

# “Do Not Teach Them How to Fish”: The Effect of Zero-Sum Beliefs on Help Giving

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How do *zero-sum beliefs*—the beliefs that one person’s success is inevitably balanced by others’ failure—affect people’s willingness to help their peers and colleagues? In nine studies (and 2 supplementary studies,  $N = 2,324$ ), we find consistent evidence for the relationship between the belief that success is zero-sum and help giving preferences. Across various hypothetical scenarios and actual help giving decisions, and even when the effort required for helping was minimal, zero-sum beliefs negatively predicted participants’ willingness to help their colleagues learn how to succeed on their own (i.e., autonomy-oriented help). In contrast, the belief that success can only be achieved at others’ expense did not affect participants’ willingness to offer the kind of help that would completely solve their colleagues’ problems for them (i.e., dependency-oriented help). Moreover, we find that the effect of zero-sum beliefs on the reluctance to give autonomy-oriented help is mediated by concerns about losing one’s status to the recipient, and that removing these concerns about status loss mitigates the negative effect of zero-sum beliefs on help giving. We discuss the theoretical and practical implications of this robust yet nuanced link between the belief that success is zero-sum and prosocial helping behaviors.

**Keywords:** zero-sum beliefs, autonomy-oriented helping, dependency-oriented helping, status

**Supplemental materials:** <https://doi.org/10.1037/xge0001196.supp>


In 1997, following his triumphant return to Apple Inc., Steve Jobs did an awfully surprising thing: he reached out to Microsoft Corporation, Apple’s long-time industry rivals, for help. “If we want to move forward to see Apple healthy and prospering again,” Jobs announced to a crowd of booping employees, “we have to let go of this notion that for Apple to win, Microsoft has to lose.” In making this bold (and extremely successful) strategic move, Jobs outlined his non-zero-sum approach to success: For one to succeed, others do not have to necessarily fail.

Even though life entails many such opportunities for joint gains, people often fail to see them as such, viewing success as a zero-

sum game where one’s gains are inevitably offset by others’ losses (Foster, 1965; Johnson et al., 2021; Ongis & Davidai, 2021; Roberts & Davidai, 2021; Różycka-Tran et al., 2015). Such zero-sum beliefs are associated with many adverse personal and societal consequences. For instance, people who view negotiations as zero-sum (i.e., “the fixed-pie bias”) typically focus on maximizing relative gains, overlook information that favors both parties, fail to reach mutually beneficial agreements, and consequently “leave money on the table” (Bazerman, 1983; Fisher et al., 2011; Thompson & Hastie, 1990). More generally, zero-sum beliefs are associated with diminished well-being, increased prejudice, lower support for gender and racial equality, and broad societal cynicism (Brown & Jacoby-Senghor, 2021; Davidai & Ongis, 2019; Esses et al., 2001; Kosakowska-Berezecka et al., 2020; Krosch & Amodio, 2014; Louis et al., 2013; Piotrowski et al., 2019; Różycka-Tran et al., 2019, 2021; Shin & Kim, 2018; Wilkins et al., 2015). And, since such beliefs involve viewing one’s own and others’ interests as diametrically opposed, they contribute to intractable conflicts and impede costly yet constructive compromises (Bartol, 2000; Bobo & Hutchings, 1996; Maoz & McCauley, 2005). Not surprisingly, people often avoid situations that are, or are believed to be, zero-sum (Davidai et al., 2021).

Given these consequences, one may expect zero-sum beliefs to also impede prosocial behavior. Indeed, people who view success as zero-sum use more coercive and harmful strategies to rise in status (Andrews-Fearon & Davidai, 2021), are more greedy (Jiang et al., 2020), less trusting (Andrews-Fearon et al., 2021; Różycka-

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The authors of this article did not receive any external financial support for the research, authorship, and/or publication and declare no conflict of interest. The ideas and data in this article have not been previously disseminated.

All study materials and data can be accessed through the Open Science Framework at: [https://osf.io/xmpcy/?view\\_only=8d0395c429f943cbb996b98aa4b131c1](https://osf.io/xmpcy/?view_only=8d0395c429f943cbb996b98aa4b131c1).

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Tran et al., 2015), and less willing to help underserved populations (Piotrowski et al., 2019). Thus, although creating mutually beneficial gains requires reciprocity and cooperation, and even though the benefits of helping can outweigh its costs (Bolino & Grant, 2016; Ent et al., 2020; Podsakoff et al., 2009), zero-sum beliefs may hinder other-minded, prosocial helping behaviors.

Unfortunately, research on the negative effects of zero-sum beliefs on help giving is lacking, leaving clear gaps in the literature. To date, only two articles directly examined how zero-sum beliefs impact help giving, finding that even when it does not affect one's productivity, such beliefs reduce people's willingness to help (Kakkar & Sivanathan, 2021; Sirola & Pitesa, 2017). Yet, because this research did not distinguish among different types of helping behaviors (Nadler, 2020), it is unclear whether zero-sum beliefs obstruct all types of helping and, if so, why. Equally important, it is unclear whether and how the effect of zero-sum beliefs on help giving can be alleviated (or even eliminated). How do zero-sum beliefs affect people's willingness to give different types of help? What kind of help are people who view success as zero-sum most and least willing to give?

We close this gap in the literature by examining whether, how, and why zero-sum beliefs affect different helping behaviors. Instead of dampening people's overall willingness to help, we suggest that zero-sum beliefs shift prosocial preferences toward certain types of behaviors and away from others, making people willing to offer some types of help so long as doing so does not undermine their status. Specifically, we argue that zero-sum beliefs reduce people's willingness to give *autonomy-oriented help*—the kind of help that teaches others the tools and skills they need to succeed on their own—but not their willingness to give *dependency-oriented help*—the kind of help that solves others' problems for them. In fact, because dependency-oriented helpers can rise in status by becoming indispensable to their recipients (Kende & Shnabel, 2017; Nadler et al., 2009; Nadler & Chernyak-Hai, 2014), zero-sum beliefs may make people more rather than less likely to give this kind of help. Thus, although helping others succeed on their own can satisfy recipients' need for autonomy and mastery (e.g., Ryan & Deci, 2000), we suggest that zero-sum beliefs dampen certain helping behaviors but not others, inhibiting autonomy-oriented, but not dependency-oriented, helping.

### Autonomy-Oriented and Dependency-Oriented Helping

Although a considerable amount of research has focused on when and why people engage in prosocial helping, much less work has been devoted to the kinds of help that people give. Yet, how people choose to help “may both reflect and be affected by the power hierarchy between helper and recipient” (Nadler, 2002, p.488). Indeed, recent research has examined people's help giving preferences within the context of status and power relations as well as the interpersonal and intergroup implications for both helpers and their recipients (e.g., Chernyak-Hai et al., 2017; Halabi & Nadler, 2017; Nadler et al., 2009).

Two kinds of helping behaviors that have received growing interest are *dependency-oriented help* and *autonomy-oriented help*. Giving dependency-oriented help—which consists of offering a full solution to someone's problem rather than teaching them how to solve it on their own—keeps recipients dependent on their helpers and thus asserts the helper's elevated status. In contrast, giving

autonomy-oriented help—which consists of teaching someone the tools they need for succeeding on their own—empowers recipients to be autonomous and independent at the cost of eliminating (or even reversing) the status imbalance between helpers and their recipients. Thus, by choosing between these two behaviors, helpers may assert, affirm, or challenge their status relative to their recipients. Indeed, although people often engage in both types of helping, they tend to give dependency-oriented help to lower-status others (Nadler & Chernyak-Hai, 2014) and use it to maintain status inequalities and intergroup hierarchies (Kende & Shnabel, 2017; Nadler et al., 2009). Whereas helpers who “give someone a fish” assert their advantage over others and uphold the status imbalance between them, those who choose to “teach them how to fish” risk being outdone by their recipients, destabilizing the status hierarchy, and losing their advantageous position.

