.95) than did those in the control condition (M=0.98, SD=0.88), $F(1,80)=5.25$, $p<.03$, $\eta^2=.06$.

Finally, we tested whether ethics-related concepts (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating on the trivia task. Both condition and the number of ethics-related concepts were entered into a linear regression model predicting extent of cheating. This analysis revealed that the effect of condition was significantly reduced (from $\beta=-.366$, $p=.001$ to $\beta=-.294$, $p<.01$), whereas the number of ethics-related concepts was a significant predictor of cheating ($\beta=-.290$, $p<.01$). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-.67, -.01), suggesting significant mediation. Thus, consistent with our prediction, the number of ethics-related concepts significantly mediated the relationship between our manipulation (i.e. signature-first) and dishonest behavior.

Together these results provide strong support for the predicted inverse relationship between ethical saliency and cheating.

General Discussion

Across four studies, we consistently found that requiring one's signature before facing a temptation to cheat is an effective mean to discourage dishonesty because it makes ethics more salient. In Study 1, we conducted a field experiment with an automobile insurance company in which we varied whether customers filling out a report of the number of miles they drove in the past year signed a pledge of honesty before or after reporting the mileage number. Our results showed that customers reported having driven a higher number of miles when they signed a pledge of honor before filling out the form than those who signed at the end, suggesting that raising the saliency of ethical standards subsequently led to more truthful self-reporting. The difference in reported miles that this subtle manipulation produced was quite striking: customers reported driving about 2,400 per car more when they signed at the top of the form rather than at the bottom, even when controlling for other factors that may have influenced this self-reported number.

In Studies 2 and 3, we moved from a field setting to a controlled, laboratory setting. In both studies, participants had the opportunity to sign a tax form either before or after making claims regarding their performance on a task. Providing further support for the results of the field study, the findings of Studies 2 and 3 demonstrated that signing a pledge of honesty before having the opportunity to cheat discourages dishonesty.

Finally, Study 4 examined the underlying psychological process that links the act of signing before filling out a form with the likelihood of cheating. The study included an implicit measure of ethical saliency: participants were asked to complete word fragments by using the

first word that came to mind. We found that the act of signing one's name prior to a task increased the saliency of ethical standards, and this heightened saliency fully mediated the relationship between signing a pledge of honesty before having the opportunity to cheat and subsequent dishonest behavior.

Theoretical Contributions

The contribution of the present research in threefold. First, our findings contribute to the literature on how self-awareness (Duval & Wicklund, 1972) can nudge people's behavior for the better. We increased honesty in both laboratory and field settings by asking participants to sign their name next to a pledge of honesty and by varying when they provided their signature (before or after having the opportunity to cheat). The act of signing increased the saliency of their ethical standards, and, as a result, influenced their unethical behavior. Just as Haley and Fessler (2005) increased sharing in an anonymous economic game by introducing the subtle prime of eye-like shapes in the background of the computer screen, we promoted honest behavior by leading participants to turn their moral gaze inward—to their own behavior—by asking them to sign their name under a pledge of honor prior to filling out an insurance or tax form.

Second, the present work contributes to existing research on behavioral ethics that recognizes the importance of nonconscious influences on unethical behavior (e.g., Bazerman & Banaji, 2004; Chugh, 2004; Kay, Wheeler, Bargh, & Ross, 2004; Reynolds, Leavitt, & DeCelles, 2010; Tenbrunsel et al., 2011). To date, this research has focused primarily on how automatic processes exacerbate unethical behavior. Extending this body of work, our studies have a preventive focus and identify subtle ways of raising the saliency of ethical standards beyond people's awareness. Our research shows that the very same automatic processes that unconsciously lead a person to behave dishonestly may be used to encourage ethical behavior

when individuals are facing the temptation to cheat. Our findings are important in light of prior research on the use of explicit interventions such as introducing a code of ethics (Weaver, Treviño, & Cochran, 1999) to discourage dishonesty. The present work highlights the role that subtle interventions can have in producing similarly powerful results, even without individuals' conscious awareness.

Finally, our research also contributes to the literature on how effectively reduce dishonesty. By introducing a slight change to the typical design of forms used for example by the IRS or insurance companies, we observed a significant shift towards honest behavior. In particular, by moving the location of the signature from the end to the beginning of a form we found more truthful reporting, less performance inflation, less over-claiming of credits, and fewer deduction claims. A simple nudge at the beginning—rather than at the end—of our tasks was enough to produce a meaningful increase in honesty.

Limitations and Venues for Future Research

Our studies used a minimal treatment paradigm to induce the observed effects; we shifted the requirement and location of participant signature and then observed differences in levels of cheating. An extension of this paradigm that might better speak to the potential magnitude of the effect in real-world application would be to precede the signature line with a more extensive set of rules that guide behavior. As an example, Shu, Gino, and Bazerman (2011) found that participants, who read an honor code prior to an opportunity to cheat, were less likely to cheat on the subsequent task relative to a control group who did not read an honor code (see Mazar et al., 2008 for signing an honor code prior to an opportunity to cheat versus having no honor code and not signing anything). Among participants, who read the honor code and also signed it after reading it, cheating was in effect eliminated on the subsequent task. Future research could

investigate ways to super-charge the effect of requiring a signature prior to the start of a task—possibly through bundling it with some guidelines for behavior. Framing these guidelines in terms of prohibitions ("do not" rules) versus encouragements ("do" rules) might also alter the effect of signing on the dotted line.

Implications for Practice

Our findings suggest that one effective way to reduce or eliminate unethical behavior is to ask people to sign their name *prior* rather than *after* being tempted to cheat. These findings apply to a large category of behaviors that rely on honest self-report on the part of the individual—any behavior in which it is impossible for another person or organization to continually monitor.

We believe one of the most important domains to which our findings may be applied is the domain of taxes. As the federal tax gap soars to over $150 billion each year (Morse, 2009), the amount spent on tax compliance and investigation has also seen dramatic increases. While the current structure of federal tax forms (and almost every state tax form) requires the tax-payer (or form-preparer) to sign at the end of the form, simply shifting the signature to the start of the form may help the federal and state governments close a significant portion of the tax gap and realize enormous savings in tax compliance and investigation costs.

Conclusion

By simply asking participants to sign on the dotted line prior to a task in which they have the opportunity to cheat rather than at the end, we found significant reductions in levels of cheating, extent of over-claiming credits, and exaggeration of deductions from taxable income. This is just a small subset of the extensive domain of behaviors, which rely on honest self-reporting on the part of the individual. An intervention as simple as shifting the signature

location can lead to a meaningful difference in behavior that follows. Signing on the dotted line can shift the moral gaze inward, raise the saliency of ethical standards, and spill over to promote more ethical actions going forward.

Appendix A

Forms used in Study 2

Form **3305** (Rev. June 2010) Center for Decision Research	**Research Study Tax Return** For the period June 1, 2010, through August 30, 2010	Keep a copy of this return for your records. OMB No. 1555-0111

Write Clearly	Name	PID	For Administrative Use Only
	Address (Number, street, and room or suite number)		T ..... FF ..... FP ..... I ..... TL .....
	City, State, and ZIP code		

Part 1	Please fill out the questions below to compute your taxed payment.		
1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶		1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... ..... ▶		2	
		3	
Part 2	Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.		
1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶		4	
		5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶		6	
Part 3	Please compute your final payment.		
1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶		7	

Sign Here	I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete. ▶ _____ Date ▶ _____ Signature

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name	PID	For Administrative Use Only
Address (Number, street, and room or suite number)		T .....
		FF .....
		FP .....
City, State, and ZIP code		I .....
		TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... ..... ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶	7	

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here

I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ ▶ _____ Signature
Date

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)..... ..... ▶	2	
	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
	5	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today's session..... ..... ▶	7	

Appendix B

Forms used in Study 3

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return
For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

a. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ..... ▶ | 1 |

Part 2 In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.

a. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ..... ▶ | 2 |

b. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶ | 3 |

| 4 |

Part 3 Please compute your taxable income and your taxes.

a. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income..... ..... ▶ | 5 |

b. Please compute your taxes by multiplying the value specified in box 5 by 50% | 6 |

Part 4 Please compute your final payment.

a. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session..... ▶ | 7 |

Sign Here

I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ ▶ _____ Signature
Date

Form **3305**
(Rev. June 2010)
Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here

I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

▶ _____ ▶ _____ Signature
Date

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....
FF .....
FP .....
I .....
TL .....

Part 1 Please fill out the questions below to compute your taxed payment.

a. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ▶	1	

Part 2 In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.

a. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ▶	2	
	3	
b. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	4	

Part 3 Please compute your taxable income and your taxes.

a. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income ▶	5	
b. Please compute your taxes by multiplying the value specified in box 5 by 50%	6	

Part 4 Please compute your final payment.

a. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session ▶	7	

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Figure Captions

Figure 1. Reported and actual performance on the matrix search task by condition, Study 2.

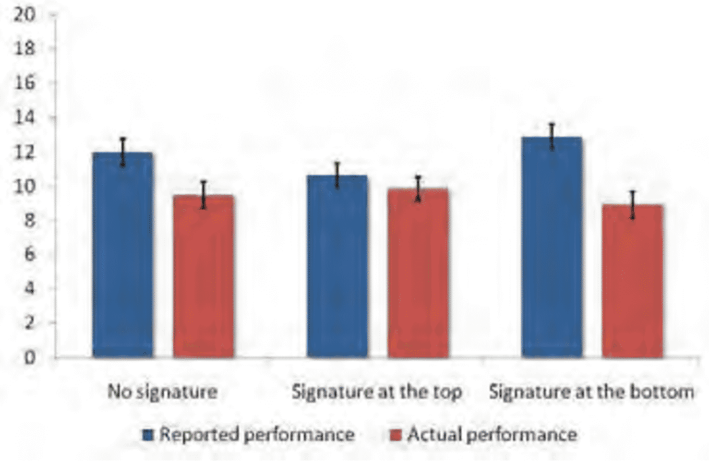


Figure 2. Reported deductions by condition, Study 2.

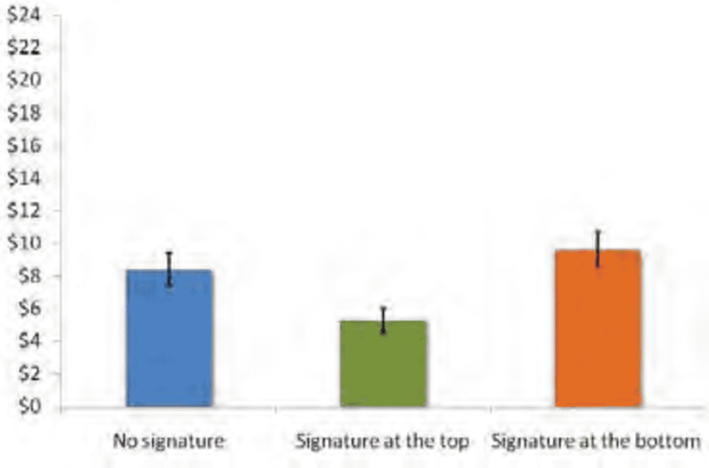
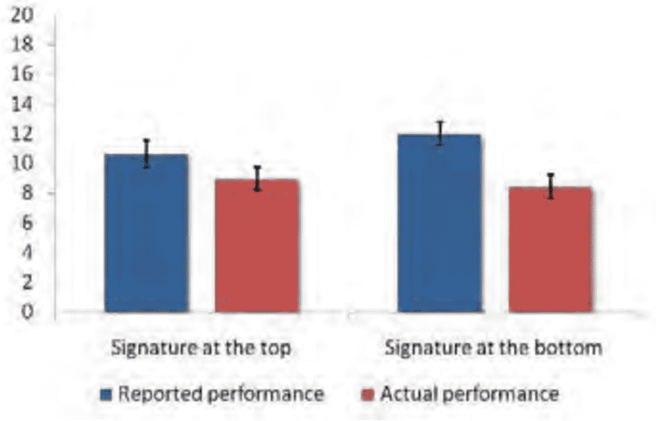


Figure 3. Reported and actual performance on the matrix search task by condition, Study 3.



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Running Head: MAKING ETHICS SALIENT AT THE RIGHT TIME

When to Sign on the Dotted Line?

Signing First

~~Making Ethics Salient:~~

~~Signing on the Dotted Line at the Beginning instead of at the End~~ Decreases Dishonest Self-Reports~~y~~

Commented [FG1]: Let s try to come up with something that is less wordy here...

Commented [NM2]: What about something like this?

Lisa Shu[1]

Nina Mazar[2]

Francesca Gino[1]

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[redacted]

Abstract

Many business and governmental interactions are based upon trust and the assumption that all actors comply with social and moral norms. The proof of compliance is typically given by signing a statement or pledge of honor at the end of a self-report such as after filling out annual tax return or insurance policy review forms. Yet, even if people care about morality and want to be seen as ethical by others, they sometimes transgress when beneficial to them despite signing on the dotted line – a costly endeavor to economies across the globe. The current paper focuses on testing an easy-to-implement method to discourage dishonesty: signing a pledge of honor at the beginning rather than, as is common practice, at the end of a self-report, which provides a temptation to cheat. Using both field and lab experiments, we find that signing a pledge of honor at the beginning, that is, before rather than after having faced the opportunity to cheat raises the saliency of ethics and morality, with significant reductions in dishonesty.

Keywords: Signing; Signature; Ethics; Dishonesty; Morality; Saliency; Cheating

In December 2010, Timothy Schetelich—who had been working as a Certified Public Accountant in Springfield (USA) for years—pleaded guilty to preparing false tax returns for several clients, which earned him higher commissions. Over the years, he claimed some of them had legitimate business expenses when in fact they did not own a business, or he fabricated and inflated deductions for expenses to obtain refunds the clients were not entitled to receive. This case, unfortunately, is not an exception. Most businesses regularly cheat on their taxes (Morse, 2009), and these unpaid taxes have been estimated to amount to roughly $150 billion every year —an astonishing cost to the economy but not even half of the costs incurred due to non-compliance of individual tax payers (Herman, 2005). Similar forms of unethical behavior include overstating insurance claims, inflating business expenses, and overstating billable hours, to mention just a few (Mazar & Ariely, 2006; Gino & Pierce, 2010).

In each of these examples, businesses or governments rely upon individuals' honest self-reports in the face of temptations to transgress. The common practice to ensure the honesty of such self-reports is to ask individuals to sign a statement or pledge of honor at the end of their self-report. As the examples above suggest, however, this practice appears to be insufficient in countering self-interested motivations to falsify numbers. In this paper, we propose and test the idea that a small change in the common practice could lead to significant improvements in compliance: simply moving the signing of the statement of honor from the end to the beginning of a self-report should bring one's moral standards into focus and subsequently promote honesty while discouraging cheating.

Research on Dishonesty

The pervasiveness of unethical practices in organizations and society more broadly has generated considerable interest among scholars in a variety of disciplines, including organizational behavior, psychology, philosophy, and economics (e.g. Brown & Treviño, 2006;

Gneezy, 2005; Haidt, 2001; Nichols & Knobe, 2007; Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2011; Tenbrunsel & Smith-Crowe, 2008; Treviño, Weaver, & Reynolds, 2006). Together the work of these scholars suggests that there are at least two types of individuals: those who only care about their self-interest and therefore will act unethically if beneficial and not too costly to them (e.g., Brief, Buttram, & Dukerick, 2001; Lewicki, Poland, Minton, & Sheppard, 1997), and those who do care about morality but find ways to permit limited amount of unethical behavior without violating their moral standards (e.g., Ayal & Gino, 2011; Mazar, Amir, & Ariely, 2008; Tenbrunsel et al., 2011). The majority of people fall into the latter category (Aquino and Reed, 2002), and factors such as ambiguity, cultural orientations, and surprisingly subtle situational influences can facilitate their moral transgressions. For instance, Schweitzer and Hsee (2002) as well as Baumeister (1998) have shown that people will present ambiguous information such that it benefits their self-interest (even if it harms others) without any negative consequences to their moral self-image. In related work, Mazar and Aggarwal (2011) reported that collectivism promotes bribery by mitigating the perceived responsibility for one's actions, and Zhong, Bohns and Gino (2010) found that ambient darkness can facilitate people's transgressions by increasing a sense of anonymity.

To date, most of this research has focused primarily on the motives and characteristics of the wrongdoers or on the organizational and environmental factors that can influence one's actions. Building on this body of work, the goal of the current paper is to develop and test an efficient and effective implementation of a measure to reduce or eliminate unethical behaviors—particularly behaviors that rely on self-monitoring in lieu of societal restraints. Filing taxes, claiming business expenses, or reporting billable hours are all examples of such behaviors that rely on truthful self-reports. These behaviors assume full honesty on the individual level; any

departure can lead to significant economic losses. Thus, it is seems important to identify practical interventions that promote honesty in domains that rely on truthful self-reports (Amir et al., 2005).

Recent papers have started to identify such interventions. For example, Mazar, Amir, and Ariely (2008) asked students to sign an honor code before participating in a task that offered the opportunity to misreport one's performance in order to earn more money in an experiment. While the students overstated their performance in the absence of an honor code, the authors observed no cheating when students were asked to read and sign an honor code at the beginning of the task. Building on this finding, Shu, Gino, and Bazerman (2011) compared people's self-reports when they simply read or did not read an honor code before participating in a task that offered the opportunity to overstate one's performance to earn more money. Similarly, the authors found that participants, who read an honor code prior to an opportunity to cheat, were less likely to cheat on the subsequent task relative to a control group, who did not read an honor code. While these findings identify interesting behavioral interventions to curtail dishonesty: introducing a reminder of a code of conduct in a context where previously was none, there are many important domains in which signing a statement to confirm the truthfulness of a report is already required, such as insurances or taxes. One important difference, however, from the lab studies is that in the field, typically a signature is requested at the end rather than at the beginning of reporting, and it is unclear, whether it is simple the reminder of a code of conduct that increases honesty in self-reports or whether is also important where the location and thus, what the timing of it is. Using both field and laboratory studies, in this paper we strive to isolate the effect of simply moving the signature currently required in many real-world contexts from the end of a self-reporting task to the beginning.

Increasing Attention to One's Moral Standards

We propose that the location of a statement on honor matters. We suggest that simply moving the statement of honor from the end to the beginning of a form will bring one's moral standards into focus right before it is most needed and an individual still has a clean moral conscience: before facing the temptation to be dishonest. Thus, the increased saliency of moral standards can have a positive effect on the truthfulness of the subsequent self-report. In contrast, when signing after the "damage" has been done, individuals are already at a stage where they make use of various "tricks" such as inattention to their moral standards in order to retain a positive moral view of themselves despite a dishonest self-report.

Commented [NM3]: When we say top vs. bottom it could be understood as one page. In our field experiment the form had multiple pages.

Previous research has shown that even subtle cues can activate the self and lead to surprisingly powerful effects on consequent behavior. For example, when playing an anonymous economic game, people are more generous when there is even the nuanced presence of eye-like shapes in the computer background (Haley & Fessler, 2005; Rigdon, Ishii, Watabe, Kitayama, 2009). In a more naturalistic setting, researchers have examined the effect of an image of a pair of eyes on the amount of money people put into a pay-on-your-honor cash box when purchasing coffee. When eyes were displayed on the contributions box instead of flowers, nearly three times the amount of money was collected (Bateson, Nettle, & Roberts, 2006). In the domain of self-reporting, individuals who were exposed to the Ten Commandments or read and signed an honor code were subsequently less likely to inflate their performance on a task in which they were paid based on performance (Mazar, Amir, & Ariely, 2008; Shu, Gino, & Bazerman, 2011).

One way to explain the above findings is that these simple environmental manipulations (eyes, codes of conduct, etc.) made ethics more salient, that is, they made people pay greater attention to their moral standards and scrutinize the ethicality of their own behavior. As a consequence, moral saliency decreased people's tendency to engage in dishonest acts and

increased the rigidity of their judgments of ethicality. Yet, the effectiveness of these manipulations in making morality salient was not tested directly but assumed by observing differences in unethical behavior following the various manipulations. In the current work, we explicitly test this link by employing an implicit measure of ethical saliency.

Our work is in line with Duval & Wicklund's (1972) theory of objective self-awareness. Objective self-awareness theory is concerned with the self-reflexive quality of the consciousness (Duval & Wicklund, 1972). "When attention is directed inward and the individual's consciousness is focused on himself, he is the object of his own consciousness—hence 'objective' self-awareness" (Duval & Wicklund, 1972, p. 2). This is contrasted with "subjective self-awareness" that results when attention is directed away from the self and the person "experiences himself as the source of perception and action" (Duval & Wicklund, 1972, p. 3). In its original formulation, the theory assumed that the orientation of conscious attention was the essence of self-evaluation. Focusing attention on the self brings about objective self-awareness, which initiated an automatic comparison of the self against standards. The self was defined very broadly as the person's knowledge of the person. A standard was "defined as a mental representation of correct behavior, attitudes, and traits ... All of the standards of correctness taken together define what a 'correct' person is" (Duval & Wicklund, 1972, pp. 3, 4). This simple system consisting of self, standards, and attentional focus was assumed to operate according to Gestalt consistency principles (Heider, 1960). Whenever a discrepancy between self and standards occurred, the decision maker experienced negative affect, and because of this aversive state, she was motivated to restore consistency.

Building on research that the self is malleable (see e.g., Shih, Pittinsky, and Ambady, 1999) and prone to even subtle primes in the environment, we examine a specific type of prime

that can be easily implemented in various real-world contexts: signing one's name. Signing has been shown to activate self-identity in the domain of consumer behavior. For example, Kettle and Häubl (in press) showed that signing (as opposed to printing) one's name increased consumers' engagement when shopping for products closely associated with their self-identities, and decreased engagement when shopping for products distant from their self-identities. We turn to the question of morality and test whether the act of signing one's name before rather than after a self-report task brings into focus one's moral compass and ethical standards and subsequently discourages dishonest actions.

Many contexts require signing one's name as a means of authentication, but almost all these contexts require the signature after self-reporting, and not prior. We propose that signing one's name after a self-reporting task is an ineffective way to recruit attention to ethical standards due to cognitive dissonance and moral disengagement. Cognitive dissonance arises when there is discrepancy between individuals' actions and their beliefs or attitudes towards these actions (Festinger & Carlsmith, 1959). Because people want to perceive themselves as moral (Aquino & Reed, 2002), dishonest behavior that could potentially lead to self-criticism induces dissonance motivation, or "psychological discomfort that motivates or 'drives' the attitude change process" (Fazio & Cooper, 1983, p. 132). In the domain of ethics, this psychological discomfort can be eliminated in two ways without changing one's moral standards: by bringing behavior closer to one's ethical goals (Baumeister & Heatherton, 1996) – that is, by being more honest – or by modifying one's beliefs about questionable actions such that they permit the behavior – that is, moral disengagement. Bandura (1990, 1996) defines moral disengagement as the process by which detrimental conduct is made personally acceptable through recoding the action as morally acceptable (see also Mazar, Amir, & Ariely, 2008 as well

Commented [LS4]: What about loss aversion as another explanation for why signing after is "too late"? Once we anchor on a certain number/tax refund, we are unwilling to stray from this reference point?

Commented [FG5]: I think we are ok without loss aversion...

Commented [NM6]: Loss aversion is an interesting thought but I m not sure we need it at this point. If the reviewers raise it, we could always add it.

as Shu, Gino, & Bazerman, 2011). Therefore, requiring one's signature after a self-reporting task will be an ineffective way to make ethics salient if someone has already cheated—it is "too late" to focus on ethics once cognitive dissonance and moral disengagement has occurred to quash cognitive dissonance.

To summarize, we propose and test the following hypotheses:

Hypothesis 1. Signing one's name prior to a self-reporting task will promote more honest reporting relative to signing one's name after the task as well as relative to a control.

Hypothesis 2. Signing one's name prior to a self-reporting task increases the saliency of moral standards relative to signing one's name after the task.

Commented [NM7]: It would be important for our theory of moral disengagement and cognitive dissonance to also show that this holds as well as relative to a control That way, we'd have another theoretical contribution that we could discuss in the end

Hypothesis 3. Heightened saliency of moral standards will mediate the effect of signing one's name on honest self-reporting.

Overview of the Experiments

We tested these hypotheses in four experiments in which participants had the opportunity to gain a financial benefit through dishonest self-reporting. In each study, we varied when participants signed their name—at the beginning or the end of the self-report form—to change the time at which moral standards were made salient to participants. That is, participants either signed before or after having had the opportunity to cheat.

In Study 1, we conducted a field experiment in collaboration with an automobile insurance company, and found signing prior to reporting produced significantly higher number of miles participants reported driving during the prior year – a noteworthy change in real behavior with substantial consequences for the insurance company. In Studies 2 and 3, we replicated the same findings in a controlled laboratory environment. Finally, study 3 and 4 show that signing one's name prior to the temptation and the opportunity to cheat heightens awareness of ethical standards, which in turn mediates the effect of the signature ~~location~~ on cheating.

Study 1: A Field Experiment with an Automobile Insurance

We first tested the effect of signing one's name before having the opportunity to misreport in a field study involving an automobile insurance company.

Procedure

We ran a field experiment with an insurance company in the United States in which we manipulated the automobile policy review form that was sent out to customers at the end of the year. The review form asked customers to record the exact current odometer mileage of all cars that were currently registered to them and/or their spouse or domestic partner, in addition to other information. We randomly assigned customers to receive a form that either asked them at the beginning (i.e., before filling out the form) or at the end (i.e., after having completed the form) of the form to sign the following pledge of honesty: "I promise that the information I am providing is true". Otherwise, the forms were identical.

Commented [LS8]: [redacted], do we have permission to include a sample form? If yes, we should put them in Appendix A.

Also, in which state was this study conducted?

Completed forms were received from 13,488 policies for a total of 20,741 cars. A single policy could cover up to four cars; 52% of policies had one car, 42% had two cars, 5% had three cars and less than 0.3% had four cars. We compared the difference between the current odometer mileage as indicated in the manipulated forms to the odometer mileage that customers had indicated the year before. If a policy had more than one car, we averaged that difference over all of its cars. The mileage difference represents the annual usage of a car, which in turn influences a customer's annual insurance costs. The fewer miles driven, the less insurance costs. Thus, when filling out the automobile policy review form, customers faced a dilemma between truthfully indicating the current odometer mileage and dishonestly indicating a lower mileage in order to reduce their insurance premium.

Since we hypothesized that signing a pledge of honor before a self-reporting task raises the saliency of people's ethical standards, we expected that customers, who signed the pledge of

honor before filling out the form, would be more truthful and thus report higher usage than those who signed the pledge of honor at the end.

Results and Discussion

As expected, controlling for the number of cars per policy (F[1,13485]=2.184, p=.14) the average annual usage per car was significantly higher among customers who signed the pledge of honor at the beginning of the form (M=26,098.4, SD=12,253.4) than those who signed the pledge of honor at the end of the form (M=23,670.6, SD=12,621.4; F[1,13485]=128.631, p<.001). The annual difference between our two treatments was on average 2,427.8 miles per car. The results also hold for the odometer difference for the first car only (signing at the beginning: M=26,204.8, SD=14,226.3, signing at the end: M=23,622.5, SD=14,505.8; t[13486]=10.438, p<.001).

These results provide support for our first hypothesis, that asking people to sign a pledge of honor before rather than after a self-reporting task lowers the likelihood of cheating through misreporting the number of miles driven over the course of the year. Using a field study, we were able to demonstrate that just a simple change in the location of one's own signature can greatly influence people's likelihood to cheat by misreporting information to advance their own self-interest.

Study 2: A Lab Experiment with Tax Returns

To test the robustness of our findings, we conducted a second study in the laboratory using a similar signing manipulation but in a different domain: filling out a tax return form. In this study, we also added a control condition to examine the actual effect of signing: whether signing prior to the opportunity to cheat encourages honesty, or whether signing afterwards encourages unethical behavior.

Method

Participants. One-hundred-and-one students and employees at local universities in the Southeastern United States (M_{age}=22.10, SD=4.98; 45% male; 82% students) completed the study for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the study.

Design and Procedure. Participants were randomly assigned to one of three conditions: 1) Signature at the top of the tax return form (i.e. before filling it out); 2) Signature at the bottom of the tax return form (i.e. after filling it out); or 3) No signature (control condition). The statement that participants had to sign on the tax return form was "I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete." At the beginning of each session, participants were given instructions to the study. The instructions informed them that they would first complete a problem-solving task under time pressure (i.e., they would have five minutes to complete the task), and that the experimenter would keep track of the time. In addition to providing information about the payment for the problem-solving task, the instructions also included the following information, "For the problem-solving task, you will be paid a higher amount than what we usually pay participants in a regular study because you will be taxed on your earnings. You will receive more details after the problem-solving task."

Problem-solving task. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; based on Mazar et al., 2008) and a collection slip on which participants later reported their performance in this part of the study. Participants were told that they would have five minutes to find two numbers in each matrix that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five

minutes were over, the experimenter asked participants to count the number of correctly solved matrixes[1], note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work and give them payment. Neither of the two forms (matrix test sheet and collection slip) had information on it that could identify participants' (no name or other form of ID).

Commented [NM9]: This doesn t seem to make sense. The tax return suggests that everything was computed in the 2nd room and then they received their pay. This here, however, would suggest they got paid for the peformance by experimenter 1, and then for the rest by experimneter 2. If this latter is true, the tax return form doesn t seem to make too much sense, no? IN that case, box 7 should have been box 6 – box 2, no?

Tax return form. After the problem-solving task, participants went to a second room to fill out a research study tax return form. The form we used was based on a typical tax return form. We varied whether participants were asked to sign a pledge of honor at the top or at the bottom of the form (see Appendix A). Participants filled out the form by self-reporting their income (i.e., their performance on the problem-solving task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their estimated cost of commute. These costs were "credited" to their post-tax earnings from the problem-solving task to compute their final payment.

The instructions read: "We would like to compensate participants for extra expenses they have incurred to participate in this session." We included two costs: 1) Time to travel to the lab at $0.10 per minute (up to 2 hours or $12 maximum), and monetary cost of commute (up to $12 maximum).

Payment structure. Given the features of the study, participants could make a total of $42—an amount which breaks down as follows: $2 show up fee, $20 on matrix task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

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[1] The task was designed such that if we assume respondents had no problems adding two numbers to ten, they should be able to identify how many matrixes they have solved correctly without requiring a solution sheet.

Opportunity to cheat on the tax return form. The study was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem-solving task and by inflating the expenses they incurred in order to participate in the study. When participants received payment after completing the first part of the study, the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their additional payments (if any). The tax return form included a one-digit identifier (one digit in the top right of the form, in the code OMB No. 1555-0111) that was identical with the digit of one number of one matrix (which was unique to each individual's work station)—a difference that was completely imperceptible to participants but allowed us to identify the matrix worksheet, the collection slip, and the tax return form that belonged to the same participant. As a result, at the end of each session, we were able to compare actual performance on the problem-sovling task and reported performance on the tax return form. If those numbers differed for an individual, that difference represented that individual's level of cheating on the problem-solving task.

Commented [NM10]: Does this mean that if the subject didn't claim any expenses in room 2 they would have to pay taxes (after having received their payment for the matrix task in room 1)?

Results

First, we examined the percentage of participants who cheated by overstating their performance on the problem-solving task when asked to report it on the tax return form. This percentage varied across conditions, $\chi^2(2, N=101)=12.58$, $p=.002$: The number of cheaters was lowest in the signature-at-the-top condition (37%, 13 out of 35), higher in the signature-at-the-bottom condition (79%, 26 out of 33), and somewhat in between those two but more similar to the latter for the no-signature condition (64%, 21 out of 33).

Both actual performance in the matrix search task and reported performance for the same task as specified in the tax return form are depicted in Figure 1 (by condition). As can be seen,

the number of matrices over-reported varied by condition, $F(2,98)=9.21$, $p<.001$, $\eta^2=.16$: it was lowest in the signature-at-the-top condition ($M=0.77$, $SD=1.44$) and higher in the signature-at-the-bottom condition ($M=3.94$, $SD=4.07$; $p<.001$) and in the no-signature condition ($M=2.52$, $SD=3.12$; $p<.05$). The difference between these two latter conditions was only marginally significant ($p<.07$). Within-subjects analyses using the difference between reported and actual performance revealed the same pattern of results.

The credits for extra expenses that participants claimed in the tax return forms varied as well significantly by condition, $F(2,98)=5.63$, $p<.01$, $\eta^2=.10$ (see Figure 2). Participants claimed the least expenses in the signature-at-the-top condition ($M=5.27$, $SD=4.43$) and more expenses in the signature-at-the-bottom ($M=9.62$, $SD=6.20$; $p<.01$) and the no-signature conditions ($M=8.45$, $SD=5.92$; $p<.05$). The difference between these two latter conditions was not significant ($p=.39$).

Discussion

The results of Study 2 provide further evidence for our hypothesis H1 that signing one's name prior to a task leads to lower levels of cheating than signing at the end. Study 2 also included a control condition in which participants did not provide their signature. Our results indicate that our findings were driven by the signing-at-the-top condition: signing prior to a self-reporting task promoted honest reporting but signing afterwards did not promote cheating.

Study 3: Increased Saliency of Ethical Standards

Thus far, we have demonstrated that signing one's name before having an opportunity to cheat discourages unethical behavior. Our implicit assumption underlying this finding was that signing before the opportunity to cheat rather than afterwards is more likely to raise the saliency of moral standards. We tested this hypothesis directly in our third study by measuring the extent to which signing before rather than after the opportunity to cheat increases the accessibility of

Commented [NM11]: A pity we don t have a control here to show that signing at the end is not likely to show any differences to a control condition when it comes to the saliency of moral standards This would be important for our claim that signing after people use tricks to deal with their immoral behavior without feeling immoral

words related to ethics and morality. Following prior research measuring implicit cognitive processes (Bassili & Smith, 1986; Tulving, Schacter, & Stark, 1982), we used a word-completion task in which participants were asked to complete various word fragments with the first letters that came to mind.

Method

Design and Procedure. Study 3 employed one between-subjects factor with two levels: signature at the top, i.e., before filling out a form, versus at the bottom, i.e., after filling out a form. The study employed the same task and procedure of Study 2 but varied the incentives for the performance task, the tax rate, and the tax return forms participants completed. Participants in this study were paid $2 for each matrix puzzle successfully solved. They were also taxed at a higher rate of 50 percent. Finally, the tax forms were modified such that they mimicked the flow of actual tax reporting practices in the United States. Deductions were first subtracted from gross income to compute taxable income; then taxes were paid on this adjusted amount.

In addition, participants were asked to complete a word-completion task as their final task in the study. The task instructions informed participants that they would have to convert word fragments into meaningful words. Participants received a list of six word fragments with letters missing and were asked to fill in the blanks to make complete words by using the first word that came to mind. Three of these word-fragments (_ _ R A L, _ I _ _ _ E, and E _ _ _ C _ _) could be completed as ethics-related words (moral, virtue, and ethical) or as ethics-neutral words (e.g., viral, tissue, and effects).

Participants. Sixty students and employees at local universities in the Southeastern United States (M_{age}=21.50, SD=2.27; 48% male; 90% students) completed the study for pay. They

received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Results

Level of cheating. We first examined the percentage of participants who cheated by overstating their performance on the matrix task when filling out the tax return form. This percentage was lower in the signature-at-the-top condition (37%, 11 out of 30) than in the signature-at-the-bottom condition (63%, 19 out of 30), $\chi^2(1, N=60)=4.27$, $p<.04$.

Figure 3 depicts actual performance on the matrix task and reported performance on the tax return form, by condition. The difference between the reported and actual performance on the matrix task was our proxy for cheating. This difference was lower in the signature-at-the-top condition ($M=1.67$, $SD=2.78$) than in the signature-at-the-bottom condition ($M=3.57$, $SD=4.19$), $t(58)=-2.07$, $p<.05$. Within-subjects analyses using both reported and actual performance revealed the same pattern of results.

The deductions participants reported in the tax return form follow the same pattern and vary significantly by condition, $F(1,58)=7.76$, $p<.01$, $\eta^2=.12$: they were lower in the signature-at-the-top condition ($M=3.23$, $SD=2.73$) than in the signature-at-the-bottom condition ($M=7.06$, $SD=7.02$).

Word-fragment task. As we predicted, participants who signed the honesty pledge before having the opportunity to cheat generated more ethics-related words ($M=1.40$, $SD=1.04$) than those who signed at the bottom of the form ($M=0.87$, $SD=0.97$), $F(1,58)=4.22$, $p<.05$, $\eta^2=.07$, suggesting that the act of signing prior to the temptation to cheat increased the accessibility of ethics-related concepts.

Mediation analyses. We also tested whether ethics-related concepts (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating on the tax return form. Both condition and the number of ethics-related concepts were entered into a linear regression model predicting extent of cheating measured by the level of over-reporting of income. This analysis revealed that the effect of condition was significantly reduced (from β=-.262, p<.05 to β=-.143, p=.23), whereas the number of ethics-related concepts was a significant predictor of cheating (β=-.456, p<.001). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-1.85, -.04), suggesting significant mediation. Thus, consistent with our prediction, the number of ethics-related concepts significantly mediated the relationship between our manipulation (i.e. signature-first) and dishonest behavior.

Commented [NM12]: Why only for income and not also for the deductions?

Commented [FG13]: I am not sure we should report this for two reasons.
1) We measured the mediator after the DV
[redacted] response: That is ok – it s often done that way. When conducting a mediation analysis to test whether signing at the top → less over-reporting → more ethics words, we find evidence for mediation
[redacted] response: Also ok. The key is if the mediation is weaker. If that reverse mediation is weaker, I"d add it as a footnote. If the reverse mediation is not weaker, I would not mention the reverse mediation.

Discussion

Using an implicit measure of ethical saliency, our third study shows that signing before having the opportunity to cheat raises the saliency of moral standards compared to signing after having had the opportunity to cheat. Consistent with our hypotheses, the mediation model suggested that raising ethical saliency discouraged cheating. Nevertheless, to further support our model, we ran a fourth study that measured ethical saliency *after* the problem-solving task but *before* the tax return form was handed out.

Study 4: Ethical Saliency and Reduced Cheating

We conducted a fourth study to more carefully examine the role of ethical saliency on cheating. In addition, to extend the generalizability of our findings, in Study 4 we employed a different cheating-task.

Method

Design and procedure. Participants were randomly assigned to one of two conditions: Signature-first versus control. Across both conditions, the instructions informed them that we were interested in people's performance under pressure across a variety of tasks. For this particular study, they would be asked to answer a 20-question general knowledge test of medium difficulty (e.g., "How many U.S. states border Mexico?", "In which U.S. state is Mount Rushmore located?"), and that they would receive $1 for each correct question (in addition to a $2 show-up fee). Participants were given 15 minutes to answer the 20 questions. Once the fifteen minutes were over, the experimenter distributed a set of materials consisting first, of the word-fragment task employed in Study 3, followed by an answer sheet with the correct answers to the questions, and finally a collection slip so that participants could report their performance after checking their answers. Participants were asked to read and fill out the set of materials in the given order, that is, they filled out the word fragment task prior to checking their answers and reporting their performance on the collection slip.

Commented [NM14]: We need to explain how the cheating worked here: that is, that they either shred their test sheet or only submitted the answer shee to the experimenter, etc. Please add.

Half of the participants received an extra page on top of this set of materials, which they were asked to read before solving the word-fragment task. The page included a pledge of honesty participants were asked to sign: "I promise that I will report information about my performance on the trivia test truthfully" (signature-first condition). As we ascertained in Study 2, it is signing before that promotes honest reporting and not signing after that promotes dishonesty, the remaining half of the participants did not receive this extra page (control). We hypothesized that

those, who received and signed the pledge of honesty, would be more likely to report their performance truthfully (H1), and that signing the pledge would lead participants to complete the word-fragment task with a higher number of ethics-related words (H2), which would mediate the effect of the signature on cheating (H3).

Participants. Eighty-two college and graduate students at local universities in the Southeastern United States (M_{age}=22, SD=3.11; 52% male) completed the study for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the study.

Results and Discussion

Same as in the previous studies, we computed the difference between self-reported performance and actual performance on the general-knowledge task by matching participants' unique study IDs that were denoted on each survey/form. This difference score served as our proxy for cheating. Positive difference-scores indicated that participants over-reported their performance and cheated on the task so that they could make more money.

When examining the performance difference-scores on the trivia test, we found that in comparison to the control condition cheating was significantly reduced in the signature first-condition (M=0.51, SD=1.42, vs. M=1.93, SD=2.15), $t(80)=3.52$, $p=.001$. Supporting these results, the percentage of participants, who overstated their performance, was higher in the control condition than in the signature-first condition (53.7% [22/41] vs. 12.2% [5/41]), $\chi^2(1, N=82)=15.96$, $p<.001$).

Signing before the opportunity to over-report performance also influenced the number of ethics-related concepts participants came up with in the word-fragment task. Participants in the

signature first-condition found more ethics-related words (M=1.44, SD=0.95) than did those in the control condition (M=0.98, SD=0.88), $F(1,80)=5.25$, $p<.03$, $\eta^2=.06$.

Finally, we tested whether the extent to which ethics-related concepts came to mind (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating on the trivia task. Both condition and the number of ethics-related concepts were entered into a linear regression model predicting extent of cheating. This analysis revealed that the effect of condition was significantly reduced (from β=-.366, p=.001 to β=-.294, $p<.01$), whereas the number of ethics-related concepts was a significant predictor of cheating (β=-.290, $p<.01$). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-.67, -.01), suggesting significant mediation. Thus, consistent with our prediction, the number of ethics-related concepts significantly mediated the relationship between our manipulation (i.e. signature-first) and dishonest behavior.

Together these results provide strong support for the predicted inverse relationship between ethical saliency and cheating.

General Discussion

Across four studies, we consistently found that requiring one's signature before facing a temptation to cheat is an effective mean to discourage dishonesty because it makes ethics more salient. In Study 1, we conducted a field experiment with an automobile insurance company in which we varied whether customers filling out a report of the number of miles they drove in the past year signed their names before or after reporting the mileage number. Our results showed that customers reported driving a higher number of miles when they penned their signature

Commented [FG15]: Also, in this case. Given how we measured our variables it makes sense to test for the mediation we report in the paper. However, when we conduct a mediation such that our condition → less over-reporting → more ethics-related words, we still find evidence for mediation.

[redacted]s response: reverse mediation doesn t make too much sense here anyways, since we are using an implicit measure. So, I wouldn t report reverse mediation here.

I suggest not reporting mediation in the previous study and only reporting the mediation currently in the paper which follows the order in which the variables were actually measured.

[redacted]s response: see my comment in study 3.

before filling out the form than after. In other words, a subtle manipulation as the location of the signature produced a striking difference in number of reported miles: customers reported driving 2,428 more miles per car when they signed at the beginning of the form rather than at the end. We estimated the per-mile-cost of automobile insurance in the U.S. to be between four and ten cents, suggesting a minimum of $97 average difference in annual insurance premium per car between customers in the two conditions (see e.g., cents-per-mile insurance offered in Texas since 2002). Asking customers to sign before reporting led to a 10.25% increase over the current practice of asking for a signature at the end; this number is most likely to represent a conservative estimate of the extent to which erroneous reporting occurs in the current practice. An important consequence of this false reporting is that the costs may extend beyond the insurer to its entire customer base—including the honest policy-holders. That is, insurance costs are higher for everyone due to the dishonesty of some, with honest policy-holders in effect subsidizing the insurance premiums of dishonest policy-holders. The consequences can be staggering in parallel domains that rely on truthful self-reports, such as the domain of taxes.

Commented [LS16]: Estimation from milemeter.com and truedelta.com through inputting different scenarios (car make, model, age, mileage etc.)

Commented [FG18]: Should we add a footnote explaining how we came up with this number?

Commented [NM17]: Here is a cite for texas: http://www.centspermilenow.org/652Garma.pdf

Commented [NM19]: Increase in what? The miles driven? Or the cost?

In Studies 2 and 3, we moved from a field experiment in an automobile insurance setting to a controlled, laboratory experiment in a tax setting. In both studies, participants had the opportunity to sign a tax form either before or after making claims regarding their performance on a task. Providing further support for the results of the field study, the findings of Studies 2 and 3 demonstrated that signing a pledge of honesty before (not after) having the opportunity to cheat discouraged dishonesty. In addition, study 2 showed that it was the "signing before" condition that decreased cheating and not the "signing after" condition that increased cheating. Furthermore, study 3 provided evidence for the hypothesis that "signing before" raised the saliency of ethical standards, which in turn led to more truthful self-reporting. Finally, Study 4

further examined the underlying psychological process that links the act of signing before filling out a form with the likelihood of cheating. The study included the same implicit measure of ethical saliency as in study 3: participants were asked to complete word fragments by using the first word that came to mind. We found that the act of signing one's name prior to a task increased the saliency of ethical standards, and this heightened saliency mediated the relationship between signing a pledge of honesty before having the opportunity to cheat and subsequent dishonest behavior.

Commented [NM20]: I erased "fully" since it does not seem to be a "full mediation" in study 4 (only in study 3).

Theoretical Contribution

The contribution of the present research is threefold. First, our findings contribute to the literature on how self-awareness (Duval & Wicklund, 1972) can nudge people's behavior for the better. We increased honesty in both laboratory and field settings by asking participants to sign their name next to a pledge of honesty and by varying when they provided their signature (before or after having the opportunity to cheat). The act of signing increased the saliency of their ethical standards, and, as a result, reduced their unethical behavior. Just as Haley and Fessler (2005) increased sharing in an anonymous economic game by introducing the subtle prime of eye-like shapes in the background of the computer screen, we promoted honest behavior by nudging participants to turn their moral gaze inward—to their own behavior—by asking them to sign their name under a pledge of honor prior to filling out an insurance or tax return form.

Second, the present work contributes to existing research on behavioral ethics that recognizes the importance of non-conscious influences on unethical behavior (e.g., Bazerman & Banaji, 2004; Chugh, 2004; Kay, Wheeler, Bargh, & Ross, 2004; Reynolds, Leavitt, & DeCelles, 2010; Tenbrunsel et al., 2011). To date, this research has focused primarily on how automatic processes exacerbate unethical behavior. Extending this body of work, our studies have a

preventive focus and identify subtle ways of raising the saliency of ethical standards. Our research shows that the very same automatic processes that unconsciously lead a person to behave dishonestly may be used to encourage ethical behavior when individuals are facing the temptation to cheat. Our findings are important in light of prior research on the use of explicit interventions such as introducing a code of ethics (Weaver, Treviño, & Cochran, 1999) to discourage dishonesty. The present work highlights the role that subtle interventions can have in producing similarly powerful results, even without individuals' conscious awareness.

Finally, our research also contributes to the literature on how to effectively reduce dishonesty. By introducing a slight change to the typical design of forms used for example by the IRS or insurance companies, we observed a significant shift towards honest behavior. In particular, by moving the location of the signature from the end to the beginning of a form we found more truthful reporting, less performance inflation, less over-claiming of credits, and fewer deduction claims. A simple nudge at the beginning—rather than at the end—of our tasks was enough to produce a meaningful increase in honesty.

Limitations and Venues for Future Research

Our studies used a minimal treatment paradigm to induce the observed effects; we shifted the requirement and location of participant signature and then observed differences in levels of cheating. An extension of this paradigm that might better speak to the potential magnitude of the effect in real-world application would be to precede the signature line with a more extensive set of rules that guide behavior. As an example, Shu, Gino, and Bazerman (2011) found that participants, who read an honor code prior to an opportunity to cheat were less likely to cheat on the subsequent task relative to a control group who did not read an honor code (see Mazar et al., 2008 for comparison between reading and signing an honor code prior to an opportunity to cheat

versus no exposure reading or signing an honor code). Future research could investigate ways to super-charge the effect of requiring a signature prior to the start of a task—possibly through bundling it with some guidelines for behavior. Framing these guidelines in terms of prohibitions ("do not" rules) versus encouragements ("do" rules) might also alter the effect of signing on the dotted line.

Implications for Practice

Our findings suggest that one effective way to reduce or eliminate unethical behavior is to ask people to sign their name *prior* rather than *after* being tempted to cheat. These findings apply to a large category of behaviors that rely on honest self-report on the part of the individual—any behavior in which it is impossible for another person or organization to continually monitor.

We believe one of the most important domains to which our findings may be applied is the domain of taxes. As the federal tax gap soars to over $150 billion each year (Morse, 2009), the amount spent on tax compliance and investigation has also seen dramatic increases. The scale of the proposed intervention is truly minimal: governments already require tax payers (and preparers) to sign when filing taxes—just currently not in the most effective location. Simply shifting the signature to the beginning of the tax form may help the federal and state governments close a significant portion of the tax gap and realize enormous savings in tax compliance and investigation costs.

Conclusion

By simply asking participants to sign on the dotted line prior to a task in which they face a temptation to cheat rather than at the end, we found significant reductions in levels of cheating, both in an insurance setting as well as in the context of taxes. This is just a small subset of the

types of domains, which rely on honest self-reporting on the part of the individual. An intervention as simple as shifting the signature location can lead to a meaningful difference in behavior that follows. Signing on the dotted line can shift the moral gaze inward, raise the saliency of ethical standards, and spill over to promote more ethical actions going forward.

Appendix A

Forms used in Study 2

Commented [NM21]: Somehow the format was still off (couldn t see/read all lines and boxes). Made changes.

Form **3305**

(Rev. June 2010)

Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly	Name	PID	For Administrative Use Only
	Address (Number, street, and room or suite number)		T .... FF .....
	City, State, and ZIP code		

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned)	2 3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12	5	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today s session ..... ▶	7	

Sign Here	I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete.
	▶ ▶

Form **3305**

(Rev. June 2010)

Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name	PID	For Administrative Use Only
Address (Number, street, and room or suite number)		T .... FF .....
City, State, and ZIP code		

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
	2	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned).....	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

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Form **3305**

(Rev. June 2010)

Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here — I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....

...

FF .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ..... ▶	1	
	2	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned).....	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ..... ▶	4	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12	5	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today s session..... ▶	7	

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Figure Captions

Commented [NM22]: I d suggest making the figures monochromatic (white/black/grey).

Figure 1. Reported and actual performance on the matrix search task by condition, Study 2.

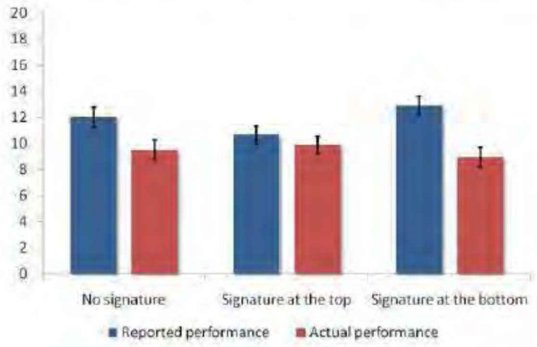


Figure 2. Reported deductions by condition, Study 2.

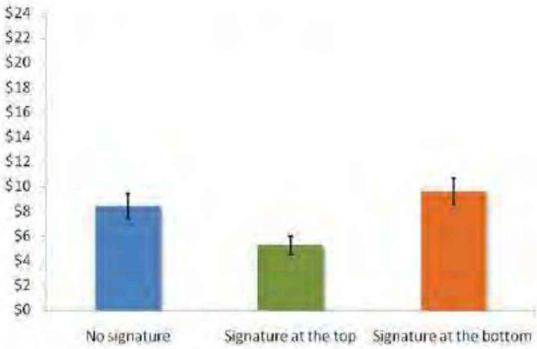
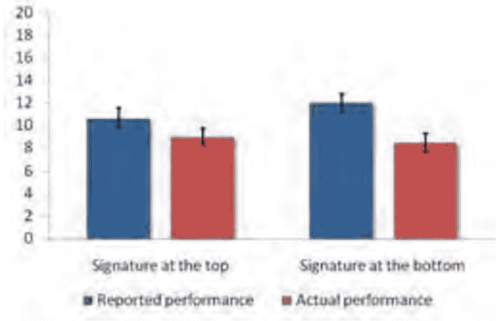


Figure 3. Reported and actual performance on the matrix search task by condition, Study 3.



Manuscript Version - 2011-04-05

Running Head: MAKING ETHICS SALIENT AT THE RIGHT TIME

When to Sign on the Dotted Line?

Signing First Increases Moral Salience and Decreases Dishonest Self-Reports

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Abstract

Many business and governmental interactions are based upon trust and the assumption that all actors comply with social and moral norms. The proof of compliance is typically given by signing a statement or pledge of honor at the end of a self-report such as after filling out annual tax return or insurance policy review forms. Yet, even if people care about morality and want to be seen as ethical by others, they sometimes transgress when beneficial to them despite signing on the dotted line – a costly endeavor to economies across the globe. The current paper focuses on testing an easy-to-implement method to discourage dishonesty: signing a pledge of honor at the beginning rather than, as is common practice, at the end of a self-report, which provides a temptation to cheat. Using both field and lab experiments, we find that signing a pledge of honor at the beginning, that is, before rather than after having faced the opportunity to cheat raises the saliency of ethics and morality, with significant reductions in dishonesty.

Keywords: Signing; Signature; Ethics; Dishonesty; Morality; Saliency; Cheating

In December 2010, Timothy Schetelich—who had been working as a Certified Public Accountant in Springfield (USA) for years—pleaded guilty to preparing false tax returns for several clients, which earned him higher commissions. Over the years, he claimed some of them had legitimate business expenses when in fact they did not own a business, or he fabricated and inflated deductions for expenses to obtain refunds the clients were not entitled to receive. This case, unfortunately, is not an exception. Most businesses regularly cheat on their taxes (Morse, 2009), and these unpaid taxes have been estimated to amount to roughly $150 billion every year —an astonishing cost to the economy but not even half of the costs incurred due to non-compliance of individual tax payers (Herman, 2005). Similar forms of unethical behavior include overstating insurance claims, inflating business expenses, and overstating billable hours, to mention just a few (Mazar & Ariely, 2006; Gino & Pierce, 2010).

In each of these examples, businesses or governments rely upon individuals' honest self-reports in the face of temptations to transgress. The common practice to ensure the honesty of such self-reports is to ask individuals to sign a statement or pledge of honor at the end of their self-report. As the examples above suggest, however, this practice appears to be insufficient in countering self-interested motivations to falsify numbers. In this paper, we propose and test the idea that a small change in the common practice could lead to significant improvements in compliance: simply moving the signing of the statement of honor from the end to the beginning of a self-report should bring one's moral standards into focus and subsequently promote honesty while discouraging cheating.

Research on Dishonesty

The pervasiveness of unethical practices in organizations and society more broadly has generated considerable interest among scholars in a variety of disciplines, including organizational behavior, psychology, philosophy, and economics (e.g. Brown & Treviño, 2006;

Gneezy, 2005; Haidt, 2001; Nichols & Knobe, 2007; Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2011; Tenbrunsel & Smith-Crowe, 2008; Treviño, Weaver, & Reynolds, 2006). Together the work of these scholars suggests that there are at least two types of individuals: those who only care about their self-interest and therefore will act unethically if beneficial and not too costly to them (e.g., Brief, Buttram, & Dukerick, 2001; Lewicki, Poland, Minton, & Sheppard, 1997), and those who do care about morality but find ways to permit limited amount of unethical behavior without violating their moral standards (e.g., Ayal & Gino, 2011; Mazar, Amir, & Ariely, 2008; Tenbrunsel et al., 2011). The majority of people fall into the latter category (Aquino and Reed, 2002), and factors such as ambiguity, cultural orientations, and surprisingly subtle situational influences can facilitate their moral transgressions. For instance, Schweitzer and Hsee (2002) as well as Baumeister (1998) have shown that people will present ambiguous information such that it benefits their self-interest (even if it harms others) without any negative consequences to their moral self-image. In related work, Mazar and Aggarwal (2011) reported that collectivism promotes bribery by mitigating the perceived responsibility for one's actions, and Zhong, Bohns and Gino (2010) found that ambient darkness can facilitate people's transgressions by increasing a sense of anonymity.

To date, most of this research has focused primarily on the motives and characteristics of the wrongdoers or on the organizational and environmental factors that can influence one's actions. Building on this body of work, the goal of the current paper is to develop and test an efficient and effective implementation of a measure to reduce or eliminate unethical behaviors—particularly behaviors that rely on self-monitoring in lieu of societal restraints. Filing taxes, claiming business expenses, or reporting billable hours are all examples of such behaviors that rely on truthful self-reports. These behaviors assume full honesty on the individual level; any

departure can lead to significant economic losses. Thus, it is seems important to identify practical interventions that promote honesty in domains that rely on truthful self-reports (Amir et al., 2005).

Recent papers have started to identify such interventions. For example, Mazar, Amir, and Ariely (2008) asked students to sign an honor code before participating in a task that offered the opportunity to misreport one's performance in order to earn more money in an experiment. While the students overstated their performance in the absence of an honor code, the authors observed no cheating when students were asked to read and sign an honor code at the beginning of the task. Building on this finding, Shu, Gino, and Bazerman (2011) compared people's self-reports when they simply read or did not read an honor code before participating in a task that offered the opportunity to overstate one's performance to earn more money. Similarly, the authors found that participants, who read an honor code prior to an opportunity to cheat, were less likely to cheat on the subsequent task relative to a control group, who did not read an honor code. While these findings identify interesting behavioral interventions to curtail dishonesty: introducing a reminder of a code of conduct in a context where previously was none, there are many important domains in which signing a statement to confirm the truthfulness of a report is already required, such as insurances or taxes. One important difference, however, from the lab studies is that in the field, typically a signature is requested at the end rather than at the beginning of reporting, and it is unclear, whether it is simple the reminder of a code of conduct that increases honesty in self-reports or whether is also important where the location and thus, what the timing of it is. Using both field and laboratory studies, in this paper we strive to isolate the effect of simply moving the signature currently required in many real-world contexts from the end of a self-reporting task to the beginning.

Increasing Attention to One's Moral Standards

We propose that the location of a statement on honor matters. We suggest that simply moving the statement of honor from the end to the beginning of a form will bring one's moral standards into focus right before it is most needed and an individual still has a clean moral conscience: before facing the temptation to be dishonest. Thus, the increased saliency of moral standards can have a positive effect on the truthfulness of the subsequent self-report. In contrast, when signing after the "damage" has been done, individuals are already at a stage where they make use of various "tricks" such as inattention to their moral standards in order to retain a positive moral view of themselves despite a dishonest self-report.

Previous research has shown that even subtle cues can activate the self and lead to surprisingly powerful effects on consequent behavior. For example, when playing an anonymous economic game, people are more generous when there is even the nuanced presence of eye-like shapes in the computer background (Haley & Fessler, 2005; Rigdon, Ishii, Watabe, Kitayama, 2009). In a more naturalistic setting, researchers have examined the effect of an image of a pair of eyes on the amount of money people put into a pay-on-your-honor cash box when purchasing coffee. When eyes were displayed on the contributions box instead of flowers, nearly three times the amount of money was collected (Bateson, Nettle, & Roberts, 2006). In the domain of self-reporting, individuals who were exposed to the Ten Commandments or read and signed an honor code were subsequently less likely to inflate their performance on a task in which they were paid based on performance (Mazar, Amir, & Ariely, 2008; Shu, Gino, & Bazerman, 2011).

