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Education or Indoctrination? The Accuracy of Introductory Psychology Textbooks in Covering Controversial Topics and Urban Legends About Psychology

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Abstract The introductory psychology class represents the first opportunity for the field to present new students with a comprehensive overview of psychological research. Writing introductory psychology textbooks is challenging given that authors need to cover many areas they themselves may not be intimately familiar with. This challenge is compounded by problems within the scholarly community in which controversial topics may be communicated in ideological terms within scholarly discourse. Psychological science has historically seen concerns raised about the mismatch between claims and data made about certain fields of knowledge, apprehensions that continue in the present "replication crisis." The concern is that, although acting in good faith, introductory psychology textbook authors may unwittingly communicate information to readers that is factually untrue. Twenty-four leading introductory psychology textbooks were surveyed for their coverage of a number of controversial topics (e.g., media violence, narcissism epidemic, multiple intelligences) and scientific urban legends (e.g., Kitty Genovese, Mozart Effect) for their factual accuracy. Results indicated numerous errors of factual reporting across textbooks, particularly related to failing to inform students of the controversial nature of some research fields and repeating some scientific urban legends as if true. Recommendations are made for improving the accuracy of introductory textbooks.

The introductory psychology class typically represents the undergraduate student's first exposure to the field of psychology. Exposure to psychology in introductory psychology classes presents a particular opportunity for myth busting of erroneous ideas about human behavior that students may have been exposed to in the general press or elsewhere (Lilienfeld et al. 2009a, b). At the same time, writing introductory textbooks presents certain challenges. Textbook writers may feel some pressure to recruit students and to "advocate" for the field, which may lead to their discussing psychological research as more definitive than it actually is. Textbook writers may do little to inform readers of the methodological and theoretical controversies prevalent in the field (e.g., LeBel and Peters 2011; Pashler and Harris 2012). Textbook writers also, by the very nature of covering the entire field of psychology, must write on topics they may personally know little about. As such there is a natural, and understandable risk that introductory textbooks may not always faithfully inform readers about psychological science. This manuscript examines this issue in a sample of 24 commonly used introductory textbooks to examine whether such textbooks experience common problems with the accurate reporting of psychological science.

Introducing Psychology

Like most social sciences, given the intersection of controversial human behaviors and values with "soft" scientific methods and the limits therein (Fanelli 2010; LeBel and Peters 2011; Pashler and Harris 2012) psychological science

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is, by nature, turbulent. Indeed, attempting to define psychology itself may be difficult, given different impressions about the boundaries of psychology (e.g., The mind or just behavior? Animals or just humans?) and its inherent fuzziness as a concept (Lilienfeld 2004). This is not necessarily a bad thing. Most scholars recognize that discourse and debate are healthy for the sciences, particularly when the boundaries may be difficult to define.

In the context of introducing students to psychological science and, indeed, potentially recruiting them as majors, both introductory instructors and textbook writers may feel some pressure, whether internal or external to "sell" psychology as a science. Given that students may come in with the perception that psychology is a "soft" science (Hedges 1987; Lilienfeld 2012a; Nature 2005), psychology textbook writers may be unconsciously prone to overcompensating by overstating the conclusiveness of psychological research and understating its limitations or theoretical controversies. Naturally, psychologists have chosen their field for the love of the material and may experience natural human biases to present it as positively, even unduly so, as possible (Matlin 2004).

Textbook writers may thus be conflicted between opposing goals of representing psychology accurately, warts and all, and advocating on behalf of the field for potential future students. This is not to say that these goals are necessarily mutually exclusive, but rather that meeting both goals may be particularly difficult, particularly when writing on fields that may be relatively unknown to the textbook authors themselves. This may be further exacerbated in fields in which involved authors themselves may have taken to making overly conclusive statements about research or "overselling" the consistency and quality of the existing research (Lilienfeld 2012b; Teo 2012). Such overselling may make it difficult for textbook authors, who must congeal countless articles across the discipline into something sensible, to fully become aware of the research field's nuances.