Importantly, giving someone dependency-oriented help by preparing a full solution for them may require as much time and effort as teaching them how to solve their problem on their own. For instance, teaching a colleague how to write an executive brief may only require a brief meeting in which you give them helpful tips, direct them to relevant resources, or simply hand over a list of “best practices” and then follow-up with a quick email. In contrast, solving this colleague's problem for them would require reading their draft, understanding the points they wish to make and the data upon which they are relying, and editing their work by going through the exact same steps that they would have gone through on their own had you taught them how to solve the issue by themselves. Moreover, the long-term investment needed for giving dependency-oriented help may surpass that which is needed for giving autonomy-oriented help. Whereas teaching someone to solve problems on their own reduces future requests for help, dependency-oriented help solidifies the recipients' reliance on the helper, suggesting that any present request may be followed up with additional requests in the future. Thus, the two types of help may require, on average, similar investments of time and effort. Nevertheless, we examine how zero-sum beliefs affect autonomy-oriented and dependency-oriented helping even when controlling for effort.

### Zero-Sum Beliefs and Different Types of Helping Behaviors

We suggest that zero-sum beliefs impact people's preference for giving autonomy-oriented and dependency-oriented help. Because people who view success as zero-sum worry that others rise in status at their expense, they may be reluctant to give autonomy-oriented help, which teaches recipients to solve problems on their own. Thus, we argue that zero-sum beliefs foster a concern that giving autonomy-oriented help reduces status imbalances between helpers and recipients and, consequently, lower people's likelihood of doing so.

The same, however, may not be true for dependency-oriented help, which gives recipients short-term solutions but does not undermine the helper's status in the long run. On the one hand, giving any type of help improves recipients' chances of success, and people who believe that success is zero-sum may therefore be reluctant to help regardless of the type of help under question. Consequently, zero-sum beliefs may impede both autonomy-oriented and dependency-oriented help giving. On the other hand,

people who view success as zero-sum might still feel compelled by social norms to offer some help despite their reluctance to do so, even if only to avoid others' sanctions. Since giving dependency-oriented help makes recipients dependent on their helpers and maintains existing hierarchies (Nadler, 2020), such people may feel like they can give this kind of help without having their status come under threat. Consequently, seeing success as zero-sum might motivate people to give dependency-oriented help, reaping the benefits of helping without worrying about personal status loss. As a result, zero-sum beliefs may not necessarily reduce dependency-oriented help and may even increase it. Thus, although we predicted that zero-sum beliefs would reduce the willingness to help others succeed on their own (i.e., autonomy-oriented helping), we did not have a strong hypothesis regarding the effect of zero-sum beliefs on giving dependency-oriented helping.

In a pilot study, we examined whether people who believe that success is zero-sum view a negative association between high status and giving autonomy-oriented (but not dependency-oriented) help (see online supplementary materials). Given our hypothesis that zero-sum beliefs highlight the status implications of autonomy-oriented help, we predicted that participants who view success as zero-sum will be less prone to see autonomy-oriented helpers as fit for high status positions. To examine this, we asked a sample of Israeli employees (a) whether success in their workplace was zero-sum and (b) whether they view colleagues who give autonomy-oriented (vs. dependency-oriented) help as fit for high status positions. As predicted, participants who believed that success can only be achieved at others' expense saw autonomy-oriented helpers as somewhat less fit for high-status positions,  $B = -.121$ ,  $SE = .063$ ,  $t(240) = -1.927$ ,  $p = .056$ , viewing a negative relationship between helping others succeed on their own and one's own status. In contrast, participants who believed that success is zero-sum saw dependency-oriented helpers as more fit for high status positions,  $B = .188$ ,  $SE = .095$ ,  $t(240) = 1.987$ ,  $p = .049$ , viewing a positive relationship between keeping others dependent on the self and one's status. Thus, these preliminary results support the relationship between zero-sum beliefs and the perceived status implications of autonomy-oriented help. People who saw success as zero-sum believed that teaching others how to solve their problems on their own (but not solving their problems for them) can harm one's status. Building on these findings, we examine how zero-sum beliefs affect people's willingness to give autonomy-oriented and dependency-oriented help.

Our research has two empirical aims. First, we examine whether and how zero-sum beliefs affect the type of help that people give, suggesting that zero-sum beliefs reduce the willingness to give autonomy-oriented, but not dependency-oriented, help. Second, we provide the first test of a mechanism linking zero-sum beliefs and help giving, such that people who view success as zero-sum worry about status loss after giving autonomy-oriented (but not dependency-oriented) help and, as a result, are less willing to do so. In sum, we hypothesize that:

*Hypothesis 1:* Zero-sum beliefs reduce people's willingness to give autonomy-oriented help, but not dependency-oriented help.

*Hypothesis 2:* Zero-sum beliefs increase concerns about status loss after giving autonomy-oriented help, but not dependency-oriented help.

*Hypothesis 3:* The negative effect of zero-sum beliefs on giving autonomy-oriented help is mediated by concerns about status loss.

*Hypothesis 4:* Removing concerns about status loss (e.g., by bolstering beliefs about one's high status) mitigates the effect of zero-sum beliefs on people's willingness to give autonomy-oriented help.

## Research Overview

Nine studies examine the effect of zero-sum beliefs on the type of help people give. We examine how zero-sum beliefs impact autonomy-oriented and dependency-oriented help giving among Israeli employees (Studies 1A, 1B, and 5), U.S. business students (Study 3A), and the general U.S. population (Studies 2A–2C, 3B, and 4). We find that fostering zero-sum beliefs about success reduces the willingness to give autonomy-oriented, but not dependency-oriented, help. In addition, we examine whether these effects are due to concerns about status loss, and whether alleviating such concerns (i.e., manipulating the mediator; Spencer et al., 2005) weakens the negative effect of zero-sum beliefs on autonomy-oriented help.

For all studies, we report all conditions run and measures collected. In line with past research (Chernyak-Hai et al., 2017; Nadler & Chernyak-Hai, 2014), Studies 1A, 1B, 2A, 2B, 4, and 5 examine help giving using two single-item measures of participants' willingness to give autonomy-oriented and dependency-oriented help, as well as an additional measure of their preference for one type of help over the other. For generalizability, Studies 3A and 3B examine preferences with a nine-item measure, including options to refuse helping or to defer help giving responsibility to someone else. For each study, we determined sample sizes in advance, conducted analyses after data collection was complete, and report a sensitivity power analysis of the smallest observable effect size given the achieved sample. In addition, we conducted Harman's single-factor tests of the number of factors needed to account for the variance in variables (Podsakoff et al., 2003), which revealed that a single factor accounted for less than 50% of the explained variance and thus indicating little risk of common-method bias.<sup>1</sup> The studies were approved by Columbia University's IRB (Protocol Number: IRB-AAAS6914), and participants gave their informed consent prior to participation (see online supplementary materials). The materials and data can be accessed through the Open Science Framework at: [https://osf.io/xmpcy/?view\\_only=8d0395c429f943cbb996b98aa4b131c1](https://osf.io/xmpcy/?view_only=8d0395c429f943cbb996b98aa4b131c1).

## Studies 1A and 1B

We began by examining whether zero-sum beliefs influence help giving preferences. Specifically, we examined whether participants who view success as zero-sum are less willing to give autonomy-oriented, but not dependency-oriented, help (Hypothesis 1) and are more concerned about status loss after giving autonomy-oriented, but not dependency-oriented, help (Hypothesis 2). In addition, we examine

<sup>1</sup> Harman's single-factor test results were 31.62%, 24.37%, 23.09%, 37.89%, 48.44%, and 31.05% for Studies 1A, 1B, 3A, 3B, 4, and 5, respectively.

whether zero-sum beliefs affect help giving because of such concerns about status loss after giving autonomy-oriented help (Hypothesis 3). We predicted that people who see success as zero-sum would worry that their status would be hurt by giving autonomy-oriented, but not dependency-oriented, help and would therefore be willing to “give someone a fish,” but reluctant to “teach them how to fish.”

## Study 1A

### Method

#### Participants

One hundred thirty-five Israeli employees (employed at least 20 hr/week) were recruited by the Midgam Project Web Panel in exchange for NIS 3 (~\$.80). We excluded 33 participants who failed comprehension and attention checks, resulting in a sample of 102 participants (49 females;  $M_{\text{age}} = 38.90$ ; 69% married, 24% single, 7% divorced; 14% high-school graduates, 37% professional education, 31% all/some college, 18% MA degree; 49% below average income, 31% average income, 18% above average income). This sample allows us to detect effects as small as  $r = .19$  with 80% power.