One way to explain the above findings is that these simple environmental manipulations (eyes, codes of conduct, etc.) made ethics more salient, that is, they made people pay greater attention to their moral standards and scrutinize the ethicality of their own behavior. As a consequence, moral saliency decreased people's tendency to engage in dishonest acts and

increased the rigidity of their judgments of ethicality. Yet, the effectiveness of these manipulations in making morality salient was not tested directly but assumed by observing differences in unethical behavior following the various manipulations. In the current work, we explicitly test this link by employing an implicit measure of ethical saliency.

Our work is in line with Duval & Wicklund's (1972) theory of objective self-awareness. Objective self-awareness theory is concerned with the self-reflexive quality of the consciousness (Duval & Wicklund, 1972). "When attention is directed inward and the individual's consciousness is focused on himself, he is the object of his own consciousness—hence 'objective' self-awareness" (Duval & Wicklund, 1972, p. 2). This is contrasted with "subjective self-awareness" that results when attention is directed away from the self and the person "experiences himself as the source of perception and action" (Duval & Wicklund, 1972, p. 3). In its original formulation, the theory assumed that the orientation of conscious attention was the essence of self-evaluation. Focusing attention on the self brings about objective self-awareness, which initiated an automatic comparison of the self against standards. The self was defined very broadly as the person's knowledge of the person. A standard was "defined as a mental representation of correct behavior, attitudes, and traits ... All of the standards of correctness taken together define what a 'correct' person is" (Duval & Wicklund, 1972, pp. 3, 4). This simple system consisting of self, standards, and attentional focus was assumed to operate according to Gestalt consistency principles (Heider, 1960). Whenever a discrepancy between self and standards occurred, the decision maker experienced negative affect, and because of this aversive state, she was motivated to restore consistency.

Building on research that the self is malleable (see e.g., Shih, Pittinsky, and Ambady, 1999) and prone to even subtle primes in the environment, we examine a specific type of prime

that can be easily implemented in various real-world contexts: signing one's name. Signing has been shown to activate self-identity in the domain of consumer behavior. For example, Kettle and Häubl (in press) showed that signing (as opposed to printing) one's name increased consumers' engagement when shopping for products closely associated with their self-identities, and decreased engagement when shopping for products distant from their self-identities. We turn to the question of morality and test whether the act of signing one's name before rather than after a self-report task brings into focus one's moral compass and ethical standards and subsequently discourages dishonest actions.

Many contexts require signing one's name as a means of authentication, but almost all these contexts require the signature after self-reporting, and not prior. We propose that signing one's name after a self-reporting task is an ineffective way to recruit attention to ethical standards due to cognitive dissonance and moral disengagement. Cognitive dissonance arises when there is discrepancy between individuals' actions and their beliefs or attitudes towards these actions (Festinger & Carlsmith, 1959). Because people want to perceive themselves as moral (Aquino & Reed, 2002), dishonest behavior that could potentially lead to self-criticism induces dissonance motivation, or "psychological discomfort that motivates or 'drives' the attitude change process" (Fazio & Cooper, 1983, p. 132). In the domain of ethics, this psychological discomfort can be eliminated in two ways without changing one's moral standards: by bringing behavior closer to one's ethical goals (Baumeister & Heatherton, 1996) – that is, by being more honest – or by modifying one's beliefs about questionable actions such that they permit the behavior – that is, moral disengagement. Bandura (1990, 1996) defines moral disengagement as the process by which detrimental conduct is made personally acceptable through recoding the action as morally acceptable (see also Mazar, Amir, & Ariely, 2008 as well

as Shu, Gino, & Bazerman, 2011). Therefore, requiring one's signature after a self-reporting task will be an ineffective way to make ethics salient if someone has already cheated—it is "too late" to focus on ethics once cognitive dissonance and moral disengagement has occurred to quash cognitive dissonance.

To summarize, we propose and test the following hypotheses:

Hypothesis 1. Signing one's name prior to a self-reporting task will promote more honest reporting relative to signing one's name after the task as well as relative to a control.

Hypothesis 2. Signing one's name prior to a self-reporting task increases the saliency of moral standards relative to signing one's name after the task.

Hypothesis 3. Heightened saliency of moral standards will mediate the effect of signing one's name on honest self-reporting.

Overview of the Experiments

We tested these hypotheses in four experiments in which participants had the opportunity to gain a financial benefit through dishonest self-reporting. In each study, we varied when participants signed their name—at the beginning or the end of the self-report form—to change the time at which moral standards were made salient to participants. That is, participants either signed before or after having had the opportunity to cheat.

In Study 1, we conducted a field experiment in collaboration with an automobile insurance company, and found signing prior to reporting produced significantly higher number of miles participants reported driving during the prior year – a noteworthy change in real behavior with substantial consequences for the insurance company. In Studies 2 and 3, we replicated the same findings in a controlled laboratory environment. Finally, study 3 and 4 show that signing one's name prior to the temptation and the opportunity to cheat heightens awareness of ethical standards, which in turn mediates the effect of the location (study 3) and presence (study 4) of one's own signature on cheating.

Study 1: A Field Experiment with an Automobile Insurance

We first tested the effect of signing one's name before having the opportunity to misreport in a field study involving an automobile insurance company.

Procedure

We ran a field experiment with an insurance company in the United States in which we manipulated the automobile policy review form that was sent out to customers at the end of the year. The review form asked customers to record the exact current odometer mileage of all cars that were currently registered to them and/or their spouse or domestic partner, in addition to other information. We randomly assigned customers to receive a form that either asked them at the beginning (i.e., before filling out the form) or at the end (i.e., after having completed the form) of the form to sign the following pledge of honesty: "I promise that the information I am providing is true". Otherwise, the forms were identical.

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Also, in which state was this study conducted?

Completed forms were received from 13,488 policies for a total of 20,741 cars. A single policy could cover up to four cars; 52% of policies had one car, 42% had two cars, 5% had three cars and less than 0.3% had four cars. We compared the difference between the current odometer mileage as indicated in the manipulated forms to the odometer mileage that customers had indicated the year before. If a policy had more than one car, we averaged that difference over all of its cars. The mileage difference represents the annual usage of a car, which in turn influences a customer's annual insurance costs. The fewer miles driven, the less insurance costs. Thus, when filling out the automobile policy review form, customers faced a dilemma between truthfully indicating the current odometer mileage and dishonestly indicating a lower mileage in order to reduce their insurance premium.

Since we hypothesized that signing a pledge of honor before a self-reporting task raises the saliency of people's ethical standards, we expected that customers, who signed the pledge of honor before filling out the form, would be more truthful and thus report higher usage than those who signed the pledge of honor at the end.

Results and Discussion

As expected, controlling for the number of cars per policy (F[1,13485]=2.184, p=.14) the average annual usage per car was significantly higher among customers who signed the pledge of honor at the beginning of the form (M=26,098.4, SD=12,253.4) than those who signed the pledge of honor at the end of the form (M=23,670.6, SD=12,621.4; F[1,13485]=128.631, p<.001). The annual difference between our two treatments was on average 2,427.8 miles per car. The results also hold for the odometer difference for the first car only (signing at the beginning: M=26,204.8, SD=14,226.3, signing at the end: M=23,622.5, SD=14,505.8; t[13486]=10.438, p<.001).

These results provide support for our first hypothesis, that asking people to sign a pledge of honor before rather than after a self-reporting task lowers the likelihood of cheating through misreporting the number of miles driven over the course of the year. Using a field study, we were able to demonstrate that just a simple change in the location of one's own signature can greatly influence people's likelihood to cheat by misreporting information to advance their own self-interest.

Study 2: A Lab Experiment with Tax Returns

To test the robustness of our findings, we conducted a second study in the laboratory using a similar signing manipulation but in a different domain: filling out a tax return form. In this study, we also added a control condition to examine the actual effect of signing: whether

signing prior to the opportunity to cheat encourages honesty, or whether signing afterwards encourages unethical behavior.

Method

Participants. One-hundred-and-one students and employees at local universities in the Southeastern United States (M_{age}=22.10, SD=4.98; 45% male; 82% students) completed the study for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the study.

Design and Procedure. Participants were randomly assigned to one of three conditions: 1) Signature at the top of the tax return form (i.e. before filling it out); 2) Signature at the bottom of the tax return form (i.e. after filling it out); or 3) No signature (control condition). The statement that participants had to sign on the tax return form was "I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete." At the beginning of each session, participants were given instructions to the study. The instructions informed them that they would first complete a problem-solving task under time pressure (i.e., they would have five minutes to complete the task), and that the experimenter would keep track of the time. In addition to providing information about the payment for the problem-solving task, the instructions also included the following information, "For the problem-solving task, you will be paid a higher amount than what we usually pay participants in a regular study because you will be taxed on your earnings. You will receive more details after the problem-solving task."

Problem-solving task. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; based on Mazar et al., 2008) and a collection slip on which participants later reported their performance in this part of the study. Participants were told that they would have five minutes to find two numbers in each matrix that

summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time. Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrixes[1], note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter so that she could check their work. Neither of the two forms (matrix test sheet and collection slip) had information on it that could identify participants' (no name or other form of ID).

Tax return form. After the problem-solving task, participants went to a second room to fill out a research study tax return form. The form we used was based on a typical tax return form. We varied whether participants were asked to sign a pledge of honor at the top or at the bottom of the form (see Appendix A). Participants filled out the form by self-reporting their income (i.e., their performance on the problem-solving task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their estimated cost of commute. These costs were "credited" to their post-tax earnings from the problem-solving task to compute their final payment.

The instructions read: "We would like to compensate participants for extra expenses they have incurred to participate in this session." We included two costs: 1) Time to travel to the lab at $0.10 per minute (up to 2 hours or $12 maximum), and monetary cost of commute (up to $12 maximum).

[1] The task was designed such that if we assume respondents had no problems adding two numbers to ten, they should be able to identify how many matrixes they have solved correctly without requiring a solution sheet.

Payment structure. Given the features of the study, participants could make a total of $42—an amount which breaks down as follows: $2 show up fee, $20 on matrix task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Opportunity to cheat on the tax return form. The study was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem-solving task and by inflating the expenses they incurred in order to participate in the study. When participants completed the first part of the study, the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments. The tax return form included a one-digit identifier (one digit in the top right of the form, in the code OMB No. 1555-0111) that was identical with the digit of one number of one matrix (which was unique to each individual's work station)—a difference that was completely imperceptible to participants but allowed us to identify the matrix worksheet, the collection slip, and the tax return form that belonged to the same participant. As a result, at the end of each session, we were able to compare actual performance on the problem-sovling task and reported performance on the tax return form. If those numbers differed for an individual, that difference represented that individual's level of cheating on the problem-solving task.

Results

First, we examined the percentage of participants who cheated by overstating their performance on the problem-solving task when asked to report it on the tax return form. This percentage varied across conditions, $\chi^2(2, N=101)=12.58$, $p=.002$: The number of cheaters was lowest in the signature-at-the-top condition (37%, 13 out of 35), higher in the signature-at-the-

bottom condition (79%, 26 out of 33), and somewhat in between those two but more similar to the latter for the no-signature condition (64%, 21 out of 33).

Both actual performance in the matrix search task and reported performance for the same task as specified in the tax return form are depicted in Figure 1 (by condition). As can be seen, the number of matrices over-reported varied by condition, $F(2,98)=9.21$, $p<.001$, $\eta^2=.16$: it was lowest in the signature-at-the-top condition ($M=0.77$, $SD=1.44$) and higher in the signature-at-the-bottom condition ($M=3.94$, $SD=4.07$; $p<.001$) and in the no-signature condition ($M=2.52$, $SD=3.12$; $p<.05$). The difference between these two latter conditions was only marginally significant ($p<.07$). Within-subjects analyses using the difference between reported and actual performance revealed the same pattern of results.

The credits for extra expenses that participants claimed in the tax return forms varied as well significantly by condition, $F(2,98)=5.63$, $p<.01$, $\eta^2=.10$ (see Figure 2). Participants claimed the least expenses in the signature-at-the-top condition ($M=5.27$, $SD=4.43$) and more expenses in the signature-at-the-bottom ($M=9.62$, $SD=6.20$; $p<.01$) and the no-signature conditions ($M=8.45$, $SD=5.92$; $p<.05$). The difference between these two latter conditions was not significant ($p=.39$).

Discussion

The results of Study 2 provide further evidence for our hypothesis H1 that signing one's name prior to a task leads to lower levels of cheating than signing at the end. Study 2 also included a control condition in which participants did not provide their signature. Our results indicate that our findings were driven by the signing-at-the-top condition: signing prior to a self-reporting task promoted honest reporting but signing afterwards did not promote cheating.

Study 3: Increased Saliency of Ethical Standards

Thus far, we have demonstrated that signing one's name before having an opportunity to cheat discourages unethical behavior. Our implicit assumption underlying this finding was that signing before the opportunity to cheat rather than afterwards is more likely to raise the saliency of moral standards. We tested this hypothesis directly in our third study by measuring the extent to which signing before rather than after the opportunity to cheat increases the accessibility of words related to ethics and morality. Following prior research measuring implicit cognitive processes (Bassili & Smith, 1986; Tulving, Schacter, & Stark, 1982), we used a word-completion task in which participants were asked to complete various word fragments with the first letters that came to mind.

Commented [NM2]: A pity we don t have a control here to show that signing at the end is not likely to show any differences to a control condition when it comes to the saliency of moral standards This would be important for our claim that signing after people use tricks to deal with their immoral behavior without feeling immoral

Method

Design and Procedure. Study 3 employed one between-subjects factor with two levels: signature at the top, i.e., before filling out a form, versus at the bottom, i.e., after filling out a form. The study employed the same task and procedure of Study 2 but varied the incentives for the performance task, the tax rate, and the tax return forms participants completed. Participants in this study were paid $2 for each matrix puzzle successfully solved. They were also taxed at a higher rate of 50 percent. Finally, the tax forms were modified such that they mimicked the flow of actual tax reporting practices in the United States. Deductions were first subtracted from gross income to compute taxable income; then taxes were paid on this adjusted amount.

In addition, participants were asked to complete a word-completion task as their final task in the study. The task instructions informed participants that they would have to convert word fragments into meaningful words. Participants received a list of six word fragments with letters missing and were asked to fill in the blanks to make complete words by using the first word that came to mind. Three of these word-fragments (_ _ R A L, _ I _ _ _ E, and E _ _ _ C _ _) could

be completed as ethics-related words (moral, virtue, and ethical) or as ethics-neutral words (e.g., viral, tissue, and effects).

Participants. Sixty students and employees at local universities in the Southeastern United States (M_{age}=21.50, SD=2.27; 48% male; 90% students) completed the study for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the study.

Results

Level of cheating. We first examined the percentage of participants who cheated by overstating their performance on the matrix task when filling out the tax return form. This percentage was lower in the signature-at-the-top condition (37%, 11 out of 30) than in the signature-at-the-bottom condition (63%, 19 out of 30), $\chi^2(1, N=60)=4.27$, $p<.04$.

Figure 3 depicts actual performance on the matrix task and reported performance on the tax return form, by condition. The difference between the reported and actual performance on the matrix task was our proxy for cheating. This difference was lower in the signature-at-the-top condition (M=1.67, SD=2.78) than in the signature-at-the-bottom condition (M=3.57, SD=4.19), $t(58)=-2.07$, $p<.05$. Within-subjects analyses using both reported and actual performance revealed the same pattern of results.

The deductions participants reported in the tax return form follow the same pattern and vary significantly by condition, $F(1,58)=7.76$, $p<.01$, $\eta^2=.12$: they were lower in the signature-at-the-top condition (M=3.23, SD=2.73) than in the signature-at-the-bottom condition (M=7.06, SD=7.02).

Word-fragment task. As we predicted, participants who signed the honesty pledge before having the opportunity to cheat generated more ethics-related words (M=1.40, SD=1.04) than

those who signed at the bottom of the form (M=0.87, SD=0.97), $F(1,58)$=4.22, p<.05, η^2=.07, suggesting that the act of signing prior to the temptation to cheat increased the accessibility of ethics-related concepts.

Mediation analyses. We also tested whether ethics-related concepts (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating on the tax return form. Both condition and the number of ethics-related concepts were entered into a linear regression model predicting extent of cheating measured by the level of over-reporting of income (Note that the same results are found when considering deductions as the dependent variable). This analysis revealed that the effect of condition was significantly reduced (from β=-.262, p<.05 to β=-.143, p=.23), whereas the number of ethics-related concepts was a significant predictor of cheating (β=-.456, p<.001). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-1.85, -.04), suggesting significant mediation. Thus, consistent with our prediction, the number of ethics-related concepts significantly mediated the relationship between our manipulation (i.e. signature-first) and dishonest behavior.

Discussion

Using an implicit measure of ethical saliency, our third study shows that signing before having the opportunity to cheat raises the saliency of moral standards compared to signing after having had the opportunity to cheat. Consistent with our hypotheses, the mediation model suggested that raising ethical saliency discouraged cheating. Nevertheless, to further support our

model, we ran a fourth study that measured ethical saliency *after* the problem-solving task but *before* the tax return form was handed out.

Study 4: Ethical Saliency and Reduced Cheating

We conducted a fourth study to more carefully examine the role of ethical saliency on cheating. In addition, to extend the generalizability of our findings, in Study 4 we employed a different cheating-task.

Method

Design and procedure. Participants were randomly assigned to one of two conditions: Signature-first versus control. Across both conditions, the instructions informed them that we were interested in people's performance under pressure across a variety of tasks. For this particular study, they would be asked to answer a 20-question general knowledge test of medium difficulty (e.g., "How many U.S. states border Mexico?", "In which U.S. state is Mount Rushmore located?"), and that they would receive $1 for each correct question (in addition to a $2 show-up fee). Participants were given 15 minutes to answer the 20 questions. Once the fifteen minutes were over, the experimenter distributed a set of materials consisting first, of the word-fragment task employed in Study 3, followed by an answer sheet with the correct answers to the questions, and finally a collection slip so that participants could report their performance after checking their answers. Participants were asked to read and fill out the set of materials in the given order, that is, they filled out the word fragment task prior to checking their answers and reporting their performance on the collection slip. Participants were told to recycle their test and to just submit the collection slip to the experimenter for payment. Participants' lab ID was reported on both forms. In this way, we were able to assure anonymity in the eyes of participants

but we were actually able to track the extent to which each participants over-reported performance on the general knowledge test.

Half of the participants received an extra page on top of this set of materials, which they were asked to read before solving the word-fragment task. The page included a pledge of honesty participants were asked to sign: "I promise that I will report information about my performance on the trivia test truthfully" (signature-first condition). As we ascertained in Study 2, it is signing before that promotes honest reporting and not signing after that promotes dishonesty, the remaining half of the participants did not receive this extra page (control). We hypothesized that those, who received and signed the pledge of honesty, would be more likely to report their performance truthfully (H1), and that signing the pledge would lead participants to complete the word-fragment task with a higher number of ethics-related words (H2), which would mediate the effect of the signature on cheating (H3).

Participants. Eighty-two college and graduate students at local universities in the Southeastern United States (M_{age}=22, SD=3.11; 52% male) completed the study for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the study.

Results and Discussion

Same as in the previous studies, we computed the difference between self-reported performance and actual performance on the general-knowledge task by matching participants' unique study IDs that were denoted on each survey/form. This difference score served as our proxy for cheating. Positive difference-scores indicated that participants over-reported their performance and cheated on the task so that they could make more money.

When examining the performance difference-scores on the trivia test, we found that in comparison to the control condition cheating was significantly reduced in the signature first-condition (M=0.51, SD=1.42, vs. M=1.93, SD=2.15), $t(80)=3.52$, $p=.001$. Supporting these results, the percentage of participants, who overstated their performance, was higher in the control condition than in the signature-first condition (53.7% [22/41] vs. 12.2% [5/41]), $\chi^2(1, N=82)=15.96$, $p<.001$).

Signing before the opportunity to over-report performance also influenced the number of ethics-related concepts participants came up with in the word-fragment task. Participants in the signature first-condition found more ethics-related words (M=1.44, SD=0.95) than did those in the control condition (M=0.98, SD=0.88), $F(1,80)=5.25$, $p<.03$, $\eta^2=.06$.

Finally, we tested whether the extent to which ethics-related concepts came to mind (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating on the trivia task. Both condition and the number of ethics-related concepts were entered into a linear regression model predicting extent of cheating. This analysis revealed that the effect of condition was significantly reduced (from β=-.366, $p=.001$ to β=-.294, $p<.01$), whereas the number of ethics-related concepts was a significant predictor of cheating (β=-.290, $p<.01$). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-.67, -.01), suggesting significant mediation. Thus, consistent with our prediction, the number of ethics-related concepts significantly mediated the relationship between our manipulation (i.e. signature-first) and dishonest behavior.

Together these results provide strong support for the predicted inverse relationship between ethical saliency and cheating.

General Discussion

Across four studies, we consistently found that requiring one's signature before facing a temptation to cheat is an effective mean to discourage dishonesty because it makes ethics more salient. In Study 1, we conducted a field experiment with an automobile insurance company in which we varied whether customers filling out a report of the number of miles they drove in the past year signed their names before or after reporting the mileage number. Our results showed that customers reported driving a higher number of miles when they penned their signature before filling out the form than after. In other words, a subtle manipulation as the location of the signature produced a striking difference in number of reported miles: customers reported driving 2,428 more miles per car when they signed at the beginning of the form rather than at the end. We estimated the per-mile-cost of automobile insurance in the U.S. to be between four and ten cents, suggesting a minimum of $97 average difference in annual insurance premium per car between customers in the two conditions (see e.g., cents-per-mile insurance offered in Texas since 2002). Asking customers to sign before reporting led to a 10.25% increase over the current practice of asking for a signature at the end; this number is most likely to represent a conservative estimate of the extent to which erroneous reporting occurs in the current practice. An important consequence of this false reporting is that the costs may extend beyond the insurer to its entire customer base—including the honest policy-holders. That is, insurance costs are higher for everyone due to the dishonesty of some, with honest policy-holders in effect subsidizing the insurance premiums of dishonest policy-holders. The consequences can be staggering in parallel domains that rely on truthful self-reports, such as the domain of taxes.

Commented [LS3]: Estimation from milemeter.com and truedelta.com through inputting different scenarios (car make, model, age, mileage etc.)

Commented [NM4]: Here is a cite for texas: http://www.centspermilenow.org/652Garma.pdf

Commented [NM5]: Increase in what? The miles driven? Or the cost?

In Studies 2 and 3, we moved from a field experiment in an automobile insurance setting to a controlled, laboratory experiment in a tax setting. In both studies, participants had the opportunity to sign a tax form either before or after making claims regarding their performance on a task. Providing further support for the results of the field study, the findings of Studies 2 and 3 demonstrated that signing a pledge of honesty before (not after) having the opportunity to cheat discouraged dishonesty. In addition, study 2 showed that it was the "signing before" condition that decreased cheating and not the "signing after" condition that increased cheating. Furthermore, study 3 provided evidence for the hypothesis that "signing before" raised the saliency of ethical standards, which in turn led to more truthful self-reporting. Finally, Study 4 further examined the underlying psychological process that links the act of signing before filling out a form with the likelihood of cheating. The study included the same implicit measure of ethical saliency as in study 3: participants were asked to complete word fragments by using the first word that came to mind. We found that the act of signing one's name prior to a task increased the saliency of ethical standards, and this heightened saliency mediated the relationship between signing a pledge of honesty before having the opportunity to cheat and subsequent dishonest behavior.

Theoretical Contribution

The contribution of the present research is threefold. First, our findings contribute to the literature on how self-awareness (Duval & Wicklund, 1972) can nudge people's behavior for the better. We increased honesty in both laboratory and field settings by asking participants to sign their name next to a pledge of honesty and by varying when they provided their signature (before or after having the opportunity to cheat). The act of signing increased the saliency of their ethical standards, and, as a result, reduced their unethical behavior. Just as Haley and Fessler (2005)

increased sharing in an anonymous economic game by introducing the subtle prime of eye-like shapes in the background of the computer screen, we promoted honest behavior by nudging participants to turn their moral gaze inward—to their own behavior—by asking them to sign their name under a pledge of honor prior to filling out an insurance or tax return form.

Second, the present work contributes to existing research on behavioral ethics that recognizes the importance of non-conscious influences on unethical behavior (e.g., Bazerman & Banaji, 2004; Chugh, 2004; Kay, Wheeler, Bargh, & Ross, 2004; Reynolds, Leavitt, & DeCelles, 2010; Tenbrunsel et al., 2011). To date, this research has focused primarily on how automatic processes exacerbate unethical behavior. Extending this body of work, our studies have a preventive focus and identify subtle ways of raising the saliency of ethical standards. Our research shows that the very same automatic processes that unconsciously lead a person to behave dishonestly may be used to encourage ethical behavior when individuals are facing the temptation to cheat. Our findings are important in light of prior research on the use of explicit interventions such as introducing a code of ethics (Weaver, Treviño, & Cochran, 1999) to discourage dishonesty. The present work highlights the role that subtle interventions can have in producing similarly powerful results, even without individuals' conscious awareness.

Finally, our research also contributes to the literature on how to effectively reduce dishonesty. By introducing a slight change to the typical design of forms used for example by the IRS or insurance companies, we observed a significant shift towards honest behavior. In particular, by moving the location of the signature from the end to the beginning of a form we found more truthful reporting, less performance inflation, less over-claiming of credits, and fewer deduction claims. A simple nudge at the beginning—rather than at the end—of our tasks was enough to produce a meaningful increase in honesty.

Limitations and Venues for Future Research

Our studies used a minimal treatment paradigm to induce the observed effects; we shifted the requirement and location of participant signature and then observed differences in levels of cheating. An extension of this paradigm that might better speak to the potential magnitude of the effect in real-world application would be to precede the signature line with a more extensive set of rules that guide behavior. As an example, Shu, Gino, and Bazerman (2011) found that participants, who read an honor code prior to an opportunity to cheat were less likely to cheat on the subsequent task relative to a control group who did not read an honor code (see Mazar et al., 2008 for comparison between reading and signing an honor code prior to an opportunity to cheat versus no exposure reading or signing an honor code). Future research could investigate ways to super-charge the effect of requiring a signature prior to the start of a task—possibly through bundling it with some guidelines for behavior. Framing these guidelines in terms of prohibitions ("do not" rules) versus encouragements ("do" rules) might also alter the effect of signing on the dotted line.

Implications for Practice

Our findings suggest that one effective way to reduce or eliminate unethical behavior is to ask people to sign their name *prior* rather than *after* being tempted to cheat. These findings apply to a large category of behaviors that rely on honest self-report on the part of the individual—any behavior in which it is impossible for another person or organization to continually monitor.

We believe one of the most important domains to which our findings may be applied is the domain of taxes. As the federal tax gap soars to over $150 billion each year (Morse, 2009), the amount spent on tax compliance and investigation has also seen dramatic increases. The scale

of the proposed intervention is truly minimal: governments already require tax payers (and preparers) to sign when filing taxes—just currently not in the most effective location. Simply shifting the signature to the beginning of the tax form may help the federal and state governments close a significant portion of the tax gap and realize enormous savings in tax compliance and investigation costs.

Conclusion

By simply asking participants to sign on the dotted line prior to a task in which they face a temptation to cheat rather than at the end, we found significant reductions in levels of cheating, both in an insurance setting as well as in the context of taxes. This is just a small subset of the types of domains, which rely on honest self-reporting on the part of the individual. An intervention as simple as shifting the signature location can lead to a meaningful difference in behavior that follows. Signing on the dotted line can shift the moral gaze inward, raise the saliency of ethical standards, and spill over to promote more ethical actions going forward.

Appendix A

Forms used in Study 2

Form **3305** (Rev. June 2010) Center for Decision Research	**Research Study Tax Return** For the period June 1, 2010, through August 30, 2010	Keep a copy of this return for your records. OMB No. 1555-0111

Write Clearly	Name	PID	For Administrative Use Only
	Address (Number, street, and room or suite number)		T .... FF .....
	City, State, and ZIP code		

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned ▶	2	
3. Please subtract the value specified in box 2 from value specified in box 1 ▶	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ▶	4	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	5	
3. Please add the value specified in box 4 and the value specified in box 5 ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today s session ▶	7	

Sign Here	I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete. ▶ ▶

Form **3305**

(Rev. June 2010)

Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....

...

FF .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned) ▶	2	
3. Please subtract the value specified in box 2 from value specified in box 1 ▶	3	

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3. Please add the value specified in box 4 and the value specified in box 5	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today s session ▶	7	

Form **3305**

(Rev. June 2010)

Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here — I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....

...

FF .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned) ▶	2	
3. Please subtract the value specified in box 2 from value specified in box 1 ▶	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

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2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	5	
3. Please add the value specified in box 4 and the value specified in box 5 ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today s session ▶	7	

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Figure Captions

Figure 1. Reported and actual performance on the matrix search task by condition, Study 2.

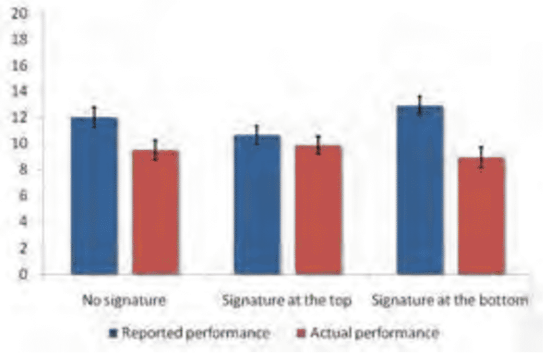


Figure 2. Reported deductions by condition, Study 2.

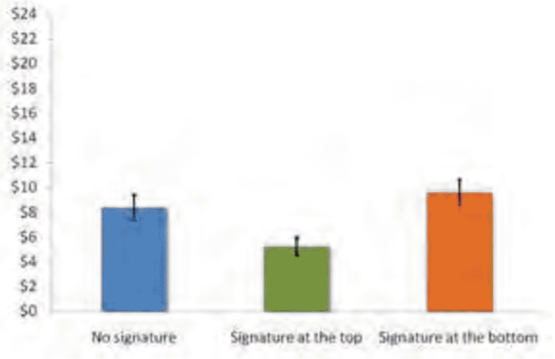
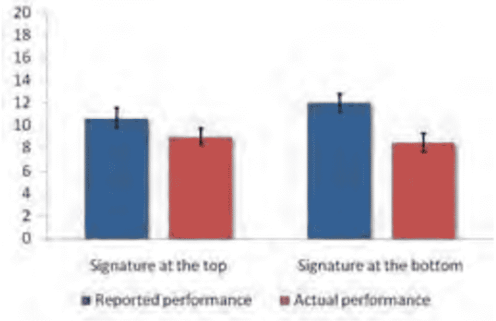


Figure 3. Reported and actual performance on the matrix search task by condition, Study 3.



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Running Head: MAKING ETHICS SALIENT

When to Sign on the Dotted Line?

Signing First Makes Ethics Salient and Decreases Dishonest Self-Reports

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[redacted]

Abstract

Many business and governmental interactions are based upon trust with the assumption that all actors generally comply with social and moral norms. Proof of compliance is typically provided through signature—e.g., at the end of tax returns or insurance policy forms. Yet even when people care about morality and want to be seen as ethical by others, they sometimes transgress when ~~it~~ beneficial to~~ts~~ them ~~to do so~~, at great cost to economies across the globe. This paper focuses on testing an easy-to-implement method to discourage dishonesty: signing at the beginning rather than at the end of a self-report, as is the current common practice. Using both field and lab experiments, we find that signing before rather than after having faced the opportunity to cheat raises the saliency of ethics and morality, and leads to significant reductions in dishonesty.

Keywords: Cheating; Dishonesty; Ethics; Morality; Saliency; Signing; Signature

In December 2010, Timothy Schetelich—who had been working as a Certified Public Accountant in Springfield, New Jersey for years—pleaded guilty to preparing false tax returns for several clients. Over the years, he claimed some of them had legitimate business expenses when in fact they did not own a business; in other cases, he fabricated and inflated deductions for expenses to obtain refunds the clients were not entitled to receive. In the process, his clients paid less taxes and he made higher commissions. This case, unfortunately, is not an exception. Many businesses regularly cheat on their taxes (Morse, 2009), and these unpaid taxes have been estimated to amount to roughly $150 billion every year in the United States—an astonishing cost to the economy. The estimated cost from the non-compliance of individual tax payers is even higher (Herman, 2005). Similar forms of unethical behavior on the private individual's level include overstating insurance claims, inflating business expenses, and overstating billable hours, to mention just a few (Mazar & Ariely, 2006; Gino & Pierce, 2010).

In many cases, companies or governments rely on individuals' honesty, and use the possibility of punishment to deter dishonesty. In accordance with legal requirements, people are often asked to sign to certify the truthfulness of their statements, and this request is~~.~~ c~~C~~ommonly located~~,~~ ~~individuals sign~~ at the end of ~~their~~ a self-report. However, the costs of non-compliance suggest that this practice ~~appears to be~~ may be insufficient in countering self-interested motivations to falsify numbers. In this paper, we propose and test the idea that a small change in the common practice could lead to significant improvements in compliance: simply moving the signing of the statement of honor from the end to the beginning of a self-report should bring one's moral standards into focus and subsequently promote honesty while discouraging cheating.

Research on Dishonesty

The pervasiveness of unethical practices in organizations and society more broadly has generated considerable interest among scholars in a variety of disciplines, including

organizational behavior, psychology, philosophy, and economics (e.g., Brown & Treviño, 2006; Gneezy, 2005; Haidt, 2001; Nichols & Knobe, 2007; Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2011; Tenbrunsel & Smith-Crowe, 2008; Treviño, Weaver, & Reynolds, 2006). Together the work of these scholars suggests that there are at least two conflicting motivations within most individuals: one motivation towards self-interest that can drive unethical behaviors when the benefits outweigh the anticipated costs (e.g., Brief, Buttram, & Dukerick, 2001; Lewicki, Poland, Minton, & Sheppard, 1997), and another motivation to preserve one's own moral standards that limits one from engaging in unethical behaviors (e.g., Ayal & Gino, 2011; Mazar, Amir, & Ariely, 2008; Tenbrunsel et al., 2011). The majority of recent work has supported the latter explanation (Aquino & Reed, 2002), and has demonstrated that factors such as ambiguity, cultural orientations, and surprisingly subtle situational influences can facilitate their moral transgressions (Ayal & Gino, 2011). For instance, Schweitzer and Hsee (2002) as well as Baumeister (1998) have shown that people will present ambiguous information such that it benefits their self-interest (even if it harms others) without any negative consequences to their moral self-image. In related work, Mazar and Aggarwal (2011) reported that collectivism promotes bribery by mitigating the perceived responsibility for one's actions, and Zhong, Bohns and Gino (2010) found that ambient darkness can facilitate people's transgressions by increasing a sense of anonymity.

To date, most of this research has focused primarily on the motives and characteristics of the wrongdoers or on the organizational and environmental factors that can influence one's actions. Building on this body of work, the goal of the current paper is to develop and test an efficient and simple measure to reduce or eliminate unethical behaviors—particularly behaviors that rely on self-monitoring in lieu of societal restraints. Filing taxes, claiming business

expenses, or reporting billable hours are all examples of such behaviors that rely on truthful self-reports, and departures from honesty can lead to significant economic losses. Thus, it seems important to identify practical interventions that promote honesty in domains that rely on truthful self-reports (Amir et al., 2005).

Recent papers have started to identify such interventions. For example, Mazar, Amir, and Ariely (2008) asked students to sign an honor code before participating in a task that offered them the opportunity to misreport their performance in order to earn more money in an experiment. While the students overstated their performance in the absence of an honor code, the authors observed no cheating when students were asked to read and sign an honor code at the beginning of the task. Building on this finding, Shu, Gino, and Bazerman (2011) compared people's self-reports when they simply read or did not read an honor code before participating in a task that offered the opportunity to overstate one's performance to earn more money. Here too, the authors found that participants who first read an honor code were less likely to cheat on the subsequent task relative to those who did not read an honor code. While these findings identify an intervention to curtail dishonesty by introducing a reminder of a code of conduct in a context where previously there was none, there exists important domains in which signing a statement to confirm the truthfulness of a report is already required, such as insurances or taxes. One important difference from the lab studies, however, is that in the field typically a signature is requested at the end rather than at the beginning of reporting. It is unclear whether it is simply the reminder of a code of conduct that increases honesty in self-reports or whether the location of the signature is important. Using both field and laboratory experiments, in this paper we examine the effect of simply moving the signature currently required in many real-world contexts from

the end of a self-reporting task to the beginning, to see if there is an easy-to-implement way for governments and companies to bolster honesty.

We recognize that our core manipulation in this study is trivial. But that is precisely the point. In this paper, we hope to show that nudges (Thaler & Sunstein, 2008) can have profound influences on behavior. In our case, we focus on how ethical nudges influence dishonesty.

Increasing Attention to One's Moral Standards

We propose that the location of a signature matters, and that simply moving the signature line from the end to the beginning of a form will bring one's moral standards into focus, right before it is most needed. This increased saliency of moral standards, in turn, can lead to increased truthfulness on the subsequent self-report. In contrast, when signing at the end of a form, the "damage" has already been done; by the time individuals have filled out the form, they have already engaged in various mental tricks and justifications that allow them to maintain a positive self-image despite having cheated.

The basic idea for moving the signature line to the start of the form is in line with Duval and Wicklund's (1972) theory of objective self-awareness. Objective self-awareness theory is concerned with the self-reflexive quality of the consciousness (Duval & Wicklund, 1972). "When attention is directed inward and the individual's consciousness is focused on himself, he is the object of his own consciousness—hence 'objective' self-awareness" (Duval & Wicklund, 1972, p. 2). This is contrasted with "subjective self-awareness" that results when attention is directed away from the self and the person "experiences himself as the source of perception and action" (Duval & Wicklund, 1972, p. 3). In its original formulation, the theory assumed that the orientation of conscious attention was the essence of self-evaluation. Focusing attention on the self brings about objective self-awareness, which initiatesd an automatic comparison of the self against standards. The self was defined very broadly as the a person's knowledge of the

herself~~person~~. A standard was "defined as a mental representation of correct behavior, attitudes, and traits ... All of the standards of correctness taken together define what a 'correct' person is" (Duval & Wicklund, 1972, pp. 3, 4). This simple system consisting of self, standards, and attentional focus was assumed to operate according to Gestalt consistency principles (Heider, 1960). Whenever a discrepancy between self and standards occurred, the decision maker experienced negative affect, and because of this aversive state, she was motivated to restore consistency (Aronson, Cohen, & Nail, 1999).

Previous research has shown that even subtle cues can activate attention to the self and lead to surprisingly powerful effects on consequent behavior. For example, when playing an anonymous economic game, people are more generous when there is even the nuanced presence of eye-like shapes in the computer background (Haley & Fessler, 2005; Rigdon, Ishii, Watabe, & Kitayama, 2009). In a more naturalistic setting, researchers have examined the effect of an image of a pair of eyes on the amount of money people put into a pay-on-your-honor cash box when consuming coffee. When eyes were displayed on the contributions box instead of flowers, nearly three times the amount of money was collected (Bateson, Nettle, & Roberts, 2006). In the domain of self-reporting, individuals who were exposed to the Ten Commandments or read and signed an honor code were subsequently less likely to inflate their performance on a task in which they were paid based on performance (Mazar et al., 2008; Shu et al., 2011).

One way to explain the above findings is that these simple environmental manipulations (eyes, codes of conduct, etc.) made ethics more salient; that is, they made people pay greater attention to their moral standards and scrutinize the ethicality of their own behavior. As a consequence, moral saliency decreased people's tendency to engage in dishonest acts and increased the rigidity of their judgments of ethicality. Yet, the effectiveness of these

manipulations in making morality salient was not tested directly but assumed by observing differences in unethical behavior following the various manipulations. In the current work, we explicitly test this link by employing an implicit measure of ethical saliency.

Building on research that the self is malleable (see e.g., Shih, Pittinsky, & Ambady, 1999) and prone to even subtle primes in the environment, we examine a specific type of prime that can be easily implemented in various real-world contexts: signing one's name. Signing has been shown to activate self-identity in the domain of consumer behavior. For example, Kettle and Häubl (in press) showed that signing (as opposed to printing) one's name increased consumers' engagement when shopping for products closely associated with their self-identities, and decreased engagement when shopping for products distant from their self-identities. We turn to the question of morality and test whether the act of signing one's name before rather than after a self-report task brings into focus one's moral compass and ethical standards and subsequently discourages dishonest actions.

Many contexts require signing one's name as a means of authentication, but almost all these contexts require the signature after self-reporting, and not prior. We propose that signing one's name after a self-reporting task is an ineffective way to recruit attention to ethical standards due to cognitive dissonance and moral disengagement. Cognitive dissonance arises when there is discrepancy between individuals' actions and their beliefs or attitudes towards these actions (Festinger & Carlsmith, 1959; Aronson, Cohen, & Nail, 1999). Because people want to perceive themselves as moral (Aquino & Reed, 2002), dishonest behavior that could potentially lead to self-criticism induces dissonance motivation, or "psychological discomfort that motivates or 'drives' the attitude change process" (Fazio & Cooper, 1983, p. 132). In the domain of ethics, ~~this~~ such potential psychological discomfort can be eliminated in two ways

without changing one's moral standards: by bringing behavior closer to one's ethical goals (Baumeister & Heatherton, 1996) – that is, by being more honest – or by modifying one's beliefs about questionable actions such that they permit ~~the~~ transgressions~~behavior – that is, moral disengagement~~. Bandura (1990, 1996) ~~defines~~ defines the~~moral disengagement as the~~ process by which detrimental conduct is made personally acceptable through recoding the action as morally acceptable as moral disengagement (see also Mazar et al., 2008 as well as Shu et al., 2011). Therefore, requiring one's signature after a self-reporting task ~~will~~ should be an ineffective way to make ethics salient if someone has already cheated—it is "too late" to focus on ethics once moral disengagement has occurred to quash cognitive dissonance. But perhaps the signature ~~is not an~~can be made a more ~~in~~effective means to curtail dishonesty~~ – perhaps it is just~~if it is required in the ~~wrong~~ right location.

To summarize, we propose and test the following hypotheses:

Hypothesis 1. Signing one's name prior to a self-reporting task will promote more honest reporting relative to signing one's name after the task as well as not signing at all.

Hypothesis 2. Signing one's name prior to a self-reporting task increases the saliency of moral standards relative to signing one's name after the task.

Hypothesis 3. Heightened saliency of moral standards will mediate the effect of signing one's name on honest self-reporting.

Overview of the Experiments

We tested these hypotheses in four experiments in which participants had the opportunity to gain a financial benefit through dishonest self-reporting. In each study, we compared the effectiveness of signing one's name at the beginning of a self-report form that presented an opportunity to chat to either signing one's name at the end and/or not at all~~varied when participants signed their name – at the beginning or the end of the self-report form. That is, participants either signed before or after having had the opportunity to cheat.~~

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In Experiment 1, we conducted a field experiment in collaboration with an automobile insurance company, and found signing prior to reporting produced significantly higher numbers of miles participants reported driving during the prior year (in comparison to signing at the end of the self-report) – a noteworthy change in real behavior with substantial consequences for the insurance company. In Experiments 2 and 3, we replicated the same findings in a controlled laboratory environment. Finally, Experiments 3 and 4 show that signing one's name prior to the temptation and the opportunity to cheat heightens awareness of ethical standards, which in turn mediates the effect of the location and presence of one's own signature on cheating.

Experiment 1: A Field Experiment with an Automobile Insurance Company

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We first tested the effect of signing one's name in a naturalistic setting. To do so, we carried out a field experiment with an insurance company in the Southeastern United States in which we manipulated the automobile policy review form that was sent out to customers at the end of the year.

Method

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The annual automobile policy review form asked customers to record the exact current odometer mileage of all cars that were currently insured under their policy, in addition to other information. We randomly assigned customers to receive a form that asked them to sign the following pledge of honesty: "I promise that the information I am providing is true". In one version of the form, they were asked to sign at the end (i.e., after having completed it) and in the other version they were asked to sign at the beginning (i.e., before starting it). Otherwise, the forms were identical.

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Completed forms were received from 13,488 policies for a total of 20,741 cars. A single policy could cover up to four cars; 52% of policies had one car, 42% had two cars, 5% had three cars and less than 0.3% had four cars. We compared odometer readings between the two conditions. If a policy had more than one car, we averaged the reported mileage for all cars on the same policy. Policy holders had an incentive to report lower mileages since the fewer miles driven, the lower the insurance premium. Thus, when filling out the automobile policy review form, customers might have faced a dilemma between truthfully indicating the current odometer mileage and dishonestly indicating a lower mileage in order to reduce their insurance premium.

Since we hypothesized that signing a pledge of honor before a self-reporting task raises the saliency of people's own ethical standards, we expected that customers who signed before filling out the form ~~would be more~~were more likely to be truthful and thus report higher mileage than those who signed at the end of the form.

Results and Discussion

As expected, controlling for the number of cars per policy ($F[1,13485]=2.184$, $p=.14$), the average annual usage per car was significantly higher among customers who signed at the beginning of the form ($M=26{,}098.4$, $SD=12{,}253.4$) than among those who signed at the end of the form ($M=23{,}670.6$, $SD=12{,}621.4$; $F[1,13485]=128.631$, $p<.001$). The annual difference between our two treatments was on average 2,427.8 miles per car. The results also hold for the mileage reported for the first car only (signing at the beginning: $M=26{,}204.8$ miles, $SD=14{,}226.3$ miles, signing at the end: $M=23{,}622.5$ miles, $SD=14{,}505.8$ miles; $t[13486]=10.438$, $p<.001$).

These results provide support for our first hypothesis, which suggests that asking people to sign before rather than after a self-reporting task lowers the magnitude of cheating through ~~misreporting the number of miles driven.~~ Using a field experiment, we were able to demonstrate

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that just a simple change in the location of one's own signature can greatly influence the extent to which people misreport information to advance their own self-interest.

Experiment 2: A Lab Experiment with Tax Returns

To test the robustness of our findings, we conducted a second experiment in the laboratory using a similar signing manipulation but in a different domain: filling out a tax return form. In this experiment, we also added a control condition to examine the effect of the signature location~~signing~~: whether signing prior to the opportunity to cheat encourages honesty, or whether signing afterwards encourages unethical behavior.

Method

Participants. One-hundred-and-one students and employees at local universities in the Southeastern United States (M_{age}=22.10, SD=4.98; 45% male; 82% students) completed the experiment for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the experiment.

Design and Procedure. Participants were randomly assigned to one of three conditions: 1) Signature at the top of the tax return form (i.e. before filling it out); 2) Signature at the bottom of the tax return form (i.e. after filling it out); or 3) No signature (control condition). The statement that participants had to sign asked them to declare that they carefully examined the return and that to the best of their knowledge and belief it was correct and complete. At the beginning of each session, participants were given instructions to the experiment. The instructions informed them that they would first complete a problem-solving task under time pressure (i.e., they would have five minutes to complete the task). In addition, the instructions also included the following information, "For the problem-solving task, you will be paid a higher amount than what we

usually pay participants ~~in a regular study~~ because you will be taxed on your earnings. You will receive more details after the problem-solving task."

Problem-solving task. For this task (based on Mazar et al., 2008), participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78~~; based on Mazar et al., 2008~~) and a collection slip on which participants later reported their performance in this part of the experiment. Participants were told that they would have five minutes to find two numbers in each matrix that summed to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. ~~In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), on average people were able to find 7 of the 20 pairs in the given amount of time.~~ Once the five minutes were over, the experimenter asked participants to count the number of correctly solved matrices[1], note that number on the collection slip, and then submit both the test sheet and the collection slip to the experimenter ~~so that she could check their work.~~ Neither of the two forms (matrix test sheet and collection slip) had any information on it that could identify the participants. Note, the sole purpose of the collection slip was for the participants to learn how many matrixes in total they have solved correctly.

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Tax return form. After the problem-solving task, participants went to a second room to fill out a research study tax return form (IRS 1040). The form we used was based on a typical tax return form. We varied whether participants were asked to sign the form at the top or at the bottom of the form (see Appendix A). Participants filled out the form by self-reporting their income (i.e., their performance on the problem-solving task) on which they paid a 20% tax (i.e., $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to

[1] We assume respondents had no problems adding two numbers to ten, which means they should be able to identify how many matrixes they have solved correctly without requiring a solution sheet.

travel to the laboratory, and their estimated cost of commute. These costs were "credited" to their post-tax earnings from the problem-solving task to compute their final payment.

The instructions read: "We would like to compensate participants for extra expenses they have incurred to participate in this session." We reimbursed ~~two types of costs: 1)~~the ~~t~~Time to travel to the lab at $0.10 per minute (up to 2 hours or $12 maximum), and the ~~monetary~~ actual cost of participants' commute (up to $12 maximum).

Payment structure. Given the features of the experiment, participants could make a total of $42—an amount which breaks down as follows: $2 show up fee, $20 on matrix task minus a 20% tax on income (i.e., $4), $12 as credits for travel time, and $12 as credits for cost of commute.

Opportunity to cheat on the tax return form. The experiment was designed such that participants could cheat on the tax return form and get away with it by overstating their "income" from the problem-solving task and by inflating the expenses they incurred in order to participate in the experiment. When participants completed the first part of the experiment, the experimenter gave them a tax return form and asked each participant to go to a second room with a second experimenter to fill out the tax form and receive their payments. The tax return form included a one-digit identifier (one digit in the top right of the form, in the code OMB No. 1555-0111) that was identical with the digit of one number of one matrix (which was unique to each individual's work station)—a difference that was completely imperceptible to participants but allowed us to link the matrix worksheet~~, the collection slip, and~~and the tax return form that belonged to the same participant. As a result, at the end of each session, we were able to compare actual performance on the problem-solving task and reported performance on the tax return form. If

Commented [NM4]: Naming the collection slip separately, causes more questions I think. Thus, I thought we should erase it here.

those numbers differed for an individual, that difference represented that individual's level of cheating.

Results

First, we examined the percentage of participants who cheated by overstating their performance on the problem-solving task when asked to report it on the tax return form. This percentage varied across conditions, $\chi^2(2, N=101)=12.58$, $p=.002$: The number of cheaters was lowest in the signature-at-the-top condition (37%, 13 out of 35), higher in the signature-at-the-bottom condition (79%, 26 out of 33), and somewhat in between those two but more similar to the latter for the no-signature condition (64%, 21 out of 33).

Both actual and reported performances on the matrix search task are depicted in Figure 1. As depicted, the number of matrices over-reported in the tax return forms varied by condition, $F(2,98)=9.21$, $p<.001$, $\eta^2=.16$: it was lowest in the signature-at-the-top condition ($M=0.77$, $SD=1.44$) and higher in the signature-at-the-bottom condition ($M=3.94$, $SD=4.07$; $p<.001$) and in the no-signature condition ($M=2.52$, $SD=3.12$; $p<.05$). The difference between these two latter conditions was only marginally significant ($p<.07$). Analyses of differences between reported and actual performance revealed the same pattern of results.

The credits for extra expenses that participants claimed in the tax return forms also varied by condition, $F(2,98)=5.63$, $p<.01$, $\eta^2=.10$ (see Figure 2). Participants claimed the least expenses in the signature-at-the-top condition ($M=5.27$, $SD=4.43$) and more expenses in the signature-at-the-bottom ($M=9.62$, $SD=6.20$; $p<.01$) and the no-signature conditions ($M=8.45$, $SD=5.92$; $p<.05$). The difference between these two latter conditions was not significant ($p=.39$). The significance and nature of the results do not change when considering the two types of expenses separately.

Discussion

The results of Experiment 2 provide further evidence for our hypothesis 1: that signing one's name prior to a task leads to lower levels of cheating than signing at the end. Experiment 2 also included a control condition in which participants did not sign anything. Our results suggest that the effect of the signature location is driven by the signing-at-the-top condition: signing prior to a self-reporting task promoted honest reporting but signing afterwards did not promote cheating.

Experiment 3: Increased Saliency of Ethical Standards

Thus far, we have demonstrated that signing one's name before having an opportunity to cheat discourages unethical behavior. Our implicit assumption underlying this finding was that signing before the opportunity to cheat rather than afterwards is more likely to raise the saliency of moral standards. We tested this hypothesis more directly in our third experiment through measuring the extent to which signing before rather than after the opportunity to cheat increases the accessibility of words related to ethics and morality. Following prior research measuring implicit cognitive processes (Bassili & Smith, 1986; Tulving, Schacter, & Stark, 1982), we used a word-completion task in which participants were asked to complete various word fragments with the first ~~letters~~ words that came to mind.

Method

Design and Procedure. Experiment 3 employed one between-subjects factor with two levels: signature at the top, i.e., before filling out a form, versus at the bottom, i.e., after filling out a form. The experiment employed the same task and procedure of Experiment 2 but varied the incentives for the performance task, the tax rate, and the tax return forms participants completed. Participants in this experiment were paid $2 (rather than $1) for each matrix puzzle

successfully solved and . They were also taxed at a higher rate of 50 percent. Finally, the tax forms were modified such that they mimicked the flow of actual tax reporting practices in the United States; . Deductions were first subtracted from gross income to compute taxable income; then taxes were paid on this adjusted amount (see Appendix B for an example of the forms used).

In addition After filling out the tax return forms, participants were asked to complete a word-completion task. The task instructions informed participants that they would have to convert word fragments into meaningful words. Participants received a list of six word fragments with letters missing and were asked to fill in the blanks to make complete words by using the first word that came to mind. Three of these word-fragments (_ _ R A L, _ I _ _ _ E, and E _ _ _ C _ _) could be completed as ethics-related words (moral, virtue, and ethical) or as ethics-neutral words (e.g., viral, tissue, and effects).

Participants. Sixty students and employees at local universities in the Southeastern United States (M_{age}=21.50, SD=2.27; 48% male; 90% students) completed the experiment for pay. They received a $2 show-up fee, and had the opportunity to earn additional money throughout the experiment.

Results

Level of cheating. We first examined the percentage of participants who cheated by overstating their performance on the matrix task when filling out the tax return form. This percentage was lower in the signature-at-the-top condition (37%, 11 out of 30) than in the signature-at-the-bottom condition (63%, 19 out of 30), $\chi^2(1, N=60)=4.27$, $p<.04$.

Figure 3 depicts actual performance on the matrix task and reported performance on the tax return form, by condition. The difference between the reported and actual performance on the matrix task was our proxy for cheating. This difference was lower in the signature-at-the-top

condition (M=1.67, SD=2.78) than in the signature-at-the-bottom condition (M=3.57, SD=4.19), $t(58)$=-2.07, p<.05. Within-subjects analyses using both reported and actual performance revealed the same pattern of results.

The deductions participants reported in the tax return form followed the same pattern and ~~vary~~ varied significantly by condition, $F(1,58)$=7.76, p<.01, η^2=.12: they were lower in the signature-at-the-top condition (M=3.23, SD=2.73) than in the signature-at-the-bottom condition (M=7.06, SD=7.02). We obtained the same results when considering each type of deductions separately.

Word-fragment task. As ~~we~~ predicted, participants who signed the honesty pledge before having the opportunity to cheat generated more ethics-related words (M=1.40, SD=1.04) than those who signed at the bottom of the form (M=0.87, SD=0.97), $F(1,58)$=4.22, p<.05, η^2=.07, suggesting that the act of signing prior to the temptation to cheat increased the accessibility of ethics-related concepts.

Mediation analyses. We also tested whether ethics-related concepts (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating when reporting the performance on the matrix task on the tax return form. Both condition and the number of ethics-related concepts were entered into a linear regression model predicting extent of cheating measured by the level of over-reporting of income (we found ~~Note that~~ the same results ~~are found~~ when considering deductions as the dependent variable). ~~This~~ The mediation analysis revealed that the effect of condition was significantly reduced (from β=-.262, p<.05 to β=-.143, p=.23), and that the number of ethics-related concepts was a significant predictor of cheating (β=-.456, p<.001). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of

condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-1.85, -.04), suggesting significant mediation. Thus, consistent with our prediction, the number of ethics-related concepts significantly mediated the relationship between our manipulations (~~i.e.~~ signature-first vs. signature-last) and dishonest behavior.

Discussion

Using an implicit measure of ethical saliency, our third experiment shows that signing before having the opportunity to cheat raises the saliency of moral standards compared to signing after having had the opportunity to cheat. Consistent with our hypothes~~i~~es H3, the mediation model suggested that raising ethical saliency discouraged cheating.

One concern in this experiment is that ~~in this experiment,~~ our mediating variable (ethical saliency) was measured at the end of the experiment instead of prior to the dependent variable (cheating behavior). Thus, ~~, which might mean that~~ the observed ~~measure~~ effect on ethical saliency might have been ~~was~~ a result of the cheating behavior and not a result of the moral priming. However, our theorizing leads us to believe that ethical saliency has causal priority over cheating behavior—rather than vice versa—in accordance to Preacher and Hayes's discussion of what constitutes causal priority and when it trumps temporal priority (2004). Still, in order to further ascertain the direction of our mediation model, we ran a fourth experiment that measured ethical saliency after the problem-solving task but *before* the tax return form was handed out.

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Experiment 4: Measuring Ethical Saliency ~~and~~ before Reducing Cheating~~Reduced Cheating~~

We conducted a fourth experiment to more carefully examine the role of ethical saliency on the effect of signing *before* filling out a self-report task on reducing cheating. In addition, to

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extend the generalizability of our findings, in Experiment 4 we employed a different cheating task.

Method

Design and Pprocedure. Participants were randomly assigned to one of two conditions: Signature-first versus control. Across both conditions, the instructions described the experiment as focusing on performance under pressure. Participants were asked to answer a 20-question general knowledge test of medium difficulty (e.g., "How many U.S. states border Mexico?", "In which U.S. state is Mount Rushmore located?"), and received $1 for each correct answer (in addition to a $2 show-up fee). Participants were given 15 minutes to answer the 20 questions.

-Once the fifteen minutes were over, the experimenter distributed a set of materials consisting first, of the word-fragment task employed in Experiment 3. Only after the participants completed this task did the experimenter distribute the answer sheet with the correct answers to the generally knowledge questions, together with a collection slip so that participants could report their performance after checking their answers. Finally, pParticipants were asked to recycle throw their test sheet with the general knowledge questions and their answers into the recycling bin and to just only submit the collection slip to the experimenter for payment. Participants' lab ID was reported on both forms. In this way, we were able to assure anonymity but we were also able to track the extent to which each participant over-reported performance on the general knowledge test.

Half of the participants received an additional message, which they were asked to read after the general knowledge test but before solving the word-fragment task. The message included a pledge of honesty participants were asked to sign: "I promise that I will report information about my performance on the trivia test truthfully" (signature-first condition). The

other half of the participants did not receive this message (control). We hypothesized that those who received and signed the pledge of honesty would be more likely to report their performance truthfully (H1), and that signing the pledge would lead participants to complete the word-fragment task with a higher number of ethics-related words (H2), which would mediate the effect of the signature on cheating (H3).

Participants. Eighty-two college and graduate students at local universities in the Southeastern United States (M_{age}=22, SD=3.11; 52% male) completed the experiment for pay. They received a $2 show-up fee and had the opportunity to earn additional money throughout the experiment.

Results and Discussion

As in the previous studies, we computed the difference between self-reported performance and actual performance on the general-knowledge task by matching participants' unique study IDs that were denoted on each survey/form. This difference score served as our proxy for cheating. Positive difference-scores indicated that participants over-reported their performance and cheated on the task so that they could make more money.