How are Introductory Psychology Textbooks Doing?

Several previous studies have examined textbook accuracy, although not always focusing on introductory psychology textbooks. Thomas (2001) examined errors in history of psychology textbooks, and found that certain types of errors were particularly common. These include the repetition of *scientific urban legends*; that is, statements repeated as factual that have actually been discredited in the scientific literature, errors of interpretation and misquoting. Thomas concluded that these errors, some of them repeated across textbooks, led to the misrepresentation of the field in some key areas to student readers. Steuer and Ham (2008) examined errors in introductory textbooks specifically. As with Thomas (2001) they found that textbook errors were common and compiled a

taxonomy of errors ranging from simple citation mistakes through misrepresentation of citations (such as reversing the findings of a study or using a citation to support a statement that is not, in fact, addressed in the cited article), using inappropriate citations or failing to cite appropriate sources through outright plagiarism. Other studies have suggested that introductory text books may be unreliable in the representation of counseling and other areas of applied psychology (Haselhuhn and Clopton 2008) and may misrepresent the views even of historically important psychologists such as B.F. Skinner (Jensen and Burgess 1997).

Analyses of textbook accuracy remain relatively uncommon, however, and there is little evidence that the concerns expressed in the above pieces have been taken to heart resulting in greater care in the production of introductory textbooks. The intent here is not to be overly critical of introductory textbook writers by any means, and we are well aware of the daunting task they undertake. But given the renewed emphasis on quality undergraduate education in psychology (e.g., Halpern 2010), addressing the accuracy of textbooks in representing psychological science as we say "warts and all" is of tantamount importance given the function of these books as the gateway to psychology for so many.

Mythmaking in Introductory Psychology Textbooks

In their coverage of introductory textbooks' representations of B.F. Skinner Jensen and Burgess refer to these texts as "mythmaking" to the extent that they report a narrative of Skinner that is convenient, but in many ways misrepresent Skinner's contributions to the field. Introductory psychology courses present an excellent avenue for myth busting of common misperceptions of psychological phenomena in the general public (Lilienfeld et al. 2009a, b). But in busting general myths of psychology, there remains the danger that introductory textbooks (and instructors separately) may promulgate myths of their own. These include the product of general ideological biases within the field (see Inbar and Lammers 2012; Tetlock 2012 for discussion) that may create *opinions with numbers* myths in which a dogmatic ideology is presented as science and described as factual in textbooks. In some case, ideological biases may be difficult for textbook authors to discover, particularly if criticism of those biases have not yet been brought forth in the academic literature. However, in other cases, textbook authors themselves may engage in *citation bias* failing to inform readers of academic debates and discrepant data when they exist, thus presenting a research field as more consistent and clear than it actually is.

A second form of mythmaking comes in the form of *scientific urban legends*. We define scientific urban legends as stories, tales or anecdotes, often used to illustrate a psychological concept, that have been disproven but continue to be

represented as factual in textbooks. Perhaps the most famous of these is the story of Kitty Genovese who, it has often been reported, was murdered in full view of multiple witnesses who did not intercede to help her. This parable is a beautiful illustration of the bystander effect of helping (or not helping) behavior, which arguably is one of the sensational concepts to come forth from social psychology. The only inconvenience is that the story, at least as often told in introductory textbooks, is not true (Manning et al. 2007). The homicide did occur, but not in view of most of the victim's neighbors. Some of the neighbors who had witnessed the attack did indeed call the police and intervene in other ways. Thus, the attack was made in view of only a small number of people, most of whom responded in perfectly typical ways (i.e., calling the police.) The parable of the unhelpful witnesses appears to be largely the creation of an erroneous newspaper article that followed the attack. Although the errors in that newspaper article are now well documented, the parable continues to be presented as factual. Curiously, some scholars have concluded that the Genovese story retains value as a useful parable (Brock 2008). In response Manning, Levine and Collins (2008, p.562) have written "We are happy to leave it to readers of this journal to judge whether it is wise to continue to use in textbooks inaccurate accounts presented as facts, and whether it is sensible to conclude that despite being read by many thousands of students and researchers, the story of the 38 witnesses has had 'negligible scholarly impact.'" Indeed, this perspective guides our current discussion as we consider the wisdom of introductory textbooks presenting distorted (whether intentional or unintentional) information on subjects that can be potentially fact-checked as false or problematic should readers take the initiative to do so.