#### Procedure and Measures

**The Belief That Success Is Zero-Sum.** Participants completed two measures of zero-sum beliefs: a 10-point scale measuring the belief that “people can only get rich at the expense of others” versus “wealth can grow so there is enough for everyone” (Inglehart et al., 2014), and a six-item measure of the belief that success in the workplace is zero-sum, adapted from the Belief that Life is a Zero-sum Game scale (e.g., “When some workers make economic gains, others lose out economically”; 1-*Completely disagree*; 7-*Completely agree*; Różycka-Tran et al., 2015; Sirola & Pitesa, 2017). We standardized and averaged these measures to create an index of zero-sum beliefs ( $\alpha = .852$ ).

**Perceived Change in Status.** Participants reported how they expected their status would change after giving each type of help. They imagined being asked by a colleague for help and indicated, on two separate scales, how their own status at the company would change after giving them dependency-oriented help and how it would change after giving autonomy-oriented help (1-*Decrease my status*; 7-*Increase my status*).<sup>2</sup>

**Help Giving Preferences.** Two measures examined the willingness to give autonomy-oriented and dependency-oriented help. First, participants indicated their willingness to give their colleague each type of help (“To what extent would you give [your colleague] a complete solution to his current problem by preparing the presentation for him or telling him exactly what to do, but not teaching him how to deal with similar situations in the future?” and “To what extent would you help [your colleague] with his current problem by giving him tools and teaching him how to solve the problem by himself as well as how to deal with similar situations in the future?”; 1-*Not at all*, 7-*Very much so*). Second, participants indicated, on a bipolar scale, which type of help they would be more prone to give (“If you had to choose, what kind of help would you give [your colleague]?”; 1-*prepare a full solution to the problem*, 7-*giving tools and teaching how to solve the problem*).

**Comprehension and Attention Check.** To guarantee their attention and understanding, participants completed an attention check (“In many studies, it is important for researchers to verify that the participants pay the required attention. For us to know that you are dedicating the required attention, we ask that you choose the second response to this question”) and six comprehension checks (“Do you and [your colleague] work in the same department?” “Do you and [your colleague] work on the same project?” “Do you have previous knowledge and experience with the type of project [your colleague] is working on?” “Do you have good work relationships with [your colleague]?” “Is it important to [your colleague] to succeed in this project?” “Did [your colleague] ask you for help with this project?”).

### Results

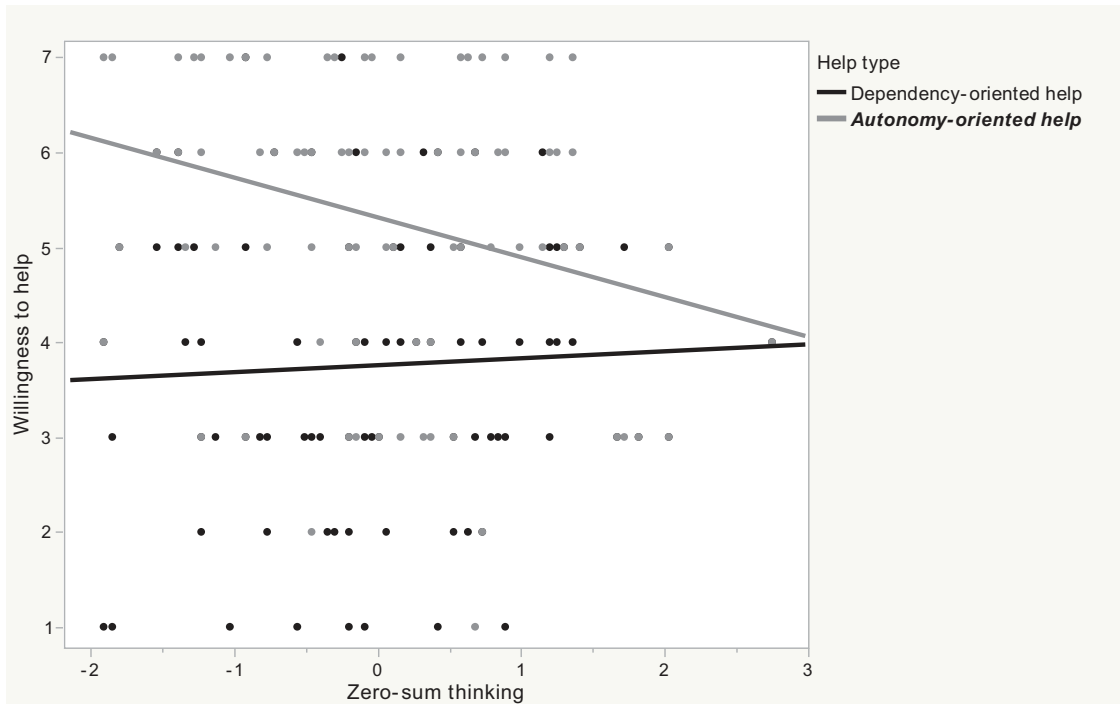
To examine Hypothesis 1, we tested participants’ willingness to give autonomy-oriented versus dependency-oriented help. As hypothesized, zero-sum beliefs negatively predicted the willingness to give autonomy-oriented help,  $B = -.279$ ,  $SE = .096$ ,  $t(100) = -2.911$ ,  $p = .004$ , but not the willingness to give dependency-oriented help,  $B = .049$ ,  $SE = .100$ ,  $t(100) = .495$ ,  $p = .621$ . The more participants believed that people can only succeed at others’ expense, the less they were willing to teach their colleagues how to solve their problems on their own. In contrast, seeing success as zero-sum did not predict participants’ willingness to give the kind of help that would keep their colleague dependent on them. Responses on the bipolar measure revealed a similar, albeit non-significant, pattern,  $B = -.210$ ,  $SE = .168$ ,  $t(100) = -1.248$ ,  $p = .215$ . The more participants viewed success as zero-sum, the less they showed a preference for giving autonomy-oriented, versus dependency-oriented, help. Whereas participants who did not view success as zero-sum preferred giving autonomy-oriented help, this was not true for those who viewed it as zero-sum (see Figure 1).

Next, to examine Hypothesis 2, we tested whether zero-sum beliefs predict concerns about status loss after giving autonomy-oriented, but not dependency-oriented, help. Indeed, although participants who viewed success as zero-sum expected to have lower status after teaching someone how to solve their problem on their own,  $B = -.344$ ,  $SE = .094$ ,  $t(100) = -3.666$ ,  $p < .001$ , there was no relationship between zero-sum beliefs and perceived status following dependency-oriented help,  $B = -.050$ ,  $SE = .100$ ,  $t(100) = -.500$ ,  $p = .618$ . Thus, participants who saw success as zero-sum worried about status loss after giving autonomy-oriented help, but the same was not true for participants who did not see it as such.

Finally, to examine Hypothesis 3, we tested whether the negative effect of zero-sum beliefs on autonomy-oriented help is explained, at least partially, by concerns about status loss. To do

<sup>2</sup>In addition, we examined in the pilot study and Study 1A whether participants believed that helping in general affects one’s status. Participants indicated how much a person gains or loses status after helping their colleagues (“To what extent do people who give help to others benefit from helping—earn management’s recognition, gain control over organizational resources, etc.” and “To what extent do people who give help to others lose out—lose management’s recognition, lose control over organizational resources, etc.”). As expected, zero-sum beliefs predicted the perceived effect of helping on the helper’s status (online supplementary materials).

**Figure 1**  
*Willingness to Help as a Product of Zero-Sum Beliefs and Type of Help (Autonomy-Oriented Help Versus Dependency-Oriented Help; Study 1A)*



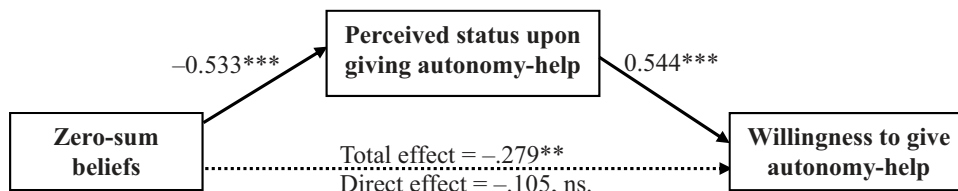
so, we ran 5,000 bootstrapped samples in the PROCESS macro for SPSS (Hayes, 2017), with zero-sum beliefs as the independent variable, willingness to give autonomy-oriented help as the dependent variable, and perceived change in status as the mediator. As predicted, we found a significant indirect effect of zero-sum beliefs on the preference for autonomy-oriented help through perceived change in status (indirect effect =  $-.174$ ,  $SE = .058$ , 95% CI  $[-.297, -.072]$ ; direct effect =  $-.105$ ,  $SE = .089$ , 95% CI  $[-.282, .072]$ ; total effect =  $-.279$ ,  $SE = .096$ , 95% CI  $[-.470, -.089]$ ; Figure 2), and this was also true when using the bipolar measure as the dependent variable (indirect effect =  $-.260$ ,  $SE = .091$ , 95% CI  $[-.462, -.105]$ ; direct effect =  $.105$ ,  $SE = .163$ , 95% CI  $[-.274, .374]$ ; total effect =  $-.210$ ,  $SE = .168$ , 95% CI  $[-.544, .124]$ ). Thus, concerns about status loss mediated the relationship between zero-sum beliefs and the reluctance to give autonomy-

oriented help. The more participants viewed success as zero-sum, the more they worried that giving autonomy-oriented help would hurt their status and, consequently, the less they were willing to do so.