When examining the performance difference-scores on the trivia test, we found that in comparison to the control condition, cheating was significantly reduced in the signature first-condition (M=0.51, SD=1.42, vs. M=1.93, SD=2.15), $t(80)=3.52$, $p=.001$. Supporting these results, the percentage of participants, who overstated their performance, was higher in the control condition than in the signature-first condition (53.7% [22/41] vs. 12.2% [5/41]), $\chi^2(1, N=82)=15.96$, $p<.001$).

Signing before the opportunity to over-report performance also influenced the number of ethics-related concepts participants came up with in the word-fragment task. Participants in the

signature first-condition found more ethics-related words (M=1.44, SD=0.95) than did those in the control condition (M=0.98, SD=0.88), $F(1,80)=5.25$, $p<.03$, $\eta^2=.06$. It is interesting to note that the magnitude of the effect in this experiment is the same as found for the signature after-condition in Experiment 3, suggesting that the initial signature is the cause of the shift in mindsets.

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Finally, we tested whether the extent to which the number of ethics-related ~~concepts~~ words that came to mind (our proxy for saliency of moral standards) mediated the effect of condition on the extent of cheating on the trivia task. Both condition and the number of ethics-related ~~concepts~~ words were entered into a linear regression model predicting extent of cheating. This analysis revealed that the effect of condition was significantly reduced (from β=-.366, p=.001 to β=-.294, $p<.01$), and that the number of ethics-related concepts was a significant predictor of cheating (β=-.290, $p<.01$). Using the bootstrapping method (with 10,000 iterations) recommended by Preacher and Hayes (2004), we tested the significance of the indirect effect of condition on dishonest behavior through the activation of ethics-related concepts. The 95% confidence interval for the indirect effect did not include zero (-.67, -.01), suggesting significant mediation. Thus, consistent with our prediction, the number of ethics-related ~~concepts~~ words significantly mediated the relationship between our manipulation (i.e. signature-first) and dishonest behavior.

Together these results provide strong support for the predicted inverse relationship between ethical saliency and cheating.

General Discussion

Across four experiments, we ~~consistently~~ found that requiring one's signature before facing a temptation to cheat is an effective mean to discourage dishonesty because it makes

ethics more salient. In Experiment 1, we conducted a field experiment with an automobile insurance company in which we varied whether customers reporting the number of miles they drove signed their names before or after reporting the mileage number. Our results showed that customers reported driving a higher number of miles (i.e., they cheated less) when they penned their signature before filling out the form than after: the difference amounted to ~~. Customers reported driving~~ 2,428 ~~more~~ miles per car ~~when they signed at the beginning of the form rather than at the end~~. We estimated the per-mile-cost of automobile insurances in the U.S. to be between four and ten cents, suggesting a minimum of $97 average difference in annual insurance premium per car between customers in the two conditions.[2] Asking customers to sign at the start of the form led to a 10.25% ~~in~~ increase in reported miles driven over the current practice of asking for a signature at the end. An important consequence of false reporting of this type is that the costs extend beyond the insurer to its entire customer base—including the honest policy-holders. Moreover, the consequences of such dishonesty can be staggering in other domains that rely on truthful self-reports, such as taxes.

In Experiments 2 and 3, we moved from a field experiment in an automobile insurance setting to ~~a~~ controlled, laboratory experimenst in a tax setting. In both experiments, participants had the opportunity to sign a tax form either before or after making claims regarding their performance on a task and their encountered costs to participate in our experiments. Providing further support for the results of the field experiment, the findings of Experiments 2 and 3 demonstrated that signing a pledge of honesty before (but not after) the opportunity to cheat discouraged dishonesty. In addition, Experiment 2 showed that it was the "signing before"

[2] This range was determined from comparing usage-based insurance—also known as PAYD, or pay as you drive—offered in Texas in 2002 (http://www.centspermilenow.org/652Garma.pdf) and calculating the premiums for different scenarios of car ~~make~~brand, model, mileage, and buyer demographic on two automobile insurance policy sites (milemer.com and truedelta.com).

condition that decreased cheating and not the "signing after" condition that increased cheating. Furthermore, Experiment 3 provided evidence for the hypothesis that "signing before" raised the saliency of ethical standards, which in turn led to more truthful self-reporting. Finally, Experiment 4 further examined the underlying psychological process that links the act of signing before filling out a form with the likelihood of cheating. The experiment included the same implicit measure of ethical saliency as in Experiment 3: participants were asked to complete word fragments by using the first word that came to mind. We found that the act of signing one's name prior to a task increased the saliency of ethical standards, and this heightened saliency mediated the relationship between signing a pledge of honesty before having the opportunity to cheat and subsequent dishonest behavior.

Theoretical Contribution

The contribution of the present research is two-fold. First, our findings contribute to the literature on how self-awareness (Duval & Wicklund, 1972) can nudge people's behavior for the better. The act of signing increased the saliency of ~~their~~ individuals' ethical standards, and, as a result, reduced their unethical behavior. Just as Haley and Fessler (2005) increased sharing in an anonymous economic game by introducing the subtle prime of eye-like shapes in the background of the computer screen, we promoted honest behavior by nudging participants to turn their moral gaze inward—to their own ~~behavior~~moral standards—by asking them to sign their name under a pledge of honor prior to filling out an insurance or tax return form. By introducing a slight change to the typical design of forms used for example by the IRS or insurance companies, that is, by moving the location of the signature from the end to the beginning of a form, we observed a significant shift towards honest behavior (i.e., ~~. In particular, by moving the location of the signature from the end to the beginning of a form we found~~ more truthful reporting, less

performance inflation, less over-claiming of credits, and fewer deduction claims). A simple nudge at the beginning—rather than at the end—of our tasks was enough to produce a meaningful increase in honesty.

Second, the present work contributes to existing research on behavioral ethics that recognizes the importance of non-conscious influences on (un)ethical behavior (e.g., Bazerman & Banaji, 2004; Chugh, 2004; Kay, Wheeler, Bargh, & Ross, 2004; Reynolds, Leavitt, & DeCelles, 2010; Tenbrunsel et al., 2011). To date, this research has focused primarily on how automatic processes exacerbate unethical behavior. Extending this work, our experiments have a preventive focus and identify subtle ways of raising the saliency of ethical standards. Our research shows that the very same automatic processes that unconsciously lead a person to behave dishonestly may be used to encourage ethical behavior when individuals are facing the temptation to cheat. Our findings are important in light of prior research on the use of explicit interventions such as introducing a code of ethics (Weaver, Treviño, & Cochran, 1999) to discourage dishonesty. The present work highlights the role that subtle interventions can have in producing similarly powerful results, even without individuals' conscious awareness.

Limitations and Venues for Future Research

Our studies used a minimal treatment paradigm to induce the observed effects; we shifted the requirement and location of ~~participant~~ a signature and then observed differences in levels of cheating. We acknowledge a potential limitation of our research is that we only show a one-time change in behavior. We may have reduced cheating through moving the location of the signature because there is a novelty effect from signing at the beginning rather than at the end of a form. Were we to implement this manipulation repeatedly ~~in multiple contexts~~ over time, we might not ~~expect~~ observe the effect-magnitude ~~of the effect to consistently occur across time~~that we report

in this paper. ~~This~~ It is an important open question whether our reported effect would hold over multiple times, and ~~that~~ we hope ~~would~~ it will inspire further work ~~building on our findings~~. Understanding how simple implementations can produce consistent behavioral changes over time in honesty is clearly an important research endeavor.

There are also possible extensions of ~~this~~ our paradigm. The potential magnitude of ~~this~~ the effect reported in our paper ~~in real-world application~~ could be amplified in real-world application by preceding the signature line with a more extensive set of rules that guide behavior. As an example, Shu, Gino, and Bazerman (2011) found that participants, who read an honor code prior to an opportunity to cheat, ~~-~~were less likely to cheat on the subsequent task relative to a control group who did not read an honor code (see Mazar et al., 2008 for comparison between reading and signing an honor code prior to an opportunity to cheat versus no exposure ~~reading or signing~~to an honor code). Future research could investigate ways to super-charge the effect of requiring a signature prior to the start of a task—possibly through bundling it with some guidelines for behavior. Framing these guidelines in terms of prohibitions ("do not" rules) versus encouragements ("do" rules) might also alter the effect of signing on the dotted line.

Implications for Practice

Our findings suggest that one effective way to reduce or eliminate unethical behavior is to ask people to sign their name *prior* rather than *after* being tempted to cheat. These findings apply to a large category of behaviors that rely on honest self-reports on the part of the individual—any behavior in which it is impossible for another person or organization to continually monitor.

We believe one of the most important domains to which our findings may be applied is the domain of taxes. As the federal tax gap soars to over $150 billion each year (Morse, 2009),

the amount spent on tax compliance and investigation has also seen dramatic increases. The scale of the proposed intervention is truly minimal: governments already require tax payers (and preparers) to sign when filing taxes—just currently not in the most effective location. Simply shifting the signature to the beginning of the tax form may help the federal and state governments close a significant portion of the tax gap and realize enormous savings in tax compliance and investigation costs without incurring any substantial additional costs.

Conclusion

By simply asking participants to sign on the dotted line prior to a task in which they face a temptation to cheat rather than at the end, we found significant reductions in levels of cheating, both in an insurance setting as well as in the context of taxes. If signing on the dotted line can shift the moral gaze inward, raise the saliency of ethical standards, and spill over to promote more ethical actions going forward, there is ~~promise~~ potential ~~of~~ for other subtle behavioral economics interventions ~~ways~~ to achieve more honesty across many ~~other~~ domains.

Appendix A

Forms used in Experiment 2

Form **3305** (Rev. June 2010) Center for Decision Research	**Research Study Tax Return** For the period June 1, 2010, through August 30, 2010	Keep a copy of this return for your records. OMB No. 1555-0111

Write Clearly	Name	PID	For Administrative Use Only
	Address (Number, street, and room or suite number)		T .... FF .....
	City, State, and ZIP code		

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned ▶	2	
3. Please subtract the value specified in box 2 from value specified in box 1 ▶	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ▶	4	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	5	
3. Please add the value specified in box 4 and the value specified in box 5 ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today s session ▶	7	

Sign Here	I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete. ▶ ▶

Form **3305**

(Rev. June 2010)

Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T

...

FF

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned) ▶	2	
3. Please subtract the value specified in box 2 from value specified in box 1 ▶	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ▶	4	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	5	
3. Please add the value specified in box 4 and the value specified in box 5	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today s session ▶	7	

Form **3305**

(Rev. June 2010)

Center for Decision Research

Research Study Tax Return

For the period June 1, 2010, through August 30, 2010

Keep a copy of this return for your records.

OMB No. 1555-0111

Sign Here — I declare that I will carefully examine this return and that to the best of my knowledge and belief it is correct and complete.

Write Clearly

Name | PID

Address (Number, street, and room or suite number)

City, State, and ZIP code

For Administrative Use Only

T .....

...

FF .....

Part 1 Please fill out the questions below to compute your taxed payment.

1. Please enter the payment you received on the problem solving task ($1 per correct matrix you solved in the other room) ▶	1	
2. Tax on payment: Please enter the equivalent of a 20% tax on your payment (i.e., 20 cents for every dollar earned) ▶	2	
3. Please subtract the value specified in box 2 from value specified in box 1 ▶	3	

Part 2 Participants will be compensated for extra expenses they have incurred in order to participate in this study. In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your tax return.

1. Please estimate the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum ▶	4	
2. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ▶	5	
3. Please add the value specified in box 4 and the value specified in box 5 ▶	6	

Part 3 Please compute your final payment.

1. Please add the value specified in box 3 and the value specified in box 6. This is the amount of your final payment for today s session ▶	7	

Appendix B

Example of Form used in Study 3

Form **3305** (Rev. June 2010) Center for Decision Research	**Research Study Tax Return** For the period June 1, 2010, through August 30, 2010	Keep a copy of this return for your records. OMB No. 1555-0111

Write Clearly	Name	PID	For Administrative Use Only
	Address (Number, street, and room or suite number)		T ..... FF ..... FP ..... I ..... TL .....
	City, State, and ZIP code		

Part 1	Please fill out the questions below to compute your taxed payment.		
a. Please enter the payment you received on the problem solving task ($2 per correct matrix you solved in the other room) ..... ▶		1	
Part 2	In Part 2, you are asked to estimate the costs incurred in order to participate. These costs will be deducted from your taxable income.		
a. Please estimate the cost of the time it took you to come to the lab. You will be compensated $0.10 per minute, up to a 2 hour maximum (i.e., $12 maximum, computed as 120 min X $0.10 per min) ..... ▶		2	
		3	
b. Please estimate the cost of your commute, if any, to come to the lab. You will be compensated up to a maximum of $12 ..... ▶		4	
Part 3	Please compute your taxable income and your taxes.		
a. Please subtract the value specified in box 4 from the value specified in box 1. This is the amount of your taxable income ..... ▶		5	
		6	
b. Please compute your taxes by multiplying the value specified in box 5 by 50%			
Part 4	Please compute your final payment.		
a. Please subtract the value specified in box 6 from the value specified in box 1. This is the amount of your final payment for today's session ..... ▶		7	

Sign Here	I declare that I carefully examined this return and that to the best of my knowledge and belief it is correct and complete. ▶ _____ Date ▶ _____ Signature

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Figure Captions

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Figure 1. Reported and actual performance on the matrix search task by condition, Experiment 2.

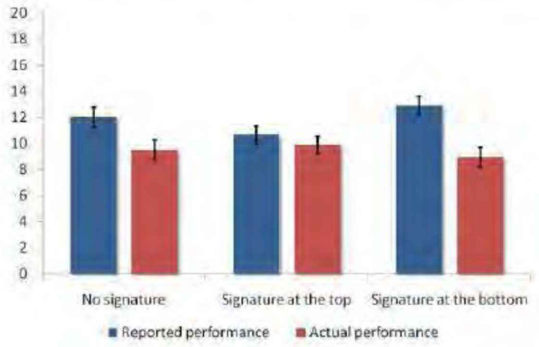

Figure 2. Reported deductions by condition, Experiment 2.

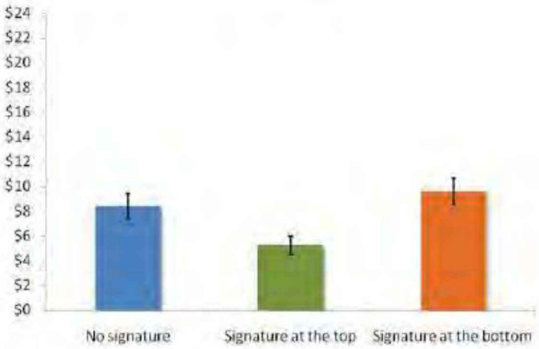

Figure 3. Reported and actual performance on the matrix search task by condition, Experiment 3.

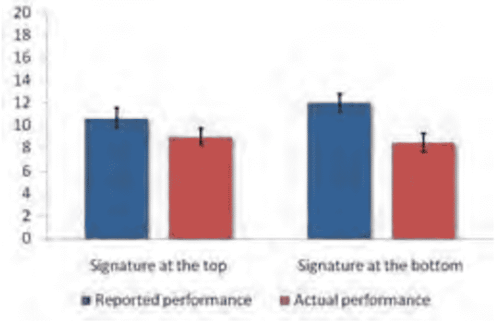

Exhibit 28
Allegation 4b Email Correspondence

From: [redacted]
Subject: Tax Study Data
Date: July 13, 2010 at 5:50 PM
To: Gino, Francesca fgino@hbs.edu

[redacted]

Ok, so here is the tax study data.

The people are SERIOUS dumdums on this study. They seem to be having some serious issues, calculating the money, or if they got the amounts right they were written and scribbled in very strange ways on the form. Please let me know if you want these canceled as soon as you can, because I don't have internet at home and won't be able to do it later tonight.

Thanks.

--

[redacted]

Taxstudy.xlsx

From: [redacted]
Subject: That's a wrap: Tax Study
Date: July 16, 2010 at 4:57 PM
To: Gino, Francesca fgino@hbs.edu

[redacted]

--

[redacted]

Taxstudy.xlsx

From: [redacted]
Subject: Taxstudy
Date: July 27, 2010 at 3:26 PM
To: Gino, Francesca fgino@hbs.edu

The numbers starting over at 1 are the new form.

--
[redacted]

Taxstudy.xlsx

Exhibit 29
Respondent's Written Response to Draft Investigation Report received on February 17, 2023

To: Teresa Amabile, Investigation Committee Chair
Robert (Bob) Kaplan, Investigation Committee Member
Shawn Cole, Investigation Committee Member

Re: Responses to Draft Report of Investigation Committee Concerning Allegations against Professor Francesca Gino – Case RI21-001

Date: February 17, 2023

I want to thank the committee for your efforts and work. I very much respect the energy you have put into the draft report. Having said that, I fundamentally and totally *disagree* with the conclusions the committee has reached regarding each of the allegations.

I want to take this opportunity to:

a) Introduce evidence that has not been considered to date

b) Rectify a number of misinterpretations of the evidence that had already been considered

c) Call into questions suppositions and inferences that the committee has made without direct evidence of wrongdoing

Before discussing each of these points, I want to clarify upfront a point raised by the committee about providing evidence exonerating me. As the committee states in the draft report, "we conclude that the Respondent, Professor Gino, has "not fulfilled "the burden of proving, by a preponderance of the evidence, any and all affirmative defenses raised (such as honest error)" as required by the HBS Policy" (Draft Investigation Report at pg. 12). While the HBS Policy notes that defenses must be proven by a preponderance of the evidence in their consideration, the burden of proof for making a finding of research misconduct is *actually* on the committee, as any findings of research misconduct must themselves be supported by a preponderance of the evidence (HBS Policy at pg. 2, 9). As noted in the HBS Policy, it is the committee's burden to prove research misconduct, not mine to prove that there was none. That said, I will provide in this document significant evidence not considered by the committee and other considerations to demonstrate my innocence of these allegations.

Before getting into the substantive comments, and introducing new evidence, I would like to explain why I have so much to add now that I did not add previously. I have taken these accusations very seriously since I learned about them on October 27, 2021. However, this process was quite unfamiliar to me, and it was not until I read the draft report that I gained a solid understanding of what was required to address the committee's concerns. In addition to what I noted above, during the time of the inquiry and investigation, I was co-creating and was the sole course head of HBS's new required course on Inclusion. This required a major time commitment and investment, after two years of a very difficult pandemic. At the time the inquiry

started, I could have dropped this assignment to focus on the research misconduct process, but I did not think that was in the best interests of HBS or my junior colleague, [redacted], who had committed to teach the course for the first time. The course, in the two iterations we taught it throughout 2022, was a far more intense time commitment than I had anticipated, and I believe it hurt my capacity to fully address the concerns the committee raised throughout this process. As evidence of my commitment to the course and the time required to bring it to the Required Curriculum (RC), I've attached a letter from Professor [redacted] (see **Exhibit 1**), who worked closely with me on the Inclusion course.

I have worked straight for six weeks on these comments, including evenings and weekends. I simply did not have such a window of time before this last step in the process.

Knowing that I did not commit any wrongdoing and have never revised or altered research data, I also underestimated what it would take to "disprove" the allegations – a burden of proving a negative that the committee has, in essence, improperly imposed. As I mentioned earlier, the HBS Policy indicates that it is the committee's burden to prove research misconduct, not mine to prove that there was none. Nevertheless, I cooperated fully every step of the way, and I was open and transparent in every request the committee made. There was a substantial amount of data and analysis to sort through (e.g., the five Maidstone Consulting Group, LLC (MCG) reports were over 180 pages, including the additional analyses for Allegation 4a) in a fairly limited time. I did my best to provide responses, but the committee made clear in the draft investigation report that it requires more from me.

Throughout these comments, I will introduce not only evidence of my own, but also statements from others *who were not interviewed by the committee* and who provide corroborating evidence. I took this step given that the committee, as stated in the draft report, indicated it doubted "the credibility of [my] written and oral statements to this Committee more generally" (Draft Investigation Report at pg. 13). I encourage the committee to conduct its own interviews of these witnesses, who can provide relevant information demonstrating that a preponderance of the evidence weighs against any research misconduct finding against me.

My hope is that these comments can fully address any and all concerns the committee raised throughout this investigation or still has. I only ask the committee to keep an open mind as you review these comments.

I. NEW EVIDENCE RELATED TO SPECIFIC ALLEGATIONS

I.A. Allegation 4a, concerning Study 1 in the 2012 PNAS article with Lisa Shu, Nina Mazar, Dan Ariely, and Max Bazerman

This allegation claims that I misrepresented the study procedures in the published paper by re-writing the description originally used in the first draft so as to deceive the reader. The core issue in this allegation is that the study, as conducted, had a flawed design whereby participants were paid in the first room *before* completing the tax form in the second room (the tax form with the manipulation we used in the study). The allegation implies that I tried to cover this up by

changing the description of the study procedures across drafts of the paper before it was submitted. The committee points to the tax form that used the phrase "payment you received" as evidence that the experiment was not properly conducted.

As I pointed out in my previous comments, to believe that participants were paid before completing the tax form that had the manipulation, one would have to believe that experienced experimentalists like [redacted] would have not detected such a basic and fundamental flaw. *More importantly, the committee did not consider the following evidence that strongly supports the validity of the design of the study in question.* In 2018, when [redacted] and I joined [redacted], and [redacted] to run a highly-powered experiment to replicate Study 1 in the 2012 PNAS paper, we discussed the details of the procedure so that we could as faithfully as possible replicate it. At no time in those 2018-2019 discussions among the co-authors did anyone, including [redacted], raise any concerns about the experimental procedure used in the 2012 PNAS paper. For independent corroboration of these circumstances, I will refer you to the answers [redacted] provided to questions I asked her (see **Exhibit 2**). [redacted] responded to my email with recorded messages, one for each of the questions I asked. I **attached the files of the recordings** for your reference.[1] [redacted] has provided testimony supporting the fact that there was no dispute among the co-authors regarding the procedure used in Study 1 of the 2012 PNAS paper. [redacted] testifies that she used the original experimental procedures—which call for paying the participants *after completing the entire study*— to conduct the replication study.[2]

[redacted] uses the same tax form that was used in Study 1 of the 2012 PNAS paper, which includes the same wording at issue ("payment you received"). [redacted]'s procedures —which she says replicate the ones used in Study 1 reported in the 2012 PNAS paper— are available for anyone to review (including the committee) on the Open Science Framework (OSF), a public depository of experimental data and procedures. All documents are posted here: https://osf.io/3javq/ The committee may access the procedures used by [redacted] at https://osf.io/dxpmc and the tax form at https://osf.io/yqpdm

During my interview, the committee paid extensive attention to the wording in the tax form "payment you received." This could be misinterpreted as meaning that the participants were paid *before* completing the tax form rather than after. It should be noted, however, that this form was available to the reviewers and the editors of the original 2012 PNAS study, and no reviewer or editor ever had that misinterpretation. Moreover, the same procedure and the same form were made available to the editors and reviewers of the 2020 PNAS replication study.[3] Again, there is not a single instance where a reviewer or editor misinterpreted the intention of the design. Co-author [redacted] has also testified that she never had that misinterpretation nor did any of her RAs or the co-authors involved in the replication (see **Exhibit 2**). In retrospect, it would have been

[1] Please refer to these recordings every time I mention **Exhibit 2** throughout this document.
[2] I did not talk to [redacted] about the investigation, in compliance with HBS Policy, and reached out to her with seven specific questions (see **Exhibit 2**) to gather facts that are pertinent to this investigation.
[3] The study was published in 2020 in a paper that included other studies. Reference: "Signing at the beginning vs. at the end does not decrease dishonesty." Kristal, A., Whillans, A., Bazerman, M., Gino, F., Shu, L., Mazar, N., Ariely, D. *Proceedings of the National Academy of Sciences*, 117(13), 7103-7107 (2020).

more accurate to use different language on the tax form (e.g., "payment earned" or "payment to receive"). However, that language, while potentially confusing, does not support the implication that I improperly revised the procedures as it was used consistently throughout both Study 1 in the 2012 PNAS paper and the direct replication by myself and others.

The highly-powered study we conducted in 2019, described in the 2020 PNAS paper, failed to replicate the results of the 2012 PNAS Study 1. At that time, I expressed the view to my co-authors that I wanted to correct the records if the signing-first effect did not replicate (see **Exhibits 3a and 3b**). When we submitted the failed replication paper to PNAS, the editor asked us questions that led [redacted], [redacted], [redacted] and I to discuss why we were publishing a second paper, rather than retracting the first. In my response to the team (see **Exhibit 4a**), I expressed to them that if we believed there was a flaw in the 2012 PNAS study design or data, we should retract that paper. If, on the other hand, we did not think there was a flaw, we should publish this new study to ensure the accuracy of the record. [redacted]'s comments also speak to this point (see **recordings with answers to the questions in Exhibit 2**). The conversation that occurred via email between [redacted] and the Editor assigned to our 2020 PNAS paper is in **Exhibit 4b**.

Again, let me stress, all co-authors of the original study, including [redacted], saw no particular flaws with the original design. And this was, as I noted above and as [redacted]'s comments and the materials available on OSF corroborate, the same experimental procedures used in the direct replication study conducted by [redacted] in 2019.

The committee also had issues with the language included to describe the study in question in the first draft version of the 2012 PNAS paper (dated 2011-02-23). The committee states, "Professor Gino provided no evidence of a prior manuscript with the procedural wording found in the first draft of the manuscript" (Draft Investigation Report at pg. 29). However, I mentioned in my earlier comments to the committee that the matrix task is a procedure I used in many other papers and studies conducted at UNC, and that it is likely I copied and pasted the text from elsewhere, or wrote it up quickly in light of the fact that the procedure was one I had used in many studies before then. I referred the committee to specific papers, but did not include the descriptions from them. The language is in fact highly similar to the one I used in other documents (see evidence presented in **Exhibit 5**).

As I stated in an email to [redacted], [redacted] and [redacted] (dated July 31, 2019) I contacted [redacted] to check on the lab studies included in the 2012 PNAS paper and she did not remember the specifics of all the studies she had helped with (see **Exhibit 4a**, where I write "I've been trying to track down the RAs who I think helped with these studies but they moved on. The one I was able to talk to, understandably maybe, does not remember all the studies she helped with."). At no point during those conversations did [redacted] raise any doubt about the validity of the studies and the procedures used. If she had, I would have suggested retracting the 2012 PNAS paper.

There are various email exchanges that show the differences in opinions among the various collaborators on this project (see **Exhibit 6**) and that show I took the role of "peacemaker," using

[redacted]'s words (see **recordings for Exhibit 2** as well as **Exhibits 7a and 7b**). These differences of opinion further weigh against any finding of research misconduct on my part.

I.A.1. Highlighting Existing Evidence for Allegation 4a

I recognize how difficult it must be for the committee to go through all the evidence this process generated to understand what happened and come to conclusions. However, the committee appears to assume that every document in my files has a reason to be in certain folders. I do think of myself as a generally well-organized person, but it is not correct to assume that every document in any of my folders is there because it was used in a project. The matrix task, for instance, is one I used in multiple projects, as noted earlier. And it is not the case that the exact version on my computer, in the folder for this project, is the version used in the study. When changes are needed to tasks and other procedures, it is common for me to send materials to research assistants (RAs) in order for them to create what's needed to conduct a specific study.

The committee also makes assumptions within the report regarding the different versions of the procedure, claiming that these different versions do not appear accurate across drafts of the paper. In reference to the versions dated 2011-02-23 and 2011-03-08, the committee notes that the procedure matches that from the IRB application (Draft Investigation Report pg. 25). However, UNC IRB has told me they have no records of the IRB applications from this time as they were done on paper. I understand that a copy of an IRB application detailing the study procedure was located on my hard drive, but as noted by the committee, this may not represent how the study was actually run as I would often amend the originally approved protocol (Draft Investigation Report pg. 28). This was further confirmed by [redacted] in her interview, though she cannot remember whether the IRB protocol was amended in this particular instance (Draft Investigation Report pg. 24).

In addition, there seem to be important parts of the MCG reports that highlight the difficulty of understanding the various versions of the description of the study in question. A few stood out to me:

> While the metadata may be informative regarding individuals involved in the documentation generation and chronology of developments and alterations within documentation versioning, it is not an unequivocal representation of individual responsibility of content within said documentation. There may be possible scenarios, where another individual (or individuals) may have been involved at a point prior to the "last modified" timestamp that play an unknown role in the data representation. (MCG Report p. 5)
>
> While we have access to the described versions of documents, and subsets of correspondence(s) in the form of available email, this does not preclude the possible existence of additional documents and correspondence containing details specific to the evolution of the experimental procedure description. (MCG Report p. 8)
>
> While it was possible to examine the email inbox of Dr. Gino, there is scarce evidence of her outbox content, hence versions of files found on her computer were

> utilized as potential source documents sent to co-authors. A clear outbox record would strengthen and add clarity to the analysis, particularly with respect to metadata and chronology. Additionally, some of the conversations regarding the study procedure are missing from email exchanges and may have happened via phone or other mode of communication. (MCG Report p. 10)

These excerpts highlight the fact that many of the discussions regarding the revisions and manuscript occurred either in person or in a medium not available to the committee. These excerpts also show that the metadata and revision history cannot now demonstrate the complete picture of what occurred at the relevant time. In addition, the reuse of the tax form with consistent language in both the 2012 and 2020 studies supports the conclusion that the procedure used in 2019 (for the study included in the 2020 PNAS paper) matched that used in 2010—the procedure as described in the 2012 PNAS paper.

Based on the tax form evidence and the consistency across studies, in addition to the lack of evidence supporting the alleged falsification, there cannot be a finding of research misconduct as to this allegation.

I.B. Allegation 4b, concerning Study 1 in the 2012 PNAS article with Lisa Shu, Nina Mazar, Dan Ariely, and Max Bazerman

Allegation 4b claims that I altered a number of observations in the data (8 of them). In what follows, I provide new evidence but also explain the anomaly claimed in Allegation 4b.

After reviewing the Draft Investigation Report and noting the committee's thoughts, I have noticed inferences not supported by what I know to be true and have found evidence that will demonstrate these inconsistencies.

The MCG forensic report refers to the July 16, 2010 as original data. It is important to note that this is NOT the original data. As I noted previously, *the original data was collected on paper*. I traveled to UNC to see if the data is still in existence, and, unfortunately, it is not. I note that the absence of data can only be considered evidence of research misconduct "where the institution establishes by a preponderance of the evidence that the respondent intentionally, knowingly, or recklessly had research records and destroyed them, had the opportunity to maintain the records but did not do so, or maintained the records and failed to produce them in a timely manner ***and*** that the respondent's conduct constitutes a significant departure from accepted practices of the relevant research community" (HBS Policy at pg. 2). Here, the data were appropriately left at UNC for maintenance. Furthermore, given the age of the data in question, it is consistent with accepted research practices for data to have been discarded.

The email [redacted] shared with the committee uses language that indicates that I would speak to [redacted] about the study given how she refers to participants. I have now been able to retrace my steps to where I was in July 2010. I traveled to Chapel Hill from California, where I had worked for a few weeks as a research consultant at Disney, on July 18, 2010. I met with [redacted] the week of July 19 to make sure the data were accurate. I know with 100% confidence that I was at UNC

between July 19-July 30. Professor [redacted] of UNC corroborates that this is consistent with his memories and calendar in an email (see **Exhibit 8**). During that time, I not only finished packing before the move from UNC to HBS, but I also discussed how I would be working with [redacted] going forward. We took the time to check on the data so that we would have a data file to use for the analyses. I left Chapel Hill by car on Friday, July 30 with [redacted], at the time a doctoral student from Duke I worked with, and now an Assistant Professor at Tepper, CMU (see **Exhibit 9** for [redacted]'s confirmation of the trip). As she states, "We left July 30, 2010. In New York July 31, 2010. I think we stayed in New York for a day or two." We met a collaborator and friend, [redacted] in New York, a Post-Doctoral Fellow working in [redacted]'s lab, and then I drove up from New York to Boston from there on my own.

As [redacted] stated in her comments, the lab study (Study 1 in the 2012 PNAS paper) used a very small sample ($N = 101$ participants). Though this was consistent with accepted practices at the time, it likely explains why the results did not replicate when we conducted a highly-powered, direct replication of it ($N = 1{,}235$ participants) (see **the recordings for Exhibit 2 and Exhibit 4b**).

There have been multiple occasions throughout the collaboration on the 2020 PNAS paper (that failed to replicate the findings on signing first of the 2012 PNAS paper) when, as an author on the team, I had the opportunity to suggest retraction of the original 2012 PNAS paper. As evident from discussions with my co-authors [redacted] refers to in her testimony (see **Exhibit 2**) and emails (see **Exhibit 4a**), I was never in favor since I did not believe the data had anomalies of any sort.

I have regularly walked away from projects where follow-up studies did not replicate initial ones or where my collaborators and I discovered an issue with how the study was conducted or with the robustness of the analyses and data. In fact, I dropped papers that were in the Revise and Resubmit (R&R) stage because of these reasons at about the same time as I was working on this project. For evidence beyond my own words, please see the statements of Professor [redacted] of Wash U in St. Louis (see **Exhibit 10**) and Professor [redacted] of UNC (see **Exhibit 11**). I encourage the committee to speak with both [redacted] and [redacted] regarding these topics.

I.B.1. Explaining the Data Anomalies for Allegation 4b

I do not believe the dataset which I analyzed and that was posted on the OSF has any anomalies suggesting wrongdoing. When studies are conducted on paper, the data is entered in no particular order. It is entered as the paper files are stacked, and it is possible multiple people entered the data. Both possibilities would lead to observations where the "participant ID number" is out of sort. Participant IDs out of sort are not an anomaly, but simply a result of the process used to handle the data. In the absence of the actual paper files collected during the study, it is impossible to know which IDs were used for certain.[4]

[4] The Harvard data retention policy requires that research records be retained for seven years after the conclusion of the study activities. HBS Policy at p. 11; Retention and Maintenance of Research Records and Data Frequently Asked Questions p. 4, https://research.harvard.edu/files/2020/07/research_records_and_data_retention_and_maintenance_guidance_rev_2017.pdf. While this study was conducted at UNC, I do not have access to the data policy that was active during that period. However, data are routinely discarded in as little as three years after the study has concluded. *See, e.g.*, https://ori.hhs.gov/education/products/rcradmin/topics/data/tutorial_11.shtml (noting that in the absence of special

As for the duplicate ID number, it is likely an error due to two participants receiving the same ID for the study by the RAs conducting it. In this study, participant IDs were handed out on index cards by an RA. It is very possible that some index cards were reused. (This is a very likely possibility especially given that the UNC behavioral lab consists of two rather small rooms – each with only four-five desktop computers. Only a few participants, 4 or 5, could take the study at the same time.) This would lead to a duplicate ID number for different participants, but this would in no way affect the integrity of the data describing the participants' responses. The sheer existence of a duplicate ID is not evidence of any data fabrication or falsification as it is quite possible that ID re-use occurred in this setting. Without evidence or witness statements that any wrongdoing occurred, there cannot be a finding by a preponderance of the evidence of research misconduct.

I.C. Allegation 3, concerning Study 4 in the 2014 Psych Science article with [redacted]

Allegation 3 claims that I altered thirteen observations in Study 4 in the 2014 Psych Science article. It is important to emphasize that the original source data no longer exists, as it was discarded consistent with routine data maintenance practices. It is not standard practice to retain these records for more than 3 years. The MCG forensics firm concluded that though it does not expressly exclude the types of manipulation noted in the allegation, without the original data, no conclusion of research misconduct can be made (MCG Report pg. 2).

As the MCG report states:

> The analysis of available source data files specific to the claimant's identification of 'suspicious' entries, and the methodology utilized by the complainant to do so, brought to light potential assumptions made by the claimant that may not be substantiated. (MCG Report p. 2)
>
> None of the files provided contains the original raw data. All files either contain some calculations/subset of information, or derive from a file that does. Additionally, all files are identically sorted, independently on the number of columns present. Therefore, in the absence of raw data, there is no way to determine if any other column could have been originally present that accounted for such sorting. […] It is possible that a combination of manual and automatic calculation occurred giving rise to some of the out of order data flagged by the complainant. (MCG Report p. 11)
>
> Not having access to the raw Qualtrics file it is impossible to determine if more modifications and edits occurred. Regarding the claimant's review, it is unclear that the assertions made by the claimant demonstrate resultant manipulation of the

requirements requiring a longer period, records generally must be retained for three years). Regardless, here, the study in question concluded far in excess of the seven years required even by Harvard's data retention policy, which itself exceeds the accepted practices of the research community.

> underlying source data. While the 13 observations identified by the respondent certainly impact the final reported results, in the absence of raw data it is impossible to determine if they represent modified participant entries. (MCG Report p. 14)

Beyond the conclusions of the forensics analysis that no research misconduct could be concluded, there is additional evidence that does not support a finding as to this allegation.

In 2014, Leif Nelson of Data Colada, contacted me and [redacted] to ask for the data (the paper was written at a time before it was standard practice to post data online in repositories like the OSF). Nelson is a Professor at the Haas School of Business at Berkeley.[5] Nelson told us that our 2014 *Psych Science* paper would be discussed in a weekly journal discussion group he organizes at Berkeley-Haas.[6] During these weekly meetings, those present (mostly doctoral students interested in marketing, organizational behavior, decision-making and psychology, as well as interested faculty members) discuss the original materials and data from the paper chosen for the week. In general, if an issue arose or was identified in this discussion, the authors of the paper being discussed were contacted requesting an explanation.

We shared the data with Nelson (as indicated in the email copied below). Neither [redacted] nor I were ever contacted about concerns or suspected any issues with the data or the analysis. We additionally had no reason to expect an issue to arise, and shared the data freely with Nelson, as neither [redacted] nor I fabricated or falsified any of the data entries.

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From: Gino, Francesca <fgino@hbs.edu>
Sent: Thursday, April 17, 2014 6:08 PM
To: Leif Nelson [redacted]
Cc: [redacted]
Subject: Re: following up

Hi Leif,

Here is the data. In the doc file, you'll see a summary of the main variables of interest for each study. I think it should be self-explanatory but do let me know if you have questions. I numbered the studies as they appear in the paper (also attached, in case that's helpful)

As for talking - Do you happen to have some time to chat on Monday next week?

Sorry for not being more responsive in the last few weeks. Between my son's sickness, travel and a personal health-related scare the last couple of months have been a bit harder than usual.

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[5] https://haas.berkeley.edu/faculty/nelson-leif/

[6] To confirm that the weekly journal discussion about our 2014 Psych Science paper did happen, I reached out to a scholar, [redacted] (now at Rutgers), who used to be a doctoral student at Berkeley at the time. He confirmed in an email the discussion did take place (see **Exhibit 12**), even if he cannot remember the specifics of the discussion. In his reply, [redacted] also provides more details on how the journal meetings were organized.

I hope all is well at Berkeley, and I hope you are taking good care of [redacted] :-)

francesca

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No other scholar or person has asked us to share the data from the paper since, nor the data for Study 4 specifically. Thus, Nelson and his Data Colada colleagues are the only people who had access to the data from this study, unless they themselves shared it with others. [redacted] and I did receive another inquiry about this study: it was from a doctoral student of [redacted], asking about the details of the task we used (in an email dated November 19, 2019). In my response, I explained that the task was not Qualtrics based and had been programmed by a software expert. An email from the software expert himself corroborates that he created the program and had it such that the data was recorded in a separate dataset online (see **Exhibit 13**).

In addition, I would often use the data from my experiments, including the data here, in my doctoral classes on Experimental Methods. I co-taught this course for two years with [redacted] (in the Spring of 2013) or my HBS colleague [redacted] (in the Fall of 2014). We would explicitly ask the students to not only reproduce the analyses as reported in the papers, but also asked them to play with the data to understand the robustness of specific effects and analyses. At no point were any data anomalies noticed or brought to our attention during these exercises.

I.C.1. Explaining the Data Anomalies for Allegation 3

The committee noted in the Draft Investigation Report that "…no witness provided a plausible explanation of data anomalies or discrepancies" (Draft Investigation Report, pg. 9). I am not surprised. I would find it really difficult to explain data on the spot, for studies conducted a long time ago by someone else. However, there is a simple, logical explanation.

The data for this study required merging three different datasets: the answers participants provided on Qualtrics, their answers on the coin-toss task outside of Qualtrics, and the Remote Associates Test (RAT) performance as coded by RAs. The merger needed to be done manually by the RA or RAs responsible for the merging of the various datasets.

Coin-toss task. In the study, we used a coin-toss task that was programmed outside of Qualtrics and captured participants' answers in a dataset hosted by the online repository the programmer created for this task. To make it easier to collect the data, the programmer had links one could use to download it. Since the programmer knew I was interested in using the task in future studies, he created a functionality that deleted the collected data for the task, so that new data could be collected when using the task again.

Creativity tasks. In the study, we used two creativity tasks, namely the uses task and 17 RAT problems. Both require manual coding from RAs. For the uses task, the RA would have to count the number of uses for an object and assure there were no repetitions or junk answers like "nope" or "n/a" to then compute a fluency measure, and then evaluate the number of uses that were

different from one another (flexibility measure) as well as the originality of the ideas participants suggested (originality measure). Both flexibility and originality are subjective measures resulting from the RAs' coding. In addition, the fluency measure requires manual coding and checking of answer quality even if the counting of ideas could be done automatically through an Excel formula.

Similarly, for the RAT problems, participants had to answer as many problems as possible correctly within 5 minutes. The RAs' coding of the answers to produce a performance measure takes two different steps. First, they can use an Excel formula to count how many questions participants answered. For instance, if a participant answered 14 out of 17 questions, the Excel formula would list the count as 14 and show that it resulted from a formula. However, a second quality control step is required. The RA has to go back to the original answers to assess validity. For instance, if a participant responded with the word "no" or a word that is not logically associated with the prompt, these would be considered invalid answers. The RA would then have to adjust the count, *manually*. In the example I provided, if there were two invalid answers, the count would be adjusted from 14 to 12. Given that participants commonly provide invalid answers, we should fully expect the formula count and adjusted response to differ. That is not an anomaly. It is simply the result of appropriate, necessary data cleaning.

I went back to the document I received on January 14, 2022, with the Subject "Additional Information Related to Allegations 1, 2, 3, and 4b of Research Misconduct." The document included the information the committee had obtained from a written document submitted by the anonymous complainant. The complainant had two main issues. The first was about some of the data being out of sort (*i.e.*, out of expected sequence). This is due to the fact that, as I explained, the final dataset I used in the analyses resulted from the merging of different datasets. Thus, the ordering of the observations is a function of the merging process. The second issue was about the computed measure of "number of responses," from the uses task. As I explained above, the measure requires *manual* coding from the RA or RAs, and it is not simply a function of counting that would result from an Excel formula.

More generally, the complainant refers to "out of order" observations as anomalies. Whenever datasets are the result of manual data entry, which is the case both for studies that have been originally conducted on paper (as was the case for Study 1 in the 2012 PNAS paper) as well as studies that require the merge of different datasets (as was the case for Study 4 in the Psych Science paper), "out of order" observations are to be expected. As the MCG report from the forensic firm itself concluded, "It is possible that a combination of manual and automatic calculation occurred giving rise to some of the out-of-order data flagged by the complainant" (MCG Report pg. 11). The out-of-order data in this allegation is not in itself evidence of wrongdoing, and as noted in the MCG Report, manual coding like that used in this study accounts for such anomalies. Additionally, the merging of data further affects the data order.

This paper was written before the time when it was the norm to post data online. These data were not available to anyone. And yet, I willingly shared these data with Data Colada, knowing full well they would scrutinize the results, and knowing full well their reputation for exposing unreproducible research. There are people in my field who are scared of Data Colada. Yet I had no hesitancy to share these data with them. If one was aware of problems with data, it does seem

highly unlikely to me that they would be so willing to share their data so freely with a group of people whose very purpose is to expose data problems. I shared my data with Data Colada because I had no doubt, and have no doubt now, that these data were properly and carefully collected, and that there were no problems in the data.

In the absence of evidence of fabrication or falsification, and considering both the lack of intent to falsify, openness to sharing of data, and manual coding and merging, there cannot be a finding by a preponderance of the evidence of research misconduct.

I.D. Allegation 2, concerning Study 4 in the 2015 Psych Science article with [redacted] and [redacted]

Allegation 2 concerns Study 4 in the 2015 Psych Science article with [redacted] and [redacted]. In their interviews with my co-authors on this paper, the committee asked both [redacted] and [redacted] whether they were aware of any RAs helping me conduct the study in question. Both [redacted] and [redacted] noted they did not know if someone helped. This response seemed to arouse suspicion that there was actually no RA involved. It should not be surprising that they did not know about the RA since I did not make a practice of introducing RAs to co-authors for projects the RAs were helping with. I do not believe this is an uncommon practice. I often do not know whether my collaborators use RAs and what their names are.

As I mentioned in my prior comments, since the time I created a lab at UNC and recruited [redacted] as the lab manager, I have relied on the help of RAs for conducting studies, cleaning the data and preparing IRB applications, among other tasks. This was the case also for this study. Email exchanges show that [redacted], at the time staff assistant at the Research Computing Services at HBS, posted the sessions for data collection in CLER (see **Exhibit 14**). Email records also show that two RAs helped run the study in CLER (see **Exhibits 15a and 15b**). They had access to the Qualtrics link used to collect data in order for them to help with the study.

One of the RAs who conducted the study in CLER, [redacted], at the time a Harvard college student, sent me a note indicating that they had been directing participants to use a certain code as their ID but that some participants used their Harvard ID instead (see **Exhibit 16**). This email is important because it shows that: 1) Participants make mistakes that are reasonable, which is relevant to explaining the anomalies the complainant points out, and; 2) this is the type of information I have asked RAs to keep track of so that they could use it when cleaning the data.

I reached out to the two RAs, asking whether they had any documents they may have created when meeting with me to discuss the study with exclusions they used when cleaning the data. When replying, one of them noted she does not remember what exclusions she used when cleaning the data (see **Exhibit 17**). The other RA had a similar answer (see **Exhibit 18**). It would be helpful to have more information about the data exclusions they used in this study, but given that they helped with the study nine years ago, and that they helped conduct multiple studies in their role of RAs for the GiNorton lab at HBS and the Harvard Kennedy School lab (that still existed at the time), it should not be a surprise they did not remember.

I would like to note that posting data (and study materials) was not required by the journal *Psychological Science*. In April of 2017, the Editor of the journal wrote an editorial in which he spoke to new changes *Psychological Science* was going to introduce to increase data sharing and transparency, but noted even then that "authors ***are not required*** to do any of these things."[7] I thus voluntarily chose to make my data available on the OSF.

In an email dated Sunday, November 30, 2014, [redacted] sent [redacted] and me his revisions of the paper so that we could resubmit it. In the email (see **Exhibit 19**), [redacted] states "Given the topic (moral cleansing has come under attack) and the strength of the results, my guess is that data detectives may ask for our data. So we should double check all stats and also be prepared to share the data sets." Had I known of any issues with the data (including simple errors), I would not have proceeded with submitting the paper for publication. As other scholars have commented in their testimony, I have never had an issue walking away from studies that did not work either before or after I was tenured. I've published many papers over my career and never thought of any one paper in particular as critically important to my overall research agenda, work, and legacy.

I.D.1. Explaining the Data Anomalies for Allegation 2

In the document I received on January 14, 2022, with the Subject "Additional Information Related to Allegations 1, 2, 3, and 4b of Research Misconduct," the complainant pointed to strange demographic responses in the dataset. In particular, they noted that 20 students had "Harvard" as their response for "Year in School." Given that the lab pool at HBS draws on students from a variety of schools in the Cambridge and Boston area, when the committee asked me about this anomaly, I did not find it to be problematic, especially given that we had 491 students in the study. Though I would love for every participant to pay close attention to every question we ask, especially when it comes to demographic questions, participants do make errors. As a case in point, I often see a given year (e.g., 1978) as the answer to "Your age." Or, an RA helping with the study herself indicated that not all participants directed to use a certain code as their ID did so correctly (see **Exhibit 16**).

In examining this anomaly, the MCG forensic firm merged two datasets from my Qualtrics account, which I had shared with the committee when asked to provide the original data. Two datasets exist for this study since we needed a large sample and it proved difficult to recruit about 500 Harvard college students in CLER. As documented in an email exchange (see **Exhibit 20**), I worked with staff at HBS to: 1) use appropriate language to modify the IRB application so that additional data could be collected from Harvard college students online, 2) have the proposed changes approved by the IRB, and 3) identify the best way to recruit participants online and pay them appropriately.

The MCG report notes that the online version of the study was shorter than the one conducted in CLER. This is due to the fact that it was known to be difficult to recruit participants for CLER studies unless they were about 45-60 min long (students needed to walk across the river to be in a lab study at the time). So, it was common practice to run two studies within the same session.

[7] https://journals.sagepub.com/doi/full/10.1177/0956797617704015 (emphasis added).

The MCG report notes those who answered "Harvard" as "Year in school" did not provide a Harvard email address (Draft Investigation Report pg. 18). As these participants who entered email addresses took the study online, participants knew that they would be paid through an Amazon gift card. It is not unlikely that anything related to their Amazon account is not through their Harvard email, but their personal email, leading some participants who took the online survey to choose to enter it instead.

The MCG report also notes differences in the number of participants included in the sample when combining the two datasets from my Qualtrics account and the data I used for analysis that was posted on the OSF platform. Specifically, there were additional participants that are not part of the dataset posted on OSF. There are plausible reasons for this difference. As the MCG report itself notes, it is common practice for the same Qualtrics link used in a study to be used for testing. For instance, an author or RA may want to check how long it takes to complete the study, that the randomization is working, or that everything is clear in the instructions. Though it is good practice to use "test" in the ID box when testing, it is not uncommon for RAs testing the Qualtrics survey to use a different ID, take note of it, and then exclude the data point at the time of the data cleaning.

Additionally, if a participant in the lab was behaving in a problematic way (e.g., checking their phone while completing the study or engaging in any other behavior that would suggest inattention), then the RA running the study would make note of it and their study ID so that the person would be excluded from the analyses (and not counted as a valid participant). When studies are conducted online using Qualtrics links, if the link is not made inactive right after data collection, whoever has the link can complete the study *after* data collection is over. If the RAs helping with data collection did not de-activate the link, then it is possible other data was recorded that did not belong to the study itself. As such, the RA cleaning the dataset would exclude it from the count and final dataset to be used for analyses. Without having access to a description of the exclusions used by the RAs who helped conduct the study, who cleaned the data and merged the two datasets, I am unable to point to the exact reason for the difference. However, it seems highly likely it is the result of data cleaning, where participants were excluded for valid reasons.

The MCG report also points to some discrepancies between the two Qualtrics datasets that were merged by the RAs and the dataset I used in the analyses and posted on OSF. As the report notes, "The rationale for the modifications within the data as they transition from the apparent research record into the published record were less clear (e.g., the modifications, while having some directionality, did not appear to align completely with authors hypothesized outcomes)" (MCG Report pg. 14). If the RAs made any honest errors in the cleaning of the data or during the mergers of the two different datasets, I am certainly responsible for these errors as I was the PI (principal investigator) on the research – however, this does not mean I am responsible for research misconduct. Throughout this process, the committee itself collected evidence that RAs or collaborators working with me never felt the pressure to produce a certain result, or had any incentive to misreport information or alter data (Draft Investigation Report pg. 32). If errors were in fact made, given this evidence, they were not intentional.

In comparing the dataset posted on OSF and the Qualtrics data set, it is being assumed in this investigation that the Qualtrics data is accurate and the data posted on the OSF is not. That assumes the "raw" Qualtrics data is the original data and that no one has accessed or modified it. As I have pointed out earlier, and as I will explain in detail on pages 21-22 of this document (facts corroborated by RAs, two FSSs and collaborators), there are others with access to my Qualtrics account and tampering by a motivated third party cannot and should not be ruled out.

I also ask the committee to think about my pattern of behavior and lack of intent. If one were to engage in data manipulation, it would make little sense to alter the data only on one's computer while leaving the original source data as is. This behavior implied by the Draft Investigation Report makes even less sense considering that I willingly posted my data online for anyone to scrutinize, and I was well aware that others had access to my Qualtrics account, and therefore could check my data at any time. My behavior is not consistent with one who fabricates or falsifies data, and in fact, the public sharing of data directly motivates against such data alteration. Additionally, without evidence that fabrication or falsification actually occurred, the anomalous entries in this Allegation alone do not support a finding of research misconduct by a preponderance of the evidence.

I.E. Allegation 1, concerning Study 3A in the 2020 JPSP article with [redacted] and [redacted]

Allegation 1 concerns Study 3A in the 2020 JPSP article with [redacted] and [redacted] The committee noted that I seemed to have a strong desire to publish this paper, suggesting that such a desire could lead to malfeasance on my part. First, the vast majority of scholars have strong desires to publish their research, so any implications that this makes one more likely to commit fraud seems unwarranted. In addition, the history of this paper demonstrates that publication of this paper was not a particularly high priority for me.

[redacted], [redacted] and I published a multi-study paper, titled "The contaminating effects of building instrumental ties: How networking can make us feel dirty" in *Administrative Science Quarterly* in 2014. In this paper, we examined how the content and approach people use when networking influence how they feel during the development and maintenance of social ties and how that, in turn, influences their performance on the job. We also explored the role of power as a moderator.

One of the studies in the ASQ 2014 paper was a survey study of lawyers in a large North American business law firm. [redacted] had developed that relationship and, in analyzing the data, noted that another possible moderator for our effects could be whether people who engage in networking do so with a promotion or prevention focus. When people embrace a promotion mindset, they focus on the growth, advancement, and accomplishments that networking can bring them. When people embrace a prevention mindset, instead, they see networking as something they are obligated to do for professional reasons. We decided to work on a second paper to explore this finding further. We also discussed it in a *Harvard Business Review* article titled "Learn to Love Networking" that appeared in the May 2016 issue of HBR.[8]

[8] https://hbr.org/2016/05/learn-to-love-networking

[redacted], [redacted] and I believed this finding deserved further exploration given that many people find professional networking to be uncomfortable and inauthentic, and we had identified a shift in mindset that could help them approach networking with more ease, and thus benefit their performance and career. We also believed that exploring this finding would contribute to existing theories about the antecedents and consequences of networking, beyond the contributions made by our ASQ 2014 paper. We went on to submit the paper to various management journals. They all rejected the paper over the course of three years based primarily on limited theoretical contributions:

- January 2016: we submitted the paper to the *Academy of Management Journal* (AMJ)
- April 2016: we received a rejection from AMJ
- December 2017: we submitted the paper to *AMJ* a second time, after major revisions to the theory and after collecting new data
- February 2018: the paper was rejected by *AMJ*
- Later that February 2018: we submitted the paper to *Organization Science* (OS)
- June 2018: the paper was rejected by *OS*
- August 2018: we submitted the paper to the *Journal of Applied Psychology* (JAP)
- October 2018: the paper was rejected by JAP
- Later in October 2018: we submitted the paper to *Organizational Behavior and Human Decision Processes* (OBHDP) (I was the Editor of the journal at the time, but the AE handled the paper)
- March 2019: the paper was rejected by *OBHDP*

As I noted, the main issue the reviewers and editors at these various journals brought up was in relation to what they believed to be *limited theoretical contributions*, indicating that the paper did not advance theory in big enough ways given the existing 2014 ASQ paper we published. The problem with this paper, thus, was not with the data or the data analysis.[9]

In an email exchange (see **Exhibit 21**), after receiving the OBHDP rejection, [redacted] and I discussed the possibility of submitting the paper to a psych-oriented journal. As the email exchange clearly shows, I was in *no hurry* to work on this paper, nor was I the person who regularly checked in about its status and expressed interest in publishing the paper:

- In an email from March 11, 2019, [redacted] states, "I take our collective silence following yet another rejection as a sign that we're ready to try and place this paper in a lower-tier journal—should we be so lucky." (see **Exhibit 21**)
- In an email from April 12, 2019, [redacted] states, "Hi team, Org Science just sent me a manuscript to review that is all about promotion/prevention regulatory foci and network ties. It's a theory-only piece, but it still gives us another incentive to get our paper published sooner than later. Shall we give ourselves a deadline to go through the reviews and compare notes on the changes we'd like to make before submitting again? I should be able to carve out a few days in May to work on the paper rewrite. Best, [redacted]" (see **Exhibit 21**)

[9] I am happy to provide the letters of rejection from these journals should the committee so desire.

- In an email from July 31, 2019, [redacted] states, "I conclude from us having found no time to work on our paper that we all have other priorities. May I therefore revamp my suggestion to settle for a B journal, like *Motivation and Emotion*, that would allow us to submit the paper as is?" (see **Exhibit 21**)
- And then in an email from September 17, 2019, as [redacted] and I were discussing the potential of submitting the paper to the *Journal of Personality and Social Psychology* (JPSP), [redacted] writes, "If not, you know well that I'm open to placing this paper lower and have it out there, at last." (see **Exhibit 21**)
- We submitted the paper to JPSP after revising it on September 20, 2019.

I am not suggesting there is anything wrong with [redacted]'s strong desire not to let the paper die and her regular check-ins on the paper status (as evidenced also by other emails she sent, see **Exhibits 22a, 22b, and 22c**). However, as these exchanges and emails clearly show, I was *not* in a rush to work on this paper and understood that, given the 2014 ASQ we published, the paper provided a contribution that was more limited (as the reviewers indicated). Specifically, the paper focused on a moderator for the relationship between networking and a person's feelings about it rather than the main effects pointing to new relationships. As it is also clear from the email exchange, I was also *not* making this paper a priority, nor did I feel the need to necessarily publish it. There are many papers I dropped and stopped working on after receiving reasonable rejections from reviewers at top journals who did not find the ideas as compelling as I did or questioned the size of the theoretical contributions, as was the case for this paper.

Also, for additional context, at the time these discussions about resubmitting the paper to yet another journal were ongoing, I had other responsibilities and personal circumstances that made me less interested in and less available for working on this paper:

- I was the Editor in Chief at OBHDP, a very time-consuming role
- I was the Unit Head of NOM at HBS, also a time-intensive role
- I was co-chairing two Executive Education Programs that were being taught in the Fall back-to-back (*Behavioral Economics* and *Driving Profitable Growth*)
- I was close to giving birth to my fourth child, [redacted]

[redacted]

After submitting the paper to JPSP, [redacted] and I received an R&R from JPSP on November 27, 2019, asking for a revision by January 26, 2020. Kouchacki resubmitted the paper on January 26, 2020 (see **Exhibit 24**), and the paper was accepted on May 4, 2020. Though we had a tight deadline for the R&R (two months, which included winter holidays), we all thought we could meet it. But, as we discussed over the phone while working on the revisions, we were ready to ask for an extension if needed. Both [redacted] and I had published papers in JPSP in the past and had experience receiving an extension on an R&R without any issues being raised by the editor or the reviewers. If a study did not work out according to our hypotheses, as we

[redacted]

discussed as a team, we would regroup to understand what happened and how to potentially re-run the study making the study itself and the resulting paper stronger.