From our own experience in teaching introductory psychology many times, we do not diminish the great value of well-written introductory textbooks, but we also recognize that such textbooks also contain recognizable errors or omissions. As Steuer and Ham (2008) note, the errors in textbooks may take many forms, from small to large, but here we focus on the creation of misinformation or myths due to the inaccurate representation of psychological research as more consistent, higher quality and more generalizable to socially relevant phenomena than it actually is, or through the repetition of scientific urban legends. We recognize that many areas of psychological science may be prone to such mythmaking and that compiling a comprehensive list would be daunting and unlikely. Thus, we focus on twelve particular areas of potential mythmaking. These twelve topics were chosen for several reasons: some were research areas familiar to the authors; others are research areas subject to intense public debate. Others have been identified as problematic within the scholarly community (e.g., Grimes et al. 2008; Larzelere 2008; Thomas 2001) specifically for their potential for ideological myth-making. We make no claim that these are any

form of randomly selected set of potential mythmaking areas, but we did suspect that examining these may provide us with some indication of how introductory psychology textbooks are doing in covering such tendentious areas. Scientific debates about these issues are discussed in depth elsewhere, and we highlight them only briefly here:

Media Violence Whether media violence does or does not contribute to aggression or societal violence remains one of the most contested issues both in the general public and scholarly community, particularly after tragic events such as the 2012 Sandy Hook shooting of elementary school children. Both evidence and scholarly opinions remains divided (see Australian Government, 2010 for one recent comprehensive overview). However, this field has had a considerable problem with overstatement, *citation bias* (Ferguson 2010) and ideological biases (Grimes et al. 2008) which make this field particularly ripe for mythmaking that could be transmitted down to introductory textbooks.

Stereotype Threat Stereotype threat, or reduced performance due to personal knowledge of a stereotype against one's own group, has been used to explain differences in math achievement between men and women (Spencer et al. 1999). Such a narrative, whether true or not (and we take no position) arguably provides a politically correct narrative to explain achievement score differences consistent with the admirable goal of promoting egalitarianism, a goal the current authors certainly endorse. This does not mean stereotype threat is untrue of course, but other scholars have claimed that the stereotype threat results are not as consistent as sometimes claimed (Stoet, and Geary 2012). Thus we suggest it is possible that the narrative of stereotype threat may potentially interfere with a fair and impartial coverage of debates regarding the consistency of the research supporting it.

The "Narcissism Epidemic." In recent years some scholars have concluded there is a "narcissism epidemic" among youth (Twenge and Foster 2008) whereas other scholars have claimed that this is a false epidemic based on flawed statistics (Donnellan, Trzesniewski, and Robins 2009). Once again, given the potential headline grabbing element of a narcissism epidemic, this appears to us as a potential area for mythmaking in introductory textbooks.

Spanking Effects Whether disciplinary spanking leads to aggression and other negative outcomes (Gershoff 2002) or has negligible effects on behavior (Morris and Gibson 2011) remains hotly contested in the literature. It also tends to be prone to misrepresentation and a failure to communicate nuances (Larzelere 2008) which makes it a candidate for mythmaking.

Multiple Intelligences Whether we have a single intelligence "g" or some form of multiple intelligences (Gardner and Moran 2006) has inspired considerable discussion. Given that a list of multiple intelligences is likely to be interesting and appealing to list-focused students, their value to introductory textbooks is obvious. However, theories of multiple intelligences have sometimes been criticized as having little research support (Waterhouse 2006). We foresee the potential for introductory textbooks to ignore controversies of multiple intelligence theories in favor of presenting an attractive theory to eager readers.