**Study 1B**

Zero-sum beliefs differentially predict people’s willingness to give autonomy-oriented and dependency-oriented help. Since zero-sum thinkers were worried about losing their status to colleagues who have the tools to succeed on their own, they were less willing to give autonomy-oriented help. In contrast, zero-sum beliefs were unrelated to participants’ willingness to solve others’ problems for them. Thus, the relationship between zero-sum beliefs and helping is apparent for autonomy-oriented, but not for dependency-oriented, help.

**Figure 2**  
*The Effect of Zero-Sum Beliefs on Willingness to Give Autonomy-Oriented Help Through Perceived Status Loss (Study 1A)*



Note. ns = not significant.  
 \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Study 1B directly replicates this effect with three important changes. First, we more than doubled the sample size, increasing the study's power to examine the relationship between the belief that success is zero-sum and the willingness to give autonomy- and dependency-oriented help. Second, we counterbalanced the order of the items measuring perceived status change and willingness to offer help. Finally, we preregistered the materials, predictions, and analysis plan (<https://aspredicted.org/blind.php?x=9p5ed6>).

## Method

### Participants

Two hundred sixty-four Israeli employees (employed at least 20 hr/week) were recruited by the Midgam Project Web Panel in exchange for NIS 3 (~\$.80). As preregistered, we excluded 52 participants who failed comprehension and attention checks, resulting in a sample of 212 participants (136 females;  $M_{\text{age}} = 39.64$ ; 60% married, 30% single, <1% divorced/widowed; 23% high-school graduate, 35% professional education, 24% all/some of college, 11% MA degree; 47% below average income, 28% average income, 17% above average income). This allows us to detect effects as small as  $r = .13$  with 80% power.

### Procedure and Measures

**The Belief That Success Is Zero-Sum.** Participants completed the measures from Study 1A, which we standardized and averaged to create an index of zero-sum beliefs ( $\alpha = .699$ ).

**Perceived Change in Status.** Participants read a description of the two types of helping behaviors and imagined that a colleague asked for their help preparing a presentation. Participants rated, on two separate scales, how much their own status in the organization would change after giving their colleague autonomy-oriented help and how much it would change after giving dependency-oriented help (1-*Decrease my status*; 7-*Increase my status*).

**Help Giving Preferences.** As in study 1A, participants reported their willingness to give autonomy- and dependency-oriented help. First, they indicated in counterbalanced order their willingness to provide each type of help (1-*Not at all*, 7-*Completely*). Second, they indicated on a 7-point bipolar item which type of help they would be more prone to give.

**Attention Check.** Participants completed the comprehension and attention checks from study 1A.

## Results

Replicating Study 1A, zero-sum beliefs negatively predicted participants' willingness to give autonomy-oriented help,  $B = -.172$ ,  $SE = .061$ ,  $t(262) = -2.826$ ,  $p = .005$ , but not their willingness to give dependency-oriented help,  $B = .097$ ,  $SE = .061$ ,  $t(262) = 1.572$ ,  $p = .117$ . Responses on the bipolar item revealed similar results, such that zero-sum beliefs predicted a lower preference for giving autonomy-oriented over dependency-oriented help,  $B = -.123$ ,  $SE = .061$ ,  $t(262) = -2.008$ ,  $p = .046$ . Thus, the more participants viewed success as zero-sum, the less they were willing to give autonomy-oriented, but not dependency-oriented, help.

In line with Hypothesis 2, zero-sum beliefs negatively predicted how much status participants expected to have after giving autonomy-oriented help,  $B = -.160$ ,  $t(262) = -2.631$ ,  $SE = .06$ ,  $p = .009$ , but not

after giving dependency-oriented help,  $B = .034$ ,  $SE = .062$ ,  $t(262) = .552$ ,  $p = .582$  (for descriptive statistics and correlations, see Table S3 in the online supplementary materials). Thus, participants who viewed success as zero-sum worried about eventual status loss if they gave autonomy-oriented, but not dependency-oriented, help.

Finally, we examined Hypothesis 3 to test whether concerns about status loss explain the effect of zero-sum beliefs on giving autonomy-oriented help. An analysis with 5,000 bootstrapped samples in the PROCESS macro for SPSS (Hayes, 2017) with zero-sum beliefs as the independent variable and giving autonomy-oriented help as the dependent variable revealed a significant indirect effect through perceived status change (indirect effect =  $-.064$ ,  $SE = .026$ , 95% CI [ $-.118$ ,  $-.015$ ]; direct effect =  $-.080$ ,  $SE = .063$ , 95% CI [ $-.205$ ,  $.044$ ]; total effect =  $-.144$ ,  $SE = .067$ , 95% CI [ $-.277$ ,  $-.012$ ]), and this was also true when using the bipolar measure as the dependent variable (indirect effect =  $-.028$ ,  $SE = .015$ , 95% CI [ $-.063$ ,  $-.004$ ]; direct effect =  $-.097$ ,  $SE = .067$ , 95% CI [ $-.228$ ,  $.034$ ]; total effect =  $-.135$ ,  $SE = .067$ , 95% CI [ $-.268$ ,  $-.002$ ]). Thus, the more participants viewed success as zero-sum, the more they worried about status loss after giving autonomy-oriented help, which reduced their willingness to do so.<sup>3</sup>

## Studies 2A–2C

Participants who viewed success as zero-sum were less willing to give autonomy-oriented, but not dependency-oriented, help. We conceptually replicate these findings in Studies 2A–2C with several important changes. First, we examine the generalizability of our findings in novel domains. Participants imagined that they ran a branch of a large company and could help another branch's manager complete their budget projections by either doing it for them or teaching them how to do it on their own (Study 2A) or that they worked at a law firm and could help a colleague increase their "billable hours" by either giving them extra work from their own clients or by helping them get more clients of their own (Study 2B). Second, to eliminate any effect of perceived effort, participants could give autonomy-oriented help in a relatively effortless manner that requires very little investment on their part by outsourcing the help to a supervisee (Study 2A) or by sending a colleague an informative tutorial (Study 2B). Third, to reduce potential demand effects, Study 2B used a new measure of zero-sum beliefs that examined participants' tendency to view life in general as zero-sum. Finally, to examine the behavioral consequences of our effect, Study 2C examines whether zero-sum beliefs impact actual helping behaviors at participants' workplace.

## Study 2A

### Method

#### Participants

One hundred fifty-one U.S. residents were recruited from Amazon's Mechanical Turk (67 females;  $M_{\text{age}} = 41.94$ ; 76.4% White/

<sup>3</sup> Aligned with our predictions, the indirect effects of zero-sum beliefs on dependency-oriented help were not significant for either the single item, Estimate =  $.01$ ,  $SE = .02$ , 95% CI [ $-.035$ ,  $.062$ ], or the bipolar measure, Estimate =  $-.00$ ,  $SE = .01$ , 95% CI [ $-.029$ ,  $.016$ ].

European American, 7.6% Black/African American, 5.7% Hispanic/Latino, 6.4% East Asian, 3.8% Southeast Asian); 86.1% of participants were employed full-time, part-time, or self-employed, with an average of 6.4 years tenure at their current job. This sample size allows us to detect effects as small as  $r = .22$  with 80% power.

### Procedure and Measures

**The Belief That Success Is Zero-Sum.** Participants completed the six-item measure of zero-sum beliefs from Studies 1A and 1B ( $\alpha = .789$ ).