December and January were busy months for me. Personally, I had four small children at home when we received the R&R, with no family around to help out. I heavily relied on the help of my full-time RA at the time, [redacted], as well as RAs working temporarily or through the BIG lab (i.e., the Behavioral Insights Group lab) to make progress on my research. My email records show that [redacted] helped with the IRB application for Study 3A, reviewed and provided feedback on the study materials, and also helped with coding (see **Exhibits 25a, 25b, 25c, and 25d**). My records also show that [redacted] and I met multiple times throughout January to discuss this study and other research (Tuesday, January 7, 2020; Friday, January 10, 2020; Thursday, January 16, 2020; Thursday, January 23, 2020). Two college students were also helping with research at that time: [redacted] (9/23/19 through 6/30/2020) and [redacted] (10/21/2019 through 6/30/2020). The excel file from Beth Hall (Director, Research Staff Services at HBS) corroborates this (see **Exhibit 26**).

I regularly meet face-to-face with my RAs to be clear on their responsibilities but also on the details of studies being conducted, given that I tend to work on multiple studies and research projects at a time, as was the case for this study. What this means is that, regularly, exchanges of data and materials happen through USB keys or flash drives rather than via email.

We were not required by the *Journal of Personality and Social Psychology* to post our data publicly in 2020, as that requirement began only after 2021.[11] However, we publicly shared our data voluntarily. This choice to share data publicly is inconsistent with the allegation that the data was somehow improperly altered, and instead supports the fact that I was unaware of any data anomalies or other concerns.

I.E.1. Explaining the Data Anomalies for Allegation 1

When reviewing the initial allegation from the complainant about Study 3A, I did not find the so-called anomaly to be surprising. The complainant indicated they found puzzling that some of the words participants used to describe a networking event were more positive than others, suggesting that their ratings on the "moral impurity" measure should have been a 1 out of a 7-point scale rather than a 2 or a 3. The claimant also indicated that language such as "all that corporate stuff is awful" should result in "moral impurity" ratings greater than 1. In prior research, [redacted] and I found that engaging in professional, instrumental networking does not necessarily change how positive or negative one feels, but does influence how "dirty" and "inauthentic" a person feels. As a person who engaged in networking at a company event, for example, I may feel good about the fact that I did have a conversation with a person I wanted to connect to, but also inauthentic in the medium for reaching out. This is to say that I did not find the explanation provided by the claimant to be convincing. The data only appear "anomalous" because the claimant does not seem to understand the method and seems unaware of the existing literature.

[11] https://www.apa.org/pubs/journals/features/psp-pspp0000403.pdf

The complainant concluded that, "This means that a researcher who tampered with this data might have manually altered some participants' ratings without also feeling compelled to manually alter the text that accompanied those ratings. This would leave a trace" (Draft Investigation Report Exhibit 4 pg. 5). I found this point puzzling, and if anything, further bolstering the case against tampering. If a person actually did alter the data intentionally, it would be easy to change the words for the emotions to match the ratings, and thus leave no trace.

The complainant also stated that given the positivity of the words some of the participants used that a "moral impurity" score of 1 should be more likely than a "2" or a "3." This is pure speculation on the part of the complainant. The complainant's conclusion cannot be justified because, as much research has shown, people experience the same event differently, from an emotional standpoint, and also express their emotions differently. I may feel rather excited after a networking event, as an example, and score 1 on the moral impurity scale, while a person who seems equally excited may score a 2 or 3.

Though there are simple explanations for the so-called anomalies identified by the complainant, the additional analyses conducted by MCG and my own re-analysis of the data I downloaded from my Qualtrics account have me puzzled with respect to other gaps. As the report noted, "there appear to be multiple discrepancies in certain sets related to the raw data source ("Qualtrics Data") and public repository data associated with the 2020 JPSP Paper ("OSF data") provided by the client" (MCG Report pg. 2). The discrepancies exist in two of the study conditions, promotion and prevention focus. When downloading the data from my Qualtrics account, and working through the steps an RA likely followed to clean the data, I found myself puzzled since some of the choices seem unreasonable for an RA to have made during data cleaning. For instance, as stated in the MCG report, "evaluation of the Qualtrics data demonstrated that 4 participants did not appear to have given consent to the research, even though the data these participants provided were utilized in the 2020 JPSP paper" (MCG Report pg. 5). It is common practice, and something I always make the point to discuss with RAs tasked with data cleaning, to not include participants that do not consent to the research in the final dataset for analyses.

Though the HBS Policy states that I would be given access to the detailed analyses from the MCG firm and all the files they used, I did not have access to their analyses and excel files other than their final report. I thus tried to recreate their analyses to follow their observations. Though my analyses do not fully match what MCG did, likely because of differences in data exclusion choices, like MCG, I did find discrepancies. I attempted to make sense of these discrepancies as I wondered whether the RA mixed up the conditions, but I could not find a pattern that convincingly pointed to an explanation for each data discrepancy. As the MCG report states, "about 28% of the data in these survey areas" (referring to the survey scores for moral impurity and net intentions) "appear to have been modified … when comparing OSF survey score data to the scores captured in the original Qualtrics survey" (MCG Report pg. 6).

What could explain such discrepancies? One possibility is that an RA who cleaned the data made an honest error in the process. I take full responsibility for errors in the data as I was the principal investigator on the project – but this responsibility does not extend to research misconduct. As different RAs or collaborators working with me have stated, they never felt the pressure to

produce a certain result, or had any incentive to misreport information or alter data, and thus any errors would have certainly been unintentional (Draft Investigation Report pg. 32). Should further analysis indicate errors in the data, I will reach out to the journal with an expression of concern. I will also conduct a direct replication of the study in question.

It is also possible that the dataset posted on OSF does reflect the original data and the Qualtrics data set instead does not, as someone with access to my Qualtrics account may have modified it. Thus, tampering by a motivated third party cannot and should not be ruled out.

Though there are potential errors in the data in the study at issue, there is no evidence to suggest that such errors are intentional or that I personally knew about or contributed to such errors. As noted, any subjective inconsistencies in the moral impurity scores are due to the individuality of the test subjects, but I acknowledge that additional inconsistencies exist in the data.

Because I was not motivated to prioritize or publish this paper at all, but once published chose to voluntarily post the data on OSF for public scrutiny, I did not have any intent that would motivate the type of data manipulation alleged. In the absence of evidence as to whether data manipulation actually occurred, and if so, who was responsible for it, there cannot be a finding by a preponderance of the evidence of research misconduct.

II. ADDITIONAL CONSIDERATIONS

II.A. Witness Credibility

During the interview with the investigation committee, I spent much time discussing my relationship with Professor [redacted] and any potential role she may have had in the allegations. This topic of discussion went on at the length it did due to the questions I was receiving and my perception that this was a topic the committee was interested in exploring. The committee relied heavily on the email testimony of [redacted] during parts of its analysis. [redacted] is part of a group of Judgment and Decision Making scholars in marketing departments who are closely connected. As she herself told me in conversations leading up to the retraction of the 2012 PNAS paper and afterward, she has been counseled by the Data Colada team. She also presented at their seminar on December 3, 2021.[12]

The committee found [redacted] a credible witness. In early 2011, [redacted], [redacted] and I combined efforts with [redacted] and [redacted] to work on a paper on the effect of signing first on ethical reporting. As noted in Bazerman's draft of Chapter 7 from his latest book *Complicit* (see **Exhibit 27**),

> The paper combined two previously unpublished empirical efforts: (1) two laboratory experiments by [redacted] Gino, and I that claimed to demonstrate the 'signing first' effect, and (2) one field experiment conducted at an insurance company, previously described by [redacted] in multiple public forums. Gino initiated

[12] Link to the schedule: http://datacolada.org/past-seminars; link to the talk: https://www.youtube.com/watch?v=LhoDGrY1EEU

> the contact with [redacted] who was positive about joining together, and noted 'I have been working on this with [redacted] - so this will have to involve her as well.' Gino contacted [redacted] who also agreed to join noting that 'it's a good idea to combine forces.' By early 2011, the five of us combined efforts, realizing that the two projects responded to limitations of the other: the [redacted] studies claimed to offer well-controlled laboratory experiments, while the field study claimed to provide an experiment using data from an insurance company.

As [redacted] explains in his chapter, he had many questions about the field study, and directed them over the course of 2011 and early 2012 to [redacted] and [redacted]. [redacted] had worked under [redacted] as a Postdoctoral Fellow and collaborated with him on multiple papers. As the person close to [redacted] [redacted] felt attacked on multiple occasions by [redacted] As [redacted] describes herself in responding to a draft of [redacted]'s chapter (see **Exhibit 28**), the collaboration became quite difficult:

a. "Given this extreme level of hostility that you directed at me, my response was short but to the point…"
b. "…bad attempt of diffusing a hostile team dynamic…"
c. "…dysfunction and 'distrust' in the group…"

The email exchange between [redacted] and [redacted] about the book chapter gives more context (see **Exhibit 29**). Given that I was the person who brought us together as a team for this collaboration (that led to the 2012 PNAS paper), and the person who independently had worked with both sides of the team on other projects prior to this collaboration, [redacted] accused me of not doing enough to stand up for her when [redacted] directed "hostility" toward her.

On July 29, 2018, [redacted] reached out to me and [redacted] to tell us that he had been working with [redacted] and [redacted] on online studies that used signing and that they had failed to find any significant results. I responded with concern about the lack of significant results and expressed interest in running a highly-powered replication (see **Exhibits 3a and 3b**). We then invited [redacted] and [redacted] to join these efforts. Once the highly-powered study was conducted, showing no effect of signing first, the collaboration became very hostile again. Once again, I was in conflict with [redacted] for not agreeing with her interpretation of the findings from the replication. For independent corroboration of these circumstances, I will refer you to [redacted]'s comments (see **the recordings in answer to the questions in Exhibit 2**). I myself recognized the difficulty of the collaboration – and expressed that in an email to the team when I decided to give up the role of corresponding author on the 2020 PNAS paper (see **Exhibit 30**).

On June 28, 2019, [redacted] and I had a conversation about the collaboration at Boston University, during the Ethics at the Frontier of Technology symposium (a one-day-long conference). During this conversation, [redacted] expressed to me her anger and disappointment that I had not done more to support her. It was during this conversation that [redacted] said to me that she wished I "would suffer as much as she did." At the time, I did not report this to anyone because I thought the words were emotional but harmless, and I would not want to accuse someone of harassment lightly. However, on August 15, 2021 (more than two months *before* I was made aware of the allegations against me), I reported the conversation with [redacted] to my HBS

colleague Professor [redacted]. [redacted] who is a neighbor, was walking by my house as she often does on weekends. We were scheduled to meet on a regular basis to prepare for the teaching we'd be doing together soon, and I wanted to inform her about the possibility I would be distracted by the event surrounding the Data Colada post that would go live two days later (on August 17, 2021, http://datacolada.org/98) and the following retraction of the 2012 PNAS paper the post referred to. I confided to [redacted] that I was particularly worried about [redacted] talking to the media and lying about the facts behind the collaboration in an attempt to hurt me. It was then that I told [redacted] about [redacted]'s threat. Please see Professor Frances [redacted]'s letter commenting on this interaction (see **Exhibit 1**).

II.B. Data Accessibility

As I noted in my interview, I have long shared my Qualtrics account information and other log-ins with collaborators, RAs, and others whom I have worked with. [redacted] has had access to my Qualtrics account since I shared with her my Qualtrics account login credentials in the years we collaborated on projects. This is a standard practice I have used with my collaborators and RAs. It helps ensure that I am not a bottleneck on projects.

[redacted], an RA whom I worked with for four years (2012-2016), stated in an email (see **Exhibit 31**) that this was the standard practice of mine that she observed. My HBS Faculty Support Specialists, [redacted] (2010-June 2017) and [redacted] (July 2017-November 2021) also testified that they had my login credentials and had my permission to share those with my collaborators (see **Exhibit 32a and 32b**). Whoever has login credentials can access my Qualtrics account and also all the data from any study conducted with Qualtrics. As a collaborator on multiple projects over the years, [redacted] had access to my Qualtrics account, and therefore, all the Qualtrics data at issue in this investigation in Allegations 1 and 2 (the studies with available data on Qualtrics).

My collaborators also often have direct access to my laptop computer. When meeting at conferences, in my office or in other locations, I've regularly worked on projects or analyzed data with collaborators, also allowing them to use my laptop while we are together. (I've never had a desktop computer as a faculty member at HBS. My laptop is the only computer I use for my work.) As evidence of these practices, please see the attached emails from two long-time collaborators of mine, Professor [redacted] of Wash U in St. Louis (see **Exhibit 10**) and Professor [redacted] of UNC (see **Exhibit 11**). The same practices are discussed in a few letters that collaborators and doctoral students submitted when nominating me for the 2018 Academy of Management Award for Mentorship (see **Exhibit 33**, with the relevant part highlighted). My understanding was that this was standard practice in research labs in past years and among people who collaborate on multiple projects. [redacted]'s email corroborates this point (see **Exhibit 31**). In addition, other scholars have used similar practices (see **Exhibit 34** as an example from [redacted] giving access to her Quatrics account to an RA we were working with). I recognize now that, from a security and privacy point of view, this was likely a mistake, as it provided me little control over access to my data and files. I am highly trusting of the people with whom I work.

During my interview with the investigation committee on November 14, 2022, the committee asked me why I did not change my password before October 2022. As it is clear from an email exchange I had with HBS Research Integrity Officer (RIO) Alain Bonacossa in October 2022, I thought others involved in the investigation needed access to my accounts—which is why I kept the same password until then. I changed it right away after Bonacossa confirmed my understanding was mistaken (see **Exhibit 35**).

In the future, I will revise my lab practices to make sure every collaborator has unique Qualtrics login credentials and my laptop will not be physically shared with others.

II.C. RA Usage

The committee interviewed two of my RAs during this investigation: both [redacted] and [redacted] (Draft Investigation Report at pg. 15 and 24). In each of their interviews, the RAs noted that they did not know the hypotheses for each study as they did not analyze the data. However, each of the RAs helped with the IRB applications for the studies they worked on, which did specify the hypotheses each of the studies was testing. [redacted] additionally helped test the studies so he knew what conditions participants would be randomly assigned (see **Exhibit 25d**). By testing the same study link multiple times, he would get to see the different conditions used in the study.

Both [redacted] and [redacted] appeared to have difficulty remembering the specifics of what they were asked. As noted in the report, when questioned about Study 3a, [redacted] appeared to refer to Study 3b instead (Draft Investigation Report at pg. 15). Similarly, [redacted] herself noted that she could not confirm the number of experiments within certain studies nor whether changes were made after the IRB applications were approved (Draft Investigation Report at pg. 24). These lapses in memory are understandable considering the time that has passed, but they also point to the fact that responses by the RAs and other witnesses are not inclusive of every fact and consideration from the relevant time period. The fact that [redacted] or [redacted] do not remember something cannot support the fact that such a discussion, task, or other item did not exist or occur. However, I know either RA would have brought any issues in procedure or data collection to my attention for us to resolve accurately and honestly. In the absence of complete memories as to the studies at issue, I have attempted to provide emails and other exhibits from the time period.

III. MISINTERPRETATIONS AND FACTUAL ERRORS CONTAINED IN THE DRAFT INVESTIGATION REPORT

There are a number of material misinterpretations and factual errors contained in the committee's draft report. I would like to rectify these in this section. I addressed some of them earlier; I will not repeat them here.

III.A. General Comments in the Draft Investigation Report

(1) *The Draft Investigation Report on pg. 9 states: "Nonetheless, no witness provided a plausible explanation of data anomalies or discrepancies."*

The committee interviewed as witnesses four co-authors ([redacted] and [redacted] and two RAs I worked with ([redacted] and [redacted] I've not been in a similar situation in the past, but I would imagine having a hard time explaining any data shown to me on screen for projects where the data was collected years ago. Having had the opportunity to go through the data in the allegations carefully, I know it took me dozens of hours of sitting with it, to understand the data and any discrepancies.

(2) *The Draft Investigation Report on pg. 9 states: "Professor Gino maintains that she never altered or falsified research data for any of the four studies, or any other study that she has conducted in her career. However, she does not question any of the data anomalies and discrepancies as described in the forensic reports. Professor Gino asserts that the data she analyzed for publication were, to the best of her knowledge, the true, valid data that were collected for each study."*

The forensics reports were massive, and given my personal and professional time constraints, I was unable to examine the discrepancies in the required detail at the time of my last testimony. I received the five MCG reports on these dates: September 30 (for Allegation 1), October 12 (for Allegations 4a and 4b), October 21 (for Allegation 2), and October 31 (for Allegation 3). My written responses were due by November 11, in time for the November 14 interview with the committee. This was an unreasonably narrow time window for me to undertake a thorough analysis of that data. It also has to be considered that during this time period, I was the course head for the Inclusion course and teaching it.

I have now included my detailed reactions to data anomalies and very plausible explanations for any discrepancies across datasets in my responses in the first section of this report.

(3) *The Draft Investigation Report on pg. 10 states: "Professor Gino indicated that, for most of her career, she routinely and frequently shared her computer and Qualtrics account login credentials with collaborators, research associates, doctoral students, and lab staff—and that she had not changed her Qualtrics password for 12 years, until she did so in October 2022—giving many people the means to commit the manipulation. In support of this assertion, Professor Gino provided a list of seven emails she sent to seven different individuals in 2015, 2016, and 2018, in which she shared her credentials; none of those individuals is a collaborator, RA, or doctoral student named in this report.*

As I mentioned in my earlier comments prior to this report, it was common for me to share login information about my accounts face-to-face, rather than in emails. I shared the seven emails to show that, as I had stated, I did share my computer and Qualtrics account login credentials with collaborators, research associates, doctoral students, and lab staff. I have now included testimony from collaborators and RAs speaking to this. I also included testimony from my prior two FSSs stating that they themselves shared my Qualtrics account login credentials with others.

I believe this is not an uncommon practice. The testimony from the FSSs corroborates this (see **Exhibits 32a and 32b**). I also include an email from one of my collaborators, [redacted], sharing her own Qualtrics account with me and an RA (see **Exhibits 34 and 36**).

(4) *The Draft Investigation Report on pg. 11 states: "First, they would have needed access to both Professor Gino's Qualtrics accounts and her computer's hard drive, as two allegations (1 and 2) involve discrepancies in Qualtrics data and one allegation (3) involves discrepancies in the computer's data."*

I have now shown that there are very logical and reasonable explanations for Allegations 4a, 4b, 3, and 2. I also provide convincing evidence that shows that I did not commit any wrongdoing in regard to Allegation 1. I would also like to clarify that anyone with access to my Qualtrics login credentials had access to the data for Allegations 1 and 2, without the need to access my hard drive.

(5) *The Draft Investigation Report on pg. 11 states: "For hard drive data manipulation, in addition to Professor Gino's HBS login information, they would also have needed access to her second "factor," probably her cell phone, in HBS's two-factor authentication system, which was implemented at HBS in 2015."*

This fact is not relevant to any of the allegations. As others have explained in their testimony, I regularly sit down with collaborators, RAs, and doctoral students in front of my laptop. If my laptop is open, there is no need for an HBS's two-factor authentication system. But, more importantly, to access my Qualtrics data, access to my computer is not needed. This means that an HBS's two-factor authentication system is not needed to access my Qualtrics account. With my Qualtrics login information, one can access my Qualtrics data from *any* computer.

(6) *The Draft Investigation Report on pg. 13 states: "Professor Gino's repeated and strenuous argument for a scenario of data falsification by bad actors across four different studies, an argument we find to be highly implausible, leads us to doubt the credibility of her written and oral statements to this Committee more generally."*

First, I am very saddened to learn that the committee doubted the credibility of my written and oral statements. In light of this comment, for any of the claims I made in this document, I corroborated the statement with evidence from email exchanges or testimony from others.

Second, I did not make any claim that a bad actor or actors were involved in manipulating my data across **all four studies**. In fact, while the motives of [redacted] are germane to this investigation, they are not actually necessary to refute all of the claims against me. (They should, however, call into question the credibility of [redacted] as a witness).

I have shown, for instance, that my description of the research method in the 2012 PNAS paper reflected accurately the correct research method. I have shown that almost all of the so-called data anomalies were not anomalies at all, but were the result of data processing, handling, and cleaning.

III.B. Comments about Allegation 1

(7) *The Draft Investigation Report on pg. 14 states: "The Investigation Committee separately interviewed each of Professor Gino's co-authors on this paper, Professor* [redacted] *and Professor* [redacted] *and found both of them to be credible."*

The committee asked whether [redacted] and [redacted] had access to the data. At least [redacted] had access to my Qualtrics if she chose to use it. There are multiple email exchanges that show how closely I worked with her when she was a doctoral student and, even more so, when she was a PostDoctoral Fellow at Harvard (see, as an example, **Exhibit 37**). She was in close contact with CLER at HBS, and with [redacted], the RA managing the GiNorton lab at the time (see **Exhibits 38a and 38b**). She was also in contact with [redacted] for studies conducted at UNC when I was at HBS (see **Exhibit 39**). On her behalf I asked HBS to create her own Qualtrics account so that she could have an independent one rather than using mine.

(8) *The Draft Investigation Report on pg. 14 states: "Neither of the coauthor witnesses had explanations for the discrepancies. (...)" and "They were unaware of anyone besides Professor Gino having access to the data."*

I don't believe these are relevant facts. As a common practice, people have help from RAs. They do not necessarily let co-authors know who is helping them and, if so, in doing what. And faculty members do not necessarily know the names of RAs helping the lab manager conduct studies. As just one example, in an email exchange between [redacted] and [redacted] from 2014, [redacted] used the help of RAs for a study she conducted under [redacted]'s supervision at UNC and she did not convey who the RAs were (see **Exhibit 40**).

(9) *The Draft Investigation Report on pg. 15 states: "In his testimony,* [redacted] *indicated that he didn't use Professor Gino's Qualtrics account or have her computer's login credentials, and that he didn't perform any data cleaning beyond simple checking for both responses or incomplete responses for this study. He also indicated that he didn't analyze the data for this study and didn't know what the hypotheses for this study were."*

As the committee itself recognizes, [redacted] was not clear in his memory of the specific study in question. [redacted] helped with the IRB application for the study, which – among other things – does specify the hypotheses the study was testing. He also helped test the study so he knew what conditions participants would be randomly assigned to (see **Exhibit 25d**). I don't fault [redacted] for not remembering the specifics, but his memory is not accurate. But, once again, if in fact there were honest errors by him or other RAs in cleaning the data and preparing it for analyses, I would be responsible for their errors as the PI.

(10) *The Draft Investigation Report on pg. 15 states: "Email correspondence between Professor Gino and* [redacted] *appeared to indicate that* [redacted] *did not have access to the Qualtrics survey data."*

I don't believe this is a conclusion the committee can draw. I may not be looking at the same emails the committee read, but I did read all my correspondence as I prepared my responses. I

did not find evidence speaking to this point. And, as I stated earlier, I found evidence of meeting in person with [redacted] and other RAs after data collection. It is very possible that, as I often did in the past, we exchanged data or any other file via a USB key.

(11) *The Draft Investigation Report on pg. 15 states: "Lastly, upon studying the email records closely, the Investigation Committee concluded that, in some of his interview responses (specifically, his responses about coding participant essays), [redacted] was actually recalling his involvement in the very similar Study 3b in the same paper, not Study 3a (the subject of this allegation)."*

In reading [redacted]'s answers during the interview, it is clear his memory is not fully accurate. [redacted] worked with me for years and helped with many studies. I would not expect him to remember the exact details of every study he helped with.

III.C. Comments about Allegation 2

(12) *The Draft Investigation Report on pg. 18 states: "Neither of these coauthor witnesses had compelling explanations for the discrepancies identified at Inquiry."*

I am not surprised that my coauthors did not provide particularly compelling explanations for the discrepancies. I myself would find it hard to provide explanations of any data on the spot, without spending time with it and reminding myself of the specific aspects of the study. I would also imagine it is somewhat anxiety-producing to be interviewed on a matter of integrity like this one. From the way [redacted] expressed herself in the interview, it does seem she was a bit stressed by the questions asked.

(13) *The Draft Investigation Report on pg. 18 states: "In addition, each of these co-authors stated that Professor Gino was responsible for the data collection and analyses for Study 4, and each stated that they did not have access to the data or any involvement in analyzing them."*

This is information I myself provided to the committee. I have never suggested anything different from this.

[redacted] did not, as she seems to recognize in her interview, know that I relied on RAs to help with studies, coding, and other responsibilities. She does regularly as well, without me knowing the specifics. While at Harvard, she was in touch with some of the RAs herself, often taking the lead in interacting with them to conduct studies (see **Exhibits 37a and 37b** for email exchanges). Though [redacted] and [redacted] suggested I was responsible for data collection, they recognized the possibility of RAs being involved to help.

(14) *The Draft Investigation Report on pg. 18 states: "MCG compared the publicly available data posted on OSF with the original datasets for this study found in Professor Gino's Qualtrics account. This analysis showed that some data in the OSF dataset do not appear in either of the two Qualtrics datasets for this study, that those data strongly support the hypothesized and*

reported results, and that some data in the two Qualtrics datasets do not appear in the OSF dataset."

If a motivated actor accessed my Qualtrics account (simply by using my login credentials), they could edit the Qualtrics easily, based on the data posted online that they knew was used for the analyses presented in the paper. If they deleted rows of data or made individual edits in the cells, there would be no records of this happening, unfortunately.

Importantly, though, as I wrote in my earlier responses, there are very plausible explanations for the anomalies. So it is very possible that the original data is not the one currently in my Qualtrics account.

III.D. Comments about Allegation 3

(15) *The Draft Investigation Report on pg. 21 states*: "*Professor* [redacted] *was puzzled by the data anomalies displayed during his interview; he tried to come up with benign explanations for how those patterns might have come about, but noted that the possibilities he generated were "unlikely.""*

As it was likely the case for him, I would find it hard to comment on data shared on screen at the time of the interview. The data was collected over ten years ago, and it is hard to make sense of any data without thinking carefully about the details of a study and the procedures used for data exclusion and cleaning. In my earlier responses, I provided a very plausible explanation for the anomalies, making it clear that they are not anomalies.

(16) *The Draft Investigation Report on pg. 21 states*: *"In addition, he stated that he never had access to the data and that he wasn't involved in writing up the method or findings sections for this study."*

To clarify, I have never claimed [redacted] had access to data prior to the point when I shared it with Nelson. He never asked for the data, and it was not common practice at the time to share data with coauthors. For example, I do not have data of studies he conducted for projects we worked on together.

III.E. Comments about Allegation 4a

(17) *The Draft Investigation Report on pg. 23 states*: *"written testimony by Professor Gino's co-author on the 2012 PNAS paper, Professor* [redacted] *"*

Any reliance on [redacted]'s answers is problematic as she is a biased witness. But, even more importantly, what she claims is not consistent with the comments provided by a co-author on the replication efforts, [redacted] (see **Exhibit 2**).

(18) *The Draft Investigation Report on pg. 23 states*: *"MCG's forensic report detailing multiple modifications to the content of the manuscript as it went through drafting and revision in the period of February 2011 through May 2011, before its initial journal submission in May 2011"*

Every paper goes through many revisions. Authors respond to each other's questions by hopefully increasing the clarity of how procedures were carried out, draft after draft. It is not a linear process. And if a particular aspect of the description really does not sit right with a co-author, then I would argue it is that author's responsibility to have a conversation about it.

In this case, the allegation that I would intentionally mislead readers is truly mind-boggling. We relied on the same procedure in the replication study done a few years later. Even the ambiguous language "payment you received" in the Tax form is language we retained in the replication study, without any discussion of it being ambiguous.

(19) *The Draft Investigation Report on pg. 24 states*: *"The Investigation Committee interviewed Professor Gino's lab manager at the time this study was conducted in the summer of 2010, [redacted], and found her to be a credible witness."*

[redacted] repeatedly states she does not remember every single detail of the study. I reached out to [redacted] as we were trying to learn more about the study and planning the replication efforts. She did not have any recollection of the procedure being flawed (see **Exhibit 4a**, when I write "I've been trying to track down the RAs who I think helped with these studies but they moved on. The one I was able to talk to, understandably maybe, does not remember all the studies she helped with.").

(20) *The Draft Investigation Report on pg. 24 states: "[redacted] stated that, to the best of her knowledge and recollection, for every study that she ran for Professor Gino, it was Professor Gino (along with, possibly, her study coauthors) who was responsible for the overall conceptualization and design of the study."*

[redacted] repeatedly gave me feedback on studies I conducted to make sure the procedures were not overly complicated in the way they would be carried out in the laboratory.

(21) *The Draft Investigation Report on pg. 24 states: "[redacted] [redacted] also asserted that, as a regular practice, she executed the data collection for a study in line with the description of the study procedure as submitted to the UNC IRB, even though, at that time at UNC, small tweaks were usually allowed without requiring an IRB modification to a previously-approved protocol. Due to the passage of time since data collection in 2010 and the large number of similar studies she conducted or supervised at UNC, [redacted] could not confirm with certainty whether one or two experimenters conducted Study 1; whether she, herself, was an experimenter for this study (or whether, as lab manager, she supervised one or more other RAs conducting the study); whether participants were paid only once or twice (i.e., only in room 2 or in both room 1 and room 2); or whether changes were made to the study materials after IRB approval. She made clear, however, that she always executed a study precisely according to the instructions provided to her by Professor Gino."*

It is important to note that, as shown by email exchanges that I found during the years I worked with [redacted] after I left UNC, she regularly helped with IRB applications (see **Exhibit 41**). What this means is that she was aware of the study hypotheses because they are specified in the description of the research and what the study aims to examine.

As [redacted] acknowledges herself, so much time has passed that she cannot remember the details of the procedure. But she would have brought up any issues if issues indeed compromised the quality of the research.

(22) *The Draft Investigation Report on pg. 24 states: "[redacted] also said that, in examining the available materials from Professor Gino's sequestered hard drive (which we displayed during our interview with her), it appeared to her that participants may have calculated and reported their puzzle performance, and received payment for it from the experimenter, in room 1, before being exposed to the tax form (which contained the experimental manipulation)."*

It is worth noting that [redacted] herself is not sure about this. and it is worth noting that, as explained earlier, we retained the same, ambiguous language "payment you received" in the direct replication we conducted for the 2020 PNAS paper. As [redacted] states in her testimony, nobody has an issue with this ambiguous language (see **Exhibit 2**). And, as I have also stated earlier, no editor or referee ever had an issue with this language.

(23) *The Draft Investigation Report on pg. 25 states: "This is the way the procedure was laid out in the IRB application, and it's the way the procedure was described in the first draft of the manuscript, dated February 23, 2011"*

The committee does not have access to the IRB that was approved. I reached out to the UNC IRB and talked to them. They have no records since IRBs were done on paper. I would be delighted to provide a written testimony if the committee does not find my words credible.

(24) *The Draft Investigation Report on pg. 25 states: "Professor [redacted] raised concerns about whether the dependent variable of cheating on puzzle performance self-report had been collected before the independent variable (the tax form) was introduced."*

[redacted] was satisfied with my answers and did not bring this up for the next 12 years, not even when we were discussing the study to run as a direct replication [redacted]'s testimony speaks to this clearly (see **Exhibit 2**).

(25) *The Draft Investigation Report on pg. 26 states: "[redacted] also indicated she did not see or have access to additional study materials until September 16, 2018, when [redacted], then a doctoral student at HBS, embarked on a replication of experiment 1 from the original PNAS paper."*

[redacted] never asked for the data or the materials. I shared both when I was asked.

(26) *The Draft Investigation Report on pg. 26 states: "According to Professor [redacted] she asked [redacted] to "check with Professor Gino and confirm which of the two procedures (i.e.,*

payment in room 1 or in room 2) was implemented" (Exhibit 14, p. 6). Professor [redacted] stated that, a few weeks later, [redacted] sent "updated materials," which "suggested that the payment happened in room 2 only and that the DV was the matrixes solved as reported on the tax form" (Exhibit 14, p. 6); these materials fit the procedure description of Experiment 1 as published in 2012."

[redacted]'s testimony is particularly helpful on this point (see **Exhibit 2**). The materials that [redacted] posted on OSF show the same language that the committee had issues with, and the procedure as carried out by the RAs, which is the same as in the original paper.

Given how strongly [redacted] opposed the language in the 2020 PNAS paper as she did not want the paper to state that signing first does not reduce cheating (but rather that there are moderators to explore), I find it really puzzling that [redacted] agreed to conduct a direct replication using language and a procedure she apparently had issues with. Or that she agreed to replicate a study that may have used a different procedure, without raising this concern.

(27) *The Draft Investigation Report on pg. 28 states: "[Professor Gino] also stated that it is possible that, in the first draft of the manuscript, she may have copied a study procedure from a previous, similar study, thereby introducing inaccuracies; she noted that, typically, she doesn't pay much attention to the procedure descriptions in early drafts of her manuscripts."*

I did mention in my November 11, 2022, written responses papers and IRBs that used the same procedure but did not include the language used in them. I have now added the evidence with language directly from those sources (see **Exhibit 5**).

(28) *The Draft Investigation Report on pg. 28 states: "In addition, Professor Gino argued that the UNC IRB application detailing the study procedure, which was on her sequestered hard drive, may not represent how Study 1 was actually run, since it was common to obtain IRB approval with a broad description of the study procedure and stimuli and to make small tweaks after approval without submitting a modification to the IRB to amend the originally approved protocol."*

This was confirmed by [redacted] in the interview with the committee and the committee reported [redacted] being a credible source.

(29) *The Draft Investigation Report on pg. 29 states: "[redacted] [redacted] indicated that she has no memory of ever asking for money back from participants during her time as a lab manager at UNC. Moreover, both Professor Gino and [redacted] argued that it is implausible that an experimenter would demand money back from participants at the end of an experiment. The Committee similarly finds this implausible. However, as noted below, the Committee has evidence from [redacted] [redacted]'s testimony suggesting that participants could have both owed money at the end of the experiment and been allowed to leave with the money they had already received."*

Participants would only be allowed to leave the study with extra money they did not actually earn if the amounts were small, like a few cents or a quarter. This was simply a function of

convenience, as payments were usually in the form of $1 bills, $5 bills, or $10 bills. Rarely, we had quarters. We never had cents or dimes.

(30) *The Draft Investigation Report on pg. 29 states: "Ultimately, after considerable deliberation, the Investigation Committee was persuaded that research misconduct occurred, based on the following factors: a) The step-by-step experimental procedure outlined in the IRB document, and other study materials found on Professor Gino's sequestered hard drive, contradict the published paper in ways that go beyond small tweaks;"*

They are no documents that are the final version of the IRB that was approved. I also hope the new evidence I provided will lead the committee to reach a different conclusion.

(31) *The Draft Investigation Report on pg. 29 states:"Even if Professor Gino had copied a study procedure from a previous, similar study and pasted it into the new, first-draft document for this experiment, there is no explanation for why she proactively would have made subsequent revisions to the procedure description, on both March 15 and April 5, that were also inaccurate, as these subsequent modifications go to the heart of experimental methodology (i.e., the requirement that the independent variable manipulation must occur before the dependent variable is measured)."*

There is a very plausible explanation. I was focusing on other parts of the paper in those drafts. I was teaching for the first time at HBS and I was getting my feet wet understanding HBS. I paid careful attention to the final draft but I may not have had the same level of attention for all parts of the paper for the many versions of this paper we circulated as a team.

(32) *The Draft Investigation Report on pg. 29 states: "Moreover, Professor Gino provided no evidence of a prior manuscript with the procedural wording found in the first draft of the manuscript;"*

I have now provided such evidence as the Matrix task is a task I used extensively in my research and in studies conducted at UNC (see **Exhibit 5**).

(33) *The Draft Investigation Report on pg. 29 states: "c) Professor Gino suggested that she probably didn't talk to* [redacted] *to clear up the procedure until after her March 15th revision, which seems unlikely, given that Professor* [redacted] *raised serious questions about the procedure on March 9."*

From the language used in the email Professor [redacted] sent, and given the relationship I had with her, it did not seem like such a serious question about the procedure. The proof is that nobody else was concerned, not even [redacted] herself once revisions of the study descriptions were made across drafts.

(34) *The Draft Investigation Report on pg. 29 states: "it is plausible that Professor Gino made changes to drafts of the manuscript in order to obscure the problem with the dependent variable collection that Professor* [redacted] *had detected."*

It is equally plausible that I simply wrote the procedure to reflect what happened when the study was conducted in the laboratory at UNC and that I made changes to the various drafts of the paper to increase the accuracy of the description of the study procedures. The additional evidence I provided about the method (and its use in the replication study) makes my explanation extremely likely.

(35) *The Draft Investigation Report on pg. 29 states: "In her testimony,* [redacted] *indicated that, on the rare occasions that a participant in the UNC lab was mistakenly paid more money than they were due in an experiment, the experimenter in charge would not request money back from them but would, instead, simply let them keep what they had received."*

This is very different from saying that people received payment (up to $40) and kept it. She is referring to receiving $5.75, receiving $6 and keeping the difference ($.25).

(36) *The Draft Investigation Report on pg. 29 states: "We thus believe it is possible that, in this study, the experimenters told participants who had lower expenses than taxes at the end of the study that they would not have to give money back but could keep what they had already received."*

This is very unlikely. The difference in payment would have been substantial. Importantly, the language "payment you received" which the committee found ambiguous is language no one had issues with during the replication efforts.

III.F. Comments about Allegation 4b

(37) *The Draft Investigation Report on pg. 31 and 32 states: "*[redacted] *asserted that she conducted the data collection under the direction and supervision of Professor Gino, following standard lab practices at the time, and that she emailed the raw data to Professor Gino upon completion of the data collection (see email correspondence in Exhibit 28).* [redacted] *also indicated that she did not have knowledge of the study hypotheses and that she was not involved in the analyses of the data, because she did not have the required statistical and methodological expertise."*

The original data was collected on paper. [redacted] and I met in late July 2010 to check the data based on the email [redacted] sent. It is important to note that, in [redacted]'s testimony, there is significant ambiguity in her recollection of this study, especially in her written responses. This is understandable given that the study was conducted about 13 years ago and used a paradigm (the matrix task) that I used in countless other studies [redacted] conducted at UNC.

IV. POLICY AND DEFINITIONS

Before concluding, I would like to emphasize that the evidence needs to be evaluated in light of the existing HBS Policies and accepted definitions.

The investigation is meant to "develop a factual record" by "examining the evidence in depth" after "pursu[ing] diligently all significant issues and leads discovered that are determined relevant." Harvard Business School Interim Policy and Procedures for Responding to Allegations of Research Misconduct ("HBS Policy") at pg. 7-9. A finding of research misconduct requires the investigation committee to "identify whether the research misconduct was falsification, fabrication, or plagiarism, and whether it was committed intentionally, knowingly, or recklessly" (HBS Policy at pg. 9). Such a determination must be made by a preponderance of the evidence. *Id.* A preponderance of the evidence means "proof by information that, compared with that opposing it, leads to the conclusion that the fact at issue is more probably true than not." *Id.* at p. 13. Research misconduct also "does not include honest error or differences of opinion." *Id.*

I must emphasize again that, while the HBS Policy notes that defenses must be proven by a preponderance of the evidence in their consideration, the burden of proof for making a finding of research misconduct is actually on the committee, as any findings of research misconduct must themselves be supported by a preponderance of the evidence (HBS Policy at pg. 2, 9). Any ability of my own to support a specific defense by a preponderance of the evidence does not exclude the requirement of the committee to support each of its determinations and findings by a preponderance of the evidence. In other words, any evidence of honest error or differences of opinion must ***also*** be considered in determining whether the committee has met ***its burden*** of determining whether there is sufficient evidence to support each and every required element of research misconduct (especially with respect to intent). *See* 42 C.F.R. § 93.106(b); *see also In re Decision of Kreipke*, Recommended Decision, Docket No. C-16-402, Decision No. CR5109 (May 31, 2018) at p. 46 (holding that any evidence of affirmative defenses should ***also*** be considered in determining whether the institutional burden has been met).

Fabrication and falsification are alleged in this matter. Fabrication means "making up data or results and recording or reporting them." *Id.* at p. 12. Falsification means "manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record." *Id.*

The HBS Policy does not define "intentionally, knowingly, or recklessly" (HBS Policy at pg. 9). In the absence of other definitions for these terms, I submit that the definitions from Black's Law Dictionary should apply. The Black's Law Dictionary definitions for these terms were adopted by an Administrative Law Judge ("ALJ") deciding a matter involving federal research misconduct findings (*Kreipke* at pg. 14). Specifically, the ALJ held that Black's Law Dictionary provides "the common definitions for intentional, knowing, and reckless and their adverb forms." *See id.* As described in *Kreipke*, Black's Law Dictionary defines these terms as follows:

- Intentional: Done with the aim of carrying out the act.
- Knowing: Having or showing awareness or understanding; well-informed; deliberate; conscious.
- Reckless: Characterized by the creation of a substantial and unjustifiable risk of harm to others and by a conscious (and sometimes deliberate) disregard for or indifference to that risk; heedless; rash. Reckless conduct is much more than mere negligence: it is a gross deviation from what a reasonable person would do.

See Black's Law Dictionary; see also *Kreipke* at p. 14.

Though the allegations here do not involve federal research funds, these definitions are a useful benchmark in the absence of HBS's own adoption of definitions for these terms. Importantly, given the definition of reckless to be "much more than mere negligence," even ordinary negligence and carelessness do not rise to the requisite level of intent to support a research misconduct finding. Black's Law Dictionary defines these additional relevant terms as follows:

- Negligence: The failure to exercise the standard of care that a reasonably prudent person would have exercised in a similar situation.
- Careless [action or behavior]: engaged in without reasonable care.
- Reasonable Care: . . . the degree of care that a prudent and competent person engaged in the same line of business or endeavor would exercise under similar circumstances.

See Black's Law Dictionary.

To find research misconduct, the committee must not only determine that there was fabrication or falsification, but ***also*** (1) that the fabrication or falsification was the result of my intentional, knowing, or reckless action ***and*** (2) that I engaged in a significant departure from accepted practices of the research community ***and*** (3) that each of these elements is proven by a preponderance of the evidence (HBS Policy at pg. 2). It is the committee's burden of proof to make such a finding. *Id.*

V. CONCLUSION

First, I reiterate my gratitude for the committee's efforts and work throughout this process. I hope that the new evidence I provided and the detailed responses about each allegation will lead the committee to revise their conclusions and recommendations as I believe they clearly show there is no evidence of wrongdoing. I have never improperly manipulated data or research results, and I hope the additional explanations and exhibits I have provided help demonstrate that.

In addition, even if the committee finds that I have not proven any affirmative defense by a preponderance of the evidence, it does not nullify the committee's burden of proving any finding of research misconduct itself by a preponderance of the evidence (HBS Policy at pg. 2, 9). The age of most of the studies subject to the allegations and the medium in which any evidence or records would have been kept has placed me at a distinct disadvantage in responding to this investigation. However, the lack of available original data or other records cannot itself be used to bolster or support a finding of research misconduct.

Research misconduct also requires a finding of *intent*, which requires the weighing of not only any certain action, but also the motivation behind that action. As has been described throughout this process, I have had no issue walking away from projects when results are not strong and have not placed any pressure on my RAs to achieve a certain result. I have additionally been open to sharing my data and placing it in a position to be scrutinized by others, exhibiting my

confidence in the honest nature of the data. There has been no motivation described by the committee and/or by the witness statements that could reasonably support a finding of research misconduct. As the committee has not identified with any specificity any action taken within the definition of research misconduct, and has not identified itself evidence to support a specific intent to commit research misconduct, there should be no finding against me for each of these allegations.

In all of my activities, whether it is research, teaching or administrative responsibilities, I have strived to be a respectful and honest person, and colleagues value me for that specifically, as the various statements I provided indicate.

Much has changed over the years about common research practices in psychology, decision making and management alike. I am committed to making changes to how I collaborate with people going forward, how I keep record of meetings with RAs and who is doing what on every single project, and how I run quality checks on data I did not collect. I have already taken many steps in that direction.

Best,
Francesca

EXHIBIT 1

Letter from Professor [redacted]

HARVARD | BUSINESS | SCHOOL

FRANCES FREI |
UPS FOUNDATION PROFESSOR OF SERVICE MANAGEMENT

To Whom It May Concern,

I am writing this letter to discuss my relationship with Francesca and her role in the launch of the Inclusion course. I'd be happy to discuss any aspect of this letter if needed.

How I know Francesca

I've known Francesca since she joined TOM as a post-doctoral fellow at HBS (2004-2006). I was glad when, after receiving two offers from HBS (one from OB and one from NOM), she decided to join the school in 2010 as an Associate Professor. She came to me for advice – as she had other offers from Stern, Wharton and Berkeley. Most of her advisors and friends were telling her she should go to places that would tenure her within a year or two. But she was not focused on getting tenure: she was asking herself which school would provide her the opportunity to keep learning and be an interesting researcher in a decade or two. I was thrilled when she chose HBS.

On December 12, 2018, Francesca reached out to tell me she had heard I was interested in teaching a course on diversity and leveraging differences. She was curious to learn about it, and expressed interest in teaching the course with me. I was beyond excited. Francesca was too. We talked at length. By the beginning of January 2019, we had decided we would teach the course together. Our new course, titled Leading Difference, was approved on March 18 2019. We taught it in the EC for the first time in the Winter of 2020, moving online in March after the spring break due to the COVID-19 pandemic. Together, we also launched an executive education version of this course, which we co-taught in August 2020 virtually: it was among the first executive education courses born virtual, which felt like quite a milestone to us. In January 2021, we taught a SIP together with [redacted], at the time the CMO of Netflix. We then taught our EC course again (with a new title, Inclusive Leadership) in the Spring of 2021.

We loved teaching together. We were both very committed to the topic, and realized that most of the MBA students in our classroom were likely students who needed the course the least. So, we started working on a big dream we shared: bringing the course into the RC. We taught it to the RC for the first time, as an initial experiment, in February of 2022.

I got to know Francesca really well over the last four years. We live just a few blocks from one another, and talked multiple times a week while developing the course, the many new cases and exercises for it, and while teaching. We also partnered up for work outside of HBS because we value each other's approach and ideas, and genuinely like working with one another. Given how closely we worked over the last many years, I have been a person Francesca turned to in difficult

times. Whether she is going through difficult or easy times, Francesca always acts with thoughtfulness and absolute integrity. She is allergic to what seems unfair or unjust, one of the reasons why she is so committed to teaching Inclusive Leadership. Even when what she has to say is difficult, she cares about being direct and honest.

Bringing Inclusive Leadership to the RC

Our dream to bring the Inclusive Leadership course to the RC was something we were truly excited about. We worked really hard in developing materials for the course. We had endless conversations about the content, and how to best uncover insights in each class session. We taught the course in February 2022, in four modules each to be delivered in Klarman with 1,000+ students on Wednesdays that month. Despite our enthusiasm, the course did not go well. After the second module, a group of students wrote a letter to the Dean, asking for the course to be dropped. Francesca hit rock bottom. The language the students used in the letter was harsh. But that was not the main issue that bothered Francesca: she felt we were "failing the students," as she told me, by bringing materials we knew were going to be critically important to them in the future, but failed to get them interested.

February was a really hard month for both of us.

But it was particularly challenging for Francesca. Her entire family of six got COVID in the Fall of 2020, and due to quarantining she was with no help for over two months. She had to give up her position of unit head as a result, which saddened her a great deal, given how much she cares about her unit and the junior people in it. But managing such a large family proved difficult. When in the summer of 2021, it seemed as if the pandemic was finally over, Francesca got hit again – with the retraction of a paper that had been published in PNAS in 2012. This shook her. Not only because of her deep commitment to integrity, but because of how hard the collaboration had been on that project. I remember talking to her in August of 2021, before the Datacolada post that led to the retraction came out. Francesca was in tears, unsure about how the media would pick up on the post. One of the co-authors on the 2012 paper had told her that she wished one day she would suffer as much as she did, and Francesca worried that they would speak to the media in ways that did not mirror the truth.

And yet, despite the pain she was going through, Francesca stayed focused on creating materials for the course, testing them out with executive education audiences and doing research that would support key course insights.

After the February experience, many would have probably decided to give up. We did not. Francesca was convinced that we could learn from the experience, make revisions to the course and teach it again.

We were given that opportunity. We taught the course again in the fall of 2022, starting in September. We worked so hard between March and August to create yet again new materials for the course. I recruited other colleagues to teach with us, since the course was offered this time in Sections. Francesca took on the role of Course Head. Francesca was on a mission: she wanted to

make sure the second iteration of the course in the RC was a significant improvement to the February iteration. It was incredible to see how hard she worked on the course. She talked to students regularly to make sure their feedback had been heard. She talked to colleagues in other units, OB especially, to make sure our courses added to theirs in a positive way. And once we were teaching the course, she met with most of her students one on one or in small groups. She read every single reflection they submitted and responded to each of them individually.

I can say with complete confidence that bringing the course to the RC was an emotionally challenging experience, and an incredibly time consuming one. If Francesca did not dedicate enough time to other commitments she had, including writing her new book (which she delayed on multiple occasions), it is only because she was super committed to making the course as strong as possible.

I am struck by how often Francesca puts things that benefit others and the school before her own self-interest. But yet again, this is probably one of the many reasons I admire her and I like working with her. Francesca, as she demonstrated in endless occasions in the last four years, is the perfect example of what the School cares about: honesty, respect, impact.

I cherish Francesca as a colleague, a friend, and a human being. I am so much better off since she emailed me back in 2018.

Sincerely,

[redacted]

[redacted]
Harvard Business School

EXHIBIT 2

Questions for [redacted] and Transcriptions of her Answers

***** PLEASE FIND HER RESPONSES IN THE RECORDINGS SHE SHARED, ATTACHED SEPARATELY AS AUDIO FILES**

Tuesday, February 7, 2023 at 09:06:36 Eastern Standard Time

Subject: a few questions
Date: Monday, January 30, 2023 at 7:17:10 PM Eastern Standard Time
From: Gino, Francesca
To: [redacted]

Hi [redacted]

I hope you are doing well. I have been reflecting on the collaboration that led to the PNAS paper we published in 2020 (**Signing at the beginning vs. at the end does not decrease dishonesty**). I have a few questions for you that I was hoping you could answer. Here they are:

1. You have been part of the great efforts behind the 2020 PNAS paper. The collaboration was very difficult. Can you describe why? And what role, in your view, did I play in it?

2. When it was time to re-run a direct replication of one of the laboratory studies from the 2012 PNAS paper, you and I discussed the details of the procedure to use. Can you briefly describe what happened in each part of the study? If I am not mistaken, you created the instructions for the person who ended up running it?

3. I don't believe there were any points of tension when we discussed the lab procedures to follow. Is this your recollection?

4. In the tax form there is a sentence reading "payment received." The sentence may come across as ambiguous, and it is the same language used in the original study that was part of the 2012 PNAS paper. I don't recall ever discussing it when working on the replication of the lab study. Is this your recollection?

5. At some point, as we were working on the 2020 PNAS paper, we discussed whether we should retract the 2012 PNAS paper. I told you that it did not seem the right course of action since I did not have any doubt about the validity of the studies included in the 2012 PNAS paper. Do you remember this conversation?

6. Back in December, I wrote a note to you and a few other doctoral students reflecting on 2022 and telling you all how grateful I felt for winning the Wyss award for mentoring earlier in 2022. You wrote back saying that "It's such a pleasure to work with you and to learn from you (both academically, but also, how you act with integrity in the face of challenging circumstances!)." Thank you for the nice words. Do you mind telling me what you were referring to specifically when saying that I acted with integrity?

7. We've collaborated on a few projects and talked about many research ideas over the past few years. Do you have anything to say about our collaborations generally and what I could do to improve?

Thank you, [redacted] I am always learning.

fran

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
Twitter: @francescagino
On LinkedIn and Instagram
Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
TEDx talk: *The Power of Why*

Transcription of the Audio Files [redacted] sent as Answers

Answer to Question 1

Initially, it was me, [redacted] and [redacted] As soon as we kept failing to replicate the original findings of the lab studies, we decided to pull the original team together. Considering you were at HBS, we first had a meeting with you. You were super open and you were like, "let me send you all the materials, and anything you need help with, let me know." You were committed to finding out what happens. You were like, "whatever we find from this direct replication, I'll accept those as the results."

And then with [redacted] and [redacted] it was a little bit more complicated. I worked closely with [redacted] in designing the direct replication, figuring out all the nuances on how to implement it because we were doing it at BU. She and I would get into these little head-to-head, like, "How do we implement things?" And sometimes she'd forget that we were doing sign first and not just general matrices and signing. We eventually figured out a way that we were all satisfied with.

We ran the studies at BU, at Harvard and at Chicago, and when we got the results back, you saw the results and accepted them as they were; you were like, okay, our finding is not robust. Let's publish this. But [redacted] and [redacted] kept trying to temper the language. And even when we found out that the randomization failed in the field experiment, you were like, "okay, we need to put that in there." But [redacted] and [redacted] kept trying to soften the language. They kept saying like, "oh, well it's not that it doesn't replicate, it's not that it did fail, it could have failed." They were the ones who were making it really hard when we kept trying to write up the manuscript definitively saying: "we really don't have confidence in the original finding." They were just like, "oh, this maybe weakens it."

And so, you had integrity throughout and I wish they had acted more like you because you really didn't have any ego in it. You wanted to know what happened and when the results came out, you accepted them. I think that was really admirable. And even [redacted] had thoughts about it when we were doing the paper, but then kind of backed off a bit.

But then when we wanted to write the public interest policy to reach like the third audience and more other people, that's when [redacted] really got mad, made things difficult and wouldn't let us say things when we kept trying to set the record straight. And part of that also then it became a bit fractious between [redacted] and [redacted] versus [redacted] And you were more on us and Team [redacted] but you were trying to broker peace between the two factions. You were trying to be the peacekeeper and I would do a lot of the writing and trying to make points, even during writing the manuscript and the blog post, and then you would send that because you were more senior. And so, I would be speaking for us as the HBS contingent and then would go through you. So I realize that we put you in a difficult position, but at the time you thought it was trying to broker both sides. But that obviously got more complicated.

I thought that you were really helpful and if they had acted like you, this would have a totally different story. And I kind of wish they did.

Answer to Question 2

You sent me all of your materials and it was all pretty straightforward. When I met with [redacted] to figure out how to run it at BU, it helped refine how I did it at Harvard, but I was basically able to do it mostly at Harvard based on how you guys wrote it up on the study.

The first part of the study involved people going into a room where they would fill out these matrices and on the instruction form, there'd be instructions and then there was a unique identifier on the top right. And on the back of it were 20 matrices that they had to fill out. And then they would throw that in their recycling bin.

And then on their table there would also be a sheet with a tax return, but it was covered by a form. And so, they would throw out the sheet from doing the matrix task, and then they'd take the clipboard that they hadn't seen before, that was on their table and it had a cover top sheet. And they'd take the clipboard and go into a separate room where they would fill out the tax study form. When they were filling out that form, they would either sign at the top or sign at the bottom.

I think in one of your studies you had a no signature condition, but we didn't do that here. We just had sign at the top, sign at the bottom.

And on this form, that's where they reported how many they solved and calculated what their payment should be for number solving. And then there were also these tax deductions that they should also calculate. And there was also a demographic slip. And then they gave that sheet to the part to someone who was running the study.

And then they got paid and then we were able to match that sheet because it had a tax number on the top right, that was a three-digit number that would match what they threw out in the recycling bin in the other room. And then we matched it together and that's how we could tell if they were lying.

I created a protocol that I'll send to you. I think you have access to it because it's on the OSF where I gave instructions for the people implementing it, like what the experimenter should say at each point, what room each thing should happen. And the two-room thing was something that I read from your materials and you said how it was set up at UNC.

Answer to Question 3

There was no tension when we talked about the lab procedures to follow. When we talked about it, I just wanted to know if the instructions that I ended up writing for the RAs to implement, if you had had that and you just said you didn't, and I was wondering if you could connect me to your UNC RA, but it was already 10 years away and that person left academia and so it just wasn't gonna work. And so that's why I had to rewrite that from scratch.

But no, there was definitely no tension with us.

With [redacted] at one point there was, because she got us confused with the shredder and she forgot why we needed the exact numbers or blah blah blah. But that was just from a misunderstanding of what we were trying to do. And then once we figured out what we were trying to do and got on the same page, the tension with her went away.

Even when we set up the lab direct replication, you were always fine with however we planned on going ahead with the analysis. You just wanted to know what happened. But, that summer, [redacted] and [redacted]'s 10 commandment paper was failed to replicate. And I think they used a different version of the matrix task [for that paper], which is why [redacted] was getting confused. But when theirs didn't replicate that summer, before we implemented ours, their response to that failed replication was like, "oh, well it's a different cultural context." So it was like the Netherlands versus the US, which wouldn't affect us here.

But the two points they did make that we took into account, that I made sure to do and you were totally fine with was: one, they said that in that failed 10 commandments replication, that there weren't enough people cheating in the control condition. And so obviously the treatment didn't reduce cheating because there was enough cheating to begin with. So we pre-registered that we would check cheating in the control condition once we had 10% of the sample, and make sure we had at least 25% people cheating so that we could reduce it and detect that effect. And so we did that. And then the other thing that they complained about, it's… what did they complain about? They complained about something else. But I remember that 10% being a big one.

You were super easy in terms of managing relationships and tension and, yeah, all of the tension was definitely with them.

Answer to Question 4

I read all these questions before I started answering them and I just went back to the tax form and see that. It really should read "payment to receive," but it's really small print. I didn't notice it when doing the direct application. We used all your materials from before and so… I guess I assume that it either should say "payment to receive" or "payment earned." But it wouldn't make sense yet.

We didn't talk about it. And also, how would they receive that payment before? They just did the task and they need to fill out this form in order to receive payment. So… None of the RAs who I've worked with to implement this in any of the locations or no one I've spoken to brought that up and we use these exact materials in ours.

I guess going forward we should probably change it in future studies. But, that was in it and it was totally fine. But there's no way they could have received payment before, and that never came up in our conversations.

Answer to Question 5

For question five, about whether we talked about retracting, I just found emails from July 31st, 2019, where we were talking about trying to retract or not. And this was happening because

during the R&R, the AE who was handling it, [redacted], kept wanting to push, why we thought the original studies didn't work. The two lab studies had 30 people per condition, which is just really small. And so, we really thought it was totally innocuous reasons for why those didn't work. And then we thought a failed randomization for the field study. We didn't know the field study was completely fabricated and fraud.

I found this email where you said that "I've been trying to track down the RAs who helped with the studies, but they moved on. And the one I was able to talk to understandably does not really remember the study she helped with." And so you said, "I'm in an awkward position. I don't have enough information to blame co-authors. And it seems unfair for me to draw conclusions now without having asked questions I should have asked many years ago about the research. I don't know what the story is behind the field data and the lab studies had such a small sample that I think they were underpowered. If we are worried that these are not the reasons behind the original research, then I think we should retract the original paper rather than trying to correct the record with this research that says highly powered studies show lack of an effect." So, basically Fran, you thought it was just being far from the data and you don't know what happened and you didn't really know what to do.

And I think that part of the reason I was pushing for not retracting it is that, at this point, I had spent two years on collecting all of this data and it was such a big finding that… we didn't have reasons to believe any of it was fabricated. What you wanted to do was… Basically, I didn't want it to be retracted because I wanted to publish this paper correcting the record with high powered direct replications. And so, you were open to helping me get this published because if you guys just retracted the old stuff, and the new stuff didn't get published, that was two years of my grad school, almost half my grad school career of work gone to waste.