Evolution and Mating Choices Although most psychologists probably acknowledge that evolution is one driving force in shaping human behavior, evolutionary psychology has often been controversial (Confer et al. 2010). Although evolution may play a significant role in our sexual and mating behaviors, it remains possible that textbook authors may shy away from discussing evolutionary influences in favor of standard socialization models of such behaviors. This potential ideological preference for socialization rather than evolutionary explanations for mating choices and behaviors may be a potential source of mythmaking.

Antidepressant Effectiveness The use of antidepressant medications to treat a variety of mood and anxiety disorders has become increasingly common in recent decades. However their effectiveness has sometimes been controversial (Ioannidis 2008). Whether textbooks note the controversy over their effectiveness or present them as effective is of interest to us.

The seven issues above fit a general pattern in which research fields may be presented as more resolved than they are, producing a form of ideological bias. We suspect these biases will generally be in the direction of greater alarmism in some cases and consistent with liberal-leaning biases in others given the relative socio-political homogeneity of the field (Redding 2001). By contrast, the following five issues have less to do with ideological biases and more to do with parables and convenient narratives. These *scientific urban legends* are convenient narratives that, although false, continue to be repeated, possibly because their narratives clearly, but falsely, illustrate a particular concept in psychology.

Kitty Genovese As indicated earlier in the paper, the Kitty Genovese story is perhaps the most famous example of a scientific urban legend commonly repeated in introductory textbooks. Thus it is included here.

Brainwashed Korean-War POWs During a recent review of an introductory psychology textbook, the first author of this paper saw this urban legend reported as true in the social psychology section. The parable of American soldiers brainwashed by Communists during the Korean War and made to confess to war crimes or defect to the communist side fits well with social psychological concepts of coercion and conformity. However, claims of brainwashing were generally exaggerated, with most of the confessions extracted under torture (Lifton 1961).

Broca's Brain As Thomas (2001) notes, one common error reported in textbooks is that Paul Broca "discovered" the area of the brain associated with his name. The theory of cortical localization of speech was, in fact, the product of Ernest Auburtin, although Broca performed the first autopsy which confirmed Auburtin's theories (Broca had remained silent on whether he believed Auburtin to be correct until after the autopsy and, himself, credited Auburtin as the originator of the theory). This is not to diminish Broca's contribution, of course, only to note that the popular narrative that Broca "discovered" Broca's area is not technically correct, given that the area was, in fact, discovered by Auburtin, as Broca himself acknowledged (Thomas 2001). This scientific urban legend is certainly a bit more limited to psychological learning itself, but certainly worthy of consideration.

10% Brain Myth This particular myth is likely one of those perpetuated more in the general public than introductory texts (at least we hoped). This myth involves the belief that humans only ever use 10% of their brain potential and that unlocking the other 90% could unleash amazing cognitive powers. It appears to have originated as a misunderstanding or misinterpretation of early neuropsychiatry work, and has been thoroughly debunked (Lilienfeld et al. 2009a, b). We include it here given both its continued popularity in the general public and as something of a baseline assessment for mythmaking in introductory textbooks.

Mozart Effect This theory suggests that listening (particularly by children) to classical music may have a positive benefit on cognitive abilities. Although initially supported by some research, gradually the weight of evidence has come against the existence of a Mozart effect (Waterhouse 2006).

The issues above were chosen to represent a variety of potential sources of false information. These included social issues often highlighted in the public sphere that emphasize the social importance of psychological science (e.g., media violence, multiple intelligences, etc.), and parables commonly used to highlight principles considered important to psychology (e.g., Kitty Genovese, Korean POWs, etc.) We sought to include a full range of potential issues, including those which were almost certainly included in most psychology texts as well as those that were often voiced in the popular press, but which may or may not be considered in introductory textbooks. In this sense, our analysis was very much an exploratory "proof of concept" analysis as opposed to a thorough

across-the-board analysis (which could possibly have encompassed hundreds of issues, parables and psychological myths.)