**Help Giving Preferences.** Participants imagined they managed a branch of a “large national corporation” where, every three months, they had to “meet with the company’s executive board to discuss their quarterly performance and budget projections.” They then imagined that a different office’s manager had asked for their help preparing their budget. Participants indicated, in counterbalanced order, their willingness to solve the other branch manager’s problem for them (“To what extent would you give this manager a solution to their problem by asking your accountant to spend the week doing the other office’s budget for them [which would help them solve their current problem, but may not help them deal with similar problems in future financial quarters]?”) and their willingness to teach them to solve their problem on their own (“To what extent would you give this manager the tools they need to solve their problem on their own by asking your accountant to spend the week teaching the other office how to prepare their budget [which would teach them how to solve their current problem as well as all similar problems in future financial quarters]?”). Importantly, we controlled for effort by explicitly stating that both types of help would require the same time commitment and involve outsourcing the help giving to a subordinate who would either solve the other office’s problem for them (i.e., dependency-oriented help) or would teach the other office how to solve their problem on their own (i.e., autonomy-oriented help).

**Attention Check.** Participants completed an open-ended attention check (“We would like to make sure that people are paying attention to our survey. To show that you have done so, please write below the number of letters that appear in the word *Monday*”).

### Results

Although both types of help required the same (minimal) level of effort, we hypothesized that zero-sum beliefs would predict the willingness to give autonomy-oriented, but not dependency-oriented, help. Indeed, supporting Hypothesis 1, zero-sum beliefs negatively predicted the willingness to give autonomy-oriented help,  $B = -.233$ ,  $SE = .093$ ,  $t(150) = -2.51$ ,  $p = .013$ , but not the willingness to give dependency-oriented help,  $B = -.051$ ,  $SE = .121$ ,  $t(150) = -.43$ ,  $p = .670$  (for descriptive statistics and correlations, see Table S4 in the online supplementary materials). Thus, replicating our findings in a new domain, participants who viewed a person’s success as coming at others’ expense were less willing to teach others how to solve their problems on their own. In contrast, zero-sum beliefs did not affect the willingness to help others by solving their problems for them in a way that would keep others dependent on them.

### Study 2B

Study 2A found additional evidence for our main thesis. In Study 2B, we further examine our findings’ generalizability in a context where help giving requires minimal effort and using a different measure of zero-sum beliefs. As before, we hypothesized that zero-sum beliefs would negatively predict participants’ willingness to help others solve their problems on their own, but not their willingness to help by solving others’ problems for them.

### Method

#### Participants

One hundred fifty-three U.S. residents were recruited from Amazon’s Mechanical Turk (74 females;  $M_{\text{age}} = 39.10$ ; 76.4% White/European American, 3.8% Black/African American, 5.7% Hispanic/Latino, 5.1% East Asian, 4.5% Southeast Asian, <1% American Indian, <1% Native Hawaiian, 3.2% Other); 90.9% of participants were employed full-time, part-time, or self-employed, with an average of 6.6 years tenure at their current job. This sample size allows us to detect effects as small as  $r = .22$  with 80% power.

#### Procedure and Measures

**The Belief That Success Is Zero-Sum.** Participants indicated their zero-sum beliefs using the Belief in a Zero-sum Game scale (Rózycka-Tran et al., 2015;  $\alpha = .913$ ).

**Help Giving Preferences.** Participants imagined working at a prestigious law firm where “lawyers are evaluated by their monthly ‘billable hours’ (number of hours spent on their clients’ cases)” and that a colleague who had failed to meet the required number of hours had asked for their help. They then indicated, in counterbalanced order, their willingness to solve their colleague’s problem for them (“To what extent would you give your colleague a solution to their problem by giving them some extra work they could bill as a one-time favor [which would solve their current problem by increasing this month’s billable hours, but would not help with their billable hours in the future]?”) and their willingness to teach their colleague how to solve their problem on their own (“To what extent would you give your colleague the tools they need to solve this problem on their own by sending them a tutorial on how to attract more clients [which would teach them how to increase their billable hours for this month as well as for all future months in the firm]?”). Importantly, both types of help required low effort by either handing-off some work to one’s colleague (i.e., dependency-oriented help) or by sending them a tutorial that would teach them how to increase their billable hours on their own (i.e., autonomy-oriented help).

**Attention Check.** Participants completed the attention check from Study 2B.

### Results

Replicating our findings, we found support for the effect of zero-sum beliefs on people’s willingness to give autonomy-oriented, but not dependency-oriented, help (Hypothesis 1). Specifically, although both types of help required minimal effort, participants who saw success as zero-sum were significantly less

willing to give their colleague autonomy-oriented help,  $B = -.352$ ,  $SE = .088$ ,  $t(152) = -4.01$ ,  $p < .001$ , but were not less willing to give them dependency-oriented help,  $B = -.146$ ,  $SE = .103$ ,  $t(152) = -1.42$ ,  $p = .158$  (for descriptive statistics and correlations, see Table S5 in the online supplementary materials). Thus, examining help giving in a new domain and using a new measure of zero-sum beliefs, we found that seeing success as zero-sum negatively predicted the desire to give others tools to solve their problems on their own, but not the desire to help others in a way that would keep them dependent on oneself.

### Study 2C

Study 2C replicates our effect with a real behavioral measure. Rather than imagining hypothetical workplace scenarios, participants reported the type of help they most often give to their colleagues. We predicted that participants who view success as zero-sum would be significantly less likely to have given autonomy-oriented (vs. dependency-oriented) help.

### Method

#### Participants

Two hundred two U.S. residents were recruited from Amazon's Mechanical Turk. Three participants who failed an attention check and one participant who was unemployed at the time of the study were excluded from analyses, leaving a final sample of 198 participants (79 females;  $M_{\text{age}} = 37.28$ ; 79.2% White/European American, 5.9% Black/African American, 5.9% Hispanic/Latino, 7.4% Asian/Asian American, 1.5% Other). This sample size allows us to detect odds ratios as small as  $OR = .71$  with 80% power.

#### Procedure and Measures

**The Belief That Success Is Zero-Sum.** Participants completed the six-item measure of zero-sum beliefs from Studies 1A and 1B ( $\alpha = .851$ ).

**Help Giving Behaviors.** Participants reported which kind of actual help they have more often given to their colleagues at work. Specifically, participants were told that "we are interested in the behaviors people show at work" and were asked to report in which of the two types of helping behaviors they have engaged more often in the past month: "Helped a colleague become more independent, so they won't need my help in the future" (autonomy-oriented help) or "Helped a colleague in a way that would make them dependent on my help in the future" (dependency-oriented help).

**Attention Check.** Participants completed the attention check from Study 2A.

### Results

We examined whether zero-sum beliefs about success predicted actual helping behaviors in the workplace. We predicted that participants who believe that getting ahead inevitably comes at others' expense are significantly less likely to have given autonomy-oriented help in the past month. Not surprisingly, given the desirability of doing so, participants indicated that they have more often given their colleagues autonomy-oriented than dependency-oriented help,  $\chi^2(1,197)$

$= 132.21$ ,  $p < .001$ , suggesting an overall preference for teaching others how to solve their problems on their own rather than solving their problems for them. However, a logistic regression predicting past helping behaviors from zero-sum beliefs revealed a significant relationship,  $B = .442$ ,  $SE = .187$ ,  $\chi^2(1,197) = 5.59$ ,  $p = .018$ , suggesting that the overall preference for giving autonomy-oriented help was qualified by participants' tendency to view success as zero-sum. Specifically, for every 1 unit increase in the belief that their colleagues succeed at their expense, participants were 55.6% less likely to have prioritized, in the past month, giving autonomy-oriented help.

In the online supplementary materials we report the results of a direct replication (Study S1) where, in addition to indicating whether they had given more autonomy-oriented or dependency-oriented help, participants could state that they had not helped any of their colleagues in the past month. As before, although participants indicated having more often given autonomy-oriented help than dependency-oriented help,  $\chi^2(1,158) = 108.11$ ,  $p < .001$ , this general tendency was qualified by their zero-sum beliefs. Specifically, a logistic regression predicting past helping behaviors from participants' zero-sum beliefs revealed a significant relationship,  $B = .508$ ,  $SE = .215$ ,  $\chi^2(1,157) = 5.58$ ,  $p = .018$ , such that participants were 66.2% less likely to have given their colleagues autonomy-oriented help for every 1 unit increase in their belief that their colleagues succeed at their expense. Thus, even when reporting their actual helping behaviors at their workplace, participants who believe that success is zero-sum were significantly less prone to have given autonomy-oriented help.