But you were definitely playing data sleuth trying to figure it out and because you didn't think there was any wrongdoing, you didn't think that just following the methods at the time necessarily warranted retraction, and especially because there was a field high powered fields study, that's why the original paper made it… we all came to the conclusion that it was worth publishing this new paper and not retracting the old paper because of what we found and the amount of work we did. I don't know if that's what you're trying… I don't know if that helps you at all. Basically, you didn't doubt the validity of how the studies were done in 2012. Your big thing was just you were far removed on how it might have been executed and you didn't want to blame your RAs without knowing what might have happened, but you were willing to say like, let's replace what we found before with what we know now. Because what we know now is really good evidence showing there's no effect.

And you were, once again, you were the easy one to convince about updating the record. You really, you had your priors thinking it would work, and then when it didn't, you updated your beliefs, and didn't try and find small ways of maybe it would work for these people in this condition.

Even after the study ended, it seemed like [redacted] and [redacted] tried to figure out like small subgroups for whom the intervention might have worked, whereas you accepted the results.

Answer to Question 6

You won the Weiss Award in 2022 because, as your students, we all felt like you earned it in so many ways. 2020 and 2021 were incredibly difficult for you. The pandemic alone and having four kids under the age of seven when it started was insane. And you guys kept getting COVID and the nanny was out and it just seemed nuts. And then on top of it, basically you were trying to act as peacemaker between [redacted] and essentially [redacted] and [redacted] and trying to stay neutral. And [redacted] accused them of deliberately doing wrongdoing. And while you wanted to give them the benefit of the doubt, once it came out that there was wrongdoing, it was just very uncomfortable. And you felt like your relationship with both [redacted] and [redacted] took a toll as a result, which is really sad because they both taught you and mentored you and you owe your career to both of them in some ways, probably more [redacted] you said, but you didn't want to turn on [redacted]

So, you really tried to negotiate. And also, I was a grad student in a really difficult position and I had a lot of strong thoughts, but I was very uncomfortable facing them, saying them to [redacted] and [redacted] directly. And so, I would ghost write a lot of things and then have you send them and try and probe and find out things through you because I was trying to make sense of what was happening both before we published the paper with the original field data being a little funny that there was no randomization. And then once the whole data colada fraud stuff came out.

And so, you were completely distraught in 2021 also just over being torn. And once you found out it was fraud, you were incredibly embarrassed and felt guilty that your name was on this. You just always wanted to do the right thing, scientifically, but then also interpersonally. But then it was just hard to know what the right thing to do was interpersonally. And so I was one of the students that corralled other students to try and nominate you for this award.

In the recommendation for the award, I talked about the integrity you acted with, with respect to the sign first. So, as I mentioned in my answer to q1, whenever I'd have questions, you were incredibly forthcoming and you were just like… It was really me, [redacted] and [redacted] starting the project. And then when we brought everyone else on board, it was [redacted] you, [redacted] and [redacted] I didn't know how any of you would really react. [redacted] had a foot out of the door, of academia. So, on the one hand, she's the only non-tenured person, but, on the other hand, she was leaving academia so she didn't really care. So, she was very removed and, basically, I dealt more with you than even with her. And then with you, once again, you gave all the materials, you were super open to answering questions. The only questions you couldn't answer were just things you didn't remember or didn't have because you weren't there at UNC. But you sent me your UNC IRB, you sent me all of your stuff. So that was really easy.

And then even [redacted] first, was pretty open to trying to collaborate and figure things out. But what really turned is once we got the results, so [redacted] wasn't surprised based on our lab findings. And so he wasn't surprised when it didn't replicate. And you, when it didn't replicate, were like, "okay, this is the truth now. We used better methods and we have a higher-powered sample."

By better methods, I just mean we collected more data with more people… "given this higher-powered sample, there's no effect." And we can tell using Bayesian statistics how null the effect is and you're like, "okay, let's set the record straight, let's publish it."

It was really managing [redacted] and [redacted] that was the challenging part for setting the record straight.

I think you and [redacted] both acted with such integrity because you felt bad that your name was on something that wasn't true and you wanted to do the honest thing and set the record straight. And you pre-committed to accepting the results of this replication and they came out the way they did and you were like, "okay, that's what it is." Whereas even after it came out, [redacted] and [redacted] kept trying to be like, "but what about here? And what about that?" And they wanted to soften the language…

So, I wrote about how you had a lot of integrity because you saw the data, let it speak for itself and accepted the results instead of trying to make the data fit your preconceived notions of what it should have been.

I thought you and [redacted] you guys have tenure, your careers are secure and you did the noble honorable thing of being like, what we published before was not correct. We didn't do anything wrong, but we followed what was the best methods at the time and now we're doing what we know to be even better, having a higher-powered sample and we're updating the record. And so, I thought that you guys both just showed this integrity and I was confused by [redacted] and [redacted] both also have tenure, and why they weren't able to handle it with the same grace you were.

Answer to Question 7

We've collaborated on a few things, this other paper with [redacted] In general, I guess… it's hard because most of our collaborating has really taken off since the pandemic and you've had so much on your plate with your four kids and people always getting sick. So, the biggest thing I think that you could do to improve is be able to spend more time with your collaborators. But even you know that, and feel bad about that. And when you are present, you're very present and you're there and you always have such good ideas and such interesting ways of framing things. And so, you still make lots of valuable contributions even if you, for the recent past, haven't had as much time to give.

Even when the whole data colada stuff happened, in my paper with [redacted] that you're on, you were saying how you learned the lesson that you don't wanna be on as many projects because when you're not as close to the data, your name might be on things that you can't verify are true. And so, you were saying how you were taking yourself off projects then, so that you would have more time to devote to the projects you are on and do care about. I think that's really admirable.

And even then, you had really helped us with some of the framing and thinking through the experiments and because of the data colada stuff that was going to come out, this was before it was actually posted, but once we already knew about it, you even offered to take yourself off the project with me and [redacted] so that, if your name came down because it was associated with that fraud, we wouldn't suffer reputationally. But we know that you were not involved in the field experiment and we know the integrity with which you conduct your work. So, we weren't really worried and we thought you added more value than… we would've lost having your name associated. And so, we wanted to keep you on it.

I think you have a really interesting way of thinking through, I've always admired your career and your creative approaches to experiments and all of that. So, the best thing you could do is just live not during a pandemic when you never have childcare issues or like your nanny's not breaking bones or getting sick, but to the extent that… a tangible thing you could do is, I guess once things get back to normal, you're already trying to make time and when we really need it, you're always there. So, when we need figuring out how to frame something or we have an editor who wants a timely response, you're always there and willing to Skype from Qatar or text or whatever. So, I really like working with you and learning from you.

Even right after the data colada thing came out, your first thing was, "okay, what should I learn from this? What lessons can I extract from this? What can I do in the future?" Not only to prevent something like this, because obviously you can't, I mean well part of it was, how do you trust other people if they're doing fraud and you don't know it...

I love the way you approach research, both when we're in the research talking about the ideas, but then from a meta perspective of how, when you take a step back thinking about learning in general. And I really do feel you're one of those lifelong students. So even in this question, you're thinking about how to improve.

EXHIBITS 3A AND 3B

Responses to Emails Indicating Failure to Replicate the 2012 PNAS Findings

Subject: Re: Replication failure
Date: Sunday, July 29, 2018 at 1:17:21 PM Eastern Daylight Time
From: Gino, Francesca
To: [redacted]
CC: [redacted]
Attachments: image002.png, image004.png, image006.png

This is very concerning. We did not run studies that we put in the 'drawer.' Is the signature online?

If so, that may be the difference. A paper by [redacted] (right spelling?) replicated our findings for a signature on paper. But, if my memory is correct, the online signature did not work or even backfired. I believe there are other replications of our findings so this is particularly puzzling.

I can check when I am in front of my computer.

I don't think you should question [redacted]'s field data. He is usually not as close as you are to the projects he is involved with, but I saw his moral compass tested multiple times and he always made good decisions — e.g., non continuing working on projects where the third studies did not show the same pattern of results of the first two, at a time prior to 2010.

francesca

On Jul 29, 2018, at 7:05 PM, [redacted] > wrote:

> [redacted] and Francesca:
>
> [redacted] and I have conducted a bunch of studies where we have failed to replicate signing first – with nothing even coming close. All of our studies have been online through mturk. The most recent failure was a large n, preregistered study (see below). Honestly, I am very concerned. As you know, I never felt confident in [redacted]'s data. But, I always loved our lab results. I have relooked at them, and they are small sample size studies, as was common at the time. Did we run other, failed studies on signing first?
>
> We are thinking of running an overpowered, pure replication of one of our lab studies, preregistered. If we get the effect, we need to figure out why it works in person and not online. If we fail to get the effect, we are thinking of documenting our failures.
>
> Two questions:
>
> 1) Do you have any insights on why we are failing so consistently?
> 2) Do you wish to be a part of the project moving forward given that we could end up publishing a "failure to replicate" story.
>
> Obviously, this has been disturbing to me, and I simply want to follow best scientific practice moving forward.
>
> Thanks,
>
> [redacted]

From: [redacted]
Sent: Sunday, July 29, 2018 5:16 AM
To: [redacted]
Subject: Replication failure

Hi [redacted] and [redacted]

Here are the results (directionally wrong, and we were powered to detect a 0.1 effect size). At the bottom of this email I include proposed next steps in advance of our call on Wednesday.

Average reported
<image002.png>
As you can see, it is not even directionally correct. But below is the t-test to show even that isn't significant:
<image004.png>

Proportion who cheated
<image006.png>
Close to 28% cheated in both conditions (and as you can see, it is slightly directionally higher for sign first).

Even excluding the 411 people who said they could tell this study was about honesty (remaining n= 2,111). Weirdly, average cheating actually goes down a bit in both conditions when we exclude people who knew it was about cheating, but still no significant differences, but the percentage of cheating actually goes up slightly (closer to 29%).

Proposed next steps
Hope you all have a good weekend and looking forward to discussing next steps on Wednesday. In the mean time, [redacted] if you see/speak with anyone from the previous team before then (i.e. Francesca), feel free to bring this up and discuss it with her. Also, it might be worth considering running a direct replication of the insurance study as well - [redacted] - do you think you could run it past your insurance company?

I will also do some power calculations in advance of our chat to discuss what size sample and how much it might cost to do the direct replication. I think I will try powering us to detect half the effect size in the published paper, but open to other suggestions.

Best,
[redacted]

--
[redacted]

Subject: Re: Replication failure
Date: Sunday, July 29, 2018 at 1:26:51 PM Eastern Daylight Time
From: Gino, Francesca
To: [redacted]
CC: [redacted]
Attachments: image002.png, image004.png, image006.png

Also, in the spirit of good science, if you did use a 'paper' type signature and our initial results do not replicate, you/we should publish the failure to replicate. That's important— i've been talking about our paper and its results with confidence for years now, and a few different organizations changed their processes to make use of what we learned

francesca

On Jul 29, 2018, at 7:05 PM, [redacted] wrote:

> [redacted] and Francesca:
>
> [redacted] [redacted] and I have conducted a bunch of studies where we have failed to replicate signing first – with nothing even coming close. All of our studies have been online through mturk. The most recent failure was a large n, preregistered study (see below). Honestly, I am very concerned. As you know, I never felt confident in [redacted]'s data. But, I always loved our lab results. I have relooked at them, and they are small sample size studies, as was common at the time. Did we run other, failed studies on signing first?
>
> We are thinking of running an overpowered, pure replication of one of our lab studies, preregistered. If we get the effect, we need to figure out why it works in person and not online. If we fail to get the effect, we are thinking of documenting our failures.
>
> Two questions:
>
> 1) Do you have any insights on why we are failing so consistently?
> 2) Do you wish to be a part of the project moving forward given that we could end up publishing a "failure to replicate" story.
>
> Obviously, this has been disturbing to me, and I simply want to follow best scientific practice moving forward.
>
> Thanks,
>
> [redacted]
>
> **From:** [redacted]
> **Sent:** Sunday, July 29, 2018 5:16 AM
> **To:** [redacted]
> **Subject:** Replication failure

Hi [redacted] and [redacted]

Here are the results (directionally wrong, and we were powered to detect a 0.1 effect size). At the bottom of this email I include proposed next steps in advance of our call on Wednesday.

Average reported
<image002.png>
As you can see, it is not even directionally correct. But below is the t-test to show even that isn't significant:
<image004.png>

Proportion who cheated
<image006.png>
Close to 28% cheated in both conditions (and as you can see, it is slightly directionally higher for sign first).

Even excluding the 411 people who said they could tell this study was about honesty (remaining n= 2,111). Weirdly, average cheating actually goes down a bit in both conditions when we exclude people who knew it was about cheating, but still no significant differences, but the percentage of cheating actually goes up slightly (closer to 29%).

Proposed next steps
Hope you all have a good weekend and looking forward to discussing next steps on Wednesday. In the mean time, [redacted] if you see/speak with anyone from the previous team before then (i.e. Francesca), feel free to bring this up and discuss it with her. Also, it might be worth considering running a direct replication of the insurance study as well - [redacted] - do you think you could run it past your insurance company?

I will also do some power calculations in advance of our chat to discuss what size sample and how much it might cost to do the direct replication. I think I will try powering us to detect half the effect size in the published paper, but open to other suggestions.

Best,
[redacted]

--
[redacted]

EXHIBIT 4A

Emails with Discussions about Retraction or Correcting the Records

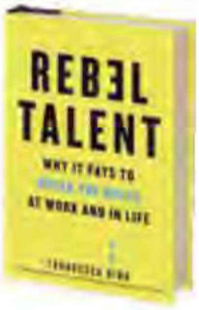
Subject: Re: PNAS
Date: Wednesday, July 31, 2019 at 5:56:38 PM Eastern Daylight Time
From: Gino, Francesca
To: [redacted]
CC: [redacted]
Attachments: image001.png

I've been trying to track down the RAs who I think helped with these studies but they moved on. The one I was able to talk to, understandably maybe, does not remember all the studies she helped with.

I am in an awkward position – I don't have enough information to blame co-authors and it seems unfair to me for me to draw conclusions now, without having asked questions I should have asked many years ago about the research. I don't know what the story is behind the field data, and the lab studies had such a small sample that I think they were underpowered.

If we are worried that these are not the reasons behind the original research then I think we should retract the original paper rather than trying to correct the record with data that suggest that highly powered studies show a lack of effect.

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Chair, Negotiation, Organizations and Markets (NOM) Unit
Co-Chair, *Behavioral Economics Executive Education Program*
Co-Chair, *Driving Profitable Growth Executive Education Program*
Editor in Chief, *Organizational Behavior and Human Decision Processes*
Website: http://francescagino.com/
Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*



From: [redacted]
Date: Wednesday, July 31, 2019 at 5:42 PM
To: [redacted]
Cc: [redacted] Francesca Gino <fgino@hbs.edu>
Subject: RE: PNAS

Hi team:

Without a file drawer issue, the chance of getting .05 on two studies in a row with a clear IV and DV is very low.....

Not being blind to condition fall sunder the broader category of "not appropriate". But, there are other possibilities in this broader category. Regardless, we (that certainly includes me) were also lazy in our oversight.

[redacted]

From: [redacted]
Sent: Wednesday, July 31, 2019 5:38 PM
To: [redacted]
Cc: [redacted] Gino, Francesca <fgino@hbs.edu>
Subject: Re: PNAS

Hi [redacted]

Thanks for passing this along. So I have a a few thoughts and the last two need to be confirmed by Francesca:

- **Wide confidence intervals around the effect sizes of the first two lab studies, so it really could just be a small sample, underpowered study story:** For the binary cheat/no cheat, the effect size of study 1 was d = 0.7544, but it had super wide confidence intervals (C.I.: 0.3375; 1.1713). For the effect size of the magnitude of cheating my rough estimation of the effect size and confidence intervals (but did not have enough info so it's not precise) is roughly d = 0.6 (C.I.: 0.2; 1). The effect size for Study 1 travel expenses was also d = 0.69 (C.I.: 0.262; 1.11). For the second study, the effect size confidence intervals were even larger: amount of cheating: d = 0.55 (CI: 0.02, 1.07), magnitude of cheating d = 0.54 (CI: 0.02, 1.01) and for expenses d = 0.73 (CI: 0.2; 1.26).
- **Maybe there was a file drawer?** Fran can say more about this - but is there any chance that these aren't the only two studies that were run for this project? Maybe there are others that didn't reach significance so we threw them away?
- **RAs not blind to condition?** Is it possible that the RAs were not blind to conditions and may have subtly influenced the results?

The first paragraph above were calculations that we only did now, and were not done in the original paper. I feel comfortable with you emailing those to [redacted] I defer to the others for their thoughts.

Best.
[redacted]

On Wed, Jul 31, 2019 at 5:20 PM [redacted] wrote:

> Team:
>
> Please see below.
>
> I am uncomfortable withholding info from [redacted] but think my response should be consistent with your views.
>
> Here are my honest responses:
>
> 1) We now know randomization failed in the field study, and question the information that was received from the insurance company.

2) Both lab studies were conducted at another university for convenience reasons, and we no longer trust that they were collected in appropriate form.

Feel free to elaborate on what [redacted] should be told, and whether it is done in writing or by phone.

Thanks,

[redacted]

From: [redacted]
Sent: Wednesday, July 31, 2019 4:11 PM
To: [redacted]
Subject: PNAS

Hi [redacted]

I hope you are enjoying a fine summer.

I have been asked to serve as action editor for your ms on the failed replication paper you and your co-authors submitted to PNAS.

As I wait for the reviews of the very competent and well know reviewers. I read the ms and found myself accepting your conclusion but wondered why you did not address the question of why, if the null hypothesis reflects the real state of things you got pretty strong data (in terms of effect size) on the two original small N studies reported in the original paper. The third, large sample study produced an effect size small enough to be quite compatible with the results of the current replications.

Is your best guess that these findings reflect something chance deviation from a null or tiny effect size or that the original studies allowed for some systematic bias? The answer to that question is probably irrelevant if our only concern is the validity or even the robustness of the order of signing phenomenon. But it may be highly relevant as we ponder the more general replicability issue.

Demonstration experiments (indeed any individual experiments) demonstrate what *can* happen--even if by chance, although successful replications make chance a less viable explanation even for surprising results. Failed replications indicate lack of robustness at a minimum. But whether they indicate chance variation, dishonesty, or dubious research practices, as opposed to dependence on a narrow set of moderating factors, or failure of a manipulation to produce the state in the research participant postulate to mediate and produce the target phenomenon remains a somewhat open question.

When the phenomenon is of practical or theoretical importance, I personally believe that question is worth addressing--and in some cases additional research to explore moderators and/or mediators. In any case I would welcome your thoughts on the matter and it might expedite the review process and my recommendation re potential revision if you shared them. No need to write a formal response, and if you would prefer to chat rather than write, I can be reached at our summer place---705-447-2954.

(if you tell me when I can expect your call I will do my best to be available at the designated time.

Best wishes and warm regards.

Any chance you will be at SESP in Toronto. We obviously have lots to talk about beyond the pnas manuscript

[redacted]

--

[redacted]

EXHIBIT 4B

Emails between [redacted] and PNAS Editor

Subject: FW: PNAS
Date: Friday, February 17, 2023 at 8:22:11 AM Eastern Standard Time
From: Gino, Francesca
To: Gino, Francesca

---------- Forwarded message ---------
From: [redacted]
Date: Thu, Aug 1, 2019 at 9:01 PM
Subject: Re: FW: PNAS
To: [redacted]
Cc: Gino, Francesca <fgino@hbs.edu>, [redacted]

Thanks, [redacted]

Study 2 in the paper had increasing moral self-presence in as the mechanism.
"After filling out the tax forms, all participants received a list of six word fragments with missing letters. They were instructed to complete them with meaningful words. Three fragments (_ _ R A L, _ I _ _ E, and E _ _ C _ _) could potentially be completed with words related to ethics (moral, virtue, and ethical) or neutral words. ***We used the number of times these fragments were completed with ethics-related words as our measure of access to moral concepts....filling out the form generated more ethics-related words (M = 1.40, SD = 1.04) than those who signed after (M = 0.87, SD = 0.97), F(1, 58) = 4.22, P < 0.05, η2 = 0.07; this greater access to ethics-related concepts (our proxy for saliency of morality) significantly mediated the effect of assigned condition (signature at the top or signature at the bottom) on cheating on the tax forms [bootstrapping with 10,000 iterations (14): 95% confidence interval –1.85, –0.04].***"

The thing is, it didn't make sense to look for mediators/mechanisms because we weren't finding the effect... But maybe if they did make us do another MTurk study or something, we could try to use that task, but I agree with [redacted] that for now we should just wait for reviewer comments.

On Thu, Aug 1, 2019 at 8:42 PM [redacted] wrote:

> Hi team:
> Looks like we can wait for reviews before figuring out next steps.
> [redacted]
> www.people.hbs.edu/mbazerman
> **From:** [redacted]
> **Sent:** Thursday, August 01, 2019 6:22 PM
> **To:** [redacted]
> **Subject:** Re: PNAS
>
> Hi [redacted]
>
> WE ARE IN CANADA, NORTH OF TORONTO.
>
> GIVEN THE DETAILS YOU DESCRIBE I THINK A SIMPLE ACKNOWLEDGMENT THAT THE PHENOMENON

FAILED TO REPLICATE IS PROBABLY BETTER THAN A LENGTHY POST-MORTEM.

HOWEVER I DO THINK IT IS WORTH REITERATING THE BASIS FOR THE ORIGINAL HYPOTHESIS AND NOTING THAT GETTING THE EFFECT WOULD DEPEND ON MAKING THE STAKES FOR SENSE OF PERSONAL INTEGRITY MORE SALIENT FROM THE BEGINNING, SO THAT AFTER THE FACT RATIONALIZATION OF DISHONESTY BECOMES MORE DIFFICULT. I DON'T KNOW IF ANY ATTEMPT TO MEASURE THIS PRESUMED MEDIATOR WAS MADE, OR EXACTLY HOW IT WOULD BE DONE IN A WAY THAT DIDN'T INTRODUCE DEMAND. YET I DO THINK SOME DISCUSSION OF THE MORE GENERAL IMPLICATIONS OF THIS OR OTHER FAILED REPLICATIONS--ESPECIALLY WHEN THERE IS ALSO SOME RECORD OF MORE THAN ONE SUCCESSES--SHOULD BE INCLUDED.

I WILL SEE WHAT THE REVIEWERS THINK.

YOURS

[redacted]

From: [redacted]
Sent: Thursday, August 1, 2019 1:11 PM
To: [redacted]
Subject: PNAS

Dear [redacted]

Thanks for writing. It is good to hear from you, and I would be delighted to catch up on life in general. We haven't talked for way too long. How close are you to Stowe, VT, where we are spending much of the summer?

But, all of this can wait until we solve the issue at hand, which I find awkward and embarrassing. Quite simply, I firmly believed the original paper, and have taught it and advised firms to adopt "signing first" far too many times. [redacted] [redacted] and I were simply busy trying to expand the project to focus on how to get people to tell the truth online, and started with signing first, in order to create a platform for other studies –assuming that signing first was going to be easy to replicate. The current paper provides our journey failing to replicate.

In direct response to your email, here is my most complete assessment on the original studies:

> Lab studies: The lab studies had small samples and were underpowered. In addition, one of the authors sent them to his/her lab at his/her prior university, and none of the five authors supervised the data collection closely. Further, no one on our team has a clear recollection whether additional studies were run and failed. But, the net result is that we place very, very little weight/faith on the two lab studies, given the failed replication (particularly the last, highly powered study in the current paper).
>
> Field studies: This data was provided to two of the five original authors, and we had always believed that a large sample field experiment had been run. However, re-analyses of the data, by the co-authors of the current paper, that were not part of the original team, show that the two conditions had dramatically different means for odometer readings before "manipulation" such that we do not believe that true randomization ever occurred. As a result, the majority of the authors of the current paper have no faith in the results of this field data.

Just to be clear, while I wasn't involved in any intentional deception, I do think that I failed in my oversight responsibilities in the original project, and for me, this is part of the learning message. I am very open to being even clearer in the current paper; the amount of journal space that should be used for these details is a very reasonable issue, and we would be open to your editorial perspective.

Another strategy suggested by one of the authors is to retract the original paper. But, I believe that this fails to fully address what happened, and is less likely to get the message out to those who have come to believe in signing first. I believe that the current paper is the best way to correct the faulty record in a paper that I helped create.

I am happy to discuss this with you by phone ([redacted]), and look forward to discussing more positive results and experiences.

With appreciation,

[redacted]

From: [redacted]
Sent: Wednesday, July 31, 2019 4:11 PM
To: [redacted]
Subject: PNAS

Hi [redacted]

I hope you are enjoying a fine summer.

I have been asked to serve as action editor for your ms on the failed replication paper you and your co-authors submitted to PNAS.

As I wait for the reviews of the very competent and well know reviewers. I read the ms and found myself accepting your conclusion but wondered why you did not address the question of why, if the null hypothesis reflects the real state of things you got pretty strong data (in terms of effect size) on the two original small N studies reported in the original paper. The third, large sample study produced an effect size small enough to be quite compatible with the results of the current replications.

Is your best guess that these findings reflect something chance deviation from a null or tiny effect size or that the original studies allowed for some systematic bias? The answer to that question is probably irrelevant if our only concern is the validity or even the robustness of the order of signing phenomenon. But it may be highly relevant as we ponder the more general replicability issue.

Demonstration experiments (indeed any individual experiments) demonstrate what *can* happen--even if by chance, although successful replications make chance a less viable explanation even for surprising results. Failed replications indicate lack of robustness at a minimum. But whether they indicate chance variation, dishonesty, or dubious research practices, as opposed to dependence on a narrow set of moderating factors, or failure of a manipulation to produce the state in the research participant postulate to mediate and produce the target phenomenon remains a somewhat open question.

When the phenomenon is of practical or theoretical importance, I personally believe that question is worth addressing--and in some cases additional research to explore moderators and/or mediators. In any case I would welcome your thoughts on the matter and it might expedite the review process and my recommendation re potential revision if you shared them. No need to write a formal response, and if you would prefer to chat rather than write, I can be reached at our summer place--[redacted].

(if you tell me when I can expect your call I will do my best to be available at the designated time.

Best wishes and warm regards.

Any chance you will be at SESP in Toronto. We obviously have lots to talk about beyond the pnas manuscript

[redacted]

--

[redacted]

EXHIBIT 5

Language From Various Papers that Used the Matrix Task

***** All papers are available in PDF format here: https://francescagino.com/researchpapers**

Description used in the 2011-02-23 version of the 2012 PNAS paper

Pg. 9-10: "*Problem-solving task*. For this task, participants received a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; Mazar, Amir, & Ariely, 2008) and a collection slip on which participants reported their performance at the end of this part of the study. Participants were told that they would have 5 min to find two numbers in each matrix that added up to 10. For each pair of numbers correctly identified, they would receive $1, for a maximum payment of $20. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008), people were able to find about 7 of the 20 pairs on average during this amount of time. Once the five minutes were over, the experimenter asked participants to fill out the collection slip, and then submit the collection slip to the experimenter. The instructions informed them that,

> In order to enable the experimenter to quickly calculate your payment, please throw your matrix sheet into the recycling bin and hand in ONLY your collection slip. We are not interested in which specific matrices you solved correctly, but only in how many you managed to solve within the allotted time. The experimenter will give you your payment and ask you to fill out a payment form.

Payment form. Participants then went to a second room to fill out a payment form. The form we used mirrored a typical tax return form. We varied whether participants were asked to sign a pledge of honesty at the top or at the bottom of the form (see Appendix A). Participants filled out the form by reporting their income (i.e., their performance on the matrix task) on which they paid a 20% tax (i.e. $0.20 for every dollar earned). In addition, they indicated how many minutes it took them to travel to the laboratory, and their estimated cost for their commute. These costs were "credited" to compute their final payment."

Gino, Ayal, Ariely (2009), Psych Science

Pg. 395: "Participants also received two sheets of paper: The first was a worksheet with 20 matrices, each containing 12 numbers consisting of an integer and two decimals (e.g., 6.39), and the second was a collection slip on which participants were supposed to report their performance and answer questions about their gender and age. Once the experiment started, participants had 5 min to find two numbers per matrix that added up to 10. The allotted time was not sufficient for anyone to solve all 20 matrices."

Mead et al. (2009), JESP

Pg. 595: "Ostensibly as a separate experiment, participants were then given a sheet with 20 number matrices, each containing 12 3-digit numbers (e.g., 4.69; see Mazar, Amir, & Ariely, 2008). We instructed participants to find the two numbers in each matrix that summed to 10.00. Instructions and an example were printed at the top of the page. Participants were told they would earn $.25 for each correct solution. After 5 min, participants in the experimenter-scored conditions gave their worksheets to the experimenter, who scored their task and paid them accordingly. Performance in this condition provided a baseline assessment of how many matrices

participants could complete in 5 min when they did not have the opportunity to cheat. Participants in the self-scored conditions (cheating-possible) simply checked a box below the matrix when they identified two numbers in the matrix that summed to 10. After 5 min, participants counted how many matrices they had checked, recycled (destroyed) their worksheets, and paid themselves for their performance."

Zhong et al. (2010), Psych Science

Pg. 312: "For the task, participants received a brown envelope that contained $10 (nine $1 bills and four quarters) and an empty white envelope, along with two sheets of paper. The first paper was a worksheet with 20 matrices, each consisting of 12 three-digit numbers (e.g., 4.78; Mazar, Amir, & Ariely, 2008). The second paper was a collection slip on which participants were to report their performance and answer demographic questions. On the back of the collection slip we included instructions for the task and a different matrix as an example."

Gino et al. (2010), Psych Science

Pg. 713: "Each participant received two sheets of paper. The first was a work sheet with 20 matrices, each based on a set of 12 three-digit numbers (e.g., 5.78; see Mazar, Amir, & Ariely, 2008). The second sheet was a collection slip on which participants were supposed to report their performance and answer questions about their gender and age. Participants had 5 min to find two numbers in each matrix that added up to 10; the time allotted was not sufficient for anyone to solve all 20 matrices. For each pair of numbers identified correctly, participants received $0.50 (for a maximum payment of $10). After the 5 min had passed, participants folded their work sheet and placed it in a recycling box positioned in a corner of the room; then they wrote down their performance on their collection slip."

Gino et al. (2011), OBHDP

Pg. 194: "Participants were presented with 20 matrices on the computer. Each matrix contained three rows and four columns of three-digit numbers (e.g., 5.19). Each matrix was presented to participants on a different screen. Participants had 20 s to find two numbers in each matrix that summed to 10. We informed participants that they would earn 50 cents for each correctly solved matrix. The computer kept track of their performance, and on the last screen it summarized how many matrices the participant solved correctly. However, participants were told to report their performance on the collection slip they had received and to stop by the experimenter's desk to receive payment based on their self-reported performance after completing the task"

Shu et al. (2011), PSPB

Pg. 337: "Each participant also received two sheets of paper. The first was a worksheet with 20 matrices, each based on a set of 12 three-digit numbers (e.g., 4.57). The second sheet was a collection slip on which participants were supposed to report their performance and answer questions about their gender and age. Once the experiment started, participants had 4 minutes to find two numbers per matrix that added up to 10, a duration that was not sufficient for anyone to solve all 20 matrices. For each pair of numbers correctly identified, participants were allowed to

keep $0.50 from their supply of money. At the end of the allotted time, they were asked to transfer the unearned amount to the white envelope."

Gino & Margolis (2011), OBHDP

Pg. 151: "The first was a worksheet with 20 matrices, each with a set of 12 three-digit numbers (e.g., 7.84; Mazar, Amir, & Ariely, 2008). The second was a collection slip on which participants were to report their performance and answer demographic questions. On the back of the collection slip we included instructions of the task and a different matrix as an example. Participants were told that they would have 5 min to find two numbers per matrix that added up to 10. For each pair of numbers correctly identified, they would keep $1 from their supply of money; they were also asked to leave the remaining amount in the envelope and drop it in a designated box along with the collection slip. Note that 5 min is not enough time to solve all 20 matrices. In previous studies (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008) people were able to find 7 of the 20 pairs on average. In addition, there was no apparent identifying information anywhere on the two sheets, so results seemed anonymous. Thus, participants had both an incentive and opportunity to over-report their performance to earn more money."

EXHIBIT 6

Differences Of Opinions Among Collaborators

Subject: Re: retraction question from PNAS (19-11695) -- draft response
Date: Thursday, July 30, 2020 at 9:09:20 PM Eastern Daylight Time
From: [redacted]
To: [redacted], Gino, Francesca, [redacted]

(Please note, I have dropped [redacted] and [redacted] from this email as this concerns our original paper).

Thank you, [redacted] for clarifying, and [redacted] for weighing in.

I have to admit that I am deeply disturbed and saddened by the level of accusations and loss of respect within this group of co-authors.

But, focusing on the factual evidence to move the discussion forward, this is what I think it comes down to:

- It is clear that the randomization wasn't successful at creating equal groups in terms of the odometer reading at baseline. But we don't have any information why this was the case.
- It is also clear that we made an error of omission when we failed to point out that the odometer readings were significantly different between our two conditions at baseline. I do not remember why this fact was omitted but it certainly wasn't done out of malicious motive, and I am glad that we had a chance to point it out with our 2020 paper.

Most importantly, I do not know whether these two issues mean that the original paper is flawed in a significant manner such that there is clear evidence that the finding that the signature at the top reduces dishonest reporting is unreliable (either as a result of major error through miscalculation or experimental error). I certainly think that the field experiment data is not as "clean/perfect" as we would have wanted it to be. But when its results are viewed in context with the evidence of our lab studies 1 and 2, together they support the hypothesis that the signature at the top reduces dishonest reporting.

Given everyone's responses, here is what I suggest we respond to PNAS:

****

"Hello [redacted]

Thank you for eliciting our thoughts. Given the significance of your question, I wanted to check in with all co-authors before responding. We were not able to reach a consensus on whether the issues of the original paper fall within PNAS's standard for retraction.

In particular, you asked us to consider whether the original paper is flawed in a significant manner such that there is clear evidence that the findings are unreliable, either as a result of major error through miscalculation or experimental error.

We have clear evidence for two weaknesses in the original paper, both of which relate to the field experiment (study 3):

1. The randomization in the field experiment was not successful in producing the same baseline levels across conditions and we do not have any information why this was the case.
2. We made an error of omission when we failed to point out that the odometer readings were significantly different between our two conditions at baseline. We do not remember why this fact was omitted, and made sure to point out this oversight in the new 2020 paper.

In sum, the field experiment data is not as "clean/perfect" as we would have liked it to be. However, the majority of us believes that when the results of the field experiment are viewed in context with the evidence of our lab studies 1 and 2, together they support the hypothesis in the original paper that signing a veracity statement at the top reduces dishonest reporting.

How do we view the original paper in context of the new 2020 paper?
The new 2020 paper reports among others a pre-registered and highly powered failed replication of one of our two original lab studies. This failed replication made us conclude in the 2020 paper that signing at the top is not as simple of a solution to curb dishonesty as we originally thought it was. Given the existing mixed evidence (including others' work) the majority of us believes that the story is instead likely to be more complex. As such the majority of us sees both PNAS papers as contributing to the advancement of our knowledge and hopes that follow up work will help shed more light on the the conditions under which we can expect/not expect to find the effect.
****

Everyone, please let me know if this acceptable to you.

Best,
[redacted]

On Jul 30, 2020, at 11:15 AM, [redacted] wrote:

Hi all,

I'm coming into the conversation late - I check this email 1-2 times weekly when not teaching for LBS; I've cced my personal email so I don't miss anything else.

I do think there is reason for retraction of our 2012 paper under the editor's simple definition of 'unreliable findings as a result of major experimental error.' We acknowledged these experimental errors in our 2020 paper and the editorial piece - but what the PNAS reader highlights is that Shu et al 2012 will continue to be cited by many more, thus not fully correcting the record. Of course future publications can fall on either side of the issue - but knowing what we know now, future publications do not change the fact that our 2012 finding is unreliable due to major experimental error.

I think [redacted]'s original suggestion of finding a time to meet and discuss was wise. We might be past that point now, so I want to provide a datapoint on p-hacking: I was invited for a flyout to Wharton OPIM (now OID) in January 2012; at the time Uri Simonsohn assessed every candidate's entire body of work (published and working manuscripts) for p-hacking before they received an invitation. Only 2 of my publications at the time did not include Francesca as a co-author - and the eventual Shu et al 2012 paper was a full working manuscript on its way to publication. Based on the body of work that Uri scrutinized for p-hacking, there is no evidence that any data collected by RAs at Francesca's former UNC lab was compromised

I think we must return to PNAS's standard for retraction: my reading of it falls on the 'retract' side. If we report back to the editor our lack of consensus: the first and last authors vote for 'retract' - can we give PNAS editors the casting vote? I'm happy to work on drafts of our response if that would be helpful [redacted]

All best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: 30 July 2020 13:20
To: [redacted]
Cc: [redacted]
[redacted]
Subject: Re: retraction question from PNAS (19-11695)

I am at a loss of words at this point. Every time we talk about paper #1 the conversation gets worse in the type of accusations we make of the research and, implicitly, of each other. This is not productive anymore.

I've always hired very reliable RAs to collect the data, and I don't think the RAs who helped in the project compromised the data in any way. Do I know this with 100% certainty? No.

Saying that there was no randomization is different than saying that the randomization failed, in the field experiment. I don't know what happened in the roll out of the experiment, since – as in the case of the lab data – I was not actually there.

I think we all agree that if we were to start the project today we would do things differently (proper power analyses, more oversight etc). but we are not in that position now.
I am truly saddened by what this collaboration led to -emails like this one, and the fact that scholars I respect so much seem unable to see eye to eye.

I think science is better off with both papers in existence. But if you want to retract one or both, I am happy to support whatever decision.

fran

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New HBR article: *Cracking the Code of Sustained Collaboration*

EXHIBITS 7A AND 7B

Taking The Role Of Peacemaker

Subject: call?
Date: Thursday, February 13, 2020 at 8:19:47 AM Eastern Standard Time
From: Gino, Francesca
To: [redacted]

Hi [redacted] and [redacted]
I've been reading the email exchanges about our PNAS paper and I am sad, realizing there are so many different feelings about this paper. I'd love to jump on a call with you two, maybe on Monday, so that I can understand what the arguments and disagreements are, and how to best move forward in a way that does not create unnecessary bad feelings.
fran

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New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

Subject: Re: Signing first paper for PNAS: Full draft
Date: Tuesday, June 25, 2019 at 2:40:51 PM Eastern Daylight Time
From: Gino, Francesca
To: [redacted]
Attachments: image001.png

I just talked to [redacted] I have a few more meetings this PM and a promotion letter to submit but then I'll draft a response to [redacted]
I will give her the option to take her name off the paper if she is not comfortable / happy with it.

I think the three of us are all on the same page.
fran

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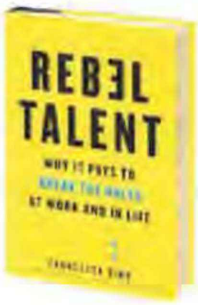

From: [redacted]
Date: Tuesday, June 25, 2019 at 2:02 PM
To: [redacted]
Cc: Francesca Gino <fgino@hbs.edu>
Subject: Re: Signing first paper for PNAS: Full draft

Also happy to chat back in office tomorrow! [redacted] and I have been going back and forth a bit — I'm totally on same page as all of you! And I think at the very most we talk about honor code as a future direction in the context of all of the data we collected as part of this project re conceptual replications. Thanks everyone!!

[redacted]

From: [redacted]
Sent: Tuesday, June 25, 2019 4:06:14 PM
To: [redacted]
Cc: Gino, Francesca; [redacted]
Subject: Re: Signing first paper for PNAS: Full draft

Happy to meet (would probably have to dial in, at a Summer Institute at MIT so difficult to make it to HBS but can step out for a call). I am very happy for Fran to continue to be the main point of contact for this (and maybe we should switch her to be the corresponding author on the paper? Unless we think we should keep [redacted]

I think I understand the point [redacted] is making, but I think we did a fairly faithful conceptual replication even if the stakes in the initial studies "weren't quite right". I think she's right to pick up on the point of maybe where we previously thought honor codes worked, they may not (but then again, we can only show this in an online context and the original studies were on paper) and perhaps someone (although I don't think it should be me) should explore whether or honor codes work when you don't expect to sign them. To the extent that she wants to bring this up, perhaps it should be in the discussion as a "future direction" and can be explored in a subsequent paper.

Given the failed replication in 2-3 tax settings at BIT and the 1 Elizabeth Linos tax setting, I feel confident that the effect is not real too.

On Tue, Jun 25, 2019 at 11:01 AM [redacted] wrote:

> Team:
>
> I had crossing email with Francesca. I am available over the next couple of days. But, I doubt that I can muster the political sensitivity in Francesca's email. I am also open to meeting, with those not in Cambridge calling in?
>
> [redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Tuesday, June 25, 2019 10:56 AM
To: [redacted]
[redacted] paper for PNAS: Full draft

I am not going to answer until I can do so with a good chunk of time so that I can be thoughtful and that will only happen tonight or tomorrow AM. Feel free to share your views / reactions so that I can answer with just one email with all our thoughts. Also happy to proceed differently.

I think the big replication study is enough to say the effect does not exist. It is a high power study, the two lab studies in the paper were not.

fran

Begin forwarded message:

From: [redacted]
Date: June 25, 2019 at 10:39:06 AM EDT
To: [redacted]
Cc: Francesca Gino <fgino@hbs.edu>, [redacted]
Subject: Re: Signing first paper for PNAS: Full draft

Hello [redacted] and Fran,
Let me try another attempt at getting point 1 across:

What was the contribution of our PNAS paper over the existing honor code papers (e.g,. Mazar, Amir, Ariely, 2008 and or Shu, Gino, Bazerman, 2011)? If you could answer that to me, I think that would be most helpful in moving forward with the discussion on this point.

I think we can all agree that

- in both settings there is an *honor code* and
- in both settings the intervention to reduce dishonesty is that an honor code is placed at the *beginning*.

Again, for me the difference was always that the existing honor code papers at that time looked at introducing an honor code where typically there is none expected and it was simply about adding an honor code before working on some task where people could cheat.

vs.

the PNAS paper is about moving the location of the honor code in situations where people have to fill out a self-report form on which they can cheat AND where typically one expects to sign an honor code declaration at the end. I.e. all kinds of formal/official self reports like tax forms or audit form) — that's why I thought we went to great lengths reproducing a tax form that looked like a real one in our lab studies that people had to **fill out AND sign and making up a believable story about having to pay taxes.**

OPTION 1:

If we accept that these two sets of papers are conceptually different THEN if you look at the current experiments 1-6, at least from the materials currently described, those are NOT situations where people typically expect to fill out and sign an official documents with an honor code at the end. There are no "official" tax forms or audit forms. They are more like situations where an honor code is randomly introduced to a task and sometimes its at the beginning and sometimes its at the end. In other words, those look more like the previously

published papers on honor codes.
These experiments 1-6 did not show any effects. So, I think it would be our responsibility to say something about what that means for the general effectiveness of an honor code to reduce dishonesty.

This would also mean that exp 1-6 are conceptually different from exp 7 and if we want to have all of them in the paper, we need to write about both aspects: takeaway for honor codes in general, and takeaway for moving a signature field of a self-report form.

Finally, this would also mean that for moving a signature field of a self-report form from its expected location at the end to the beginning of the form, we now have "only" one failed experiment (albeit high powered and exact replication of PNAS exp 1) vs. 3 experiments that worked (albeit 2 low powered lab exp and one failed-randomization high powered field experiment 3)
To say that the 3 PNAS experiments were just flukes because one high powered replication didn't work seems to me an extreme claim then. I think it would be more precise to say that at this point we have low confidence in a reliable effect of moving the signature to the top of a form form on any typical official self-report declaration form, and we therefore discourage practitioners of using that intervention as their first choice. At some point, if there were more failed experiments, then I would have no problem making the extreme claim that the PNAS experiments were all flukes.

==========

OPTION 2:

If we say that there is *no* conceptual difference between the previously published papers and our PNAS paper, i.e., no theoretical contribution, then we should explicitly say so and then we now have 7 experiments all about introducing an honor code that didn't work vs. I don't know how many published honor code experiments that did work (I know we had only 1 in our Mazar, Amir, Ariely, 2008 paper, we have 3 in the PNAS paper, not sure how many you had, and not sure how many other papers are out there with such experiments).
Then our paper would be speaking about the effectiveness of an honor code in general, which would require a slight repositioning of the paper. And depending what other papers we find, the takeaway would be either very low confidence or no confidence in the effectiveness of using honor codes.

========

Ok, I'll stop here. I think it will be good to have [redacted] and [redacted] look over the draft and finish the first round of revisions.

In the meantime, would be good to if we could all put some more thought into this point.

Many thanks,
[redacted]

On Jun 25, 2019, at 09:27, [redacted] wrote:

Thanks for your insightful comments, [redacted] Only studies 1 (online only) and 2 (where we couldn't observe ground truth behavior, just averages across conditions) had a control condition without an honor code, but studies 2,4,5,6 and 7 all had honor codes and the conditions were either signing before or after. So I'm not sure if this paper is the one to go into the impact of honor codes more broadly.

On Tue, Jun 25, 2019 at 9:22 AM [redacted] wrote:

Hello Fran et al.,
To clarify, my point no.1 is about exp 1-6 not being about signing first but rather about honor code. The direct replication exp no. 7 is obviously about signing first. So, am not sure that 1-6 fit with 7.
Cheers,
[redacted]

Sent from my iPhone

On Jun 25, 2019, at 09:15, Gino, Francesca <fgino@hbs.edu> wrote:

Hi [redacted]

Thank you for going over the paper and SI so quickly. [redacted] worked on the draft and made revisions to respond to your comments. I also had the opportunity to review your edits and comments –they were very helpful. I agree that it'd be important to post all the data from the PNAS 2012 paper so we will do so.

You raised two important big issues and here is how we have been thinking about that:

1. There are clearly similarities between the presence of an honor code and signing first. After all, when a person is asked to sign there is a short declaration of honesty they are signing next to. But, conceptually, the two are different and this is a paper that really focused on signing first. We can clarify this further in the paper, or call this out specifically in the General Discussion section. The direct replication we did was a direct replication of the lab studies in the signing first paper – and that's clearly a signing first effect, not an honor code one.

2. When we conducted the highly powered, pre-registered, direct replication (N = 1,235), we followed **exactly** the methods used in the lab studies in the PNAS paper. The only difference is where we recruited the subject and conducted the study but that should not make any difference, otherwise one should question the replicability of the findings. We went into this with the clear, spelled out desire to wanting to know, with confidence, whether the signing-first effect was a real effect or not. The results we obtained, also substantiated by the other studies [redacted] and [redacted] conducted before we joined the team, provide a clear answer: the effect does not exist. This is *not* the result I was personally hoping for, given that I've been disseminating the signing-first effect for years now, in different organizations. It is also disappointing to learn that a finding I've been speaking about with a lot of pride and confidence is not there. But the evidence is undisputable: I think this is a case where the effect we originally demonstrated was detected by a fluke. The original lab sample sizes were very small and the randomization failed in the field work. I don't think it makes sense to search for a moderator for an effect that does not exist. So, I think we simply need to tell other scholars and everyone else who'll read the paper what we know now.

In terms of timing, we are in a bit of a rush, for two reasons. One is being respectful of [redacted]'s progress: she has been working on this project for over a year now, and I see no good reason for delaying the submission of the paper. As I said, the evidence is compelling and convincing. Given where she is in her doctoral program, [redacted] can benefit from a publication. The second one is that is it important for us to spread this knowledge: the signing-first effect is an effect other organizations and government have been using in their policy efforts. They should know the effect is not real so that they can focus their efforts and money elsewhere.

If you have no other edits, I may be helpful for [redacted] to go next?
[redacted] – let us know if you have time in the next few days to have a look.

fran

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<image001.png>

From: [redacted]
Date: Monday, June 24, 2019 at 4:00 PM
To: Francesca Gino <fgino@hbs.edu>
Cc: [redacted]
Subject: Re: Signing first paper for PNAS: Full draft

Dear HBS-colleagues,
First of all, thank you for taking the lead and putting in all these efforts. I had a careful read over both files and attached are my edits/comments.

I would like to raise two bigger issues and hear what you think:

1) What is the difference between the existing literature/experiments that show that introducing an honor code reduces cheating. (e.g., [redacted], 2008 or [redacted], 2011) vs. our signing before vs. after PNAS paper? For me, it was always that the first set of papers looked at introducing an honor code where typically there is none vs. the PNAS paper is about moving the location of the honor code in situations where it is typically expected at the end like for example when filling out an audit form or a tax form.
With this distinction in mind and the description of the methods of experiments 1-6 currently provided in the appendix, they seem to me to be conceptual replications of the former not the latter, no?
If you agree with my concern, is the direct replication we chose to do, the right one? Is our positioning of the paper the right one?

2) We can choose to "just" report that our new experiments don't work and because of the overall weak/mixed results caution practitioners of using "signing at the beginning" as a tool (basically what we do right now), OR we could go a step further to explore/examine/discuss why these new experiments didn't work while the former did work. That would be a more meaningful paper for the academic field as it would allow for learning. If no-one is in a rush, I would be interested in going that step further.

Miscellaneous:

It would be good to add more more detailed results/analyses for each of exp 1-6 to understand the better where the null effects are coming from.

I look forward to hearing your thoughts.

[redacted] off to you.

Ciao,
[redacted]

On Jun 22, 2019, at 7:43 AM, Gino, Francesca <fgino@hbs.edu> wrote:

Hi [redacted] and [redacted]

attached here you'll find the draft of the paper and supplemental information for the studies in which we set out to replicate the signing-first effect. As you'll see, we did not find evidence for the effect. In fact, as we state right in the abstract, across six conceptual replications (N = 4,892) and one highly powered, pre-registered, direct replication (N = 1,235), we observed no effect of signing first on honest reporting.

[redacted] and I all worked on the paper and SI and we have no further edits / comments for the attached versions of the documents.

It'd be great to submit soon. Who wants to review these documents next?

Thanks,
fran

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<PNAS_SI June 21_AW.docx><Sign First- PNAS_June 21_AW.docx>

<PNAS_SI June 24.docx>

<Sign First- PNAS_June 24.docx>

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[redacted]

EXHIBIT 8

Time With [redacted] At UNC In July 2010

Saturday, February 4, 2023 at 14:28:22 Eastern Standard Time

Subject: Re: UNC visit
Date: Saturday, February 4, 2023 at 2:25:23 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca
Attachments: image001.jpg

Hi Fran,

That was a long time ago! The general timing you describe is accurate with my memory. Definitely remember you being in California with Disney and then coming back before you headed up to Boston. Looking back at my calendar, I see that we spent most of Monday, July 26th together working on a number of different projects we had going at the time. So that is consistent with the timing too.

I also do remember us doing work with [redacted] as she continued to be involved in a number of projects we were working on together.

Hope that helps.

All my best,

[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Date: Saturday, February 4, 2023 at 1:02 PM
To: [redacted]

Subject: UNC visit

Hi [redacted],

I hope you are enjoying the weekend.
I am wondering whether you can confirm my notes on my move from UNC to HBS.

I made the move in the summer of 2010, but spent some time in California (working as research consultant for Disney) in June of 2010 and part of July. I was back in Chapel Hill for two weeks between July 19-July 30, to finish packing and then drove to Boston from there on July 30.

I met with you at UNC to discuss current projects, and with [redacted] who would be helping on studies even after I moved to HBS.

Can you confirm my notes are accurate?

Thank you!
fran

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On LinkedIn and Instagram
Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
TEDx talk: *The Power of Why*

EXHIBIT 9

[redacted] **Confirming Trip In July 2010**

Saturday, February 4, 2023 at 12:12:23 Eastern Standard Time

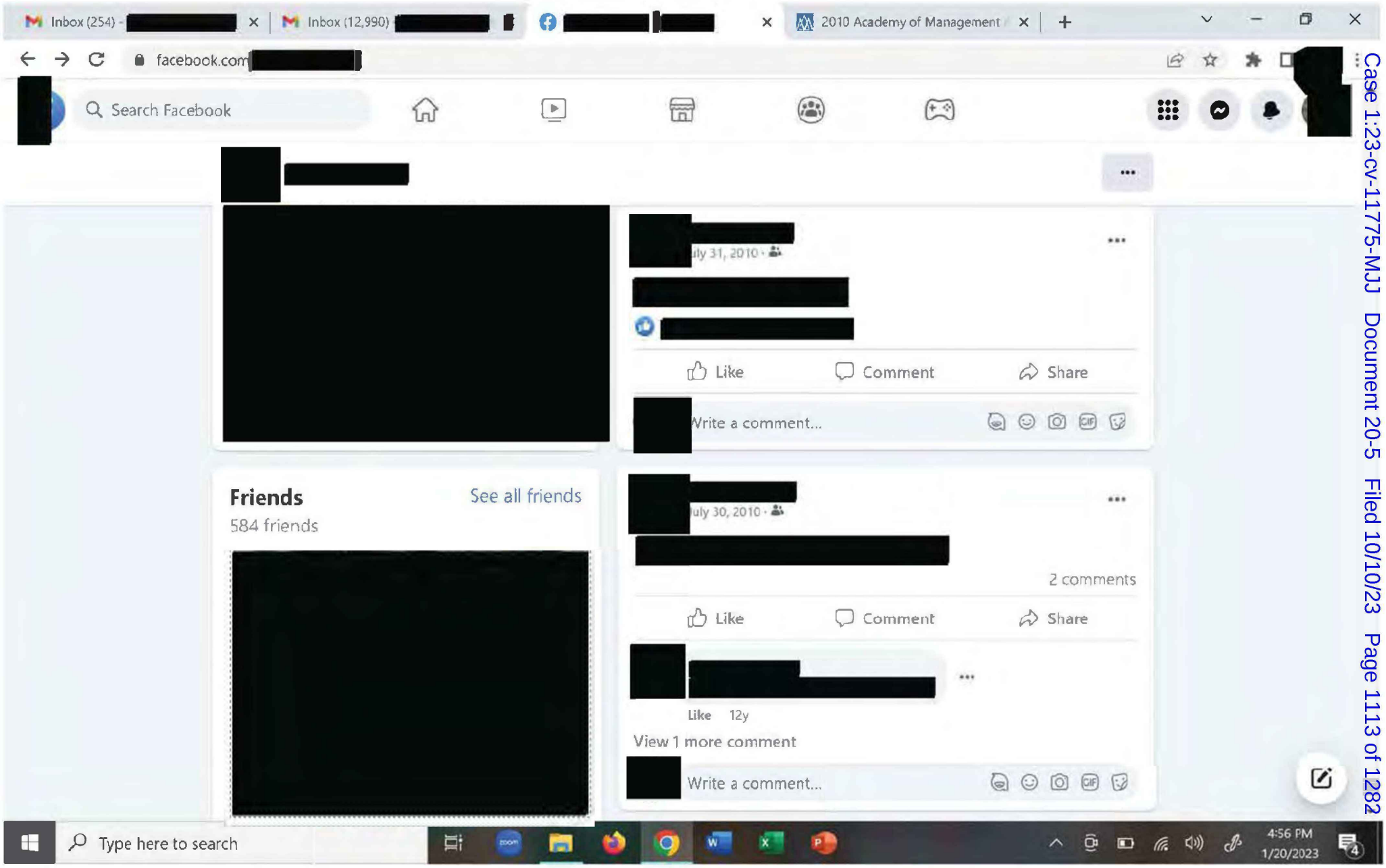
Subject: July 30, 2010
Date: Friday, January 20, 2023 at 5:05:29 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca
Attachments: Screenshot 2023-01-20 16.56.11.png, francesca infront of a random best western 2010.jpg, cat and fran.jpg, jgp-95.jpg

> You don't often get email from [redacted]. Learn why this is important

Wow. This just confirms that I should be some sort of detective. This was weirdly satisfying to figure this out.

We left July 30, 2010. In New York July 31, 2010. I think we stayed in New York for a day or two.

Big hugs,
[redacted]



Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 1113 of 1282

EXHIBIT 10

Letter from Professor [redacted]

2023 at 5:37:26 PM Eastern Standard Time

[redacted]

for the next 15 years as well. I remember we would turn four revisions per day, 6am to 10pm. The psych science and OBHDP papers will always be two of my favorites. I love how in the midst of everyone using imaginary or fake money as stimuli, we used real cash in large amounts. What I learned from that was that if you want to identify real effects, use real and strong stimuli. Those data and results were both amazing.

The project with [redacted] totally takes me back. I'd kind of forgotten about it, but then it all came back to me. It helps I have it all in my emails. Yeah, I remember all the design work we did, and what a great idea it seemed like, and ultimately the disappointment when we realized that our experiments had not worked, and had to abandon it. There was a ton of work in it, but what are you going to do? It was a good lesson for me too that a great career is littered with failures. I think we had some others, right? The day of the week one with the Kraft data? On reimbursement fraud? That was a great idea, but there was simply no evidence in the data. What else. . . oh yeah the drunk driving data that ended up being really disappointing. At least we never disagreed on abandoning the projects. Maybe we learned about sunk cost fallacy at all the JDM conferences we went to.

But I digress. . . So to answer your questions, we spent a ton of time working in the same room or with the same data. I remember for both the 2009 Psych Science and 2009 OBHDP that be both ran the analysis separately, particularly because I spent some time reading up on the asymptotics of chi-squared tests. I do remember the 2013 SJDM presentation because I was in the audience, and even asked a question. Everyone was super excited about that paper, and my question/comment was about the financial implications (which would have been huge). I'd seen [redacted] present it the year before as well. But I never got any sense that anyone questioned the results, and certainly not [redacted] or [redacted] who I also interacted with a lot.

Look Fran. . . we go way back, and the last thing I would ever describe you as is stubborn. You never were on any of our projects. I think we both realized early on how important it was to adopt a portfolio of projects, such that we would never have to rely on any one. Those projects we had that failed had eaten up a ton of time, but our careers or success never depended on any of them. We've always dropped projects and papers that weren't right or strong, because we could. You certainly didn't need that 2012 paper. And Lord knows that we always listened to one another's ideas and adapted. I think many people mistake determination and drive for stubbornness, and I think this is unfairly applied to women (like so many things). There was a lot of envy toward you because of your success and productivity, and I remember explaining to people that you literally worked 18-20 hours per day, nearly every single day of the year. I remember you working on Christmas. And what was always so amazing to me was seeing the rapid learning-by-doing that came with that. You are one of the toughest people I know, which again, is often misattributed or viewed negatively in successful women. But tough is not stubborn. You're one of the few people I know that is tougher than I am.

How could you be a better collaborator? Well selfishly I'd love for us to both work on one project together and nothing else. . You're like me, and have taken on many responsibilities. But that's part of being a senior faculty member, and even more so for women who get asked to do even more non-promotable tasks.

I'll collaborate with you anytime you want, and never worry about you being stubborn. Working with you was the most fun I ever had in academic research.

I hope this is helpful. But I hope you don't have to worry about this too much. I have nothing but admiration for you, Fran. Let me know if you want to talk more about this.

Best wishes,

[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Date: Thursday, February 2, 2023 at 3:21 PM
To: [redacted]
Subject: quick questions

Hi [redacted]

I hope you are well.

I have been spending some time in the last few months thinking about how to best improve the way I work with collaborators, doctoral students and RAs, so that I have more control and transparency over who is doing what.

You and I met at Carnegie Mellon University back in 2006, and we've been working together since then (!).