Either repetition of the scientific urban legends above or the misleading representations of the contentious research fields first described would misinform readers of introductory textbooks. This would actually work against the goal of providing accurate information to students rather than supporting it. Granted, we acknowledge the true state of some of these issues may be quite complex and lack the enticing narrative of a less nuanced approach. But we submit that the purpose of introductory textbooks is to present accurate information, as best possible, not to provide narratives that support particular beliefs that may be in dispute. To examine how introductory textbooks have been doing on these twelve issues, we considered coverage of these issues in a number of commonly used introductory textbooks published by major publishers.

Methods

A number of popularly used introductory psychology textbooks published by major publishers were included in the current analysis. All editions were current at the time they were solicited and received in the Spring of 2012. Twenty-four books were included in total. This sample of books is not comprehensive, of course, although we suspect these books are likely representative of the total population of introductory textbooks as these books are produced from the major publishers and are the top selling titles for introductory courses. A list of included introductory textbooks is provided in Appendix A.

A rubric was created to assess the coverage of each of the included issues. For the first seven controversial issues in psychology, a 3-point rubric was developed with the following options:

a) The textbook included only one-sided coverage of a controversial issue. No coverage of the debate was included and one side was presented as fact.
b) The textbook noted the debate in the area, but only peripherally, focusing mainly on one side of the debate. Both sides were acknowledged but the advantage was clearly given to one side of the debate.
c) The textbook provided fair, comprehensive and accurate coverage of both sides of the debate.

For the five scientific urban legends, the rubric was similar, but with the following options:

a) The textbook reported the urban legend as fact.
b) The textbook raised some doubts about the authenticity of the urban legend but leant toward presenting it as fact.

c) The urban legend was acknowledged as false.

These criteria were designed to provide guidance for raters in assessing relative degrees of problematic coverage of specific issues. It was recognized that problematic coverage is not necessarily a yes/no issue, but can occur in gradients. In essence these criteria were developed to distinguish coverage that was entirely biased, coverage that acknowledged but then dismissed controversy, and balanced coverage.

We note that in some cases a specific urban legend may have overlapped with a broader issue (e.g., Korean POWs, and brainwashing more generally.) In such cases, only coverage of the specific urban legend, not the broader issue, was considered. Of course, it is reasonable that coverage of broader issues has merit, however, we wished to be careful not to change our analyses mid-stream.

Each textbook was reviewed independently by the first two authors. In some cases, textbooks simply didn't cover one of the twelve issues above. The two reviewers agreed in 100% of cases whether an issue was covered in a textbook or not. Concordance between the reviewers for ratings of items that were covered was 93.2%. All of the remaining ratings were off by a single point. Overall, this indicates considerable concordance in the review process.

Results

For ease of presentation we have labeled our outcome options listed above in chart form simply as "Biased", "Partially Biased" and "Good" as well as "Not Covered" for books that didn't touch on an issue at all. "Biased" refers to the "a" options described above, involving one-sided coverage of controversial issues or repeating scientific urban legends as factual, where as "Partially Biased" refers to the "b" options. "Good" refers to the "c" option, indicating fair and accurate coverage. In Table 1 we present the percentage of Introductory Textbooks that fall into each of these four categories for each of the twelve issues we considered.

These results indicate that controversial topics varied somewhat in coverage. Most areas received coverage in the majority of textbooks, although a few (The Narcissism Epidemic and several of the scientific urban legends) were less often covered. When textbooks did cover these topics, results indicate that, as a whole, textbooks had difficulty covering them carefully and accurately. The stereotype threat and narcissism epidemic, interestingly, were the least well covered topics. Textbooks were most effective in challenging societal myths (Lilienfeld et al. 2009a, b) such as the 10% myth or the Mozart Effect, although only rarely did introductory textbooks cover these issues.