### Studies 3A and 3B

Both when considering different hypothetical scenarios and when reporting their actual helping behaviors, zero-sum beliefs predicted participants' help giving preferences. In Studies 3A and 3B, in addition to asking about the two types of help (which may portray them as the only possible responses to a request for help), we gave participants the opportunity to respond in other ecologically valid ways, such as rejecting their colleague's request or referring them to someone else. In addition, we replicated our findings with both an international sample of students enrolled in a Master of Business Administration (MBA) program in the United States (Study 3A) and an online participant pool (Study 3B). As before, we hypothesized that zero-sum beliefs would negatively predict the willingness to give autonomy-oriented, but not dependency-oriented, help.

### Study 3A

#### Method

#### Participants

One hundred twenty-nine students in an MBA program at a private university in the United States completed a survey as part of a longer assignment (54 females;  $M_{\text{age}} = 28.73$ ; 45% non-U.S. citizens). These students typically have 5–6 years of professional experience and come from diverse backgrounds. This sample size allows us to detect effects as small as  $r = .17$  with 80% power.



## Procedure and Measures

**The Belief That Success Is Zero-Sum.** Participants indicated their zero-sum beliefs using the Belief in a Zero-sum Game scale ( $\alpha = .884$ ).

**Help Giving Preferences.** Participants imagined that a colleague had asked for their help preparing a presentation which, if done successfully, could earn their colleague a substantial bonus and a potential promotion. Following, participants viewed, in random order, nine items depicting potential responses to their colleague's request. For each one, participants indicated how likely they'd be to respond in that manner (1-*Extremely unlikely*; 7-*Extremely likely*). Two items involved autonomy-oriented help ("I'd help by walking them through the tools they need to solve this [and future] problems on their own" and "I'd help by teaching them the skills they need to solve this and similar problems on their own";  $r = .44$ ;  $p < .001$ ) and three involved dependency-oriented help ("I'd help by giving them a complete solution to their problem on a one-time basis," "I'd help by preparing the presentation for them, which would solve their current problem," and "I'd help by resolving their issue for them as a one-off favor";  $\alpha = .675$ ). To mask the study's goal and increase its ecological validity, the remaining items were three filler items (e.g., "I'd turn down their request for help but encourage them to keep trying and believe in themselves") and one item that involves a combination of both types of help.

## Results

We predicted that viewing success as zero-sum would reduce the willingness to offer autonomy-oriented, but not dependency-oriented, help (Hypothesis 1). Indeed, zero-sum beliefs negatively predicted participants' willingness to give autonomy-oriented help,  $B = -.179$ ,  $SE = .067$ ,  $t(128) = -2.675$ ,  $p = .008$ , but not their willingness to give dependency-oriented help,  $B = .112$ ,  $SE = .118$ ,  $t(128) = .955$ ,  $p = .341$  (for descriptive statistics and correlations, see Table S6 in the online supplementary materials). Moreover, an analysis of each of the two autonomy-oriented help items separately revealed similar results: the more participants viewed success as zero-sum, the less they were willing to walk their colleague through the tools needed to solve the problem on their own,  $B = -.132$ ,  $SE = .064$ ,  $t(128) = -2.052$ ,  $p = .042$ , and the less they were willing to teach them those skills,  $B = -.225$ ,  $SE = .093$ ,  $t(128) = -2.424$ ,  $p = .017$ . In contrast, zero-sum beliefs were not related to participants' willingness to give their colleague a complete solution to their problem,  $B = -.062$ ,  $SE = .148$ ,  $t(128) = -.422$ ,  $p = .674$ , or prepare the presentation for them,  $B = .085$ ,  $SE = .142$ ,  $t(128) = .598$ ,  $p = .551$ , and only marginally related to the willingness to resolve the issue for them as a one-time favor,  $B = .306$ ,  $SE = .157$ ,  $t(128) = 1.951$ ,  $p = .053$ . Finally, replicating past findings (Kakkar & Sivanathan, 2021; Sirola & Pitesa, 2017), zero-sum beliefs predicted participants' refusal to help, as measured by the three filler items,  $B = .385$ ,  $SE = .100$ ,  $t(128) = 3.85$ ,  $p = .0002$ . Thus, although participants who believed that success is zero-sum were generally less willing to help their colleagues, this reluctance was only reflected in their willingness to give autonomy-oriented, but not dependency-oriented, help.

## Study 3B

Study 3B is a direct replication of Study 3A using a general sample of U.S. residents.

## Method

### Participants

Three hundred four U.S. residents were recruited from Amazon's Mechanical Turk (129 females;  $M_{\text{age}} = 40.04$ ; 71.8% White/European American, 7.9% Black/African American, 4.9% Hispanic/Latino, 13.4% Asian/Asian American, <1% American Indian/Alaska Native, 1.3% Other); 87.2% of participants were employed full-time, part-time, or self-employed, with an average of 6.5 years tenure at their current job. This sample size allows us to detect effects as small as  $r = .11$  with 80% power.

### Procedure and Measures

Participants completed the same measures from Study 3A: an eight-item measure of zero-sum beliefs ( $\alpha = .931$ ) and a nine-item measure of help giving. As before, in addition to their willingness to give autonomy-oriented and dependency-oriented help, this measure included three filler items (e.g., refusing to help) and one item involving both types of help.

## Results

We predicted that zero-sum beliefs would reduce the willingness to give autonomy-oriented, but not dependency-oriented, help (Hypothesis 1). Indeed, viewing success as zero-sum negatively predicted participants' willingness to give autonomy-oriented help,  $B = -.188$ ,  $SE = .055$ ,  $t(303) = -3.433$ ,  $p = .001$ , but not dependency-oriented help,  $B = .059$ ,  $SE = .057$ ,  $t(303) = .996$ ,  $p = .320$  (for descriptive statistics and correlations, see Table S7 in the online supplementary materials). A separate analysis of each item revealed similar results: zero-sum beliefs negatively predicted the willingness to walk one's colleague through the tools needed to solve the problem on their own,  $B = -.241$ ,  $SE = .060$ ,  $t(303) = -4.024$ ,  $p < .001$ , and to teach them these skills,  $B = -.135$ ,  $SE = .059$ ,  $t(303) = -2.285$ ,  $p = .023$ , but did not predict the willingness to give one's colleague a complete solution,  $B = .053$ ,  $SE = .069$ ,  $t(303) = .764$ ,  $p = .446$ , prepare the presentation for them,  $B = .079$ ,  $SE = .072$ ,  $t(303) = 1.090$ ,  $p = .277$ , or resolve their issue as a one-time favor,  $B = .046$ ,  $SE = .067$ ,  $t(303) = .681$ ,  $p = .496$ . Finally, an analysis of the filler items again found that zero-sum beliefs predicted participants' refusal to give help,  $B = .270$ ,  $SE = .058$ ,  $t(304) = 4.65$ ,  $p < .001$ . Thus, despite their general aversion to helping their colleagues, participants were specifically averse to give autonomy-oriented, but not dependency-oriented, help.

## Study 4

Across different scenarios, measures, and samples, Studies 1–3 found robust and consistent evidence for the negative relationship between viewing success as zero-sum and giving autonomy-oriented, but not dependency oriented, help (see Table 1). Study 4 examines the causal effect of zero-sum beliefs on help giving. Specifically, we manipulated whether participants viewed an organizational context as zero-sum before measuring their willingness to

**Table 1***The Effect of Zero-Sum Beliefs on Participants Willingness to Give Autonomy-Oriented and Dependency-Oriented Help*

Study	N	Autonomy-oriented helping		Dependency-oriented helping	
		$\beta$	<i>t</i> -test	$\beta$	<i>t</i> -test
Study 1A	102	$B = -0.28 (.10)$	$t = -2.911, p = .004$	$B = 0.05 (.10)$	$t = 0.495, p = .621$
Study 1B	212	$B = -0.17 (.06)$	$t = -2.826, p = .005$	$B = 0.10 (.06)$	$t = 1.572, p = .117$
Study 2A	151	$B = -0.23 (.09)$	$t = -2.51, p = .013$	$B = -0.05 (.12)$	$t = -0.43, p = .670$
Study 2B	153	$B = -0.35 (.09)$	$t = -4.01, p < .001$	$B = -0.15 (.10)$	$t = -1.42, p = .158$
Study 3A	129	$B = -0.18 (.07)$	$t = -2.675, p = .008$	$B = 0.11 (.12)$	$t = 0.955, p = .341$
Study 3B	304	$B = -0.19 (.06)$	$t = -3.433, p = .001$	$B = 0.06 (.06)$	$t = 0.996, p = .320$

help by either teaching a colleague to succeed on their own or by solving a colleague's problem for them. We predicted that fostering zero-sum beliefs about success would reduce participants' willingness to give autonomy-oriented, but not dependency-oriented, help.