In many occasions over the last many years, we've worked on projects that ended up not working out. For instance, in the Fall of 2011 and beginning of 2012, we were working on a study on status and punishment with [redacted] at USC. We met at AOM in San Antonio in August of 2011 and sat at my computer designing studies. Based on those conversations, we then conducted a study at UNC where we manipulated status by having some "office materials" like mugs and pencil holders branded as JP Morgan (for high status) or a local bank (for lower status). In January of 2012, I reported to the team that the manipulation did not seem to work. In this and many other studies we conducted that did not work out, either because the manipulation was not effective or because our hypotheses were not supported, did I show any stubbornness in conducting the research?

For our many projects, we often met face to face. It was not uncommon for us to use my computer or yours to stare at data, write up analyses or parts of papers we were working on. It is a common practice I've used with collaborators. Can you confirm that my memory is accurate?

I also have a specific question about the SJDM conference in 2013, which was held in Toronto in mid-November that year. At that conference, [redacted] talked about the 2012 PNAS paper on signing first. I believe you were in the room at the time, seeing all the questions she received. Afterwards, given the

questions [redacted] received, [redacted] and I met to discuss. Do you remember seeing us around a computer talking? Any sense of the type of questions she received?

And if you have any thoughts on how I could become a better collaborator, I am all ears. I am always learning.

If you could let me know, I would very much appreciate it.

Thank you,
fran

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Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
TEDx talk: *The Power of Why*

EXHIBIT 11

Letter from Professor [redacted]

Thursday, February 2, 2023 at 21:23:34 Eastern Standard Time

Subject: Re: a few questions
Date: Thursday, February 2, 2023 at 2:58:34 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca, [redacted]
Attachments: image001.jpg

Hi Fran,

All is well here. Hope the same is true for you. This is a fun trip down memory lane. Not quite 20 years as collaborators, but it has been a long time.

In terms of your questions, yes! The first project was my first big spend on a lab-based project. We loved the idea, but after we got the feedback we sat down and carefully thought about it. You helped me see that it did not make sense to move forward as the contribution was fundamentally too limited.

The Shinsei experiment was also such a cool idea. Thinking about valence on feedback in the real world. We thought we had a compelling paper and then when we got the R&R we went and did additional analyses. Then the analysis broke. We had the old model that I'm sure we could have gotten published at an "A" journal. But once we broke the analyses for ourselves, it didn't matter. We were seeking truth, not a publication, and the truth showed that the experiment failed. We shelved the project.

Yes, I've cherished our in-person interactions over time. One of my favorite was for the analysis that we did for the ASQ paper. I recall staring at the computer together as we analyzed the data. Through the years, you've spent plenty of time with me in Chapel Hill and I've done the same with you in Boston. Then once we got good Zoom technology we've been able to share screens. I can think of an AMJ R&R before that where you and I had papers in front of us and had to talk back and forth (that same project we got together to white board it).

I've used our interactions as the guide for me in setting up my other collaborations. Something I've really come to appreciate about working with you is how many questions you ask. You are constantly pushing us to get to truth, not take shortcuts, and understand deeply what we are studying. Thanks for that.

All my best,

[redacted]

[redacted]

[redacted]

From: Francesca Gino <fgino@hbs.edu>
Date: Thursday, February 2, 2023 at 12:19 PM
To: [redacted]
Subject: a few questions
Resent-From: [redacted]

Hi [redacted]

I hope you are well.

I have been spending some time in the last few months thinking about how to best improve the way I work with collaborators, doctoral students and RAs, so that I have more control and transparency over who is doing what.

You and I met a long time ago, when you were a doctoral student at HBS (!), and we've been working together since then.

In many occasions over the last many years, we've worked on projects that ended up not working out. For instance, back in 2010, after receiving a reject from Organization Science for a paper we submitted with Gary, we decided to walk away from the project since we did not think, upon reading the feedback, that the idea was big enough. I don't think I had any issue with walking away, even if we had spent thousands of dollars running one of the studies. Is my memory accurate?

Another project we worked on in 2010 was the one on performance feedback, with the field experiment at Shinsei. We submitted it in January 2011 (with the title, *Driven by Social Comparisons: How Feedback about Coworkers' Effort Influences Individual Productivity*) and then received an R&R in July that year. As we worked on the revisions, we found that the results were not as robust or that there was an issue with the way the field study was conducted. Do you happen to remember? I don't recall being particularly upset despite the fact that we had an R&R. Just noted that this is part of learning and doing research. Do you remember how I reacted?

For our many projects, we often met face to face. Even when I moved to HBS and you were still at UNC, I made a few trips to Chapel Hill since I still had studies running there and also collaborators like you! It was not uncommon for us to use my computer or yours to stare at data, write up analyses or parts of papers we were working on. It is a common practice I've used with collaborators. Can you confirm that my memory is accurate?

And if you have any thoughts on how I could become a better collaborator, I am all ears. I am always learning.

If you could let me know, I would very much appreciate it.

Thank you,
fran

Francesca Gino
Tandon Family Professor of Business Administration
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Website: http://francescagino.com/
Twitter: @francescagino
On LinkedIn and Instagram
Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
TEDx talk: *The Power of Why*

EXHIBIT 12

Email from [redacted]

Subject: Re: quick question
Date: Saturday, February 4, 2023 at 2:25:40 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca

Hi Francesca:

Thank you for the kind words! I'll provide some brief answers here, but I think I might be more helpful to you over the phone. Would a chat next Weds or Thurs work for you?

1. Unfortunately, I don't have a working paper for the gender and confidence project. The project has taken a bit of a new direction, as my coauthors and I struggled to replicate the classic backlash finding where agentic women are socially punished more than agentic men. We've tested several moderators that seem to slightly reduce the extent to which confident women are trusted more than confident men (in terms of benevolence-based and integrity-based trust). Still, we have not yet found an effect where women are penalized more than men for displaying agency in the form of high confidence. Given these struggles to replicate classic backlash effects, we've been wondering whether some influential findings in that literature still hold today and are proceeding with a replication paper that attempts exact replications of some seminal findings published 10+ years ago.

   Despite changing the project's direction, we have a lot of data from studies that tested how the type of confidence being expressed (e.g., overplacement vs. overestimation) might impact the extent to which men are penalized for displaying confidence compared to women. If you are interested in hearing more about the previous studies we ran, I'd be happy to provide more details over the phone about what we have tried and found.

2. Leif was largely responsible for organizing the Berkeley journal club. When it started, most papers were chosen by either him, Joe Simmons, or Uri Simonsohn (Wharton started a journal club around the same time and it ran concurrently with the Berkeley one). Pretty much anybody who wanted to come participated. The main participants were Consumer Behavior faculty students, most of the Micro OB-oriented faculty and students, and a few JDM-oriented students in the Social Psych department (we'd also get occasional guest attendees from seminar speakers or other academics in town—I remember [redacted] being at one meeting in Berkeley, for example). But, to accommodate more diverse papers and research topics, the club eventually evolved into a shared leadership model where faculty who attend the meetings take turns selecting recently published articles they find interesting and want to discuss. Other than not selecting papers from regular meeting attendees and trying to keep the focus on recent papers (almost all of them were very recently accepted in journals), there weren't any ground rules that I recall.

3. Other than finding an old email from Leif that confirms your 2014 paper with [redacted] was discussed in one of the meetings, I do not remember anything about that meeting. I could potentially take some guesses about what might have come up based on my memory of the types of things that tended to get brought up in those discussions, but it would just be me speculating.

From: Gino, Francesca <fgino@hbs.edu>
Date: Saturday, February 4, 2023 at 9:30 AM
To: [redacted]
Subject: quick question

Hi [redacted]

I hope you are doing well!

I am writing with three questions for you.

1. Is your paper on "when and why confident women are trusted more than confident men" available for sharing as a working paper? if so, would you mind sharing it with me? I am doing some research on when women avoid backlash and this seems relevant.
2. I believe [redacted] told me at some point that you were part of the journal club at Berkeley that Leif organized. Is that right? Can you tell me how the club is organized and who participates? Are there rules? How are papers chosen? I may want to create something similar – a colleague of mine and I had been discussing the possibility.
3. Assuming you were part of the club, do you remember being part of a discussion that discussed my 2014 Psych Science paper with [redacted]? And if so, do you remember what you all discussed?

If this is easier to discuss live, I'd be happy to call you.
Congrats on all the amazing research you are doing.

francesca

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Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
TEDx talk: *The Power of Why*

EXHIBIT 13

Email from [redacted]

Tuesday, February 7, 2023 at 09:31:44 Eastern Standard Time

Subject: Re: quick question
Date: Saturday, February 4, 2023 at 4:51:43 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca

Hi Francesca,

Great to hear from you! Although the server I was running back then is now offline, I believe I might have a copy of the code I wrote for the tasks. So much time has passed (!) though that I would probably need to tweak quite a bit to bring the code up to current security standards, make it work with the modern version of the code library, and have it work with modern web browsers. I would also need to get a new web server and database up and running. If the tasks were tied into Qualtrics (can't recall if yours were) then there would be more tweaking/troubleshooting since Qualtrics has changed quite a bit since then. All in all, it might not be a "ton" of work though.

Do you have a general timeline for your project?

I'm currently traveling through Sunday, but I'd be glad to touch base with you on Monday or Tuesday once I get home to let you know if I'm able to find the original code.

Hope you're doing well!

[redacted]
Sent from my iPhone

On Feb 4, 2023, at 9:59 AM, Gino, Francesca <fgino@hbs.edu> wrote:

Hi [redacted]

I hope all is well.

Not sure you remember me. My HBS colleague [redacted] introduces us back in 2012 (!) since I was interested in developing a series on online tasks to use in research I was conducting at the time. You created the tasks so that they would be played by study participants outside of Qualtrics.

To make it easier to collect the data, you had links one could use to download it. Since you knew I was interested in using the tasks in future studies, you then created a functionality that deleted the collected data for each task, so that new data could be collected when using the task again.

Is my memory accurate?

And I imagine the tasks don't exist any longer given that it is now over 10 years ago.
If I were interested in recreating them, are you still doing work as a "contractor"? or have you moved on?

Thanks!
francesca

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On LinkedIn and Instagram
Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
TEDx talk: *The Power of Why*

EXHIBIT 14

Email Exchange with [redacted]

Subject: RE: IRB14-3048 : Understanding authenticity
Date: Wednesday, September 10, 2014 at 11:30:57 AM Eastern Daylight Time
From: [redacted]
To: Gino, Francesca
CC: [redacted]

Hi Francesca,

I have booked all of the dates you requested:

9/15 afternoon
9/17 afternoon
9/18 all day
9/22 afternoon
9/26 all day
10/1 afternoon
10/2 all day
10/9 all day
10/10 all day

I can't finalize or post these sessions until your testing is complete, but [redacted] will notify us as soon as you are done today so we can get these up and running ASAP.

Thanks very much,
[redacted]

[redacted]

From: Gino, Francesca
Sent: Wednesday, September 10, 2014 11:20 AM
To: [redacted]
Cc: [redacted]
Subject: Re: IRB14-3048 : Understanding authenticity

Thanks [redacted] People who participate in study 1 can participate in study 2. Do you have all the information you need? Let me know which days I can book the lab when you can
THANK YOU!
francesca

Francesca Gino
Professor of Business Administration
Harvard Business School

Website: http://francescagino.com/
Twitter: @francescagino
Book: *Sidetracked*

From: [redacted]
Date: Wednesday, September 10, 2014 at 11:10 AM
To: Francesca Gino <fgino@hbs.edu>
Cc: [redacted]
Subject: RE: IRB14-3048 : Understanding authenticity

Hi Francesca,

One more thing – do you want subjects to be able to participate in both studies or do you want people who have participated in the first study to be excluded from the second study?

Thanks,
[redacted]

[redacted]

From: Gino, Francesca
Sent: Tuesday, September 09, 2014 11:24 PM
To: [redacted]
Cc: [redacted]
Subject: Re: IRB14-3048 : Understanding authenticity

Will review the document and send it back. I'll start data collection for study 2 once I collected all the data for study 1. The instructions to the study vary a bit but in both studies people first complete a writing task and then answer a few questions. They are then presented with a scenario and again have to answer a few more questions.

In each study participants are paid $20. There is no bonus payment

francesca

On Sep 9, 2014, at 11:19 PM, [redacted] wrote:

> Hi Francesca,
>
> I'll have to check on lab availability in the morning, but I have 2 questions about your study info sheet in the meantime:

1. What is the difference between the 2 studies? You've included them in the same study info sheet. Is the only difference in the participant eligibility requirements? Are the payment scheme and public study name the same for both? Are you planning to run both at the same time or switch between them on the same day?

2. If you could please fill out the study description section at the end (or just send me one via email), that would be great. The study description typically includes some vague details about what participants will be doing (e.g., "Participants will read a series of documents and answer questions about what they have read" or "Participants will make decisions and complete a survey"). The description will also include payment information, especially if you have any bonus payments (e.g., "Participants will receive a base amount of $20 with a chance to earn up to an additional $5").

Thanks,
[redacted]

Sent from my iPhone

On Sep 9, 2014, at 11:04 PM, "Gino, Francesca" <fgino@hbs.edu> wrote:

> Hi [redacted]
>
> Thanks. I attached the study information sheet.
> If only two days a week are possible how about the following (I added an extra session within a day where I would have the lab for the entire day):
>
> 9/15 two sessions (so, lab between 3-6:30) 3:30 5 pm
> 9/17 two sessions (so, the lab between 3-6:30) 3:30 5 pm
> 9/18: all day (sessions at 10, 11:30, 1, 2:30, 4, 5:30 pm)
>
> 9/22 two sessions (so, lab between 3-6:30) 3:30 5 pm
> 9/26: all day (sessions at 10, 11:30, 1, 2:30, 4, 5:30 pm)
>
> 10/01 two sessions (so, lab between 3-6:30) 3:30 5 pm
> 10/2: all day (sessions at 10, 11:30, 1, 2:30, 4, 5:30 pm)
>
> 10/9: all day (sessions at 10, 11:30, 1, 2:30, 4, 5:30 pm)
> 10/10: all day (sessions at 10, 11:30, 1, 2:30, 4, 5:30 pm)
>
> Thanks,
> francesca
>
> ---
> Francesca Gino
> Professor of Business Administration
> Harvard Business School
> Website: http://francescagino.com/
> Twitter: @francescagino
> Book: *Sidetracked*

From: [redacted]
Date: Tuesday, September 9, 2014 at 4:57 PM
To: Francesca Gino <fgino@hbs.edu>
Cc: [redacted]
Subject: Re: IRB14-3048 : Understanding authenticity

Hi Francesca,

Generally we request that researchers run not more than 2 days per week so that the lab can be available to other researchers. We can make an exception for next week, but you will need to test your study prior to recruitment, which means you'd have at most 5 days to recruit for the first day of sessions.

To schedule testing, please contact [redacted] with the details of your study's technical requirements. Additionally, I will need the Study Info Sheet as soon as possible to begin recruiting.

Please let me know if you think this will all be feasible for you, and I will book next week. 9/15 and 9/17 are still available at the times you requested, but [redacted] has testing for the September Decision Making and Preferences bundle at 2pm on 9/18. I can check with [redacted] and [redacted] to see if that can be rescheduled to fit you in.

I will confirm with you for the week after that (9/22-9/26) on Friday.

Thank you,
[redacted]

Sent from my iPhone

On Sep 9, 2014, at 3:59 PM, "Gino, Francesca" <fgino@hbs.edu> wrote:

> Hi [redacted]
>
> Can I book the following times/days in the lab?
>
> 9/15 two sessions (so, lab between 3-6:30) 3:30 5 pm
> 9/17 two sessions (so, the lab between 3-6:30) 3:30 5 pm
> 9/18: all day (sessions at 10:30, 12, 1:30, 3, 4:30)
> 9/22 two sessions (so, lab between 3-6:30) 3:30 5 pm
> 9/23 two sessions (so, lab between 3-6:30) 3:30 5 pm

9/24 two sessions (so, lab between 3-6:30) 3:30 5 pm
9/26: all day (sessions at 10:30, 12, 1:30, 3, 4:30)
10/01 two sessions (so, lab between 3-6:30) 3:30 5 pm
10/2: all day (sessions at 10:30, 12, 1:30, 3, 4:30)
10/9: all day (sessions at 10:30, 12, 1:30, 3, 4:30)
10/10: all day (sessions at 10:30, 12, 1:30, 3, 4:30)

The october dates may not be necessary but I would love to book the lab just in case given how many participants I need data from
Please let me know if this is ok with you.
francesca

Francesca Gino
Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
Twitter: @francescagino
Book: *Sidetracked*

From: [redacted]
Date: Tuesday, September 9, 2014 at 10:26 AM
To: Francesca Gino <fgino@hbs.edu>
Cc: [redacted]
Subject: RE: IRB14-3048 : Understanding authenticity

Hi Francesca,

Here is the lab availability for the next 4 weeks:

9/15: all day
9/16: 10am-11:30am
9/17: after 2pm
9/18: all day
9/19: 10am-noon

9/22: all day
9/23: all day
9/24: after 2pm
9/25: not available
9/26: all day

9/29: not available
9/30: not available
10/1: all day
10/2: all day
10/3: not available

10/6: all day

10/7: all day
10/8: all day
10/9: all day
10/10: all day

While there is some availability in the lab remaining this week, it will be difficult to recruit full sessions for them (depending on how many people you need per session).

Please let me know what times you'd like! I will also need the completed In-Lab Study Info Sheet for this study at your earliest convenience.

Thanks very much,
[redacted]

[redacted]

From: Gino, Francesca
Sent: Monday, September 08, 2014 8:05 PM
To: [redacted]
Subject: Re: IRB14-3048 : Understanding authenticity
Importance: High

Hi [redacted]

Could you please let me know when the lab is available? I need a lot of subjects for two different studies... So, the sooner I can start collecting the data, the better.

Study 1: We will gather data from 500 students (all undergraduate at Harvard) and have them complete a 60-minute study.

Study 2: We will gather data from 350 individuals through CLER.

Thanks!
francesca

Francesca Gino
Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
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Book: *Sidetracked*

From: Human Subjects <humansubjects@hbs.edu>
Date: Monday, September 8, 2014 at 3:08 PM
To: Francesca Gino <fgino@hbs.edu>, [redacted]
Subject: FW: IRB14-3048 : Understanding authenticity

Hi Francesca,

I'm copying my colleague [redacted] who will be able to help you find time for your sessions. We've recently moved scheduling and recruiting over to her so she's the new contact for prepping sessions.

[redacted] can you please Francesca some available dates when you have a moment?

Best,
[redacted]

Human Subjects Research Coordinator
Research Administration
Harvard Business School
Baker Library | Bloomberg Center B90A
Boston, MA 02163

[redacted]

From: Gino, Francesca

Sent: Monday, September 08, 2014 3:00 PM
To: Human Subjects
Subject: Re: IRB14-3048 : Understanding authenticity

Great, thank you. Could you please let me know which dates the lab is available so that I can run sessions?
I need to collect data from many students so I'd love to schedule time asap

Thanks!
francesca

Francesca Gino
Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
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Book: *Sidetracked*

From: Human Subjects <humansubjects@hbs.edu>
Date: Monday, September 8, 2014 at 2:28 PM
To: Francesca Gino <fgino@hbs.edu>
Subject: IRB14-3048 : Understanding authenticity

Hi Francesca,

I'm sending you this quick note to let you know that we approved your human subjects application in ESTR. You should have received a link to the official approval letter in a separate email from the system to keep for your records (if not, please check your spam folder).

If you have any questions at all, please let me know.

Best,
[redacted]

Human Subjects Research Coordinator
Research Administration
Harvard Business School
Baker Library | Bloomberg Center B90A
Boston, MA 02163

[redacted]

<study_info_lab authenticity.doc>

EXHIBITS 15A AND 15B

Email Exchanges with RAs helping on the 2015 Psychological Science Paper

Subject: Re: your help
Date: Wednesday, September 10, 2014 at 8:41:18 PM Eastern Daylight Time
From: [redacted]
To: Gino, Francesca

Francesca,

Great! Thanks so much. I'm looking forward to it.

[redacted]

On Wed, Sep 10, 2014 at 8:40 PM, Gino, Francesca <fgino@hbs.edu> wrote:

> Hi [redacted]
>
> Yes, you should be able to leave by 6 pm on those days.
> I just talked to the lab manager and she recruited people for two sessions each day: 3:30 and 5 pm. Each session should last about 60 min (if not a bit less)
>
> I will see you in CLER on Monday around 4:30 pm
>
> francesca
>
> ---
>
> Francesca Gino
>
> Professor of Business Administration
>
> Harvard Business School
>
> Website: http://francescagino.com/
>
> Twitter: @francescagino
>
> Book: *Sidetracked*

From: [redacted]
Date: Wednesday, September 10, 2014 at 8:32 PM

To: Francesca Gino <fgino@hbs.edu>
Subject: Re: your help

Francesca,

I got my classes sectioned today so my schedule is a little different from what I told you yesterday. I am available on Monday, September 15th after 4pm. I am able to make the rest of the dates.

However, would it be possible to leave at 6pm, so I have enough time to get to my professor's office hours on time? If not, I'm sure I could try and work something out with him!

Best,

[redacted]

On Wed, Sep 10, 2014 at 8:24 PM, Gino, Francesca <fgino@hbs.edu> wrote:

[redacted]

Would it be possible for you to be in the lab (at CLER) from 2:30 (with the first session starting at 3 pm) to 6:30 pm on

- Monday, sept 15
- Wednesday, sept 17
- Monday, sept 22
- Wed, oct 1?

That would be great!
francesca

Francesca Gino

Professor of Business Administration

Harvard Business School

Website: http://francescagino.com/

Twitter: @francescagino

Book: *Sidetracked*

From: [redacted]
Date: Tuesday, September 9, 2014 at 6:52 PM
To: Francesca Gino <fgino@hbs.edu>
Subject: Re: your help

Hi Francesca,

I would love to help! On MWF I have class from 10-2pm, and on TuTh my classes are from 10-12pm and 3-4pm. Other than that, I am pretty much free. The times may be subject to change depending on when my teaching fellows decide to section me, but I will let you know. I'm looking forward to working with you. Thank you!

Best,
[redacted]

On Tue, Sep 9, 2014 at 11:31 AM, Gino, Francesca <fgino@hbs.edu> wrote:

Hi [redacted] and [redacted]

I met you during your presentations for PRIMO. I am one of the faculty organizing the lab you ere part of. I am writing to see if you'd be willing to help me run two studies in CLER in sept and early October. I would pay you for being in the lab and conducting the research.

The only thing I need to know is whether you'd be willing to do this and what your availability is

Thanks for considering this!
francesca

Francesca Gino

Professor of Business Administration

Harvard Business School

Website: http://francescagino.com/

Twitter: @francescagino

Book: *Sidetracked*

--
[redacted]

--
[redacted]

--
[redacted]

Subject: Re: quick question
Date: Wednesday, September 10, 2014 at 8:39:13 PM Eastern Daylight Time
From: [redacted]
To: Gino, Francesca

HI Dr. Gino,

Meeting at 9 am on the 18th sounds great. I helped [redacted] running sessions before so I am familiar with the lab in CLER.

I look forward to meeting you in person,
[redacted]

On Sep 10, 2014, at 8:16 PM, Gino, Francesca wrote:

> Hi [redacted]
>
> The dates are confirmed, except for the morning of 9/18. Are you familiar with the lab in CLER on HBS campus?
>
> 9/18: all day
>
> 9/26: all day
>
> 10/2: all day
>
> 10/9: all day
> 10/10: all day
>
> I can meet you in my office the day of the session so that I can give you information about the set up etc.
> The study will be completed from computers on qualtrics. Everybody gets paid the same amount so the set up should not be too difficult.
>
> Do you want to meet around 9 am on 9/18?
>
> Thanks,
> francesca
>
> ---
> Francesca Gino
> Professor of Business Administration
> Harvard Business School
> Website: http://francescagino.com/
> Twitter: @francescagino
> Book: *Sidetracked*
>
> **From:** [redacted]
> **Date:** Wednesday, September 10, 2014 at 1:31 PM
> **To:** Francesca Gino <fgino@hbs.edu>
> **Subject:** Re: quick question
>
> Hi Dr. Gino,
>
> I have blocked those dates - I look forward to hearing from you about the study.

Sincerely,
[redacted]

On Sep 9, 2014, at 1:23 PM, Gino, Francesca wrote:

> Hi [redacted]
>
> Wonderful (and thanks [redacted] for connecting us!)
> Can you block those dates. I will send you information about the study later today.
>
> Thanks!
> francesca
>
> ---
> Francesca Gino
> Professor of Business Administration
> Harvard Business School
> Website: http://francescagino.com/
> Twitter: @francescagino
> Book: *Sidetracked*
>
> **From:** [redacted]
> **Date:** Tuesday, September 9, 2014 at 12:12 PM
> **To:** Francesca Gino <fgino@hbs.edu>
> **Cc:** [redacted]
> **Subject:** Re: Fwd: quick question
>
> Hi Francesca,
>
> [redacted] (cc'ed) said she could work on the days that you need an RA. Feel free to coordinate with her directly. :-)
>
> Best,
> [redacted]
> --
> [redacted]
> [redacted]
> [redacted]
> [redacted]

EXHIBIT 16

Email from RA indicating some participants did not follow instructions

Sunday, February 5, 2023 at 15:13:55 Eastern Standard Time

Subject: CLER Study Notes
Date: Monday, September 22, 2014 at 5:09:14 PM Eastern Daylight Time
From: [redacted]
To: Gino, Francesca

Hi Francesca,

Since the notecards for CLER IDs aren't available, we've been directing folks to type the number on their computer monitor+1 or 2 depending on the session.

For example Computer 201 in the first session would be 2011. Unfortunately, some people have been putting in their Harvard ID's, despite my instructions. I don't know if they can go back and change this, or if this will affect the study, but I just wanted to let you know.

Thanks!

[redacted]

--
[redacted]

EXHIBIT 17

Email from RA [redacted]

Sunday, February 5, 2023 at 16:00:47 Eastern Standard Time

Subject: Re: quick question
Date: Sunday, February 5, 2023 at 3:48:03 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca

Hi Francesca,

I do not remember off the top of my head!

Is there a timeline you'd need this by? Only asking as I'm going back to visit my parents in March and I'll have my old laptop from college. There's a possibility I may have a file on there and could be helpful.

Another question - do you remember more of the context of the coding task, could help me narrow it down a bit!

Thanks,
[redacted]

[redacted]

On Sun, Feb 5, 2023 at 12:32 PM Gino, Francesca <fgino@hbs.edu> wrote:

> Hi [redacted]
>
> I am not sure you remember me – I am a professor at HBS. Back in 2014 (!!!) you were part of the GiNorton lab – some great memories. In September of that year, you helped with a study I was conducting in CLER. Thank you again for all your help on that study and many others!
>
> As in any study, not all participants exactly followed all the instructions. For instance, at the time, you and the other RA helping on this study told me some participants did not follow the procedure for the ID they were asked to use or answered "Harvard" when asked about "Year in school." I remember meeting with you in my office and discussing what would count as "poor quality data" that would lead to exclusions and what would not. **Do you happen to have a doc file with the exclusions we discussed?**
>
> I realize we got back almost 10 years, and I am asking about one study in particular when you helped with many, so if you don't remember that's ok. But I wanted to check just in case.
>
> Since you helped with the data cleaning and merging, I was wondering whether you had a write up of the exclusions we discussed.

Thanks!

francesca

Francesca Gino

Tandon Family Professor of Business Administration

Harvard Business School

Website: http://francescagino.com/

Twitter: @francescagino

On LinkedIn and Instagram

Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

TEDx talk: *The Power of Why*

EXHIBIT 18

Email from RA [redacted]

Subject: Re: quick question
Date: Wednesday, February 8, 2023 at 9:16:45 AM Eastern Standard Time
From: [redacted]
To: Gino, Francesca

Dear Professor,

Of course I remember you and the studies I worked on at CLER and at the Decision Lab! Please accept my apologies in the late response, I sometimes do not check this address as often.

It is wonderful to hear from you. I am afraid I will not be of much help in this case. I scanned the folder I have from the work with [redacted] in my drive, however it seems I only have very few files from that time. I really do wish I had a bit more information from memory or in a written doc to help you with this. I also no longer use the computer I had at that and some things were not backed up. My apologies.

In case there is any other way I can help, please let me know.

Kind regards,
[redacted]

Le dim. 5 févr. 2023 à 15:30, Gino, Francesca <fgino@hbs.edu> a écrit :

> Hi [redacted]
>
> I am not sure you remember me – I am a professor at HBS. [redacted] who used to be at HKS, introduced us back in Sept of 2014 so that you could help with a study I was conducting in CLER. Thank you again for all your help!
>
> As in any study, not all participants exactly followed all the instructions. For instance, at the time, you and the other RA helping on this study told me some participants did not follow the procedure for the ID they were asked to use or answered "Harvard" when asked about "Year in school." I remember meeting with you in my office and discussing what would count as "poor quality data" that would lead to exclusions and what would not. **Do you happen to have a doc file with the exclusions we discussed?**
>
> I realize we got back almost 10 years, and I am asking about one study in particular when you helped with many, so if you don't remember that's ok. But I wanted to check just in case.
>
> Since you helped with the data cleaning and merging, I was wondering whether you had a write up of the exclusions we discussed.
>
> Thanks!
>
> francesca

Francesca Gino

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On LinkedIn and Instagram

Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

TEDx talk: *The Power of Why*

EXHIBIT 19

Email from Professor [redacted]

Subject: RE: paper and letter
Date: Sunday, November 30, 2014 at 11:20:50 AM Eastern Standard Time
From: [redacted]
To: Gino, Francesca, [redacted]

Sounds good. I think we can get the threat compensation down to one sentence. Also, we could cut the first sentence of the discussion, though I like it.

Nothing, just the typical pairwise comparisons. If you take the Bonferroni to the extreme we should be doing corrections on every 2X2 as it involves three tests (two main effect and interaction).

From: Gino, Francesca [mailto:fgino@hbs.edu]
Sent: Sunday, November 30, 2014 11:19 AM
To: [redacted]
Subject: Re: paper and letter

Thank you [redacted] Your changes are great. The only thing we may need to add back is the threat-compensation literature since the reviewers asked for it.
I am going to double check everything and add the missing information you mentioned.

As for Bonferroni corrections, I was asked to report them in a previous Psych Science submission. What would you report instead?

francesca

From: [redacted]
Date: Sunday, November 30, 2014 at 11:04 AM
To: Francesca Gino <fgino@hbs.edu>, [redacted]
Subject: paper and letter

Here is the paper! It is looking great!

Because of my perfectionistic tendencies, I made a few changes.

I gave each experiment a title.

Should we report d effect size for al comparisons. Also sometimes we report SD and sometimes we don't. We should be consistent and I favor reporting SD for all means.

I am not in favor of the Bonferroni correction. I find it a conservative and unnecessary test and if we use it here we then put pressure on ourselves use it all the time.

Given the topic (moral cleansing has come under attack) and the strength of the results, my guess is that data detectives may ask for our data. So we should double check all stats and also be prepared to share the data sets.

Here is my word count. I had to cut out about 300 words from the discussion to get us down to 2000.
Into: 1002
Study 1 intro: 30

Study 1 discussion: 35
Study 2 intro: 43
Study 2 discussion: 31
Study 3 intro: 103
Study 3 discussion: 59
Study 4 intro: 214
Study 4 discussion: 61
Study 5 intro: 55
Study 5 discussion: 34
Discussion: 333
Total: 2000

Happy to talk through any of these issues!

Best,
[redacted]

EXHIBIT 20

Email Exchanges with HBS Human Subjects Research Coordinator

Sunday, February 5, 2023 at 15:47:55 Eastern Standard Time

Subject: RE: regarding my study: proposed changes
Date: Tuesday, September 16, 2014 at 3:27:46 PM Eastern Daylight Time
From: [redacted]
To: Gino, Francesca
Attachments: Modifying an Approved Study2 (3).pdf

Hi Francesca,

I think the best thing to do is to submit a modification. In ESTR, you'll need to navigate to the study, and hit "create a modification". Further instructions can be found at this site, and I've attached them here too for easy reference:

http://estrsupport.fss.harvard.edu/icb/icb.do?keyword=k93454&pageid=icb.page640606

You should describe this new addition in the documents and in question 4 on the Modification Information smart form page. In the main protocol application, please use wording that clearly describes what has already been approved and what the proposed additions are moving forward (i.e. "Moving forward, we'd like to add conduct this study online using Harvard undergrad students [...]").

You'll want to replace the previously approved protocol template document with the updated version (and any other documents that need updating). In order for us to keep track of old versions, select the "Update" button if you are uploading a new version of the document. Click the "Add" button (and follow the instructions above) to add an entirely
new document to the SmartForm. Please don't delete a document, unless you are no longer using it or any version of it in your study.

Since you plan on running the CLER portion still, you need to keep all those documents in the study record, and then add a new consent form, survey, etc. for the online portion. Please label these new documents clearly so we can tell which population it's for (ie. OnlineStudy_ConsentForm).

If you have any questions, please let me know.

Best,
[redacted]

Human Subjects Research Coordinator
Research Administration
Harvard Business School
Baker Library | Bloomberg Center B90A
Boston, MA 02163

[redacted]

From: Gino, Francesca
Sent: Tuesday, September 16, 2014 2:53 PM

To: [redacted]
Subject: Re: regarding my study: proposed changes
Importance: High

Hi [redacted]

The revised survey is attached here. Given that I'll continue running the original study in the lab, should I submit this as a new study rather than a modification?

Thanks,
francesca

Francesca Gino
Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
Twitter: @francescagino
Book: *Sidetracked*

From: [redacted]
Date: Tuesday, September 16, 2014 at 2:40 PM
To: Francesca Gino <fgino@hbs.edu>, [redacted]
Cc: [redacted]
Subject: RE: regarding my study: proposed changes

I like it all.

[redacted] once the amendment is OK'd by [redacted] can you work with Francesca to implement this as a revised copy of her existing survey in Qualtrics? (She and I discussed, and I recommended, keeping the original study running in the CLER alongside this amended version.)

Francesca, I have reached out to the FAS Registrar (via email: they were not answering their phones) to see if we could get info on section size for Fall undergrad courses, but have not yet heard back.

[redacted]

From: Gino, Francesca
Sent: Tuesday, September 16, 2014 2:20 PM
To: [redacted]
Cc: [redacted]
Subject: regarding my study: proposed changes
Importance: High

Hi [redacted]

Thank you for stopping by today.
I prepared a different survey, with the additions and the changes in language you suggested.

Here are the main changes. Can you have a look to see if the language is ok? If so, I'll submit an IRB amendment.

INTRODUCTION

Welcome!

This is an online survey that will take about 15-20 minutes. You will receive a $10 Amazon gift card for completing this survey. You will be able to complete the survey and receive payment only if you are currently an undergraduate at Harvard and have a valid Harvard ID card.

When ready, please press >>

[I changed the consent form]

MESSAGE ON THE LAST SCREEN

Thank you for participating in this study. Researchers at Harvard Business School often conduct research studies for pay. If you are interested in signing up for being part of the research pool, please visit the following link:

http://www.hbs.edu/cler/

By signing up today, you'll be able to know when studies are running so that you can participate.

Let me know if you have any suggestions for improvement.
As for the email I'd like to send out to Faculty, here it is:

==========
Dear X,

I am writing to see if you'd be open to tell your students about a study I am conducting. Students can fill out an online survey (about 15-20 min long) and receive a $10 Amazon gift card. For the study, I need about 500 Harvard undergraduates, so I'd really appreciate if you could let your students know about this opportunity.

The survey can be accessed here: [LINK]

I'd be happy to share an email you could send to your students, or prepare a slide for you to talk about in class.

Thank you for considering this,

Francesca
==========

Let me know,
francesca

Francesca Gino
Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
Twitter: @francescagino
Book: *Sidetracked*

EXHIBIT 21

Email Exchanges with Co-authors [redacted] and [redacted]

From: [redacted]
Date: Thursday, September 19, 2019 at 8:17 PM
To: [redacted] Francesca Gino <fgino@hbs.edu>
Subject: RE: Networking motivation paper

Hi Team,

I know, sad that a nice paper like this can't get published. Let's hope for a better reception at a psych journal...

I've reviewed the changes (thank you, [redacted] responded to Francesca's suggestions (thank you for those), and added one comment suggesting that we add the article attached to our theory section.

Once you've had a chance to resolve those last few points, I'm happy to see this baby submitted, with both trepidation and hope!

[redacted]

From: [redacted]
Sent: September 19, 2019 3:47 PM
To: Gino, Francesca <fgino@hbs.edu>; [redacted]
Subject: Re: Networking motivation paper

Thank you Fran.
[redacted] I'll wait for review and then submit

[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Thursday, September 19, 2019 at 11:08 AM
To: [redacted]
Subject: Re: Networking motivation paper

Re-reading this paper made me sad. It is a good paper...
I added just a couple of comments and minor edits. Once [redacted] has read the paper, we can resubmit it

fran

Francesca Gino
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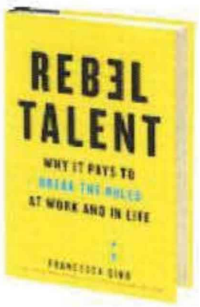
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*



From: [redacted]
Date: Thursday, September 19, 2019 at 8:49 AM
To: Francesca Gino <fgino@hbs.edu>, [redacted]
Subject: Re: Networking motivation paper

Here is the draft with my edits. I added sample size determination, etc
I did not edit much since I felt like it is in good shape. I am planning to send to to ASC section

Do you want to do a quick look before I submit?

[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Wednesday, September 18, 2019 at 3:03 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Networking motivation paper

I agree 100% here.

fran

On Sep 18, 2019, at 12:41 PM, [redacted] wrote:

> Okay, [redacted] I trust your instinct and Francesca that JPSP is a plausible target. Between ASC and IRGP, I leave it to you two to make the right choice, but I will chime in that ASC makes more sense to me. All our data comes from individual responses and individual attitudes and cognitions. We do not actually have relational data. We construe and measure networking as an individual experience, and know nothing about the networks of our subjects, beyond what they report about them.
>
> Thanks,
> [redacted]
>
> **From:** [redacted]
> **Sent:** September 18, 2019 11:01 AM
> **To:** Gino, Francesca <fgino@hbs.edu>
> **Cc:** [redacted]

Subject: Networking motivation paper

I read the paper and I think we should go with psych audience, I agree that management science most likely would have very similar issues with contribution. I am editing the paper for JPSP, we need to figure out which section, ASC or IRGP we are sending it to. [redacted] is on editorial board at ASC section

[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Tuesday, September 17, 2019 at 10:08 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

Thank you [redacted] I did re-read the paper a few weeks ago... curious to hear your views. I found the reviews to be 'hard' to digest. I definitely like the paper more than the reviewers did

fran

On Sep 17, 2019, at 11:24 AM, [redacted] wrote:

> [redacted] you are right that none of us has worked on this for a long time and we may need to edit. Lets me do a read later today or early tomorrow morning to be give my more informed opinion
>
> [redacted]
>
> **From:** [redacted]
> **Date:** Tuesday, September 17, 2019 at 12:51 PM
> **To:** "Gino, Francesca" <fgino@hbs.edu>, [redacted]
> **Subject:** RE: Your manuscript, OBHDP_2018_839, has not been accepted
>
> Team,
>
> I am not optimistic about the chances of our paper at Management Science, in light of the string of 5 rejections we've already received from other management journals. Management Science is a bit different from the management journals we've tried already, but our studies are not going to be all that attractive to them. We don't have a field experiment, the organizational study is primarily based on self-reports, we use several different DVs, etc.
>
> If you believe that a psych journal would appreciate what we have, I'd be more interested in trying that route rather than knocking on the door or another management journal with very poor odds of success, in my view. I know very little about psychology journals, and leave it to you to decide how high we can aim. If you trust [redacted]'s view that this is a JPSP paper, then let's try that. If not,

you know well that I'm open to placing this paper lower and have it out there, at last.

If we do go for JPSP, though, I think we'd need to actually revise the paper. If none of us has the time necessary to do this editorial work (and none of us has meaningfully edited this paper for almost two years), then I'd revert to my proposal to settle for a lower-tier journal.

[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: September 17, 2019 1:16 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

I am happy to try this route, and I would ask for [redacted]

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New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

<image001.png>

From: [redacted]
Date: Monday, September 16, 2019 at 6:49 PM
To: Francesca Gino <fgino@hbs.edu>
Cc: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

This is a response I got from [redacted] asking him a question about a different project for Mgm Sci but I think we may have a chance there given his response, we have field experiment and non-mturk sample

we do accept micro papers, and this is a major reason why I added Hengchen. Ian is also well-qualified to evaluate experimental work. You can also request someone outside our department as another AE if that's helpful (such as [redacted] Uri, Joe Simmons). Greta may very well be DE, but in my view micro OB papers have a home, but what we're looking for might be very different than at other places. I would want something that is a)incentivized (or at least incentive compatible), b)behavioral, and c)directly generalizable to organizational settings. If it's an org field experiment, great! What we're likely to be far less interested in a)scale-based

research, b)self-response data (which has its own value), and c)scenario studies.

From: [redacted]
Date: Monday, September 16, 2019 at 11:00 AM
To: "Gino, Francesca" <fgino@hbs.edu>
Cc: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

What about management science

I just looked at the their AE and they have networking/micro type, like [redacted] or [redacted]

Or you may think they already won't be in favor, then lets not waste time

Should we try them?

[redacted] Washington University in St. Louis
[redacted] Massachusetts Institute of Technology
[redacted] University of California, Los Angeles
[redacted] London Business School
[redacted] University of Pennsylvania
[redacted] Stanford University
[redacted] Duke University
[redacted] Dartmouth College
[redacted] University of California, Los Angeles
[redacted] The Ohio State University
[redacted] University of North Carolina at Chapel Hill
[redacted] University of Chicago
[redacted] University of Maryland, College Park
[redacted] Stanford University
[redacted] University of South Carolina
[redacted] University of Southern California
[redacted] Washington University in St. Louis

[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Monday, September 16, 2019 at 7:38 AM
To: [redacted]
Cc: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

I am not sure. [redacted] thought this was the right paper for JPSP

fran

On Sep 16, 2019, at 8:33 AM, [redacted] wrote:

We need to do some rewrite since we primarily used management literature and networking
[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Sunday, September 15, 2019 at 7:17 PM
To: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

Should we try an A-type journal first? JPSP?
Just to get the reactions from a psych audience? They have a fast turnaround

---

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New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

<image001.png>

From: [redacted]
Date: Sunday, September 15, 2019 at 11:55 AM
To: [redacted] Francesca Gino <fgino@hbs.edu>
Subject: RE: Your manuscript, OBHDP_2018_839, has not been accepted

Thanks for the follow up, [redacted] By all means let's submit somewhere. As for where, my view is below.

From: [redacted]
Sent: September 12, 2019 8:50 AM
To: [redacted] Gino, Francesca <fgino@hbs.edu>
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

Lets decide and submit this paper somewhere

I think we have not tried any psych J and they may be receptive

From: [redacted]
Date: Wednesday, July 31, 2019 at 7:36 PM
To: "Gino, Francesca" <fgino@hbs.edu>, [redacted]
Subject: RE: Your manuscript, OBHDP_2018_839, has not been accepted

Hi Franci,

You're not the only one who talked about working on the paper in May! We all had good intentions, but we're also all busy with many interesting projects. A good problem to have, I guess. ☺

You can definitely have four more weeks! It's lovely that you haven't given up on the paper, and I am happy to take another stab at it, too, once you've had a chance to make your edits.

Thanks,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: July 31, 2019 7:49 PM
To: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

I realize I said end of May and it is now end of July...
Can you give me 4 more weeks? If I have not touched the paper by then, we can send submit it to a B-type journal

---

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Website: http://francescagino.com/
Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

<image002.png>

From: [redacted]
Date: Wednesday, July 31, 2019 at 6:21 PM

To: [redacted], Francesca Gino <fgino@hbs.edu>
Subject: RE: Your manuscript, OBHDP_2018_839, has not been accepted

Hi Francesca and [redacted]

I hope summer is treating you well. I've just returned from Europe and am taking a look at my pipeline to plan the year ahead.

I conclude from us having found no time to work on our paper that we all have other priorities. May I therefore revamp my suggestion to settle for a B journal, like *Motivation and Emotion*, that would allow us to submit the paper as is? I know you don't like the idea of "throwing the paper away" in an obscure journal (and neither do I, to be honest), but isn't it better than letting the paper sit untouched for months? The ideas are not getting any newer as time slips away, and we're missing opportunities to cite our paper and have people who are working around regulatory focus and networking cite it, too (another person asked me about it at EGOS, and again I couldn't give him an article to cite).

I will add that Motivation and Emotion has a 1.5 impact factor, and JEP:G has 3.5. The difference is sizable but not so wide, IMO, as to justify waiting around in hopes that, one day, we'll find the time and motivation to revise this paper.

Your thoughts?

[redacted]

From: [redacted]
Sent: April 15, 2019 6:12 PM
To: [redacted]>; Gino, Francesca <fgino@hbs.edu>
Subject: RE: Your manuscript, OBHDP_2018_839, has not been accepted

That's a good idea, [redacted] Shall we schedule a time in early May?

From: [redacted]
Sent: April 13, 2019 7:54 PM
To: Gino, Francesca <fgino@hbs.edu>; [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

Sounds good. Do we want to chat after reading the reviews

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Saturday, April 13, 2019 at 12:45 PM
To: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

I suggest we have the paper back under review by the end of May.
I have two busy weeks ahead of me, and really need to finish working on an R&R.
but then I can work on our paper
fran

Francesca Gino
Tandon Family Professor of Business Administration
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Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

<image003.png>

From: [redacted]
Date: Friday, April 12, 2019 at 3:32 PM
To: [redacted]
Cc: Francesca Gino <fgino@hbs.edu>
Subject: RE: Your manuscript, OBHDP_2018_839, has not been accepted

Hi team,

Org Science just sent me a manuscript to review that is all about promotion/prevention regulatory foci and network ties. It's a theory-only piece, but it still gives us another incentive to get our paper published sooner than later.

Shall we give ourselves a deadline to go through the reviews and compare notes on the changes we'd like to make before submitting again? I should be able to carve out a few days in May to work on the paper rewrite.

Best,
[redacted]

From: [redacted]
Sent: April 7, 2019 12:43 PM
To: [redacted]
Cc: Gino, Francesca <fgino@hbs.edu>
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

I am not teaching so that is good, but I am writing a couple of drafts. I should have time to contribute if we come up with a direction to pursue

[redacted]

On Apr 7, 2019, at 8:18 AM, [redacted]

[redacted] wrote:

I'm actually getting excited about rewriting the paper. We have received a lot of consistent feedback, and even though we disagree with a lot of it, it still gives us a clear sense of what turns people off, and we can address at least a subset of those reactions.

What's your availability to rewrite in the coming weeks?

[redacted]

From: [redacted]
Sent: April 6, 2019 11:04 AM
To: Gino, Francesca <fgino@hbs.edu>; [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

We can, but I agree with [redacted] that we need to do some rewrite then

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Thursday, April 4, 2019 at 8:53 AM
To: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

Can we try JEP:G? it has a really good impact

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Chair, Negotiation, Organizations and Markets (NOM) Unit
Co-Chair, *Behavioral Economics Executive Education Program*
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Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

<image001.png>

From: [redacted]
Date: Friday, March 29, 2019 at 9:55 AM
To: [redacted], Francesca Gino <fgino@hbs.edu>
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

My vote is for B too but I think we can try JESP or PSPB (they are solid A_ journals)
[redacted]

From: [redacted]
Date: Friday, March 29, 2019 at 8:43 AM
To: [redacted] "Gino, Francesca" <fgino@hbs.edu>
Subject: RE: Your manuscript, OBHDP_2018_839, has not been accepted

I agree with [redacted] that we've had many psych reviewers already, and I'd be surprised if a top psych journal like JPSP had a more positive reaction than those reviewers did.

Here's how I see the situation. We've had the following clear-cut rejections:

1. AMJ, first try
2. AMJ, second try
3. OS
4. JAP
5. OBHDP

Even accounting for the reviewers who got the paper twice, we've had a dozen people uniformly reject the paper, including reviewers with background in OB, networks and psych. With this track record, I see no point submitting yet again to a top journal, even if we made edits to the paper. We're just going to be rejected again.

There are two ways forward, in my view:

- Option A is to rewrite the paper completely, including a new title, revamped framing and theory, and new studies, and submit it to a top-tier journal.
- Option 2 is to submit the current paper, with light edits, to a lower tier journal, such as Social Psychology Quarterly or Motivation and Emotion.

Option A would be a major investment, and I think we all have papers with greater potential we'd rather focus on instead. Option B is disappointing, but it would allow us to finally place this paper before it becomes obsolete (the first submission was 3 years ago, and others have pushed research on networking in the meantime) and give ourselves and others a chance to cite it (just this week, I've had someone asking me how to cite our networking promotion and prevention scale).

My vote is for Option B, unless you have a better third option to suggest.

[redacted]

From: [redacted]
Sent: March 29, 2019 8:46 AM
To: Gino, Francesca <fgino@hbs.edu>
Cc: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

We can; I think the challenge is that our JSPS and OS reviewers seem to be psych people and they did not like it. But we can certainly try. One challenge is that JPSP

has new requirements for sample size etc for a submission

[redacted]

From: "Gino, Francesca" <fgino@hbs.edu>
Date: Thursday, March 28, 2019 at 6:03 PM
To: [redacted]
Cc: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

Can we try a psych journal like JPSP first? And see what psych people say about the work?

fran

On Mar 28, 2019, at 7:38 AM, [redacted] wrote:

Hard for me to say; I do not think PNAS would be interested since they go with very interesting phenomenon or very wide applicability and appeal. Also editing for PNAS is going to be a ton of work since they want a very brief draft

I agree we need to edit if we want to try another mgm journal. What about going to JESP or J of Management

[redacted]

From: [redacted]
Date: Wednesday, March 27, 2019 at 1:41 PM
To: "Gino, Francesca" <fgino@hbs.edu>, [redacted]
Subject: RE: Your manuscript, OBHDP_2018_839, has not been accepted

Hi Francesca,

Thanks for thinking this through. If we target another A journal, I think that we have to revise the paper first. Short of running new studies—which none of us has the appetite for, and might not help us anyway—we need to make a few changes to address the most recurrent criticisms, add the most recent relevant literature, and avoid irritating future reviewers who will have seen the paper in its current form already. If we all can carve out time to go through the paper and find the low hanging fruit in terms of revisions, I'm fine trying another top journal.

I don't know PNAS, so I lean on your judgment there. I'm not sure about Management Science, though. I strongly suspect that we'd get the same reaction that we've received from all the other management journals we've sent the paper to. My instinct is to try PNAS, after some revising, and if that doesn't work, bite the bullet and go to B journals.

What say you, [redacted]?
Thanks,
[redacted]

From: Gino, Francesca [mailto:fgino@hbs.edu]
Sent: March 27, 2019 9:14 AM
To: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

Hi team,
I have been thinking about this quite a bit and here is where I am at. I'd like for us to try the following outlets:

- Management Science (Org section)
- PNAS

If these do not work, then we can go to B journals.

Can we try this plan?
fran

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Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

<image001.png>

From: [redacted]
Date: Monday, March 11, 2019 at 9:39 AM
To: [redacted]
Cc: Francesca Gino <fgino@hbs.edu>
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

Dear Francesca and [redacted]

I take our collective silence following yet another rejection as a sign that we're ready to try and place this paper in a lower-tier journal—should we be so lucky.

I am thinking of Motivation & Emotion. We would still need to spend a couple of days on the paper to deal with recent related papers and tweak the argument. Now that the paper has gone through 4 rounds of reviews, the likelihood of running into the same reviewers is higher, and we probably need to edit the paper

at least a little to show them some responsiveness.

For a more sociological outlet, we could consider Social Psychology Quarterly, but they are going to need an injection of sociological literature to believe the paper fits, and that will require a few days' work, with uncertain results.

You might have other lower-tier psych journals in mind, so please feel free to suggest alternatives.

I would even be open to a book chapter, if an opportunity came up. Any home would be a good home, given the reactions we've been getting. Although some comments are stunning (control for grit??!?), the pattern is clear and we need to make lemonade with these lemons...

[redacted]

Sent from my iPhone

EXHIBITS 22A, 22B, AND 22C

Emails from Co-author [redacted]

Subject: RE: feedback from MIT
Date: Sunday, October 18, 2015 at 8:32:29 PM Eastern Daylight Time
From: [redacted]
To: Gino, Francesca, [redacted]
Attachments: Why Connect Oct 2015.pptx, Report template 2015 edits Oct15.docx

I want you in the room every time I give a talk, Francesca! Thanks for the excellent notes!

I am itching to work on the paper. Here's my suggestion. This coming week, I must write a tenure letter and three decisions for org science. Once those are out of the way, I should be able to finally take my stab at the paper the following week and send it back to you toward the end of October. Going forward, I finish this term's teaching on Nov 20, so I will be able to focus on our work for real when you come visit, thankfully.

Meanwhile, I'm sending you the latest slides that include the new law firm results. Also, to put our law-firm results in their broader context, I'm also attaching the personal report I have put together for each respondent. Please keep it to yourself, since it mentions the firm by name and I have signed a NDA with them. But I'm sharing the report with you because it gives perspective on how uniquely important promotion/prevention and authenticity are in the data.

[redacted]

From: Gino, Francesca [mailto:fgino@hbs.edu]
Sent: October-18-15 2:28 PM
To: [redacted]
Subject: feedback from MIT

Hi team,

As promised, here is the feedback on [redacted]'s great talk from MIT.

[redacted] — I know you are super busy but if you can find time in the next couple of weeks to add the field data, then I could have a pass at the manuscript and then send it back to you. Then we could finish working on it when I come visit in Nov?

francesca

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
Twitter: @francescagino
Book: *Sidetracked*

Subject: RE: Paper 2 revised extended abstract
Date: Friday, May 15, 2015 at 3:07:21 PM Eastern Daylight Time
From: [redacted]
To: Gino, Francesca, [redacted]

Francesca,

I totally understand things getting out of control for a while, and am thrilled to hear you'll be able to work on the paper soon. The good news is that it has been accepted at the Lugano conference (June21-22), so now we really are on the spot to push it forward in the next few weeks. Besides, other people are converging on the nexus between networks and motivation, and we want to ahead of that trend…

Really looking forward to the work ahead! We certainly are getting fabulous encouragement from our colleagues to keep it up!

[redacted]

From: Gino, Francesca [mailto:fgino@hbs.edu]
Sent: May-15-15 2:52 PM
To: [redacted]
Subject: Re: Paper 2 revised extended abstract

[redacted]

Sorry I went MIA. What a semester… all good, just much busier than I had expected.
This is top priority for me. Just a tenure letter in front of it, but I'll be in touch with a good update in the next week or so

Congrats to us for the award. Really wonderful!
francesca

Francesca Gino
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Book: *Sidetracked*

From: [redacted]
Date: Tuesday, May 12, 2015 at 9:49 PM
To: Francesca Gino <fgino@hbs.edu>, [redacted]
Subject: Paper 2 revised extended abstract

Hi Francesca and [redacted]

I've taken a stab at expanding the extended abstract for paper 2 (attached), and I've sent it the Lugano conference organizers. It may be too little, too late for the conference, but perhaps it will help move things along for us. Once you add the description of the law firm study (also attached), it starts to feel a little closer to an actual paper. Sometimes, having a few extra paragraphs on paper inspires a writing breakthrough! ☺

Best,
[redacted]

Subject: RE: Your manuscript, OBHDP_2018_839, has not been accepted
Date: Wednesday, July 31, 2019 at 8:35:50 PM Eastern Daylight Time
From: [redacted]
To: Gino, Francesca, [redacted]
Attachments: image001.png, image002.png

Hi Franci,

You're not the only one who talked about working on the paper in May! We all had good intentions, but we're also all busy with many interesting projects. A good problem to have, I guess. ☺

You can definitely have four more weeks! It's lovely that you haven't given up on the paper, and I am happy to take another stab at it, too, once you've had a chance to make your edits.

Thanks,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: July 31, 2019 7:49 PM
To: [redacted]
Subject: Re: Your manuscript, OBHDP_2018_839, has not been accepted

I realize I said end of May and it is now end of July...
Can you give me 4 more weeks? If I have not touched the paper by then, we can send submit it to a B-type journal

---

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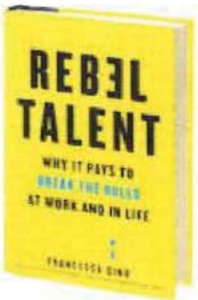

EXHIBIT 23

Email to [redacted]

Subject: an update
Date: Wednesday, November 28, 2018 at 3:00:08 PM Eastern Standard Time
From: Gino, Francesca
To: [redacted]
Attachments: UH related activities for Nov Dec 2018.docx, image001.png

Hi Nitin,

I am writing to let you know that [redacted] and [redacted] have kindly agreed to take on my Unit Head responsibilities for the next 2-3 weeks, as I need to be out of the office during that time for personal reasons. I'll stay engaged over email so that I can come back to the role fully informed in January, and help in the next couple of weeks if needed.

I am sorry if I was supposed to ask for permission from you and didn't. But the last few days have been difficult from a personal standpoint, and I did not have much time to come up with a plan that would be fair to NOM.

[redacted]

I also apologize for missing the AC meeting yesterday and the one coming up – I know how important they are.

best,
francesca

Francesca Gino
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To Break The Rules At Work And In Life

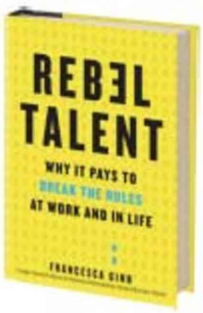

EXHIBIT 24

Email Confirming Submission to JPSP

Subject: Re: Networking motivation paper
Date: Friday, September 20, 2019 at 9:39:34 AM Eastern Daylight Time
From: [redacted]
To: [redacted], Gino, Francesca
Attachments: image001.png, image002.png, Why connect 9-20-19.docx

Submitted!
Here is the final file

[redacted]

From: [redacted]
Date: Thursday, September 19, 2019 at 8:07 PM
To: "Gino, Francesca" <fgino@hbs.edu>, [redacted]
Subject: RE: Networking motivation paper

It was [redacted]'s find. My only merit is remembering she sent it! 😊

From: Gino, Francesca <fgino@hbs.edu>
Sent: September 19, 2019 9:04 PM
To: [redacted]
Subject: Re: Networking motivation paper

Thank you [redacted] Great find – I was not aware of the paper you sent!
fran

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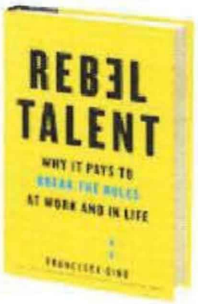

EXHIBITS 25A, 25B, 25C, AND 25D

Email Exchanges with RA [redacted]

Sunday, February 5, 2023 at 20:56:54 Eastern Standard Time

Subject: RE: help with an IRB application
Date: Monday, January 6, 2020 at 5:43:59 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca
Attachments: HUA Protocol Networking Motives 01.06.2020 v01 draft.docx

Hi Fran,

I just finished drafting a protocol for these studies (attached here).

I included some questions in the margins. Also, I used brackets and yellow highlighting to indicate uncertainty (e.g., I don't know if you want to use Dropbox or OneDrive to store the study data, so I wrote "Harvard [Dropbox] for question 12.27).