Aside from this, textbooks had difficulty covering controversial areas of research carefully, often not noting scholarly

Table 1 Percentages of Introductory Textbooks with Biased, Partially Biased or Unbiased Reporting on Controversial Issues and Scientific Urban Legends

Issue	Not Covered	Biased	Partially Biased	Unbiased
Media Violence	0%	50%	37.5%	12.5%
Stereotype Threat	25%	62.5%	12.5%	0%
Narcissism Epidemic	83.3%	12.5%	4.2%	0%
Spanking	29.2%	33.3%	25%	12.5%
Multiple Intelligences	0%	33.3%	58.3%	8.3%
Evolution/Mating	20.8%	25%	37.5%	16.7%
Antidepressants	4.2%	25%	58.3%	12.5%
Kitty Genovese	33.3%	45.8%	8.3%	12.5%
Korean POWs	95.8%	4.2%	0%	0%
Broca	25%	70.8%	4.2%	0%
10% Myth	75%	0%	0%	25%
Mozart	83.3%	0%	4.2%	12.5%

debate or divergent evidence where it existed. Similarly, the parable of Kitty Genovese continues to be often reported as fact despite having been discredited in the flagship journal of the American Psychological Association (Manning et al. 2008). The errors on these issues were universally in the direction of presenting controversial research or scientific urban legends as more consistent or factual than they are. As evidenced in Table 1, some textbooks are covering these issues carefully and well, although these were in the minority.

Discussion

We set out to examine the degree to which introductory textbooks were considering controversial topics fairly and accurately. Our results indicate that, by and large, introductory textbooks have difficulty accurately portraying controversial topics with care or, in some cases, simply avoid covering them at all. Such results indicate that readers of introductory textbooks may be unintentionally misinformed on these topics. Given that the misinformation contained generally hewed toward presenting contested research as more consistent, generalizable to socially relevant phenomena and higher quality than it was, we believe that these errors are consistent with an indoctrination, however unintentional, into certain beliefs or hypotheses that may be "dear" to a socio-politically homogeneous psychological community (Redding 2001). However, we submit that poor coverage of these topics eschews commitment to accurate undergraduate research (Halpern 2010) and risks damaging the credibility of the field when ideological positions are fact-checked as false by some students (see Hall et al. 2011a for warnings about adopting doctrinaire positions).

The failure of introductory textbooks, in many cases, to accurately represent the Kitty Genovese parable and the controversies surrounding it, arguably represents the clearest

bellwether. Almost 50% of introductory textbooks continue to report the parable as fact despite its debunking several years ago in the flagship journal of the APA. Most of the remainder of textbooks (33.3%) "got it right" only in the sense that they didn't cover the issue at all.

On controversial topics ranging from stereotype threat through media violence, introductory textbooks struggled with careful and fair balanced presentation of the research. However, it is important to note that some textbooks, in fact, did an excellent job. Although we did not quantify it, it was our personal observation that books that were accurate on one issue were prone to being careful in their coverage of other controversial issues as well. Or, put simply, some textbook writers appear to exhibit more caution and accuracy than others in their coverage of controversial topics. This issue may be one that instructors may wish to look for when considering textbook adoptions.

In fairness to introductory textbook authors, some part of the difficulty is often that, on controversial topics, many scholars invested in a field may "oversell" their results and present them as less controversial than they are. This may be exacerbated by some APA position statements, which may be written by narrow groups of scholars invested in a particular ideological position, creating position statements that do not accurately reflect divergent research in a field and are prone to errors and citation bias (see Farady 2010; Ferguson 2010; Hall et al. 2011a). In essence, then, difficulties with introductory textbooks may represent larger difficulties in the field in accurately and carefully representing research and noting where replication may be absent or has failed (Pashler and Harris 2012).

As for scientific urban legends, textbooks tended to struggle with Kitty Genovese (even despite that parable having been outright debunked), and Broca's discovery of the brain area associated with his name. The other three urban legends, textbooks largely shied away from. However, in doing so,

textbooks may be missing an opportunity for myth busting (Lilienfeld et al. 2009a, b), allowing popular misconceptions to continue. In our classes, we often field questions about the 10% myth and Mozart effect in particular. Thus, it is surprising to see so few textbooks addressing common misconceptions about psychology.