## Method

### Participants

Two hundred one U.S. residents were recruited from Amazon's Mechanical Turk (76 females;  $M_{\text{age}} = 38.47$ ; 74.2% White/European American, 5.6% Black/African American, 8.5% Hispanic/Latino, 6.8% East Asian, 2.4% South Asian 1.4% Indigenous/Native American, <1% Middle Eastern/Arabic, <1% Other); 89.1% of participants were employed full-time, part-time, or self-employed, with an average of 6.3 years tenure at their current job. This sample size allows us to detect effects as small as  $d = .39$  with 80% power.

### Procedure and Measures

Participants were randomly assigned to one of two conditions. In the zero-sum condition, they imagined working for a company where each employee's performance is evaluated relative to their colleagues. Specifically, participants read that this company ranks employees relative to each other, that employees with the highest rankings are rewarded with "bonuses, extra vacation days, and even promotions," and that those with the lowest rankings miss out on bonuses and may even face job loss. In the non-zero-sum condition, participants imagined working for a company where performance is evaluated based on absolute, specific benchmarks such that only employees who receive (absolute) high ratings are rewarded.

Participants then completed a manipulation check, measuring how much they viewed success in this organization as zero-sum, such that employees can only succeed at their colleagues' expense (e.g., "When some workers in this company make economic gains, others lose out economically", 1-Strongly disagree, 7-Strongly agree;  $\alpha = .938$ ).

Following, participants completed the same measure of helping behavior from Studies 1A and 1B. Participants imagined being asked by a colleague for help with a presentation and indicated whether they would give them autonomy-oriented help ("To what extent would you help [your colleague] with his current problem by giving him tools and teaching him how to solve the problem by himself as well as how to deal with similar situations in the future?") and dependency-oriented help ("To what extent would you give [your colleague] a complete solution to his current problem by preparing the presentation for him or telling him exactly

what to do, but not teaching him how to deal with similar situations in the future?"). In addition, participants indicated, on a bipolar scale, which type of help they would be more prone to give ("If you had to choose, what kind of help would you give [your colleague]?"; 1-prepare a full solution to the problem, 7-giving tools and teaching how to solve the problem).

Participants completed an open-ended attention check ("We would like to make sure that people are paying attention to our survey. To show that you have done so, please write below the number of letters that appear in the word *Tuesday*").

## Results

### Manipulation Check

First, we examined whether the manipulation affected the belief that success in the organization is zero-sum. Indeed, participants in the *zero-sum condition* were significantly more prone to view one employee's success as coming at other employees' expense ( $M = 5.53, SD = 1.05$ ) than participants in the *non-zero-sum condition* ( $M = 3.91, SD = 1.58$ ),  $t(199) = 8.62, p < .001, d = 1.22$ .

### Help Giving Preferences

We next examined whether viewing success as zero-sum causally reduced the willingness to give autonomy-oriented, but not dependency-oriented, help. As predicted, participants were significantly less willing to teach a colleague how to solve their problem on their own in the zero-sum condition ( $M = 4.70, SD = 1.97$ ) than the non-zero-sum condition ( $M = 5.29, SD = 1.59$ ),  $t(199) = 2.35, p = .019, d = .45$ . In contrast, participants were equally willing to give dependency-oriented help in the zero-sum ( $M = 2.98, SD = 1.90$ ) and non-zero-sum ( $M = 2.96, SD = 1.52$ ),  $t(199) = .09, p = .926, d = .02$ , conditions (for correlations, see Table S8 in the online supplementary materials). Responses on the bipolar measure revealed similar, albeit directional, results ( $M_{\text{zero-sum}} = 4.54, SD = 1.47$ ;  $M_{\text{non-zero-sum}} = 4.74, SD = 1.32$ ,  $t(199) = .99, p = .321, d = .15$ ).<sup>4</sup> Thus, whereas viewing success as zero-sum inhibited participants from helping their colleagues succeed on their own, it did not affect their willingness to simply solve their colleagues' problems for them.

<sup>4</sup> Confusion about the scale's midpoint may account for the weaker effect on the bipolar measure. Since participants were asked whether they'd prefer to help in an autonomy- or dependency-oriented manner, they may have interpreted the scale's midpoint as either indicating no preference or as indicating a reluctance to help. Consequently, this confusion may account for the nonsignificant directional effect on this measure.

## Study 5

Using various measures and samples, Studies 1–4 found consistent evidence for the effect of zero-sum beliefs on help giving preferences (Hypotheses 1, 2, and 3). Whereas participants who view success as zero-sum were reluctant to teach their colleagues how to solve their problems on their own, they did not worry about solving those problems for them.

Notice, however, that the negative effect of zero-sum beliefs on autonomy-oriented helping hinges on people's concerns about status loss. This suggests that alleviating such concerns would mitigate the effect of zero-sum beliefs on help giving (Hypothesis 4). Indeed, research has found that self-affirmations (e.g., writing about one's virtues or cherished personal values) can help maintain a basic need for adequacy (Cohen & Sherman, 2014; Sherman & Cohen, 2006) and attenuate people's concerns of status loss (Menon et al., 2006). Accordingly, we examine in Study 5 whether thinking about one's strengths and advantages mitigates the negative effect of zero-sum belief on autonomy-oriented help. If zero-sum beliefs inhibit autonomy-oriented helping by fostering concerns about status loss, then affirming participants' status may counter this effect. Thus, we predicted that making participants feel secure in their status by affirming their self-perceptions would reduce the negative effect of zero-sum beliefs on their willingness to give autonomy-oriented help.

## Method

### Participants

Three hundred one Israeli employees (156 females;  $M_{\text{age}} = 39.13$ ; employed at least 20 hr/week; 60% married, 29% single, 11% divorced; 30% high-school graduate, 28% professional education, 19% BA degree, 12% MA/PhD degree; 48% below average income, 30% average income, 14% above average income) were recruited by the Midgam Project Web Panel in exchange for NIS 3 (~\$.80). All participants successfully completed the comprehension and attention checks, allowing detection of effects as small as  $r = .11$  with 80% power.

### Procedure and Measures

**The Belief That Success Is Zero-Sum.** Participants completed the measures from Study 1A, which we standardized and averaged to create an index of zero-sum beliefs ( $\alpha = .795$ ).

**Status Affirmation Manipulation.** As before, participants imagined being asked by a colleague for help. Before indicating their willingness to help, we manipulated concerns about status loss by randomly assigning participants to one of two conditions: a status affirmation condition or a control condition. In the status affirmation condition, participants wrote about three personal traits that give them an advantage over their colleagues. They were told that these could be any "trait that distinguishes you from the other employees in the organization," and were asked to explain how it gave them an advantage over others. In the control condition, participants wrote about three general characteristics of their organization, "such as the size of the company or the number of people working in the organization, the field of occupation and/or the geographical location."

**Help Giving Preferences.** Following the status affirmation manipulation, participants read about the two types of help and indicated, in counterbalanced order, their willingness to give a colleague each one (1-*Not at all*, 7-*Completely*). Finally, they indicated on a 7-point bipolar scale which type of help they would be more prone to give.

**Attention Check.** Participants completed the comprehension and attention checks from Study 1A.

## Results

Supporting Hypothesis 1, zero-sum beliefs negatively predicted the willingness to give autonomy-oriented help,  $B = -.177$ ,  $SE = .057$ ,  $t(297) = -3.131$ ,  $p = .002$ , but *positively* predicted the willingness to give dependency-oriented help,  $B = .160$ ,  $SE = .057$ ,  $t(297) = 2.840$ ,  $p = .005$  (for descriptive statistics and correlations, see Table S9 in the online supplementary materials). Although participants who view success as zero-sum were less willing to help a colleague succeed on their own, they were more willing to help them in a dependency-oriented manner.