Also, we still need to put together:

1. Consent form documents for the three different studies
    a. Do you have Qualtrics/MTurk versions available? If so, I can make them into Word documents for the IRB.
2. A measures document (just Word exports of the three different Qualtrics surveys should suffice).

One more thing: I created a draft ESTR submission for this study (which can be found here -> IRB20-0016: Networking Motives). I'll upload the finalized protocol, measures, consent forms, etc. when we've finished those.

If there's anything else I can do to help with this, please let me know.

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Monday, January 6, 2020 10:07 AM
To: [redacted]
Subject: Re: help with an IRB application

THANK YOU!
I'm re-taking the CITI certification now

PS – let me know if you can reach [redacted] today. I am planning to use the case study in March so it'd be great to have it in the system soon

---

Francesca Gino
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Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Monday, January 6, 2020 at 10:04 AM
To: Francesca Gino <fgino@hbs.edu>
Subject: RE: help with an IRB application

Hi Fran,

Sure thing, I'll start working on the application today and will send you an update on my progress before EOD.

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Monday, January 6, 2020 10:02 AM
To: [redacted]
Subject: help with an IRB application

Hi [redacted]
I am wondering if you could help me prepare an IRB application that mention 3 different studies, explained in the attached.

Rational for the studies:
Networks are a key source of social capital for achieving goals in professional and personal settings. Yet, despite the clear benefits of having an extensive network, individuals often shy away from the opportunity to create new connections because engaging in instrumental networking can make them feel inauthentic and physically dirty. In this research, we explore how the motives people have when engaging in networking can reduce these feelings and lead them to network more often. Specifically, we examine how self-regulatory focus, whether promotion or prevention, affects people's experience of and outcomes from networking. We predict that a promotion focus is beneficial to professional networking. People who approach networking with a promotion focus experience lower levels of moral impurity when engaging in instrumental networking than those who approach networking with a prevention focus. As a result, networking with a promotion focus increases the frequency of instrumental networking as compared to networking with a prevention focus, with positive consequences for job performance.

I can fill in the blanks for things you do not know how to fill in.
I'll have the Qualtrics ready by EOD

Thanks!
fran

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New HBR article: *Cracking the Code of Sustained Collaboration*

Subject: RE: help with an IRB application
Date: Tuesday, January 7, 2020 at 4:11:45 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca
Attachments: HUA Adult Consent Form Template.docx, HUA Protocol Networking Motives 01.07.2020 fg ar with tracked changes.docx, Study 1 Online Consent Form (From Study 1 Part 1 Qualtrics Survey).docx

Hi Fran,

I think we're almost ready to submit this application; just a few more details to handle.

I reviewed the protocol and revised it using your comments and the Qualtrics documents you sent me.

If you want to see the latest changes, they're all in "*HUA Protocol Networking Motives 01.07.2020 fg ar with tracked changes.docx*" (in Tracked Changes).

I've also uploaded the recruitment scripts, the revised protocol, the Qualtrics consent forms, and the measures/Qualtrics documents to the ESTR application (which is here: IRB20-0016: Networking Motives).

Some questions:

1. In the protocol, you said that Study 1 Part 2 participants will be contacted "**a week**" after they complete Study 1 Part 1. In the Study 1 consent form, it says that participants will receive the Part 2 link "**three days**" after Part 1.
    a. Which length of time (1 week vs. 3 days) between Parts 1 and 2 would you prefer?
1. What do you plan to do with the email addresses collected during Study 1 Part 1 after you finish Study 1?
    a. Right now, the protocol says that you'll delete the Study 1 email addresses after Study 1 Part 2 is closed. Is that the plan?
        i. Question 6.2 in the protocol (page 17) is especially relevant (nd includes a rough plan for disposing of those email addresses and linking the Part 1 and Part 2 data.
        ii. For 12.24 in the protocol (page 30) , I marked the first option in order to indicate that the direct identifiers (the email addresses) will be deleted after you finish Study 1. I also mention this plan in 12.25.

Comments:

1. The Qualtrics consent forms don't match up with the CUHS consent form templates I'm familiar with (please see "**HUA Adult Consent Form Template**").
    a. Of course, if you've already submitted this sort of online consent form to the IRB before, then there's probably nothing to worry about. Just wanted to check with you.
    b. **Alain didn't like the Qualtrics formatting (e.g., "Study 1 Online Consent Form") when I tried to use it for the Feedback Study application.**
    c. **If you want me to try to get the Qualtrics consent forms to fit into the most recent HUA consent form template, I can try to do that (though the wordings are pretty different).**
2. The Study 3 consent form doesn't mention LinkedIn. I think the coordinators might push back on this and will probably ask you to mention LinkedIn in the Study 3 consent form.
    a. We could submit the application and wait to see what they say. Up to you, of course.

Sorry this took so long. If I can help with anything else, please let me know.

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Tuesday, January 7, 2020 12:07 PM
To: [redacted]
Subject: Re: help with an IRB application

Here are the word versions. Do these work?

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Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Tuesday, January 7, 2020 at 11:58 AM
To: Francesca Gino <fgino@hbs.edu>
Subject: RE: help with an IRB application

Thanks Fran!

I noticed that the consent forms in the PDF printouts for the surveys are cut off (e.g., consent forms for Study 1 Part 1 is cut off on page 4). Not a huge deal, but the coordinators might ask about that.

If you have a free moment, would you be willing to share one of the surveys with me? I can do the consent form printouts if you share one of the surveys with me.

Thanks for your help; I should be able to finish this by the early afternoon.

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Tuesday, January 7, 2020 10:53 AM
To: [redacted]
Subject: Re: help with an IRB application

[redacted]
Here is the revised protocol, and the surveys from Qualtrics.

Let me know if you have any questions
fran

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
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From: [redacted]
Date: Monday, January 6, 2020 at 5:44 PM
To: Francesca Gino <fgino@hbs.edu>
Subject: RE: help with an IRB application

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Also, we still need to put together:

1. Consent form documents for the three different studies
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One more thing: I created a draft ESTR submission for this study (which can be found here -> IRB20-0016: Networking Motives). I'll upload the finalized protocol, measures, consent forms, etc. when we've finished those.

If there's anything else I can do to help with this, please let me know.

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Monday, January 6, 2020 10:07 AM
To: [redacted]
Subject: Re: help with an IRB application

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From: [redacted]
Date: Monday, January 6, 2020 at 10:04 AM
To: Francesca Gino <fgino@hbs.edu>
Subject: RE: help with an IRB application

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[redacted]

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To: [redacted]
Subject: help with an IRB application

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increases the frequency of instrumental networking as compared to networking with a prevention focus, with positive consequences for job performance.

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New HBR article: *Cracking the Code of Sustained Collaboration*

Subject: RE: coding task
Date: Thursday, January 23, 2020 at 6:12:22 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca
Attachments: data RFN study1_AR.xlsx

Hi Fran,

I have a few questions about the coding scheme:

1. The document mentions 5 categories (e.g., "Type of network ties", "Strategic orientation"), and there are 13 dimensions beneath those categories (e.g., familiarity with target, learning attitude, one-on-one vs. group networking).
    a. Do you want me to code the 412 essays on all 13 dimensions, or just a subset of the dimensions?
2. I'm a bit confused by what the coding scheme means by "target" in the first category, "Type of network ties".
    a. For example, if the participant describes networking with multiple people, which person is the "target"?
    b. What if there are multiple targets and the targets differ on a dimension (e.g., the participant describes networking with people both within *and* outside of their company)?
3. If you have some time, would you be willing to skim the example I've attached ("*data RFN study1_AR.xlsx*") to see if you're okay with how I've arranged the 13 dimensions?

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Thursday, January 23, 2020 10:24 AM
To: [redacted]
Subject: Re: coding task

Thank you!!!

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Chair, Negotiation, Organizations and Markets (NOM) Unit
Co-Chair, *Behavioral Economics Executive Education Program*
Co-Chair, *Driving Profitable Growth Executive Education Program*
Website: http://francescagino.com/
Twitter: @francescagino
New Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New HBR article: *Cracking the Code of Sustained Collaboration*

From: [redacted]
Date: Thursday, January 23, 2020 at 10:21 AM

To: Francesca Gino <fgino@hbs.edu>
Subject: RE: coding task

Hi Fran,

Sounds good to me; I should be able to send you the completed coding by tomorrow afternoon. I'll let you know if I have any questions in the meantime.

Best,
[redacted]

P.S. I have some concerns about the Viking videos project; I'll try to send you an update on that before the end of the day. The gist is that [redacted]'s RA is pushing forward with the transcriptions without timestamps.

From: Gino, Francesca <fgino@hbs.edu>
Sent: Thursday, January 23, 2020 10:06 AM
To: [redacted]
Subject: coding task

Hi [redacted]

If you have time today and tomorrow, I was wondering if I can get your help on the following task.
The details are in the doc file. The essays are in the BM column of the excel file.

If you can, you can just add columns for each of the dimensions to code in the excel file. I think for each dimensions the code should be 0 or 1 (for no and yes) but you can decide to use scales (1-5) if you think that would be best after reading a few of the essays

Thanks!
fran

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New HBR article: *Cracking the Code of Sustained Collaboration*

Subject: RE: testing
Date: Tuesday, January 14, 2020 at 10:56:11 AM Eastern Standard Time
From: [redacted]
To: Gino, Francesca

Hi Fran,

Just a few things to note (sorry for the delay, had to organize my notes):

- Study 1, Part 1
  - The question "How many years have you been speaking English on a daily basis?" actually threw me off a bit.
    - I wasn't sure if I should just list my age or if I should account for how long it took me to actually start speaking. I'm probably overthinking this, though.
  - It's possible to enter nonsensical values (long text, long numbers) for the last few demographic questions about how long you've lived in the U.S., your age, etc.
    - Dropdown questions might be a bit safer.
  - The formatting in the question, "How many years have you been speaking English on a daily basis?" looks a bit strange. I think there's an extra space between the word "How" and the word "many."
  - In the prompt for the first measure ("First, we want to ask you a few questions about yourself. For each of the questions below, please indicate the extent to which you agree"), you say "indicate the extent to which you agree", but in the prompt for the second measure ("Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement"), you say "indicate how strongly you agree or disagree" in the prompt.
    - This isn't a problem per se; it's just a difference I noticed.
- Study 2
  - After participants are asked to list an aspiration, the next instruction ("In this next task, you will read a story and asked to imagine yourself in the situation described") should say, "you will read a story and be asked". Just a minor typo.
  - There's a typo in the instructions that show up after the moral purity measure:
    - "Now please take a minute and think about the what you wrote about earlier, about something ideally would like to do, in other words, think about a hope or aspiration that you currently have. Please reflect on your experience for 1-2 minutes and then proceed to the next task" -> Should be, "Now please take a minute and think about what you wrote about earlier, about something ideally you would like to do. In other words, think about a hope or aspiration that you currently have…"
  - Though I understand what you're trying to get participants to do when you ask, "Please write a few words that came to mind?", I wonder if it would be helpful to remind them about what they're supposed to write about (e.g., "Please write a few words that came to mind while you were reflecting?" *[also applies to Study 3]*
- Study 3
  - The field beneath the question 'Please enter the initials of your contact' allows you to input a lengthy combination of characters, probably more characters than participants will need in order to enter initials.
  - There's a typo in the instructions that show up after the moral purity measure:
    - "Now please take a minute and think about the what you wrote about earlier, about something you ought to do, in other words, think about a duty or obligation that that you

currently have. Please reflect on your experience for 1-2 minutes and then proceed to the next task." -> Should be, "Now please take a minute and think about the what you wrote about earlier, about something you ought to do. In other words, think about a duty or obligation that you currently have..."

- There's no text verification for the "reflection" 'write 5-6 words' questions; I was able to proceed without writing any words in those reflection questions.

- Across all three surveys:
  - In the consent forms:
    - I'd change the phrase (underneath the headings ***Why is this research being done*** and ***What is the purpose of this research***) "We are interested in understanding how people interact with others in a professional setting, e.g., when they try to create new professional connection or nurture existing relationships" to say "connections".
    - The formatting for the last bullet point ("You can ask all the questions you want before you decide") in the list beneath the "***What should I know about a research study?***" heading is different from the formatting for the rest of the bullets.
    - The formatting of the text beneath the heading "***What is the purpose of this research?***" makes the text light gray (while the rest of the consent form is black) and a bit difficult to read.
  - I think there's something odd going on with the survey flow for the attention/comprehension checks at the beginnings of the surveys.
    - Study 1:
      - I said "No" to the question "Are you fluent in English?" but was still allowed to proceed.
      - On my second or third test of Study 1 Part 1, I intentionally failed all of the attention/comprehension checks at the beginning of the survey (wrong letter "g", said "Cat", didn't choose the last option) but was still allowed to proceed.
      - On my third or fourth test run of Study 1, I didn't enter a real email address after the consent form and was kicked out the survey without explanation.
        - This was a run during which I intentionally answered all of the attention/comprehension check questions incorrectly.
        - **Maybe the survey is kicking me out for answering those attention check questions incorrectly *after* the consent form instead of kicking me out before the consent form?**
          - **If participants answer the attention check questions incorrectly, I think they should be kicked out before the consent form.**
    - Study 2:
      - I intentionally failed one of the attention/English comprehension check questions (the first one, 'Please select the letter that's missing in this chain'), but I was still allowed to start the survey.
    - Study 3:
      - I intentionally failed two of the attention check/English comprehension questions (gave answers of "b" and "Tree"), but I was still allowed to start the survey.
  - For the "Gender" demographic questions, some participants might not like the fact that there's not a third "Other" option.
  - The free response questions generally allow you to proceed without entering much text.
    - Not a problem, but I wonder if some participants will try to cheat the surveys by entering short, bogus responses.

Best,
[redacted]

From: Gino, Francesca <fgino@hbs.edu>
Sent: Tuesday, January 14, 2020 8:46 AM
To: [redacted]
Subject: testing

[redacted]

Before I post the studies, can you check each of the following links (going through them a couple of times) to see if anything seems off?

Study 1, Part 1
https://hbs.qualtrics.com/jfe/form/SV_bILkcjYj2cHAKWh

Study 2
https://hbs.qualtrics.com/jfe/form/SV_8jeI9PXvlowBnRr

Study 3
https://hbs.qualtrics.com/jfe/form/SV_1GQY6ZpnsaVKDJ3

thanks!
fran

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EXHIBIT 26

RAs Working with Me Between 2011 and 2022

Fiscal Year	Start Date	End Date	% of time or sum of hours	Salary or Hourly Rate	RA Name	Payroll Type
FY11	3/1/11	6/30/11	75%	46,256.00	[redacted]	Exempt (Salaried)
FY11	8/22/10	2/28/11	50%	46,256.00		PON, exempt
FY11	7/1/10	6/30/11	12.50%	65,280.00		Exempt (Salaried)
FY12	7/1/11	12/29/11	75%	49,000.00		Exempt (Salaried)
FY12	6/15/11	3/31/12	557.5	24.00		Contractor (Hourly)
FY12	2/12/12	3/10/12		12.00		HU Student (Hourly)
FY12	7/1/11	6/30/12	25%	66,912.00		Exempt (Salaried)
FY12	7/1/11	8/27/11		12.00		Temp (Hourly)
FY13	2/11/13	2/13/13				Agency Temp (Hourly) (Hourly)
FY13	8/8/12	6/30/13	43.75%	60,000.00		Exempt (Salaried)
FY13	7/1/12	3/31/13	25%	68,919.00		Exempt (Salaried)
FY13	1/6/13	6/30/13	50%	56,000.00		Exempt (Salaried)
FY13	7/29/12	9/1/12	75	100.00		Contractor (Hourly)
FY13	12/30/12	3/2/13		12.00		HU Student (Hourly)
FY14	1/17/14	1/31/14		15.00		HU Student (Hourly)
FY14	8/15/13	9/28/13		15.00		Temp (Hourly)
FY14	1/20/14	5/31/14		15.00		HU Student (Hourly)
FY14	7/1/13	6/30/14	43.75%	61,800.00		Exempt (Salaried)
FY14	8/15/13	9/28/13		15.00		HU Student (Hourly)
FY14	7/1/13	6/30/14	25%	70,986.57		Exempt (Salaried)
FY14	7/1/13	5/30/14	50%	57,680.00		Exempt (Salaried)
FY15	5/8/15	5/8/15		21.00		Agency Temp (Hourly) (Hourly)
FY15	8/11/14	8/16/14		30.78		One-Time Payment
FY15	9/22/14	12/20/14	12	15.00		HU Student (Hourly)
FY15	7/1/14	8/30/14	175.5	15.00		Temp (Hourly)
FY15	7/1/14	8/30/14	95	15.00		Temp (Hourly)
FY15	7/1/14	9/6/14	55	13.00		Temp (Hourly)
FY15	7/24/14	12/31/14	60.5	12.00		Payroll Service (Hourly)
FY15	12/21/14	2/28/15	108	26.44		LHT (Hourly)
FY15	7/1/14	8/30/14	137.5	15.00		Temp (Hourly)
FY15	9/2/14	2/28/15	350	24.62		LHT (Hourly)
FY15	7/1/14	6/30/15	43.75%	63,654.00		Exempt (Salaried)

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 1198 of 1282

FY15	8/18/14	12/31/14	24.46	24.62	[redacted]	Payroll Service (Hourly)
FY15	7/1/14	6/30/15	544.455	35.28	[redacted]	Payroll Service (Hourly)
FY16	12/6/15	12/19/15	7	25.96	[redacted]	HU Student (Hourly)
FY16	7/13/15	9/20/15	156.5	15.00	[redacted]	Payroll Service (Hourly)
FY16	8/3/15	8/7/15		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY16	12/6/15	6/30/16	38	15.00	[redacted]	HU Student (Hourly)
FY16	7/1/15	8/29/15	26.5	15.00	[redacted]	HU Student (Hourly)
FY16	12/6/15	12/19/15	16.5	25.00	[redacted]	HU Student (Hourly)
FY16	12/9/15	12/14/15		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY16	7/20/15	9/30/15	185	15.00	[redacted]	Payroll Service (Hourly)
FY16	8/3/15	8/7/15		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY16	12/9/15	12/14/15		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY16	7/1/15	1/31/16	37.50%	65,563.62	[redacted]	Exempt (Salaried)
FY16	2/1/16	5/27/16	5%	65,563.62	[redacted]	Exempt (Salaried)
FY16	7/1/15	6/30/16	520	36.34	[redacted]	Payroll Service (Hourly)
FY16	5/31/16	6/2/16		276.00	[redacted]	Extra-Compensation
FY16	12/6/15	12/19/15	10.5	14.00	[redacted]	Temp (Hourly)
FY16	7/1/15	7/31/15	58.92	14.00	[redacted]	Payroll Service (Hourly)
FY17	10/15/16	6/30/17	50%	62,000.00	[redacted]	Exempt (Salaried)
FY17	1/29/17	6/30/17		30.77	[redacted]	HU Student (Hourly)
FY17	7/1/16	8/6/16	18	15.00	[redacted]	HU Student (Hourly)
FY17	2/19/17	4/29/17	36.75	26.44	[redacted]	LHT (Hourly)
FY17	7/1/16	6/30/17	509.7	37.43	[redacted]	Payroll Service (Hourly)
FY18	4/10/18	4/27/18		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY18	11/29/17	11/29/17		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY18	4/9/18	4/9/18		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY18	10/27/17	10/29/17		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY18	11/29/17	11/29/17		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY18	7/1/17	9/30/17	29.75	30.77	[redacted]	HU Student (Hourly)
FY18	10/27/17	11/2/17		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY18	7/23/17	7/31/17		230.01	[redacted]	One-Time Payment
FY18	2/4/18	6/30/18	18	14.00	[redacted]	HU Student (Hourly)
FY18	7/1/17	6/30/18	520	38.37	[redacted]	Payroll Service (Hourly)
FY18	11/2/17	11/2/17		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY19	7/1/18	6/30/19	75%	56,650.00	[redacted]	Exempt (Salaried)

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 1199 of 1282

FY19	11/14/18	2/9/19		9.00	[redacted]	Contractor (Hourly)
FY19	7/1/18	6/30/19	10	39.52	[redacted]	Payroll Service (Hourly)
FY20	10/17/19	11/9/19		14.00	[redacted]	HU Student (Hourly)
FY20	**10/21/19**	**6/30/20**		15.00	[redacted]	HU Student (Hourly)
FY20	7/1/19	9/28/19	15	14.00	[redacted]	Contractor (Hourly)
FY20	2/14/20	2/19/20		21.00	[redacted]	Agency Temp (Hourly) (Hourly)
FY20	**9/23/19**	**6/30/20**		15.00	[redacted]	HU Student (Hourly)
FY20	7/1/19	6/30/20	100%	59,000.00	[redacted]	Exempt (Salaried)
FY20	7/1/19	6/30/20		40.71	[redacted]	Payroll Service (Hourly)
FY20	5/12/20	6/30/20		14.00	[redacted]	HU Student (Hourly)
FY20	9/16/19	10/5/19		14.00	[redacted]	HU Student (Hourly)
FY20	5/11/20	6/30/20		14.00	[redacted]	HU Student (Hourly)
FY21	2/4/21	4/30/21		27.88	[redacted]	Temp (Hourly)
FY21	7/1/20	8/29/20	486	15.00	[redacted]	HU Student (Hourly)
FY21	1/7/21	2/28/21		17.00	[redacted]	Payroll Service (Hourly)
FY21	6/9/21	6/30/21		17.00	[redacted]	HU Student (Hourly)
FY21	6/14/21	6/30/21	50%	58,000.00	[redacted]	Exempt (Salaried)
FY21	1/7/21	2/28/21		17.00	[redacted]	Payroll Service (Hourly)
FY21	7/1/20	1/30/21		16.00	[redacted]	HU Student (Hourly)
FY21	8/30/20	9/26/20		15.00	[redacted]	HU Student (Hourly)
FY21	7/1/20	7/11/20	100%	59,000.00	[redacted]	Exempt (Salaried)
FY21	7/12/20	6/30/21	75%	59,000.00	[redacted]	Exempt (Salaried)
FY21	7/1/20	6/30/21		40.71	[redacted]	Payroll Service (Hourly)
FY21	7/13/20	1/30/21	7	15.00	[redacted]	HU Student (Hourly)
FY21	7/13/20	8/29/20		15.00	[redacted]	HU Student (Hourly)
FY22	7/1/21	12/18/21		17.00	[redacted]	HU Student (Hourly)
FY22	7/1/21	6/30/22	50%	58,000.00	[redacted]	Exempt (Salaried)
FY22	7/1/21	6/30/22		41.93	[redacted]	Payroll Service (Hourly)

Case 1:23-cv-11775-MJJ Document 20-5 Filed 10/10/23 Page 1200 of 1282

EXHIBIT 27

Draft Chapter 7 of Professor [redacted]'s Book "Complicit"

Chapter 7

Profile F: Trust in our Relationships

In the summer of 2021, when I was nearly finished with the first draft of this book, three respected social science researchers—Uri Simonsohn, Joe Simmons, and Leif Nelson—published a post on the academic blog Data Colada (http://datacolada.org/98) entitled "Evidence of Fraud in an Influential Field Experiment About Dishonesty."[i] The authors presented compelling evidence that the well-cited research paper "Signing at the Beginning Makes Ethics Salient and Decreases Dishonest Self-Reports in Comparison to Signing at the End" was fraudulent. Unfortunately, I was a coauthor of the paper. While I did not commit the fraud, I was complicit in the fraud that was uncovered. My trust in others was central to my complicity.

This chapter documents my struggle in thinking about how to manage the many benefits of being trusting against the risk of becoming a complicitor. As I will document, I was far from a passive observer. When I saw possible ethical problems, I did seek clarification. But, I too easily accepted answers, when I should have pushed even harder. The failure to push harder created my complicity.

[redacted], and I published the paper in question in 2012 in the journal *Proceedings of the National Academy of Sciences*.[ii] The paper aimed to identify a simple intervention that "nudges" people to be more honest when filling out forms, such as their income tax return or a mileage report for the company that insures their car. Specifically, based on the results of three experiments, we claimed that if an organization asks people to sign a statement promising to tell the truth *before* they fill out a form, they will provide more honest information than if they sign such a statement *after* providing the requested

information. We predicted that reminding people upfront of their obligation to be truthful would prompt them to respond more honestly. And, indeed, this is what our experiments all appeared to show.

The paper combined two previously unpublished empirical efforts: (1) two laboratory experiments by [redacted] and I that claimed to demonstrate the "signing first" effect, and (2) one field experiment conducted at an insurance company, previously described by [redacted] in multiple public forums. Gino initiated the contact to [redacted] who was positive about joining together, and noted "I have been working on this with [redacted] -- so this will have to involve her as well." Gino contacted [redacted] who also agreed to join noting that "it's a good idea to combine forces". By early 2011, the five of us combine efforts, realizing that the two projects responded to limitations of the other: the [redacted] studies claimed to offer well-controlled laboratory experiments, while the field study claimed to provide an experiment using data from an insurance company.

In the field experiment, customers were said to have signed an honesty statement either before or after reporting mileage from their car's odometer. Because the insurance company would charge customers more if they drove more, customers had a monetary incentive to (unethically) under-report their mileage. Data were ostensibly collected from customers twice; each customer had provided their odometer reading earlier, before the researchers were involved, and a second time, after the researchers assigned them to one of two conditions (signing *before* reporting mileage or signing *after* reporting mileage). The key measure in the field experiment was the difference between the two mileage reports, which would provide a measure of how many miles customers drove during that period of time. It was important for customers to be randomly assigned to one of the two conditions, as this would ensure that any difference

observed in mileage reporting could be causally explained by whether they signed before or after reporting their mileage second time. The field experiment was represented as involving randomly assigning customers to one of the two conditions.

In February 2011, all authors received a draft of the new, combined paper. Gino, [redacted] and [redacted] had worked on it before I saw a draft. This was the first opportunity I'd had to examine insurance company study in any detail. The write-up of that experiment claimed that customers who signed the "truth" statement *after* reporting their odometer mileage had driven 23,601 miles in the past year and that customers who signed the "truth" statement *before* reporting their mileage had driven 26,098 miles in the past year—2,427 more miles than those who signed the truth statement after. This was a very large, statistically significant difference. The implication was that when signing on the front end of a form, people considered the ethical dimension of what they were about to report, which made them less likely to lie by underreporting their mileage.

The data in the insurance experiment made me nervous. Specifically, I found it strange that people had driven such a large number of miles in one year in both conditions—averaging over 24,000 miles. "The means for the number of miles driven in a year seem enormous—twice what I would have expected," I wrote to my coauthors in March 2011. "Am I simply wrong, is the sample unusual, or is there an error in recording the data?" [redacted] responded to me quickly with a brief email: "the milage [sic] are correct." Over the next few weeks, I had multiple discussions in person with [redacted] and Gino at Harvard, in which I communicated my suspicions about the data—specifically, the number of miles driven, which seemed to me to be abnormally high.

My concerns led to further communication among the five authors. In an April 2011 email, [redacted] provided more information about the source of the data: "We used an older population mostly in Florida -- but we can't tell how we got the data, who was the population (they were all AARP members) -- and we also can't show the forms . . . " I still did not understand why the customers' mileage would be so high, and received no good answers to my questions throughout the rest of 2011.

In January of 2012, I attended a professional conference in San Diego, where I ran into [redacted] who was my advisee, a coauthor of mine on other papers, and a friend. [redacted] was with [redacted], whom I had never met. After [redacted] introduced us, I expressed my significant concern about [redacted]'s lack of clarity in explaining the mileage issue I had questioned. I told [redacted] and [redacted] that I didn't think [redacted]'s explanation—that the data came from an elderly population—accounted for what seemed to me to be abnormally high mileage numbers. [redacted] pulled out her laptop and found the data file that we were discussing. She said that while [redacted] may not have explained the issue well enough, we were simply dealing with a minor issue regarding how to explain the data. As I recall that conversation, [redacted] believed that the confusion came from the first odometer reading, which customers provided before being assigned to a sign-before or sign-after condition. Specifically, she explained that it wasn't clear when the first readings had been taken, and it may have been more than a year before the second readings were taken. Thus, the first draft of the write-up of the study apparently was not accurate in stating that there had been a year between the two mileage reports. The implication was that the time difference between the mileage reporting was unclear, rather than that the mileage data were wrong. [redacted]'s explanation was plausible and consistent with the general trust I have in my co-authors (in the

past, I had never considered the possibility that a coauthor had provided fraudulent data), so I trusted her account.

We changed the description of the data collection, consistent with [redacted]r's oral report, after [redacted] had additional communication with the insurance company. While I considered [redacted]'s earlier answers to be inadequate, I wanted to believe the updated explanation and that the study was solid. [redacted] was a graduate student at the time, my advisee, and had been presenting this research on the job market as part of her portfolio of ongoing research. I was rooting for her to succeed and wanted this paper to help carry her forward. As I write this book a decade later, I am open to the possibility that I was engaged in motivated blindness—the tendency to ignore information about others' unethical behavior when doing so would work against our self-interest.[iii]

After we published our paper in 2012, it received a great deal of attention. By the end of 2021, the paper had been cited in other research papers close to 500 times.[iv] Numerous organizations implemented our idea and moved the signature line from the bottom of forms to the top. I believed the core result—that signing first leads to more honest reporting than signing after. I presented our work at universities and when I taught MBA students and executives. In my consulting practice, I advised organizations to move signature lines to the top of forms.

In September 2016, I received an email from Stuart Baserman, the co-founder of Slice Labs, a technology company working to move the insurance industry online (a growing field known as "insurtech"). "A couple of days ago," Baserman wrote, "I was researching the 'psychology of claims' and I came across 'Signing at the beginning makes ethics salient . . ' . . . Of course, the paper and your name caught my attention. If you have some time, it would be nice to learn about you, your work and how it may relate to what we are building at Slice."

I soon met Baserman and began work as a consultant to Slice. (The similarity of our surnames led my spouse to order DNA-testing kits for each of us, which showed that we are very distant cousins). Part of my consulting assignment involved helping Slice create a platform that would induce claimants to tell the truth online. Working with Slice led me to broaden out from the idea of "signing first" to find ways to induce online honesty, including when people are answering questions and making decisions.

In 2017, I started a research collaboration with [redacted] (then a Harvard Ph.D. student) and [redacted] (then an assistant professor at Harvard) that looked at this broader question of online honesty. Knowing that Slice would be interested in the results of the research, before we began, I reached out to Harvard Business School officials to confirm that it would be acceptable for me to conduct the basic research using HBS resources, given the relationship between the research and my work for a consulting client—a possible conflict of interest. I received this permission.

Given the apparent success of signing first, documented in the Shu-Mazar-Gino-Ariely-Bazerman 2012 publication, it felt obvious to start by demonstrating the signing-first strategy in an online context. In the Shu-Mazar-Gino-Ariely-Bazerman laboratory studies, participants had shown up at a lab in person, and data was collected using physical forms. I believed that [redacted] and I would be conducting an easy extension study that would simply replicate the 2012 results in an online context. Yet, our first attempt at replication failed; that is, people's reporting was not statistically different whether they signed before or after filling out an online form. We tried four more times and failed each time.

We now had five failures to replicate what [redacted] Gino, [redacted] and I had reported as a large, statistically significant effect in our 2012 paper. [redacted] and I decided the

next step would be to do a pure replication of one of the laboratory studies from the 2012 paper with a large sample. To be collaborative rather than adversarial, [redacted] and [redacted] suggested that we invite the other four authors from the original paper (Shu-Mazar-Gino-Ariely) into the project. All four authors agreed to join us. Again we failed to replicate the signing-first effect. The seven of us (Kristal-Whillans-Bazerman-Gino-Shu-Mazar-Ariely) went on to document this failure in a *Proceedings of the National Academy of Sciences* paper in 2020.[v]

In the process of writing this 2020 failure-to-replicate paper, [redacted] uncovered an unexplainably large difference in the *first* baseline odometer reading in the field study—the mileage that the insurance company's customers reported at least a year before being assigned to the signing-first or signing-after conditions. Namely, there was an enormous difference between the two groups in this first odometer reading, which was taken before any researcher intervened: the baseline mileage for drivers signing *after* mileage reporting was 75,035 miles, while the baseline for drivers signing *first* was 59,693. Researchers call this a "randomization failure," meaning that the two conditions differed on an important outcome before researchers intervened. The likelihood of the two conditions differing by this large amount by chance was less than 1 in 10,000, which raised questions about whether a randomized experiment had even taken place. I expressed this concern to all of my coauthors. In the end, we agreed to document the enormous pre-measure difference in our 2020 publication.

An early draft of the 2020 paper said that we had only learned about the 2012 randomization failure due to [redacted]'s recent reexamination of the data. In a telephone conversation, [redacted] responded by claiming that all five authors of the 2012 paper (Shu-Mazar-Gino-Ariely-Bazerman) had been on a telephone call with the insurance company during which the randomization failure had been discussed. I responded that I had never been on such a call, or

on any call, with the insurance company involved in the 2012 field experiment. I am certain I would have remembered such a call. As I noted, I didn't know about the randomization failure until 2019.

As we worked on the replication project, [redacted] and I had regular disagreements with [redacted] and [redacted] about the degree to which the new studies invalidated the results published in 2012. [redacted] and I favored clearly expressing our view that the signing-first effect did not replicate, while [redacted] and [redacted] simply wanted to narrow the conclusions of the failure-to-replicate paper. In the interest of reaching a consensus, I made too many concessions. As a result, the 2020 paper is not as critical of our 2012 paper as I argued it should be. I also have no recollection of any of the authors (including me) of the 2020 paper making the argument to initiate the process to retract the 2012 paper. My failure to fight harder to clearly describe the lack of validity of the 2012 paper made me complicit.

On July 27, 2020, soon after the 2020 paper was published, the editors of the *Proceedings of the National Academy of Sciences* (*PNAS*) asked if our original 2012 paper should be retracted. An email discussion ensued among the five coauthors of the 2012 paper about retracting. I was in favor of retraction. On July 28, 2020, [redacted] emailed the other four authors, "I am not aware of any experimental error — my guess is that it is just one of these times when the lab produces a different result for some reason — I am not suggesting any mistake…I believe that over time the weight of the evidence will be in favor of the first result…But —we will see. This is the beautify [sic] of this process." A few hours later, [redacted] sent another email expressing confidence in the results of the 2012 paper, despite five failures to replicate. Going a step further, he predicted that the *2020 failure to replicate* paper would need to be retracted: " . . . I suspect that we will end up retracting the second paper . . . My strong preference is to keep both papers

out and let the science process do its job . . . " In an email sent the same day, [redacted] agreed with [redacted] "I do not see reason for retracting our paper given PNAS' criteria. As far as I know we do not have evidence that the findings of our three experiments are unreliable, either as a result of major error through miscalculation or experimental error . . . From the email thread so far, it looks like the majority agrees that there is no need for retraction. Shall we respond to PNAS with that or is there more need for discussion? . . . Cheers, [redacted]

"It is obvious to me that the original paper was based on unscientific and unethical reporting of data," I wrote the next evening in another email arguing for retraction. "This is the basis of my preference to retract. I think we should all be embarrassed that our names are on the paper – I certainly am embarrassed by having my name on that paper . . . I may be outvoted, but do not read me as being part of a consensus, [redacted]

[redacted] responded to the group within a few hours, requesting that I clarify what was unscientific and unethical about our original data reporting. The next morning, I answered her question: "Reporting a randomized experiment where there was no randomization. Lack of transparency about this issue . . . Obfuscation to multiple questions that I asked in the creation of the original paper . . . Not informing me of the lack of randomization during the creation of the paper." But, even then, I did not suspect pure data fabrication in our published work. [redacted] and I remained the only two authors of the 2012 paper explicitly in favor of retraction. Ultimately, we did not retract the original study. I think that this was a mistake.

In July 2021, about a year after we passed on the opportunity to retract our 2012 paper, Uri Simonsohn contacted all five of the authors of the 2012 paper to let us know that the Data Colada team had drafted a post providing strong evidence pointing toward data fraud in the insurance experiment. [redacted] quickly proposed that all the paper's authors meet online. I

responded that I was not willing to be part of that group until I received a written statement that clearly explained how the fraud had occurred. I did not receive this information.

I then initiated what became repeated requests for the original emails and data that [redacted] claimed to have received from the insurance company. Within a few days, [redacted] claimed that they'd been lost. Soon after, he left an audio message for me, Gino, [redacted] and [redacted] that included the following: "Hello to everybody . . . the first point, I should say, is that this is, if anything is wrong, it is perfectly my—my fault, and, nobody else. I was the one that was, got the connection to the, the Hartford insurance company that ran this study . . . we gave them the instructions of what to do, and we got the data . . . [redacted] and I found the original data . . . ". [redacted] subsequently clarified that finding the original data referred to [redacted] finding the data that [redacted] provided to her in February, 2011.

I still do not know why, over the course of ten years, [redacted] avoided my questions, fought so hard against retracting the paper, repeatedly tried to bolster the strength of the 2012 paper, or how he knew that the mileage data was correct when I first raised questions. While [redacted] consistently clarified that he was the only author who had been in contact with the insurance company, he told Buzzfeed News that he was innocent of fraud and implied that Hartford was responsible.[vi] "I can see why it is tempting to think that I had something to do with creating the data in a fraudulent way" he said.[vii] But, according to Buzzfeed, [redacted] gave conflicting answers about the origins of the data file that was the basis for the analysis.[viii]

On July 22, 2021, Gino, [redacted] and I asked PNAS to retract our 2012 paper. ([redacted] and [redacted] also made independent requests for retraction around the same time.) The media focused its attention on [redacted] and released the rest of the authors from blame for committing data fraud.

I am confident that people that I care about in my professional network do not view me with suspicion, yet I remain uncomfortable about having my name connected to a fraudulent paper.

While I did not collect the insurance company data and was not directly involved in its analysis, I suspected it was problematic and shared my suspicions with my coauthors. I took their answers at face value and believed them when I should have been more persistent in demanding better answers. And when further data arrived that questioned the results of the 2012 paper, I could and should have been more persistent in highlighting my views. Being an author of a fraudulent paper haunts me, in large part due to my own complicity.

The story I've just told is not nearly as important as the stories I've told about other complicitors in this book. But it highlights the ubiquity of situations in which we are faced with a choice between being complicit and taking a stand, especially when faced with the question of whether to trust those around us. The irony of this being a story about data fraud in a paper on inducing honesty is not lost on me.

The Value and Challenge of Trust

Choosing to trust the people who surround you creates enormous opportunities in life. By trusting your colleagues, you can accomplish so much more for your organization than if you spent time rechecking all of their work or held back from sharing important information with them. Developing trust also helps us build relationships that can be key to our happiness. Thus, any concerns we may have about becoming complicit as a result of our trust in others need to be balanced against the benefits of trusting them.

One challenge associated with this balancing act is that the cues that something is wrong are typically ambiguous. When you see hints that something is wrong, it is possible that you are

seeing smoke when there is no fire. Further investigation might show that no harm was done, and you could end up offending people you care about by showing your lack of trust. In academia, given all of the challenges to ensuring the integrity of data in the social sciences, I think it would be healthy if we changed our norms to make it standard for authors to expect greater documentation of the work of their coauthors, without offense being taken in the process.

In an important paper on trust, organizational scholars Roger Meyer, Jim Davis, and David Schoorman highlight the power of distinguishing trust based on three different attributes of a person: their ability, their benevolence, and their integrity.[ix] The scholars highlight that when you say "I trust you" to someone, that can mean that you trust the person to have the competence to complete a task (ability), the generosity required to meet their commitment (benevolence), or the intention of completing a project in an honest manner (integrity). It is easy to recall episodes in life where we trusted people based on each of these three different qualities.

Being trusting is generally a good thing. We view people who are not trusting with suspicion. It is awkward to reveal that you do not trust someone; it sounds like an accusation and can threaten the relationship. But trust can also lead to System 1 thinking, or the habit of intuitively relying on information provided by others even when we receive signals that there might be reason for concern. And, as I highlight in Chapter 3, we may be biased in over-trusting people who are part of our team, for example, or coauthors.

I trusted both the ability and integrity of all of my coauthors on the 2012 paper. Reflecting on my history of interactions with all of my many past coauthors, I find that the only times in my career when I didn't trust a coauthor's ability were when I was mentoring a relatively new doctoral student on one of their first projects. In those cases, I would carefully review their work, since they might not yet have the skills to conduct the technical pieces of a

project correctly. However, I have never paused to question the integrity of data provided by a coauthor. And, overall, I think that being trusting has helped me complete interesting research projects and develop important professional relationships.

By the time the 2020 replication failure paper was published, I no longer believed in the integrity of the insurance data. I was skeptical about whether a valid study had been conducted, but I did not imagine that the data were purely fraudulent. What should I have done? I could have explored the data more fully myself. I could have contacted the journal that published the 2012 paper, without the majority of my coauthors, and asked that it be retracted. In retrospect, I wish I had done this. But I didn't. Instead, by not setting the research record straight as quickly as possible, I was complicit.

After the data fraud story broke in 2021, it became clear to me that I had placed too much trust in others and, indirectly, too much trust in data presented in a paper that had my name on it. In recent years, many questions have arisen surrounding the validity and integrity of social science research, which have led to more stringent practices when it comes to conducting experiments and reporting data. We can apply these new norms to the question of whether it is appropriate to check the work of our colleagues, particularly when we notice something that doesn't look right. I do not wish to become a less trusting person, but I do wish that I had listened to the signals that emerged over time in the data fraud story and questioned my trust. Being trusting may be a good attribute generally, but when we trust those who may not be worthy of our trust, we can become complicit in any harm that results.

Chapter 7

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[iii] Bazerman & Tenbrunsel, *Blind spots*.
[iv] Google Scholar, Retrieved November 9, 2021 from Nhttps://scholar.google.com/citations?view_op=view_citation&hl=en&user=NGKWT4gAAAAJ&cstart=20&pagesize=80&citation_for_view=NGKWT4gAAAAJ:3htObqc8RwsC.
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Chapter 8

EXHIBIT 28

Professor [redacted]'s Reply to Professor [redacted]'s Draft Chapter 7

Dear [redacted]

I think your idea for the book and your effort to understand what happened with the 2012 paper is certainly interesting and worthy of exploration. But I think what you've written shows a lack of effort to accurately present the ground-truth facts in terms of roles, responsibilities, and motives of those involved. This is a necessary step before one can arrive at the real lessons that this incident should have taught us all.

Without a shred of evidence that I had anything to do with the field study, and despite [redacted] repeatedly stating that he alone had contact with the insurance company that performed the field study, you repeatedly and misleadingly in this chapter keep referring to:

- "*one field experiment conducted at an insurance company by* [redacted] *and* [redacted]
- "*his* [redacted] *and* [redacted] *'s data,*"
- "*the* [redacted] *study,*"
- "[redacted] *and* [redacted] *'s field experiment,*"
- "[redacted] *and* [redacted] *'s insurance company study,*"
- "*the* [redacted] *and* [redacted] *experiment,*"
- "*the* [redacted] *field study.*"

You also say that

- "[redacted] *... claimed to show the 'signing first' effect,*"
- "[redacted] *claimed customers had been randomly assigned to one of two conditions,*"
- "*neither* [redacted] *nor* [redacted] *sent [the data to you].*"

And you write that you believe that I [redacted]

- "*understood the data*" before the paper was published in 2012.

In doing so, you've framed the narrative in a way that indiscriminately and unfairly deflects the blame onto [redacted] and me equally, even though you have no evidence that I was involved in any way with the field study (including collecting and entering the data or being involved in its primary analysis and balance checks), had any contacts with the insurance company, or had any ongoing project on "signing first" with [redacted] at that time. There is simply no evidence that this study and data was any more mine than for example, yours.

To clarify: I was invited by Francesca by email (with [redacted] in cc) in January 2011 to join the 2012 group of coauthors with the stated expectation that I write-up the field experiment that [redacted] had already conducted and analyzed at that time. I had no files or detailed information about the field study before joining this group of collaborators. I had no project on this topic with [redacted] In addition, I was never tasked to perform the primary analysis; it was already done, and [redacted] shared it with me after I joined this group of coauthors so I could write it up (February 2011). Furthermore, you may want to correct the chapter by making it clear that it was Francesca who wrote the first draft, and that [redacted] and I subsequently edited it. In the email that Francesca sent to

all of us with the first joint draft attached, she also suggested that [redacted] and I be first and second author, presumably because we were the most junior authors on the team (PhD student and assistant professor). Nevertheless, because of my small contribution at that time, I replied to everyone (February 2011) that I didn't think I deserved to be second author, unless I ended up contributing more.

About a year later, in January 2012, you and I met for the first time in person, at the SPSP conference in San Diego, where we discussed your concern about the large mean for driven miles. At that conference, I only conveyed what I had been able to gather from [redacted] If you may recall, over the course of our entire collaboration on the 2012 paper (1/2011 – 7/2012), I often served as the intermediary, relaying questions about the field study from the group to [redacted] and back as well as asking him for feedback on our write-up. I did not have the firsthand knowledge required to respond to your legitimate concern about the large number of miles driven.

You further claim that:

> "*We changed the description of the data collection to be consistent with* [redacted] *'s oral report.*"

To be accurate, we changed the description of the data collection later, in May 2012, after [redacted] sent an email to Francesca, [redacted] and me in which he wrote:

> "*Hello to all, Just finished another set of talked [sic] with people at the insurance company and with Ed -- and it seems that the number is not from year before but it is from the start of the policy. .... I am sorry it was not clear from the start (and I should have checked on this years ago, when all the people helping me with this study were still working there), but the good news is that now we have a better handle on the data[.]*"

The three of us then updated the description of the study accordingly, and [redacted] shared the updated draft with you and [redacted] for feedback about 10 days later. Because you were the only one who was left out of the email that [redacted] had sent to Francesca, [redacted] and me, you shared your surprise about this updated description in an email to us all a day later. [redacted] responded to your email that same day saying:

> "*Hello to all, Sorry if I did not include everyone on the correspondence and discussions. here is what we have learned 1) The forms we mailed people did not ask them how much they drove in the last year, they only asked them for the odometer reading 2) The data for the base of the odometer was not a similar form from the year before -- it was based on what was in the file of each customer -- which is basically the odometer reading from the time the policy started. .... This means that that the difference measure is a good one, but we cannot say anything definitive about the time period, and that the time period is not the same for all customers... .*"

In addition, there are several inaccuracies in your discussion of the sharing of the insurance data with you and your asserted lack of knowledge that the insurance company was Hartford. Apparently, in an effort to address your continuing concern about the large mileage driven, in

February 2012, [redacted] introduced all of us via email to two people "[redacted]" and "[redacted]," with whom he apparently had worked with on the insurance field study. Like you, I had not known or had any contact with [redacted] or [redacted] before that email. Following this introduction, our entire authorship group had several email exchanges with Ed, in which Ed mentioned "Hartford" several times. In addition, [redacted] also shared the insurance data file with all of us in one of these emails, including the insurance form files that were labeled "Hartford." So, by February 2012 at the very latest (that is 3-4 months before first submission to PNAS), every co-author had received the field experiment data and insurance forms from [redacted] and were informed that the insurance company data was from Hartford. During that time, I also set up a Dropbox folder on my private account, where I put our joint files and shared it with everyone for their convenience. In 2018 I shared the insurance data file with [redacted] and added her to the people with access to my Dropbox folder.

Later, you write in your chapter about our interactions this past summer 2021, after being contacted by Data Colada and my effort to set up a meeting amongst the 2012 authors:

> "*I was not willing to be part of that group until I received a written statement from* [redacted] *and/or* [redacted] *that clearly explained how the fraud had occurred. I received no direct response to this request.*"

I would like to remind you that I did respond to your email in writing, that same day, July 15, 2021. I did so despite your unfounded, implicit accusation that I knew of the fraud. Given this extreme level of hostility that you directed at me, my response was short but to the point. I stated the truth:

> *"I was not aware of fraud until the email we got from Uri, Leif, and Joe. I cannot speak to how the study was conducted or the data was collected beyond what we all know."*

Thus, you are at best inaccurate when you write you received no response. The fact is that you did receive a response from me to your request and yet, you showed no interest to have a level-headed, honest, courteous conversation with our authorship group, devoid of unfounded accusations.

Finally, I would like to address four other points in your draft chapter that are misleading, in some cases due to omitted information or missing context:

1) You write:

> "*As we worked on the replication project,* [redacted] *and I had regular battles with* [redacted] *and* [redacted] *about the degree to which the new studies invalidated the results published in 2012.* [redacted] *and I favored clearly expressing our view that the signing-first effect did not replicate, while* [redacted] *and* [redacted] *simply wanted to narrow the conclusions of the failure-to-replicate paper. … .*"

While this is essentially correct, it fails to give the reader some of the reasons why I wanted to narrow the conclusions of the failure-to-replicate paper. For the record, I did

not want to do it just for the sake of it. I had two main reasons. First, I wanted to understand the discrepancies with the old lab studies, given that at the time I was invited to join the 2012 group of co-authors, I was informed by Francesca that there was a total of four lab studies showing the effect (ultimately only 2 made it into the PNAS paper). Since we did not have any evidence that any of those lab findings were the result of major error through miscalculation or experimental error, in my mind there existed four old lab studies showing the effect vs. six new lab studies that were not showing the effect, and I was genuinely interested in discovering potential moderators of the effect. Second, I thought the old and new studies were comparing apples to oranges. For example, the old lab studies tested the location of the signature in a context where one typically expects to sign at some point (a tax form), while the 2020 lab studies 1-5 were in a context where one doesn't expect to sign at some point. I was also concerned that the 2020 lab studies 2-6 were performed without a control condition (i.e. a cheating condition without a signature).

As researchers we ought to seek the truth and that's what I was trying to do. The truth is that you made it very clear what the goal of the 2020 paper was and what you expected from us. You wrote in 2019:

> "[redacted] [redacted] *and I meant to be inclusive when we asked all original authors to join. But, I do not want that decision to result in further delay in what I think of as 'coming clean'.*"

In another email you stated,

> "*The fact that after and no signature do not differ does not make them the same.*"

Yet, you didn't apply that same takeaway to the fact that sign before and after did not differ.

I now realize that given the issues I have had with the 2020 paper and the pressure I have been feeling to not raise any more issues about it, I should have taken my name off the list of authors. The irony is that this is how I believe you felt regarding the 2012 paper. The difference to your feeling of complicity is that I feel complicit with both the 2012 and the 2020 papers.

To be clear, I do believe that the 2020 paper was essential for making the insurance field study data publicly available, which ultimately made possible the discovery of the fraud. It also may very well be that the location of the signature doesn't affect honest self-reporting. However, it is very clear to me now (especially also after the new issues that I only discovered post publication of the 2020 paper and that I have since pointed out to the entire authorship group) that the evidence presented in the 2020 paper is not sufficient to claim that signing before versus after does not decrease dishonesty.

2) You decided to quote verbatim my email from July 28, 2020:

> *"[To add my opinion to the exchange:] I do not see reason for retracting our paper given PNAS' criteria. As far as I know we do not have evidence that the findings of our three experiments are unreliable, either as a result of major error through miscalculation or experimental error. From the email thread so far, it looks like the majority agrees that there is no need for retraction. Shall we respond to PNAS with that or is there more need for discussion? . . . Cheers,* [redacted]

The first part of my email is me adding my opinion to that of the other four coauthors. The second part of my email is what I wrote in the capacity as corresponding author. My casual tone in this context may come across as if I didn't take the issue seriously when the truth is that the casual tone was my bad attempt of diffusing a hostile team dynamic.

Furthermore, what is missing is that back in 2019, when we were working on the 2020 paper, the group of coauthors decided to point out the randomization issue with the insurance field study from the 2012 paper. My best recollection is that you did not raise the possibility of retraction of the 2012 at that time. That's why, to my knowledge, the 2020 was also written the way it was. It was meant to build on the 2012 paper, even if it raised questions about some of its conclusions.

As I recall, you first mentioned retraction for the 2012 paper when PNAS wrote to us on July 27, 2020 (i.e., about four months after the 2020 paper was published), because they had received an email from a reader asking if the 2012 paper would be retracted. Together with Francesca and [redacted] I voted against retraction. I had two prime reasons for my vote: First, because of what I just described above; and second, because we did not have any other new evidence since 2019 -- both Francesca and [redacted] told us they were not aware of any experimental errors in the studies they had conducted for the 2012 paper.

At the end of the day, in response to PNAS' request after publishing the 2020 paper, all five of us 2012 coauthors were still in agreement on the randomization problem with the insurance field study (which, to reiterate, was pointed out in the 2020 paper), but we reached different conclusions about whether or not to vote for retraction of the 2012 paper. As you know, I was transparent about that in my corresponding email to PNAS, which by the way all five of us co-authors approved and agreed to send. In the end, we received the following decision from PNAS:

> "*We have now shared your response with two experts serving on our Editorial Board. Both are in agreement that 'given that the 2020 paper points out the weaknesses of the earlier one, I think that both papers should be in the literature and readers should draw their own conclusions.' As such, no further action will be taken.*"

3) You chose to quote verbatim [redacted]'s audio message to us from 7/15/2021, where [redacted] says

> "[redacted] *and I found the original data that they send [sic] us . . .*"

It is correct that [redacted] said that. However, unfortunately his statement is misleading. The fact is, the insurance company has never sent anything to me. The only files I received were sent to me by [redacted] Also, [redacted] and I did not find anything together.

For context, prior to his audio message to us I had informed [redacted] that I had found the data file that accompanied the analysis results files that he shared with me for my write up back in February 2011. I can only assume that [redacted] was referring to that in his audio message. This is by the way the data file that I also shared with the Data Colada authors.

As I have stated before, I was not involved in the field study, had no contact with the insurance company, no ongoing project with [redacted] on that topic, and no files or detailed information about the field study prior to the 2012 collaboration.

4) You also write:

> "*On July 22, 2021, Gino, [redacted] and I asked PNAS to retract our 2012 paper.*"

This creates the false impression that only the three of you asked for retraction. The truth is all five coauthors asked PNAS to retract the 2012 paper. We just didn't do it together in a single letter because of the dysfunction and "distrust" in the group.

If your main point is that "trusting" each other led to a lack of due diligence and needed oversight, you point is well taken. I could not agree more. But for a scientist, placing pursuit of truth at the foreground, some of your claims are false and some of your representations unfair, misleading, presented out of context, and frankly defamatory.

Sincerely,

[redacted]

EXHIBIT 29

Email Exchange Between Professor [redacted] and Professor [redacted]

Friday, February 3, 2023 at 16:58:21 Eastern Standard Time

Subject: FW: Complicity in the Signing First paper
Date: Wednesday, November 17, 2021 at 10:56:43 AM Eastern Standard Time
From: [redacted]
To: [redacted]
CC: Gino, Francesca, [redacted]
Attachments: [redacted]20211116_NM.docx, Chapter 7.11.17.21.docx

[redacted]

First, thank you for the time and effort to review the chapter that I sent. I am attempting to be as accurate as I can about the history, particularly about my complicity in the story. Sending the chapter to all co-authors was intended as a check on my accuracy.

I also want to be clear that this is my first-person account of my honest understanding of the data fraud story. The use of quotes (from emails) is intended to help me avoid the need to interpret the motives of others.

Attached is an updated draft of the chapter that is responsive to many of your concerns in your letter to me on 11/16/21. This chapter is not yet final, and I remain open to clarity from others. [redacted] requested an extra week to respond, and I intend to provide that time.

Your connection to the field study: Quite honestly, I always assumed that the field experiment was a joint product by the two of you (until it became part of our five-author publication). My read of the email chain in January, 2011 implies that [redacted] saw you as his collaborator, that Gino thought you were part of that project, and that you saw the integration of five authors as joining forces, rather than you being added to a combination of the four of us – the latter leaving it unclear the basis for your inclusion. But, referring to the field experiment as a [redacted] and [redacted] study is not really needed for my account, and I have edited that out of the revision.

I have edited my account about who created the initial draft in 2011 and about our first meeting in San Diego per your letter. I appreciate the clarity.

I appreciate that Gino and you saw yourself in the middle between [redacted] and me at multiple points. But, my experience found you in alignment with [redacted] at key junctures in the story. I have avoided editorializing about that, and only use actual words that I received from you. If you see any remaining errors, I am open to reviewing more of your observations. I plan to continue to try to avoid offering information about the motives of others, information that I did not have as the story developed.

Only recently was I made aware of the emails that were in my inbox in 2012 that mention Ed and Hartford. I honestly have no recollection of seeing them. I was certainly frustrated by the information flow in the project by then, and was considering withdrawing from the project (it was my decision to not do so). But, I have eliminated the statement that I didn't know about the name of the insurance company until 2019, since the definition of "know" can be ambiguous.

Based on your letter on 11/16/21, I have eliminated the sentence "I received no direct response to this request".

I can understand your frustration with my lack of willingness to meet as a group in July, 2021. From my perspective, I wanted to be disconnected from the fraud as much as possible. I also wanted to be as accurate

as possible in writing this chapter. If you find it useful to meet, perhaps with Gino and [redacted] (cced), I am open to that. I continue to be unwilling to meet with [redacted] I do not mean to be speaking for Gino and [redacted] in this statement.

1st other point: Once again, my goal is to avoid inferring motives of others throughout this chapter. My read is that you and I have continue to reach different conclusions of what could be inferred from the replication failures.

2nd other point: I have added my failure to request retraction in 2019. I think that this is a helpful edit for accuracy in describing my complicity. My understanding is that Gino believes that she never voted against retraction in 2020. I think that Gino and I are clear that she never voted for retraction in 2020. This is not part of the chapter.

3rd other point: I have shrunk the words in [redacted]'s oral message to avoid the implication that the insurance company sent data to both of you.

4th other point: I added the fact that you and [redacted] independently also requested retraction in 2021.

I hope that you find many of these changes responsive, and I appreciate the multiple points where you helped me be more accurate or precise.

As I noted earlier, I am open to additional information about what I have factually wrong. And, I am open to discussing. I have good availability this week, and then will be off the grid for a couple of weeks. I will not be finalizing the chapter and book before early to mid-December.

Once again, I appreciate your input on this chapter,

[redacted]

From: [redacted]
Sent: Tuesday, November 16, 2021 5:18 PM
To: [redacted]
Subject: Re: Complicity in the Signing First paper

[redacted]

Attached please find my comments to your chapter.

[redacted]

On Nov 11, 2021, at 8:29 AM, [redacted] wrote:

Authors of the two signing first papers:

I have spent much of 2021 writing a book entitled *Profiles in Complicity*. The book provides seven profiles of the ways in which many of us are complicit with wrongdoing. This is my honest personal account of our story. I have tried to use objective evidence in describing what happened – thus the use of emails. I would appreciate it if you would review my account for any errors you see in my description.

It is easiest for me to incorporate your feedback if I hear from you within the next week. But, I will have further chances to change actual errors at a later date.

In advance, thank you for your review of this material,

[redacted]

[redacted]

Information contained is private and confidential.

EXHIBIT 30

Email Informing Co-authors About Giving Up the Role of Corresponding Author for the 2020 PNAS paper

Subject: Re: Correction 2019-11695RRR
Date: Thursday, November 18, 2021 at 10:42:24 AM Eastern Standard Time
From: Gino, Francesca
To: [redacted]

Hi all,

I was able to connect with [redacted] and **I think the best way forward is for each of us to sit down and take the time to go through all the materials and the paper to make sure there are no other issues to point out to PNAS.** I can also enlist my awesome RA, [redacted], to do the same. But, in the end, this is our work, and we should all take the same care and attention [redacted] took in going through the materials.