We readily acknowledge that the twelve topics chosen for our analysis are by no means random, and that must be considered when evaluating our results. Indeed, they were chosen both for the degree students are interested in them, and to the degree they have created controversies within the field. It is entirely possible that textbooks are covering most of the less controversial topics faithfully, and that textbook issues are limited only to more controversial, doctrinaire-prone issues. However, given the degree to which false coverage of these issue can damage the credibility of the science (Hall et al. 2011a), particularly when a simple Google search could reveal the doctrinaire position as false, we call upon textbook writers to represent controversial topics more faithfully, whatever their personal views may be. We fully acknowledge the immense challenges that face writers of introductory textbooks and intend our essay here as a constructive effort to aid textbook writers, rather than a critique. Indeed, it is our position, that much of the problem is shared among the field itself with its tendency to "oversell" research in many areas.

We recognize that, ultimately, any selection of topics is potentially arbitrary, and many other potential issues were left out of our analysis. For instance, there have been controversies over the presentation of the Phineas Gage case (MacMillan 2008) or concerns about the validity of the Stanford Prison Experiment (Gray 2013). In light of our findings it is undoubtedly the case that psychology textbooks are providing false or incomplete information on numerous other issues to students because these mythical stories happen to present psychology in an interesting light. Our current study is, in essence, a proof of concept, demonstrating that this is certainly happening with some issues in psychology textbooks. A full accounting of the scope of the problem would be a much larger undertaking.

In some cases, such as the Korean POW urban legend, our analysis may have been narrow. For instance, some texts cover brainwashing more generally and accurately (e.g., Lilienfeld et al. 2012), without necessarily mentioning the Korean POW issue specifically. In such cases, we did not deviate from our initial decision to focus on the specific issue, although we note that looking at the broader issue could also be illustrative.

Future research could address the limitations of our current study in several ways. First, researchers could sample introductory psychology instructors for issues they believe are covered in biased ways in introductory texts. Although there may be no way to definitively sample an unbiased list of topics, even by pulling from a larger sample of instructors, using this methodology may achieve a more representative sample of concern areas experienced by a wide body of introductory psychology instructors. Second, future research may consider ways to "blind" the raters to the hypotheses of the study. Again, it may be difficult to obtain true researcher blinding. Asking raters to examine topics for potential bias may inherently set forth some demand characteristics, but there may be creative ways to get past this, perhaps by including some areas of research that truly are definitive as distractors.

It remains a difficult question for what psychology textbooks should do when considering "classic" stories and studies (whether Kitty Genovese on one hand, or classic…but sometimes seriously flawed…studies, from the bo-bo doll studies to the Milgram electroshock studies, to Little Albert, to the Stanford Prison Experiment, see Jarrett 2008; Tavris 2014). As noted by Brock (2008) it may be tempting to hold onto these stories or flawed experiments because, without their flaws, they beautifully illustrate psychological principles. However, principles that rely on flawed studies or fables, may not really exist, and we argue that, as educators, we do our students a disservice not to inform our students of the full story. That may mean telling our students about a psychology that is a little messy, muddled, and doesn't always have definitive answers. But, if that's the truth, that's what the psychology students are paying to learn about, not the fantasy we may like to believe is true.

What we are arguing for is textbook writing that may be, in some respects, less satisfying insofar as it would eschew purporting to have "the answer" for hot-button questions students are interested in. We know many students have questions such as "Is spanking really harmful?" or "Are men really better at math?" Naturally students want "the answer" and textbook writers may be eager to give that answer (or perhaps particularly the answer that is politically correct in the field). But often the honest answer is that "it's complex and we're not entirely sure." But that is science, particularly the science of the human mind. And that is what we must faithfully report.

Appendix A

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