There is an additional thought I'd like to share. This collaboration has been really difficult (I don't think I am saying something you don't already know). I am generally a very positive person, but all the disagreements, poor communication and awkwardness has generated a lot of stress for me. I am usually a private person but I think you need a bit of context... The last year and ½ has been really challenging for me, personally, due to the pandemic, managing a large family with small children through it, getting COVID, family health issues, and the drama of the summer added to the already high levels of stress, broke friendships and mentorship relationships. On top of everything else, all of this has been hard to process and to work through. **I don't have the mental strength to continue being the corresponding author, so I would prefer if [redacted] or [redacted] took charge – it can be one of the changes to communicate to the journal if possible.**

Maybe we can give ourselves a deadline of Nov 29. We can reconvine then and hopefully agree on the note to send back to Yael.
Thank you for understanding,

francesca

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
Twitter: @francescagino
On LinkedIn and Instagram
Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
New TEDx talk: *The Power of Why*

EXHIBIT 31

Email from RA [redacted]

Monday, February 6, 2023 at 15:32:25 Eastern Standard Time

Subject: Re: a few questions
Date: Monday, February 6, 2023 at 3:16:49 PM Eastern Standard Time
From: [redacted]
To: Gino, Francesca

You don't often get email from [redacted]. Learn why this is important

Hi Francesca -

Thanks for reaching out about this and it's great to hear that you are reviewing and improving your research mechanisms. I no longer have access to my HBS email so my answers are based on my recollections from working with you between 2012- 2016.

1. It was common practice that I had access to your Qualtrics and MTurk accounts in order to create experiment materials and collect data from research participants.

2. We mainly hired undergraduate research assistants to staff experiment sessions both at HBS or in the field.

3. While at HBS I supported other research faculty and, in general, your research practices were similar.

I hope this helps and please let me know if you have any other questions!

[redacted]

On Thu, Feb 2, 2023 at 7:42 AM Gino, Francesca <fgino@hbs.edu> wrote:

> Hi [redacted]
>
> I hope you are well.
>
> I have been spending some time in the last few months thinking about how to best improve the way I work with collaborators, doctoral students and RAs, so that I do not go over my research budget (as it happened in the past) and also have more control and transparency over who is doing what.
>
> When you were still at HBS, it was common for me to share my account information for Qualtrics, MTurk and Prolific so that I did not become a bottleneck for people working with me. In fact, both my FSS (faculty support specialist), doctoral students and collaborators also had my credit account for the same reason.
>
> I often shared this information with people face to face. My notes tell me that you were one of the people I shared this information with, given that you worked closely with me in support of the GiNorton lab. Can you confirm this for me?

One of the many reasons why I enjoyed working with you is that you were super well organized. For some of the studies we conducted, you had help from other RAs, either from the lab or hired temporarily. Do you remember if they were mainly undergrads?

In addition to supporting me, you also worked with other faculty members, who – like me – ran many laboratory studies, worked with doctoral students and scholars at other schools. Were my practices similar to theirs?

If you could let me know, I would very much appreciate it.

Thank you,

francesca

Francesca Gino

Tandon Family Professor of Business Administration

Harvard Business School

Website: http://francescagino.com/

Twitter: @francescagino

On LinkedIn and Instagram

Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

TEDx talk: *The Power of Why*

EXHIBITS 32A AND 32B

Emails from Previous FSS [redacted] and FSS [redacted]

Monday, February 6, 2023 at 11:10:35 Eastern Standard Time

Subject: Re: quick question

Date: Monday, February 6, 2023 at 10:48:35 AM Eastern Standard Time

From: [redacted]

To: Gino, Francesca

H Fran,

Hope you had a p easant weekend. It was very co d on Saturday!! My partner and I have a dog now and he had to wear h s coat to go outs de, and even then he d dn't want to stay outs de for ong :)

In response to your quest ons...

I be eve we shared your account nformat on at the t me t was pr mar y mTurk and Qua tr cs, I th nk both over ema and face to face. I do remember shar ng t w th some of your students face to face and some co aborators over ema . And I remember that your research budget wou d often go over due to the many ongo ng stud es!

You were def n te y the most pro f c researcher of the peop e I worked for (A son, Les e, Jerry, Ian, etc.) and I do not reca shar ng that nformat on as often w th the r students and co aborators. If I d d so, I th nk t was pr mar y n person, and/or the facu ty member shared t d rect y w th the r students (I remember be ng ess nvo ved n A son's research and more nvo ved n teach ng and adm n strat ve support, etc.).

Hope that's he pfu . Ref ect ng on the past makes me m ss the wonderfu co eagues n NOM!

[redacted]

On Fri, Feb 3, 2023 at 11:36 AM Gino, Francesca <fgino@hbs.edu> wrote:

> Thank you!!!
>
> fran
>
> ---
>
> Francesca Gino
>
> Tandon Family Professor of Business Administration
>
> Harvard Business School
>
> Website: http://francescagino.com/
>
> Twitter: @francescagino
>
> On LinkedIn and Instagram
>
> Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
>
> TEDx talk: *The Power of Why*
>
> ---
>
> **From:** [redacted]
> **Date:** Friday, February 3, 2023 at 10:22 AM
> **To:** Francesca Gino <fgino@hbs.edu>

Subject: Re: quick question

Hi Fran,

I'll get back to you over the weekend if that's all right. Busy times over at MIT during tenure case season :)

[redacted]

On Thu, Feb 2, 2023 at 10:29 AM Gino, Francesca <fgino@hbs.edu> wrote:

> Hi [redacted]
>
> I hope you are well.
>
> I have been spending some time in the last few months thinking about how to best improve the way I work with collaborators, doctoral students and RAs, so that I do not go over my research budget (as it happened in the past) and also have more control and transparency over who is doing what.
>
> When you were still at HBS, it was common for you to share my account information for Qualtrics, MTurk and Prolific so that I did not become a bottleneck for people working with me. I know you and others also had my credit account for the same reason.
>
> I often shared this information with people face to face. Did you share this information face to face also or via email?
>
> In addition to supporting me, you also worked with other faculty members, who – like me – ran many laboratory studies, worked with doctoral students and scholars at other schools and were supported by RAs. Were my practices similar to theirs?
>
> If you could let me know, I would very much appreciate it.
>
> Thank you,
>
> fran

Francesca Gino

Tandon Family Professor of Business Administration

Harvard Business School

Website: http://francescagino.com/

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On LinkedIn and Instagram

Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*

TEDx talk: *The Power of Why*

Wednesday, February 8, 2023 at 18:02:35 Eastern Standard Time

Subject: Re: quick question

Date: Wednesday, February 8, 2023 at 5:59:36 PM Eastern Standard Time

From: [redacted]

To: Gino, Francesca

H Fran,

I hope you've been do ng we , too! So sorry for my de ayed response, I've been down & out w th COVID (I th nk I'm the ast person I know to get t).

I don't *think* I ever shared your cred t card nfo v a ema , just over the phone or face to face w th a coup e of fo ks (nc ud ng the ab managers for your co aborator at I be eve Berke ey, s nce we needed to fund someone e se's account). However I know we d d share your Pro f c/Qua tr cs/etc. og n nformat on v a ema w th a few fo ks ke your RA's and doctora students (but I don't th nk anyone e se).

W th my other facu ty, t k nd of var ed at one po nt n t me I was the on y one who wou d purchase Pro f c or mTurk cred ts the RA/doctora student wou d get approva from the r facu ty and then forward the request to me to purchase the actua cred ts & hand e the re mbursement. However for the most part, RA's (and somet mes doctora students) had the necessary og n & cred t card nformat on to make these purchases themse ves, and they wou d just make sure to forward me/the facu ty the rece pts. (Th s of course meant we needed to do a b t more work toward the end of each f sca year to keep everyone n the oop w th regard to the budget's ba ance so that fo ks cou d p an accord ng y and a ert me/the facu ty f any b g purchases needed to be made.)

I hope that he ps! Let me know f any other nformat on wou d be he pfu or f you have any quest ons about the above.

Hope you and your fam y are do ng we and hav ng a great new year so far,

[redacted]

On Thu, Feb 2, 2023 at 7:28 AM Gino, Francesca <fgino@hbs.edu> wrote:

> Hi [redacted]
>
> I hope you are well.
>
> I have been spending some time in the last few months thinking about how to best improve the way I work with collaborators, doctoral students and RAs, so that I do not go over my research budget (as it happened in the past) and also have more control and transparency over who is doing what.
>
> When you were still at HBS, it was common for you to share my account information for Qualtrics, MTurk and Prolific so that I did not become a bottleneck for people working with me. I know you and others also had my credit account for the same reason.
>
> I often shared this information with people face to face. Did you share this information face to face also or via email?
>
> In addition to supporting me, you also worked with other faculty members, who – like me – ran many laboratory studies, worked with doctoral students and scholars at other schools and were supported by RAs. Were my practices similar to theirs?

> If you could let me know, I would very much appreciate it.
>
> Thank you,
>
> fran
>
> ---
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> Francesca Gino
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> On LinkedIn and Instagram
>
> Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
>
> TEDx talk: *The Power of Why*

--

[redacted]

Harvard Prison Divestment Campaign

EXHIBIT 33

Email With Letters Used for Nomination to the AOM Mentorship Award

Thursday, January 26, 2023 at 07:14:36 Eastern Standard Time

Subject: nomination package
Date: Sunday, January 21, 2018 at 7:46:13 AM Eastern Standard Time
From: [redacted]
To: Gino, Francesca
CC: [redacted]
Attachments: CombinedNominationLetter_01152018.pdf

Dear Francesca,

Thanks to [redacted] and [redacted] as well as all others who were excited to join our effort, we were able to put together a full nomination package (attached).

Fingers crossed for this award to go to the most deserving person we know! :-)

Best,
[redacted]

--
[redacted]

January 15, 2018

Dear Professor [redacted]

We are very pleased to nominate Professor Francesca Gino, Harvard Business School, for the Academy of Management Organizational Behavior Division's Mentorship Award.

Francesca has proven to be an effective mentor: her mentees have consistently cultivated novel and important academic identities, and each are, or are on their way to becoming, important contributors to the organizational behavior community. This systematic tendency—to cultivate strong scholars, contributing in important ways to an academic community, is itself strong evidence of her qualification for this award.

But her greatest value as a mentor shines through when considering the words of her mentees when they reflect on her mentorship. More than merely helping her mentees become great scholars, it is clear that Francesca's mentorship is central to helping people to become better versions of themselves. One of her mentees, in their nomination letter, describes Francesca's humility and personal kindness as having a powerful impact on her as a doctoral student. Another called her a "friend and advocate". Still another described her as someone who "see greatness in others, even when they can't see it themselves". Every one of her mentees describes her as selfless—as giving freely of her time, resources and social network—often with no expectation of personal benefit, but simply as a reflection of the genuine, personal care Francesca has for those she comes into contact with. Nearly every mentee described Francesca as a person who was there for them—who gave of herself, and provided vital emotional and moral support—when times were difficult, either personally or professionally.

In short, the results of Francesca's mentorship speak for themselves, and are reflected in the success of those who call her a mentor. But the greatest impact she's had on those whom she guides, are a reflection of her character. She is truly making the organizational behavior scholarly community better—both by cultivating wonderful scholars, and by providing a blueprint of impeccable character.

We have attached to this letter nomination letters from many of her mentees: [redacted] (Northwestern); [redacted] (University of North Carolina at Chapel Hill); [redacted] (University of Michigan); [redacted] (Columbia); [redacted] (University of North Carolina at Chapel Hill); [redacted] (London Business School); [redacted] (University of Texas, Austin); [redacted] (Harvard Business School). We trust that you'll find these letters as compelling as we do, and will see fit to recognize Francesca's obvious impact as a mentor.

Sincerely,

[redacted]

Northwestern | Kellogg

January 14, 2018

Dear Colleagues,

I am honored to share my support for the nomination of Francesca Gino, Tandon Family Professor of Business Administration at Harvard Business School, for OB Mentorship Award. She has been an exceptional mentor and role model for me. For the past decade, I have had the privileged opportunity to learn and flourish in my own academic endeavors thanks to her mentorship.

I first met Francesca when I was a third year PhD student at the University of Utah. She was [redacted]nior faculty member at the University of North Carolina, Chapel Hill. From this first interaction, she has shown deep commitment to my personal and professional advancement at every stage. Specifically, she was invaluable in guiding me through graduate school, the job market, and now my current position as a junior faculty. I am deeply indebted to my mentor, Francesca Gino, for her continuous care, support, attention, and intellect. Further, I am grateful to her for always being available when I needed any advice, personally or professionally. I have benefited tremendously from her mentoring and I am honored to share my support.

While Francesca proves to be a research leader and an academic star, her dedication to others [redacted]onal relationships. What makes her amazing is her genuine care for people, [redacted]es especially supporting those who need [redacted]d junior faculty. Francesca's genuine care coupled with her [redacted]es her the perfect mentor.

As a graduate student and now junior faculty, she has given me exposure to various professional resources, opportunities, and networks. She has supported me through the job market and with her constant mentoring, I successfully landed a job at Kellogg. Francesca provides emotional and moral support, encouragement, and continues to challenge me intellectually. She is a constant reminder to me to be true to myself and my passion.

In addition to commitment to my development, she has inspired me to be passionate about my work and has pushed me to devote my career to work that matters. I have been fortunate to publish multiple papers with her, one winning OB Division's Outstanding Publication Award in 2015 for the most significant contribution to the advancement of the field of OB. I have not

Northwestern | Kellogg

had a more dedicated, hard-working, optimistic, enthusiastic, passionate co-author. She is a delight to work with and have pushed me to become a better scholar and human being in many ways. She is my mentor and favorite co-author!

OB Mentorship Award honors a passionate scholar who has excelled in supporting others to achieve their career objectives. Francesca's passion for leading aspiring scholars is an exceptional example for all of us. She has made a difference for me and it is with great pleasure that I enthusiastically support her nomination to be selected as this year's recipient of the OB Mentorship Award. Lastly, I really hope I have said enough to entice you she truly deserves this award.

Sincerely,

[redacted]

UNC
KENAN-FLAGLER
BUSINESS SCHOOL

THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

CAMPUS BOX 3490
McCOLL BUILDING
CHAPEL HILL, NC 27599-3490 USA

January 9, 2018

To
The Selection Committee
AOM Mentorship Award
Academy of Management Conference, 2018

Sub: Nominating Dr.Francesca Gino for the AOM 2018 Mentorship Award

Dear Selection committee,

It is with great pleasure that I nominate Professor Francesca Gino for the AOM 2018 Mentorship Award. I have known Professor Gino since 2009, and in every instance I have found her a devoted friend, fine scholar, and an invaluable mentor.

John Crosby once said, "A mentor is a brain to pick, an ear to listen, and a push in the right direction." Francesca is an ideal educator and mentor – enthusiastic, compassionate, and awe-inspiring. The level of respect she enjoys in the fields of organizational behavior and social psychology are proof of this fact. But allow me to share with you how Francesca has been a wonderful mentor to me.

When I was a newbie pre-doctoral scholar at the Harvard Law School's Program on Negotiation, Francesca and I started working on our project on childhood memories. We chatted on phone regularly and Francesca was very attentive to any input I had, even when sometimes my suggestions were more academic than pragmatic. Often our phone conversations would veer into topics unrelated to our project, such as the challenges I was facing on the academic job market. She provided direction and opportunity, putting me in touch with influential others, allowing me to chart my own path, but at the same time making sure that I was geared for success. Consequently, I landed my first job at the Kenan-Flagler Business School.

Even after our project ended with a successful publication in the *Journal of Personality and Social Psychology*, Francesca and I continued to stay in touch. She would routinely reach out to me so I could let her know how I was doing. During my early years at Kenan-Flagler, I struggled with teaching the core MBA course on ethics. Francesca generously shared with me her own

experience, how she delivered similar course content, how she managed class time effectively, and how she encouraged her students to participate in the intellectual dialogue in each session.

Despite the multitude of responsibilities she had, Francesca would make time to meet with me at conferences to ensure my growth as an academician. She would carefully listen to me—and help me analyze which strategies were successful and which needed some tweaking. I have never encountered a kinder or more patient mentor!

It is a joy to have Francesca as my mentor; she is like my very own Mission Control, always there for me, watching out for my welfare, monitoring my progress, and making it her job to ensure that I succeed in my career as a Professor. I could never thank her enough!

In closing, I hope I have been able to persuade you how deserving Francesca is of the AOM Mentorship Award, and I encourage you to consider her for this well-deserved recognition. Please do not hesitate to contact me a [redacted] if you have additional questions.

Sincerely,

[redacted]

[redacted]

STEPHEN M.
ROSS SCHOOL OF BUSINESS
UNIVERSITY OF MICHIGAN

Management and Organizations

January 12, 2018

Dear Members of the Academy of Management OB Mentorship Award,

It is with great pleasure that I nominate Francesca Gino for the prestigious OB Mentorship Award. I have known Francesca for the past seven years, and she was the Chair of my dissertation committee. Francesca taught me how to think creatively and critically. During our meetings in her office or at Petsi Pies, we often stop talking to simply think through a particular theoretical wrinkle or intellectual roadblock. One-on-one meetings with Francesca rarely lasted less than an hour, and she never gives the impression that she has something more important to do. Her focus on a student is complete. This level of attention is astounding, given the sheer number of doctoral students who work with her in her own department, not to mention the range of active research collaborators she maintains across the country and the world.

Francesca is an independent and original thinker who is genuinely interested in discussing new ideas and in helping students move forward with rigorous and creative methods. Students often encounter moments of frustration, as data either do not corroborate initial hypotheses or remain too messy to decipher. She is not only incredibly patient and thoughtful about this process, but she also brings in much-needed doses of optimism at the right times, and powerfully reignites a student's passion for the initial question. For example, after critically examining the data and thinking through what went wrong and what could be improved, she helped me design high quality experiments and better execute the project. Her optimism shines through not only the data collection, analysis, and writing processes, but also through the review process, which can often be the most discouraging. She taught me how not to be discouraged and in fact how to be resilient in the face of scathing reviews. Thanks to her training on the scientific process, I now have a better sense of projects that are worthy of pursuit, and think ahead about the theoretical and practical contributions my work will be making.

Francesca's immense passion for and dedication to research is evident in the number of publications she has accumulated and the impact her research has on the field of judgment and decision-making and beyond. Yet despite her many accomplishments, she is one of the most humble people I know - someone who encourages students to voice their opinions at all times. I always feel safe raising new ideas (sometimes through late-night email exchanges with her) that seemed so silly to discuss with anyone else. I never felt stressed out about meeting with her. In fact, in-person or phone meetings with her

always spark so much excitement and enthusiasm in me. Due to her genuine humility and her open-mind eager for new ideas, Francesca has made working with her one of the most enriching and fun experiences of my graduate life.

I admire and respect her for the great scholar that she is, but even more for the person she is. Although there are many accomplished professors, there are only a few who genuinely care for their students and train them not only to be accomplished scientists, but also to be good human beings. She thinks of her students and their careers first. She supports students financially when they need it most, and is emotionally available for them. During my doctoral program, I went through major family-related crises back home, which made it extremely difficult for me to stay focused on my research. She encouraged me to stay positive while providing the support necessary to help me finish multiple projects we had together. Thanks to this unlimited support and trust, I did not lose track of my research, but was able to channel all my energy into it. I always felt safe discussing personal matters with her, and even while I was away, she never forgot to check on me and my family, and to ask whether she could help in anyway.

Francesca is the epitome of intelligence, kindness, warmth, and integrity. She has consistently provided yardsticks against which I can measure myself as a research and citizen of academia, and reinforced my passion for the field of academic inquiry. I am greatly indebted to her and to the remarkable support she has generously brought into my life.

Please help honor Francesca with this extremely meaningful mentoring award.

Sincerely Yours,

[redacted]

Faculty Mentor: Francesca Gino
Nominator: [redacted]

Francesca embodies a mentor who provides outstanding intellectual, social, and moral support. She pushes her students intellectually, but also makes them feel psychologically safe. She guides her students while giving them the freedom to explore their interests. She is a friend and advocate. Most importantly, she is understanding during times of hardship and is willing to be vulnerable with her students. Many people in the field are lucky if their adviser is able to fulfill one of these roles, but only students who work with Francesca have the incredible fortune to have an adviser who fulfills all of these roles well. Below, I provide some stories that capture how it has been a true privilege to have Francesca as mentor.

My first meeting with Francesca took place the hour after she arrived in Boston to start her position at Harvard. The fact that we met immediately after she arrived—before she even got a chance to unpack from her suitcases—shows how much she prioritizes her role as an adviser. During that first meeting, we jumped into discussion of how I could work on a number of different projects. From day one, I felt like she had a vested interest in my academic development.

During my first year, I had just collected some new data for a project and met with her to discuss the results. Walking into this meeting, I expected a conversation in which we would broadly talk about the research findings and next steps. Instead, Francesca proposed that I sit down and take notes while she analyzed the data with me. Although the meeting was meant to be an hour, it lasted *five* hours, and the principles that I learned from that meeting still applies to the research that I conduct today.

When it came time to developing my dissertation, Francesca adapted her advising style to allow me to explore independently, and importantly, also fail in a safe environment. During my first dissertation proposal meeting, I presented a number of ideas that needed more development. Whereas some advisers may have focused on the shortcomings of the ideas or intervened to offer a directed path of how to develop these ideas further, Francesca expressed curiosity in areas of promise and encouraged me to struggle in finding my own solutions. She patiently listened to countless iterations of my ideas, and in each case, she never made me feel incompetent, even when the ideas were not good. Her greatest gift to me was that she believed in me enough to give me the freedom to learn from my own failures.

Beyond the intellectual support, Francesca has also provided incredible social and moral support. Whenever we attended a conference together or a speaker was coming to campus, she connected me to individuals with research overlap so that I could have a research community that would stay with me beyond graduation. Francesca has introduced me to a number of people who are life-long collaborators, colleagues, and friends. I attribute much of my continued development as a scholar to the community that she has helped me develop. Beyond social support, Francesca also provided moral support, especially during critical moments of personal struggle. Whether in the form of offering to take a spinning class together, inviting me over to spend time with her family, or revealing personal failures of her own, Francesca always knew how to encourage and motivate me.

For all of these reasons, and more, I believe that Francesca is most deserving of the AOM Mentoring Award.

January 2018

Dear Award Committee:

It is my great honor to recommend Professor Francesca Gino for earnest consideration for the 2018 Academy of Management OB Division Mentorship Award.

I first met Francesca in 2007—prior to her meteoric rise in the field. At the time, she was on the academic job market and just coming into the spotlight as I was starting my doctorate. We connected over a lab meeting of [redacted] students through our mutual interest in behavioral ethics, and that was the beginning of sessions of brainstorming that led to a series of fruitful collaborations.

Even in the very beginning of working together, despite our gap in training, Francesca was the first collaborator to challenge me to think of myself as her peer. She weighed my inputs—into design, methodology, literature, analysis, and writing—with as much consideration as those of more senior collaborators, and fully trusted in my ability to contribute to all aspects of our projects. Her trust in my own potential challenged me to meet her standards and to think, act, and write as her peer. Francesca distinguished herself from my other excellent mentors (I could not have been in better company) through placing this trust very early on in me while I was still a novice graduate student. She invested in me through spending a tremendous amount of time teaching and showing me the work of research; from writing IRB applications, to designing experiments, to cleaning and analyzing datasets, and co-writing papers simultaneously in the same space: she spent dedicated time meticulously teaching me all aspects of the research process, all while challenging me to serve as true co-pilot of our projects—never just cabin or cleaning crew.

Whenever Francesca has collaborators more junior than she is, she is allergic to receiving due credit. I believe her immense contribution and dedication to so many of our manuscripts together (all on which I appear as first author) more than qualifies her for the first author position. The main reason my name appears rather than of hers as first author is because her generosity and influence among our collaborators far outweigh my own.

Francesca has been steady in her dedication and commitment to her mentees throughout the astounding rise of her career. She has always exemplified how to truly adopt a growth mindset. As academics, we must face frequent failure in the process of attempting to uncover new knowledge. Francesca's determination to persevere despite numerous obstacles one encounters in the publishing process has stuck with me for good: it is not enough to have a good mind—but rather, success in academia requires numerous iterated attempts coupled with patient optimism that almost every carefully considered project can eventually find a good journal to call home. The wisdom of adopting a growth mindset is a lifelong lesson I endeavor to pass on to my advisees.

Francesca has been an exemplary collaborator, mentor, and friend. I believe the OB Division Mentorship Award is a well-deserved way to celebrate Francesca's exceptional commitment to her mentees throughout her career.

All my best,

[redacted]

[redacted]

Red McCombs School of Business
THE UNIVERSITY OF TEXAS AT AUSTIN

Management Department • 2110 Speedway Stop B6300 • Austin, Texas 78712-1282
(512) 471-3676 • FAX (512) 471-3937

January 11, 2018

Dear Professor [redacted]

I am writing to nominate Francesca Gino for the Academy of Management Organizational Behavior Mentorship Award.

If you were to ask most any management faculty member at Harvard Business School which faculty member has had the biggest impact on the largest number of students, they would likely all quickly point toward Francesca Gino. During any given year, Francesca often has over 5 students that she is officially advising and likely over 10 other students that she is informally advising. I fell into the latter category, in that as a HBS doctoral student she wasn't my official advisor, but even so, she did far more for my training and career than even some of the best advisors do for their own students.

From the moment I began my doctorate at HBS, Francesca was a source of both academic guidance and social support. In my first semester in the program, even though I had barely any research experience, Francesca was willing to take a gamble on me, and added me to a field project that she was conducting with a pharmaceutical company. For that project, she flew me all the way to Europe with her, just so I could see firsthand how to properly conduct a field study. Allowing me to be last author on that study would have been enough, but as she saw that I was taking on responsibility for the project, she immediately moved me to first-author, even in front of her. For my own ego, I would like to say that Francesca thought that I was so talented that I, specifically, was worth that opportunity, but that wasn't the case; Francesca has given those types of opportunities again and again to most every doctoral student who has crossed her path. Most every organizational behavior doctoral student who has recently passed through HBS has multiple similar stories of the amazing things that Francesca has done for them. Her kindness and giving in both collaborations and social interactions, particularly for those ranking below her, is far beyond any faculty member I have ever encountered.

During her tenure at Harvard Business School Francesca has consistently mentored over twice as many doctoral students as even the second closest management faculty member to her. In my time at HBS, I saw her lead not one, but two separate concurrent research laboratory groups for doctoral students. Proof of the effectiveness of her mentorship is evident in that the students she has mentored have gone to receive jobs and be successful at universities including the University of Michigan, Northwestern, the University of North Carolina, INSEAD, the University of Texas at Austin, and Wharton.

I cannot think of a better person to receive this award than Francesca. The field is lucky to have her.

Sincerely,

[redacted]

HARVARD | BUSINESS | SCHOOL

PAUL GREEN JR
DOCTORAL CANDIDATE

January 14, 2018

Dear Professor [redacted]

I am writing to submit my enthusiastic nomination of Francesca Gino for the Academy of Management Organizational Behavior Division Mentorship Award.

In my professional career prior to academia, and over the past few years as a doctoral student, I have had the opportunity to observe many mentors. Francesca is, by nearly every measure of effective mentorship, without question, a wonderful mentor. She is a model of selflessness in her devotion of time and resources to advising and guiding those who look to her for professional and personal guidance. She is thoughtful and patient in helping her advisees hone their research ideas and identities, never asking or expecting her students to embrace her interests, but rather, intently and genuinely seeking to understand her advisees' passion, then investing the focused time and energy required to help them find a suitable home for that passion in the academic literature. And she has proven effective in this domain; those who look to Francesca as a mentor have, almost to a person, crafted a novel, compelling research identity and are flourishing in their respective academic niches. And she is an enthusiastic, and eternally positive supporter to each of her advisees, investing extensive time and energy to ensuring that, particularly in their early academic careers, as her advisees inevitably encounter rejection and disappointment, helping them to work their way through the difficult times.

I've experienced Francesca's mentorship in each of these dimensions, and as I reflect on my own professional experience, as well as the relationship that many of my colleagues have with their academic mentors, I can confidently say that, on each of these dimensions, Francesca's mentorship is unparalleled. She is endlessly generous with her time, resources and attention; and she gives with no expectation of personal benefit—in fact, she often gives at some significant cost to her personal life and other personal interests and passions. In considering these qualities alone, Francesca stands out from the crowd, and is worthy of recognition. But her greatest distinguishing characteristic as a mentor for me—the thing that, in my estimation, most qualifies her for recognition—is her devotion to finding, and exposing, in her mentees, something great—something that they don't see themselves. Francesca became an academic mentor to me even before I knew I would become an academic. She met me when I was in industry. Over a handful of conversations, she slowly drew from me an interest in studying a particular phenomenon within my organization; she saw my natural interest in research, but didn't foist a research project on me. Rather, she invested time in helping me to realize the question that I wanted to answer. As I began to devote some of my professional time to research, our conversations eventually turned to her showing me that I had many of the natural ingredients to be a researcher. She encouraged me to see myself as a researcher, and introduced me to others—my interactions with whom confirmed Francesca's suggestion that I would be embraced by the academic community.

This has continued through my relationship with Francesca—and the net result is that I have gradually become someone who I never thought I could be. As I reflect on my relationship with her, my net experience is one of unbelievable growth—of becoming something more than I could have imagined on my own. This is, in my estimation, the mark of a truly great mentor: one who sees greatness in others that they can't see themselves, and helps cultivate and expose that greatness. This is Francesca in a nutshell. And for this reason, I can think of no one more deserving of this award.

Sincerely,

[redacted]

SOLDIERS FIELD BOSTON, MA 02163 Ph [redacted] Fx [redacted] GEORGE F. BAKER FOUNDATION

In this essay, I would like to talk about how my experience with my advisor Francesca Gino has been a wonderful experience for me. Honestly, I am not sure where to start since Francesca is a role model in so many ways. And it is quite difficult to describe how she has been so inspiring as a scholar and as a person. But I will try my best.

When I think of Francesca, one of the first words that comes to my mind is "encouragement". When I started the doctoral program, I was not sure about how much I should take the lead research projects. Francesca always took the time to listen to my ideas and helped me to formulate them and always encouraged me to take the initiative. This did not only help me to be involved in research projects very early on in the doctoral program, but also gave me courage to formulate and share my research ideas within HBS community. I think taking the initiative and discussing ideas with different researchers is one of the key aspects of research and collaboration, so I owe a lot to Francesca for giving me courage and the leadership role in research projects.

Francesca's guidance in research has been exceptionally phenomenal as she has the ability to offer it according to my needs. For example, when I first started to doctoral program, if I needed help with statistical analysis, she would sit down with me one on one in her office and walk through all the steps with me in a detailed way. I remember that even on that day, I was surprised that a super-star scholar like Francesca could find a time to teach me a simple statistical test. As time went by and I have learned those concrete steps, now our discussions sometimes can be more about how to approach a question (research design), or how to interpret our results, or how to construct a paper. In other words, she is there for me whenever I need her, and she always helps in the most efficient and productive way according to my needs.

One of the reasons why I also love working with Francesca is the research community that she created. We have a great lab group and she does a wonderful job to organize the lab. She also encourages students to collaborate. For instance one of the greatest experiences of my first year was to collaborate with a 3rd year student on a research project. In addition, in conferences or through guest speaker events, she introduces us to researchers from other schools with similar interests, which is also a great way to start collaborations.

One thing that I am completely sure about is that Francesca will always find time for me. No matter how busy her schedule is she will not only find the time for me, but also will focus her attention to me one hundred percent during our meetings. She also gives great advice about how to give talks, how to prepare presentations, what to do in conferences. And despite all of the research projects that we ran as a lab, she always covers the expenses with her research budget.

I think no matter how long I write, nothing will be sufficient to describe Francesca. She is not only a mentor but also a great friend. Our coffee shop meetings, chats about life, social get-togethers are definitely one of the most wonderful aspects of my doctoral student experience. One of the most productive time periods of my week is the time after I meet Francesca. She is so inspiring, so energetic, encouraging and always ready to help to all of us that, when I see her, I also find extra energy and get things done. And I think her attitude (that she is never

tired or never busy to find time find for any of us) and her enthusiasm about her work is just wonderful. I feel incredibly lucky to be her student and I feel privileged to work with her. I am so happy that I work with her, not only because she is a great scholar but also because she has such a good heart and a wonderful person.

Thank you so much for your consideration.

Best wishes,

[redacted]

EXHIBIT 34

Email Showing RA Access to Co-author's Qualtrics Account

Subject: Re: survey draft ready to go!
Date: Monday, December 12, 2016 at 11:33:25 PM Eastern Standard Time
From: [redacted]
To: [redacted]
CC: Gino, Francesca
Attachments: image001.png

Hi [redacted]

I made those changes and a few others. Here is the link and below is a list of my changes!

http://rotman.az1.qualtrics.com/SE/?SID=SV_6zZcHkq5GhoLePb

Changes I made:
-In consent form: added the HBS logo to consent

-In consent form: changed the "guide for informed consent" link to be a hyperlink so that participants could click on it and immediately be directed to the page. In google chrome it opens up in a new tab. In safari and firefox it opens in the same tab and you have to press the back button to return to the survey. If you think this is too confusing, I can just get rid of the hyperlink and keep it how it was before just as plain text.

-Your change from "not very close" to "acquaintance" was automatically applied to the rest of the labels. After making the change, you just had to click out of the question for it to refresh!

-Network questions (all of them): I put the questions in larger font so that if participants have to scroll up to re-read the question, it will pop out at them.

-Network questions -- the closeness question: I changed the order of the explanations of each relationship type (e.g., "avoided relationships are...") to be consistent with the order of the scale labels. Before it started with "very close relationships" rather than "avoided." I also got rid of the extra words and listed them out more as definitions. It was just getting too wordy and I wanted to make it look cleaner. Let me know if you prefer it the original way and I'll change it back!

[redacted]

On Mon, Dec 12, 2016 at 4:03 PM, [redacted] wrote:

> Hi [redacted]
>
> The survey looks great! Thank you so much for the beautiful work.
>
> To answer your questions:
>
> -It's best not to randomize the network questions.
>
> -Let's force responses.
>
> -The look you chose is perfect.

-I am worried, too, about those who list of a lot of people losing track of what questions they are answering. Let's see what FiveStars folks say after piloting the survey…

Before we share the link with FiveStars, here are a couple of final changes I'd like to make:

-Add the HBS logo to the intro/consent page

-Replace "Not very close" with "Acquaintance" in the closeness section (I changed the first time that scale is presented, but couldn't find how to replace all the others!

-FYI, in the "check off who you know" question, I've replaced "…having interacted directly with that person, either in person or virtually" with "…having interacted directly with that individual, either in person or virtually".

Thanks again for your great help!

[redacted]

From: [redacted]
Sent: December 11, 2016 1:01 PM
To: [redacted] Gino, Francesca <fgino@hbs.edu>
Subject: survey draft ready to go!

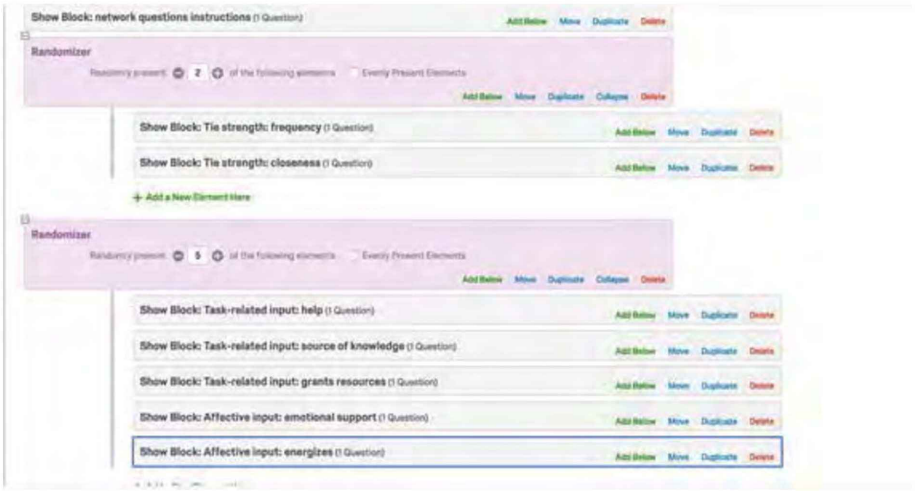
Hi [redacted]

Take a look at the survey and let me know what you think re: formatting, design, etc. Here is the link (you can also go into your Qualtrics account to view it).

http://rotman.az1.qualtrics.com/SE/?SID=SV_6zZcHkq5GhoLePb

A few things to note:

-I did not randomize the order of the network questions. I thought it would be best to keep the question types (the statement questions and the direct questions) together to avoid confusion. Let me know if you want to randomize completely. Another option is to group the direct questions together and the statement questions together, but randomize within groups. Here is a screen shot of that option:



-I made all of the questions force response. However, there's also a "request response" option that shows a message when you try to submit unanswered questions. The message asks you to respond but allows you to proceed without answering them.

-There are various "look and feel" template styles. We usually use plain traditional ones in our lab but I think what I selected for this one may be better because it highlights the question when you scroll over them. Let me know what you'd prefer.

-If participants select a lot of people they know, they will have a long list of people for the network questions. I am worried about participants not being able to see the question they're answering as they scroll down the page. There's really no solution for this but I'm just pointing it out. I guess as long as the order of the people are randomized, this isn't a huge issue?

[redacted]

EXHIBIT 35

Email Exchange with HBS RIO Alain Bonacossa

Subject: RE: *** CONFIDENTIAL *** A few minutes to chat?
Date: Monday, October 31, 2022 at 3:33:37 PM Eastern Daylight Time
From: Bonacossa, Alain
To: Gino, Francesca
Attachments: image001.png

Hi Francesca,
No one except me would be able or want to log into your account for research integrity purpose. Also, HBS officials would never share your credentials. In fact, I don't even have them. I just have the ability to log into an account as a system administrator but that does not mean I have your login credentials. All of this to say the forensic firm would never be able to access your Qualtrics account nor were they ever provided with your login information.
Alain

From: Gino, Francesca <fgino@hbs.edu>
Sent: Monday, October 31, 2022 3:30 PM
To: Bonacossa, Alain <abonacossa@hbs.edu>
Subject: Re: *** CONFIDENTIAL *** A few minutes to chat?

Yep, doing that now. and do you know if the other logins in the summer were from the forensic firm?
Thank you,
francesca

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
Twitter: @francescagino
On LinkedIn and Instagram
Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
TEDx talk: *The Power of Why*

From: "Bonacossa, Alain" <abonacossa@hbs.edu>
Date: Monday, October 31, 2022 at 1:29 PM
To: Francesca Gino <fgino@hbs.edu>
Subject: RE: *** CONFIDENTIAL *** A few minutes to chat?

Hi Francesca,

Yes, you can change your Qualtrics password (and I'd recommend not sharing it with others). I'm a brand administrator so I could access your account, if there was a need related to research integrity.

Thanks,
Alain

From: Gino, Francesca <fgino@hbs.edu>
Sent: Monday, October 31, 2022 1:23 PM

To: Bonacossa, Alain <abonacossa@hbs.edu>
Subject: Re: *** CONFIDENTIAL *** A few minutes to chat?

Thank you, Alain.

I just met with IT and changed all my passwords for logging into my computer and accounts. Can I also go ahead and change my Qualtrics password?
Looking at recent logins there are various attempts to log into my account that are not from me. Do you need my account information or I am ok changing password? It looks like you may have logged in with two different accounts.

I also learned from Qualtrics that Logins are only recent so mine only go back to the summer of 2022, which is too unfortunate.

Thanks for clarifying.
francesca

Recent Logins Current IP: 199.94.8.69

User	IP Address	Location	Date
fgino@hbs.edu	199.94.8.69	Cambridge MA United States 8 miles to 98.229.25.197	October 31, 2022 at 1:17 PM
fgino@hbs.edu	172.110.63.13	Concord MA United States 19 miles to 98.229.25.197	October 28, 2022 at 4:32 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 8 miles to 98.229.25.197	October 28, 2022 at 10:58 AM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 8 miles to 98.229.25.197	October 28, 2022 at 10:51 AM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 8 miles to 98.229.25.197	October 20, 2022 at 10:17 AM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 8 miles to 98.229.25.197	October 7, 2022 at 2:23 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 8 miles to 98.229.25.197	October 3, 2022 at 7:06 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 8 miles to 98.229.25.197	October 2, 2022 at 4:06 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 8 miles to 98.229.25.197	September 19, 2022 at 7:12 PM
fgino@hbs.edu	199.94.8.26	Cambridge MA United States 8 miles to 98.229.25.197	September 16, 2022 at 10:45 AM
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 16, 2022 at 6:54 PM
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 16, 2022 at 10:56 AM
fgino@hbs.edu	199.94.27.41	Dorchester MA United States 4 miles to 98.229.25.197	August 10, 2022 at 5:48 AM
abonacossa@hbs.edu	199.94.27.41	Dorchester MA United States	August 10, 2022 at 5:48 AM

[redacted]	[redacted]	4 miles to 98.229.25.197	[redacted]
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 4, 2022 at 11:15 AM
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 3, 2022 at 12:07 PM
fgino@hbs.edu	98.229.25.197	Boston MA United States	August 2, 2022 at 1:18 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 6 miles to 98.229.25.197	July 24, 2022 at 8:42 PM
fgino@hbs.edu	98.229.25.197	Boston MA United States	July 22, 2022 at 12:27 PM
fgino@hbs.edu	73.149.241.156	Cambridge MA United States 6 miles to 98.229.25.197	July 8, 2022 at 2:37 PM
fgino@hbs.edu	98.229.25.197	Boston MA United States	July 7, 2022 at 9:22 PM
fgino@hbs.edu	50.241.106.249	Chelsea MA United States 4 miles to 98.229.25.197	July 7, 2022 at 8:31 AM

Francesca Gino
Tandon Family Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
Twitter: @francescagino
On LinkedIn and Instagram
Most Recent Book: *Rebel Talent: Why It Pays To Break The Rules At Work And In Life*
TEDx talk: *The Power of Why*

From: "Bonacossa, Alain" <abonacossa@hbs.edu>
Date: Monday, October 31, 2022 at 6:42 AM
To: Francesca Gino <fgino@hbs.edu>
Subject: RE: *** CONFIDENTIAL *** A few minutes to chat?

Good morning, Francesca.

We just received the forensic report for allegation 3, so I will be sending that to you via SFT together with a notice of a slight change in the allegation 3 language itself.

Please let me know if you have any questions or if you have trouble accessing the files.

Thanks,
Alain

From: Gino, Francesca <fgino@hbs.edu>
Sent: Friday, October 28, 2022 8:59 PM
To: Bonacossa, Alain <abonacossa@hbs.edu>
Subject: Re: *** CONFIDENTIAL *** A few minutes to chat?

I had the same issue with the emails but I was able to open the PDFs. Thank you,
francesca

EXHIBIT 36

Email Showing Sharing of Qualtrics Login Information by Others

Subject: RE: Question
Date: Wednesday, October 28, 2015 at 1:09:12 PM Eastern Daylight Time
From: [redacted]
To: [redacted]
CC: Gino, Francesca

Oh, and please feel free to access the most recent survey (called "Networking Version 2 - [redacted] Sept4") from my Qualtrics account:
Username: [redacted]
Password: [redacted]

From: [redacted]
Sent: October-27-15 5:14 PM
To: [redacted]
Cc: Gino, Francesca <fgino@hbs.edu>
Subject: Question

[redacted]

It looks like if we want to move forward we need to launch the surveys the next few days. Can you share with me the latest survey we had in the law firm so I see what questions we asked.

Also, as far as I understand so far we only asked how they feel about the event, what other type of questions can we ask? I mean we are targeting networking events for MBS students, we ask them how they felt about what they did, and how much networking they engaged in but can we add more DVs. Are there other questions we can use?

We hav e a great opportunity to collect data from many MBA students the next 2 weeks, after that, we need to wait for a year.

Francesca is thinking about IVs but I also wanted us to think about DVs.

[redacted]

EXHIBIT 37

Email Showing Joint Work with [redacted]

Subject: checking in ...
Date: Sunday, October 20, 2013 at 12:31:51 PM Eastern Daylight Time
From: [redacted]
To: Gino, Francesca

Hello,

I wanted to know how we want to proceed. Here is the list. What can I do?

Authenticity-morality – PS R&R

On your plate

Psychological ownership

Sent you the draft, on your plate; we need to submit this

HBR – promise keeping piece

On your plate

Guilt-control - JEP:G

I emailed and asked a question. I will write up the last study for revison.

Amnesia

Data collection; can you take care of it?

Authenticity-prosocial motivation

Data collection; can you take care of it?

Instrumental networking

On your plate, working on [redacted]'s draft

Corporate practices (MSCI, hotline data, etc ?)

Do we want to start thinking about IV and DV? We are presenting this in first week of February!

you suggested we dedicate 1-2 RAs to this but I do not know what to ask them to do yet

Commitment drift, [redacted]

Collecting data

Codes of conduct (Project with Yuval)

will collect more data, waiting for your feedback

Physio data

Data analysis

Disney

waiting on IRBs; Maarten emailed us, you have not responded

Wipro

?

EXHIBITS 38A AND 38B

Email Exchanges Between [redacted] and RA[redacted]

Subject: Re: Next CLER study
Date: Wednesday, September 11, 2013 at 10:06:39 AM Eastern Daylight Time
From: [redacted]
To: [redacted]
CC: Gino, Francesca
Attachments: Study snapshots.pptx

Hi [redacted]

Attached please find the Study snapshot for our study.

As for the answers to the questions for this study:

Provide a one paragraph description of each experiment

> Our goal is to understand authenticity as a psychological state, and the consequences of feeling inauthentic or authentic. We test whether authenticity makes a person psychologically present while inauthenticity impairs cognition. Moreover, we measure salience of moral goals as well as moral attentiveness.

**Give full access to your surveys online

> The survey is called "Authenticity Flow Goal Credential CLER - Sep 2013" I will share it with you in a minute at [redacted] If you do not see it, please let me know.

DirectRT/Media Lab, any extra compensation for participation in your

study/ pay for performance, gifts, subject restrictions, special

demographics, other special arrangements, etc.)?

> No special instructions

+++These may require a different process ** please discuss before the due

date. If you do not do this, the request may not be processed, and the

study may not be included in the session.

-- Have you run this study before (or another study similar enough that

you don't want the same participants)? If so, on what dates?

> No

**Send SCREENSHOTS of each study in PowerPoint, be sure it is formatted

to show the participants view of the screen. Include the following

information:

> Attached

-- If you have a lot of repetitive questions, you can use some examples and describe the rest. Describe differences between conditions. On the first page of each set of screenshots, indicate the following:

-- Name of the experiment

-- Names of all researchers involved

--Amount of time it will take participants to complete

**Provide a link for each web-based study, and DirectRT/MediaLab files

-- Each survey should have only one link (which links to all conditions).

**Qualtrics Settings

-- Accept multiple responses on the same computer (Qualtrics: don't select "No ballot stuffing")

-- Do not make any questions required

-- First question for in-lab studies should be "What is your CLER ID number?"

-- Do not use a thank you page

-- Double check your links and survey settings

Done

Please let me know if you need any more information.

Best,

[redacted]

On Wed, Aug 28, 2013 at 8:04 PM, [redacted] wrote:

> Hi [redacted] and Francesca,
>
> We don't have a exact date yet, but probably early October. The next submission deadline is Friday, Sept. 13.
>
> Thanks!
> [redacted]
>
> ---
> From: Gino, Francesca
> Sent: Wednesday, August 28, 2013 5:14 PM
> To: [redacted]
> Cc: [redacted]

Subject: Re: Next CLER study

I am cc-ing [redacted] who can tell us :-)

From: [redacted]
Date: Wednesday, August 28, 2013 7:23 PM
To: "Gino, Francesca" <fgino@hbs.edu<mailto:fgino@hbs.edu>>
Subject: Next CLER study

Hi Francesca,

I just wanted to say that I am thinking of doing a short study on our idea about moral goals in CLER through [redacted] Do you know when is the next data collection?

[redacted]

Saturday, February 4, 2023 at 20:49:40 Eastern Standard Time

Subject: Re: next sessions
Date: Tuesday, January 22, 2013 at 5:31:53 PM Eastern Standard Time
From: [redacted]
To: [redacted]
CC: Gino, Francesca
Attachments: ATT00001.htm

Hi [redacted]

Attached please find the Study snapshot. As for the answer to the questions

Provide a one paragraph description of each experiment

Drawing on recent research in moral psychology, we propose that authenticity is directly linked to morality. We explore this link by investigating how people react to threats to their authenticity. Participants are randomly assigned to recall different situations and then their accessibility of cleansing-related concepts as well as their helping behavior is measured. We argue that cleansing desire is a generative process linking inauthenticity with moral compensation such that through either the opportunity to physically cleanse oneself or prosocial behavior people compensate for their inauthenticity. To rule out the idea that recalling any negative event can lead to the same effects, we employ a 2 (valence of experience: positive vs. negative) X 2 (context: authentic vs. test) between-subjects design.

**Give full access to your surveys online

the survey on my account called "Authenticity - with failure/success conditions CLER". I will share it with you in a minute at [redacted] If you do not see it, please let me know.

**Do you need anything special (e.g. any software other than

DirectRT/Media Lab, any extra compensation for participation in your

study/ pay for performance, gifts, subject restrictions, special

demographics, other special arrangements, etc.)?

We need the study to be the last one since we ask for participants[1] help and those who agree will answer a few questions.

+++These may require a different process ** please discuss before the due

date. If you do not do this, the request may not be processed, and the

study may not be included in the session.

-- Have you run this study before (or another study similar enough that

you don't want the same participants)? If so, on what dates?

No

**Send SCREENSHOTS of each study in PowerPoint, be sure it is formatted

to show the participants view of the screen. Include the following

information:

Attached

-- If you have a lot of repetitive questions, you can use some examples

and describe the rest. Describe differences between conditions. On the

first page of each set of screenshots, indicate the following:

-- Name of the experiment

-- Names of all researchers involved

--Amount of time it will take participants to complete

**Provide a link for each web-based study, and DirectRT/MediaLab files

-- Each survey should have only one link (which links to all conditions).

**Qualtrics Settings

-- Accept multiple responses on the same computer (Qualtrics: don't

select "No ballot stuffing")

-- Do not make any questions required

-- First question for in-lab studies should be "What is your CLER ID

number?"

-- Do not use a thank you page

-- Double check your links and survey settings

Done

Please let me know if you need any more information. I still need to add images to the product choices at the end of survey. would that be okay?

Best,

[redacted]

EXHIBIT 39

Email Exchanges Between [redacted] and RA [redacted]

Subject: Re: Data IN
Date: Saturday, April 5, 2014 at 6:04:21 PM Eastern Daylight Time
From: [redacted]
To: [redacted]
CC: Gino, Francesca

Hi [redacted]

I just analyzed the data and we have enough people in each cell. We do not need any more participants. Thank you for running the study. I think [redacted] has already sent the money for participants and RAs but let us know where we stand in terms of costs.

best
[redacted]

[redacted]

On Fri, Apr 4, 2014 at 5:28 PM, [redacted] <[redacted]> wrote:

Hi [redacted]

Thank you, let me look at this tomorrow and get back to you.

[redacted]

[redacted]

On Fri, Apr 4, 2014 at 4:13 PM, [redacted] <uncexperimenter@gmail.com> wrote:

Hi [redacted]

Just letting you know we finished one more day, please let me know how to proceed with data collection.

Thanks,
[redacted]

[redacted]

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On Mar 31, 2014, at 9:38 PM, [redacted] wrote:

Hi [redacted]

I just checked the data; I cant say for sure but my feeling is that there are differences between the new method and the earlier data; I think we need one more session and then I can run the full analyses and decide.

thanks
[redacted]

[redacted]

Edmond J. Safra Center for Ethics
Harvard University

On Fri, Mar 28, 2014 at 3:50 PM, [redacted] wrote:

Will do

Sent from my iPhone

On Mar 28, 2014, at 3:49 PM, "Gino, Francesca" <fgino@hbs.edu> wrote:

Yay!

From: [redacted]
Date: Friday, March 28, 2014 3:47 PM
To: [redacted]
Cc: Francesca Gino <fgino@hbs.edu>
Subject: Data IN

Hi [redacted]

We are closing another day of IN shortly, can you please check the data this weekend and let us know if we should plan
one more day to hopefully finish collection next week.

Thanks,
[redacted]

[redacted]

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EXHIBIT 40

Email from RA [redacted] Talking About RAs Helping Her

Subject: RE: study
Date: Wednesday, January 15, 2014 at 2:36:28 PM Eastern Standard Time
From: [redacted]
To: [redacted]
CC: Gino, Francesca, [redacted]

Hi [redacted]

Yes, that would work just fine. Please have the RAs **email** their invoices to me.

The invoices should be made out to:
[redacted]
Rotman School of Management
105 St. George St.
Toronto, ON M5S 3E6
Canada

Many thanks!
[redacted]

From: [redacted] [mailto:uncexperimenter@gmail.com]
Sent: January-15-14 7:11 PM
To: [redacted]
Cc: Francesca Gino; [redacted]
Subject: Re: study

Hi [redacted]

I won't be able to send you an invoice directly from Kenan-Flagler, but I can have each RA send you an individual invoice from them. Will that work?

[redacted]

[redacted]

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On Jan 10, 2014, at 1:37 PM, [redacted] [redacted] wrote:

> Hi [redacted]
>
> Thanks for this input. Could I ask you and the RA to invoice me at the University of Toronto once the study is completed, and I'll have our accounts payable process the invoices?
>
> Best,
> [redacted]

From: [redacted]
Sent: January-10-14 7:04 PM
To: Gino, Francesca
Cc: [redacted]
Subject: Re: study

Hi Franci,

That's hard to say.

Best case scenario a couple hours for admin stuff, and max fill rate (16 hrs) would be under 20hrs.
Of course, we don't always fill and have a med no-show rate, so that needs to get factored in.

I will likely try to delegate as much of this as possible. So, I would estimate somewhere between 16 - 45hrs,
probably falling somewhere in the middle, at a rate of $11/hr.

Let me know if that makes sense.

[redacted]

[redacted]

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On Jan 10, 2014, at 12:56 PM, Gino, Francesca wrote:

[redacted]

Can you estimate the amount of hours you and the RA would be working?
If that is ok with you, [redacted] would pay for the RA/your costs, and I would pay for the study. The expenses would be much easier to handle…

franci

From: [redacted] <uncexperimenter@gmail.com>
Date: Monday, January 6, 2014 3:23 PM

Cc: Francesca Gino <fgino@hbs.edu>
Subject: Re: study

Hi Franci,

I just wanted to check in on this project on cost, before getting started.

The cost for participants would be $1800
Plus running costs. $30/hr my time running. $11/hr RAs running.

Let me know and I can get started.

Thanks,
[redacted]

[redacted]

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On Jan 5, 2014, at 11:19 AM, [redacted] wrote:

> Hi [redacted]
>
> Attached please find the study design. Let me know if you have any questions.
>
> Best,
> [redacted]
>
> On Sat, Jan 4, 2014 at 8:29 PM, [redacted] wrote:
>
> > Great and happy new year [redacted]
> >
> > I will send the document by Monday morning.

thanks
[redacted]

On Sat, Jan 4, 2014 at 8:24 PM, Gino, Francesca <fgino@hbs.edu> wrote:

> Wonderful!
>
> I am cc-ing [redacted] who can send you a description of the study. [redacted] can you send [redacted] a document in word that describes in detail our proposed study?
>
> Thanks [redacted]
> franci
>
> ---
>
> **From:** [redacted]
> **Date:** Saturday, January 4, 2014 5:31 PM
> **To:** Francesca Gino <fgino@hbs.edu>
> **Subject:** Re: study
>
> Hi [redacted]
>
> Happy New Year! And congrats on getting Tenure - that's absolutely amazing!!
>
> Students come back this coming week. A study is very likely possible, I'll need
> more details to say for sure.
>
> Send it over ;)
>
> [redacted]
>
> [redacted]
>
> **Shaping Leaders | Driving Results**
>
> On Jan 3, 2014, at 8:15 PM, Gino, Francesca wrote:

Hi [redacted]

HAPPY NEW YEAR!

I am writing to see if we could run a study at UNC this month. Are the students back?
If you can help us with this, I can send you a detailed description of the study materials.

Thanks!
francesca

PS — I got promoted to tenured, full professor in December :-) Yay!

Francesca Gino
Associate Professor of Business Administration
Harvard Business School
Website: http://francescagino.com/
Twitter: @francescagino
Book: *Sidetracked*

<Study Design UNC.docx>

EXHIBIT 41

Email from RA [redacted] About UNC IRB Applications

Subject: RE: IRB Notice
Date: Tuesday, January 28, 2014 at 2:40:33 AM Eastern Standard Time
From: [redacted]
To: [redacted], Gino, Francesca, [redacted]

Hi [redacted]

I'm going to take care this. Please let me know the amount and whether I should send the check to your name at the address below.

Many thanks,
[redacted]

From: [redacted] [mailto:uncexperimenter@gmail.com]
Sent: January-28-14 2:03 AM
To: Francesca Gino; [redacted]
Cc: [redacted]
Subject: Fwd: IRB Notice

Approved, sessions up and running next week. Franci, can you send me a check for participant payment asap.

Thanks,
[redacted]

[redacted]

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Begin forwarded message:

From: IRB <irb_no_reply@mailserv.unc.edu>
Subject: IRB Notice
Date: January 27, 2014 3:27:00 PM EST
To: [redacted]
Cc: [redacted]

To: [redacted]
Kenan-Flagler Business School

From: Office of Human Research Ethics

Date: 1/27/2014
RE: Notice of IRB Exemption
Exemption Category: 2.Survey, interview, public observation
Study #: 14-0119

Study Title: Instrumental Networking

This submission has been reviewed by the Office of Human Research Ethics and was determined to be exempt from further review according to the regulatory category cited above under 45 CFR 46.101(b).

Study Description:

Purpose: To see if social networking for professional gain makes individuals feel morally and physically unclean, and to examine how the amount of power a person has when engaging in this kind of networking affects their feelings of dirtiness.

Participants: Approximately 200 individuals ages 18-99

Procedures (methods): Subjects will take a leadership questionnaire. Within the questionnaire subjects will be notified of their assignment to an employee or manager role for a future group task, however the group task will not actually take place. Then subjects will use either their Linkedin or Facebook account to send a message to a person of their choosing, the message is intended to build a professional (Linkedin) or personal (Facebook) relationship. Subjects will then perform a word completion task, indicate to what extent they are feeling several emotions, rate the desirability of various products, and report how powerful the role assignment at the beginning made them feel.

Investigator's Responsibilities:

If your study protocol changes in such a way that exempt status would no longer apply, you should contact the above IRB before making the changes. The IRB will maintain records for this study for 3 years, at which time you will be contacted about the status of the study.

Please be aware that approval may still be required from other relevant authorities or "gatekeepers" (e.g., school principals, facility directors, custodians of records), even though the project has determined to be exempt. .

CC:
[redacted], Kenan-Flagler Business SchoolIRB Informational Message - please do not use email REPLY to this address