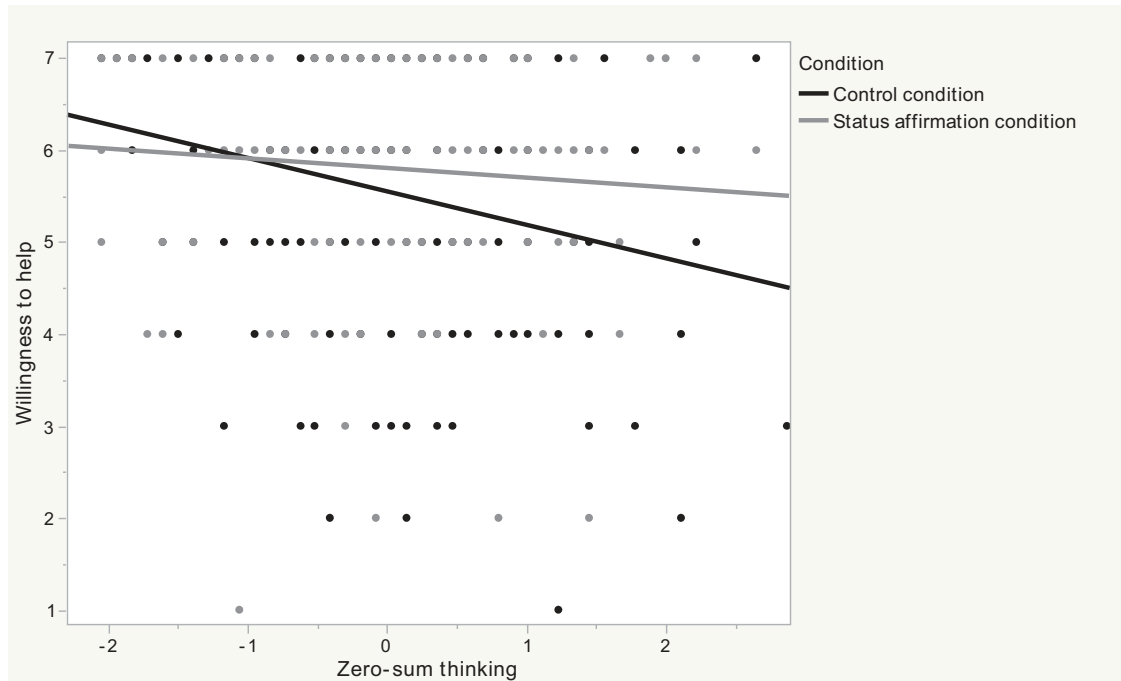
Next, we examined how the status affirmation affected the relationship between zero-sum beliefs and participants' willingness to help their colleagues. A linear regression analysis predicting helping from zero-sum beliefs, condition (dummy variable: 1 = *status affirmation condition* and 0 = *control condition*), and their interaction revealed a marginally significant interaction on the willingness to give autonomy-oriented help,  $B = .098$ ,  $SE = .057$ ,  $t(297) = 1.738$ ,  $p = .083$ , and a significant interaction on the willingness to give dependency-oriented help,  $B = .120$ ,  $SE = .057$ ,  $t(297) = 2.118$ ,  $p = .035$ . We further probed these interactions in a series of separate bivariate correlations. As predicted, zero-sum beliefs negatively predicted the willingness to give autonomy-oriented help in the control condition,  $B = -.275$ ,  $SE = .080$ ,  $t(297) = -3.464$ ,  $p = .001$ , but not the status affirmation condition,  $B = -.079$ ,  $SE = .081$ ,  $t(297) = -.976$ ,  $p = .330$  (see Figure 3). Consistent with Hypothesis 4, removing concerns about status loss mitigated the negative effect of zero-sum beliefs on autonomy-oriented help.

A very different pattern was observed for dependency-oriented help. Although zero-sum beliefs did not affect participants' willingness to give dependency-oriented help in the control condition (similar to Studies 1–3),  $B = .041$ ,  $SE = .079$ ,  $t(297) = .522$ ,  $p = .602$ , it positively affected their willingness to do so in the status affirmation condition,  $B = .281$ ,  $SE = .081$ ,  $t(297) = 3.494$ ,  $p = .001$ . Thus, removing concerns about status loss increased zero-sum thinkers' willingness to give dependency-oriented help, suggesting that status affirmations may be especially important for people who view success as zero-sum. Stated differently, affirming their personal status reduced zero-sum thinkers' reluctance to give autonomy-oriented help and increased their willingness to give dependency-oriented help.

## General Discussion

How do zero-sum beliefs affect people's willingness to help their peers and colleagues? In nine studies, we documented a robust yet nuanced link between the belief that success is zero-sum and prosocial behavior. First, we found that zero-sum beliefs reduce people's willingness to provide autonomy-oriented, but not dependency-oriented, help (Hypothesis 1). Second, we found that

**Figure 3**  
*Willingness to Give Autonomy-Oriented Help as a Product of Zero-Sum Beliefs and Condition (Status-Affirmation Condition Versus Control Condition; Study 5)*



zero-sum beliefs increase people's concerns about status loss after giving autonomy-oriented, but not dependency-oriented, help (Hypothesis 2). Finally, we found that the relationship between zero-sum beliefs and help giving is mediated by concerns about status loss (Hypothesis 3) but that removing concerns about status loss mitigated the negative effect of zero-sum beliefs on autonomy-oriented help (Hypothesis 4). Whereas participants who viewed success as zero-sum were reluctant to give autonomy-oriented help, reassuring them of their high status increased their willingness to do so.

Rather than inhibiting all types of help, we found that people who view success as zero-sum were willing to help others so long as it did not empower them to succeed on their own. This suggests that when asking such people for help, recipients may benefit from seeking full solutions (dependency-oriented help) rather than tools to succeed on their own (autonomy-oriented help). And, since some people may simply want their problems solved for them (e.g., needing prompt solutions for time-sensitive issues), understanding who is most and least likely to offer each type of help may guide recipients to receive the type of aid they most need. In other words, since people vary in dispositions toward giving autonomy-oriented versus dependency-oriented help (Maki et al., 2017), their zero-sum beliefs can offer a glimpse into how willing they would be to offer each type of help.

Despite their reluctance to give autonomy-oriented help, participants who saw success as zero-sum were still happy to give dependency-oriented help, thus helping others without feeling like they were putting their own status at risk. Moreover, we found that alleviating concerns about status loss (by prompting thoughts

of one's strengths and virtues) mitigated the negative effect of zero-sum beliefs on autonomy-oriented help and increased the willingness to give dependency-oriented help. This suggests that zero-sum beliefs may have two independent effects on help giving, suppressing people's overall willingness to help while also shifting their preference away from autonomy-oriented help and toward dependency-oriented help. In contrast to past findings (Kakkar & Sivanathan, 2021; Sirola & Pitesa, 2017), zero-sum beliefs do not seem to dampen people's willingness to give dependency-oriented help. Thus, depending on the type of help they are asked to give, zero-sum thinkers may be equally likely (or even more so) to help. And, by helping others in a way that does not let them succeed on their own, people who view success as zero-sum may be able to follow prosocial norms while also not feel like they are jeopardizing their own status.

Importantly, the effect of zero-sum beliefs on help giving was independent from the amount of effort that helping required. As shown in Studies 2A and 2B, participants who viewed success as zero-sum were substantially less willing to give autonomy-oriented help even when doing so required very minimal effort (e.g., by sending someone a tutorial about how to succeed on their own or by outsourcing the autonomy-oriented help). Moreover, since giving autonomy-oriented help may sometimes require less time and effort than doing others' work for them, it is notable that people who view success as zero-sum may still be less willing to do so. Thus, the effect of zero-sum beliefs on helping seem to be due to concerns about status loss rather than concerns about effort.

Our findings are important for stimulating helping within groups and organizations. To encourage autonomy-oriented help, one may need to create an environment where people feel safe and

secure about their status. Just as fishermen may not want to “teach someone how to fish” when they worry about food scarcity, people may be reluctant to give autonomy-oriented help when they worry about others succeeding at their expense. Thus, as shown in Study 3, leaders (Kakkar & Sivanathan, 2021) and environments (e.g., Amazon’s “rank-and-yank” policy that rewards people based on their group ranking; Kantor & Streitfeld, 2015) that foster zero-sum beliefs can affect the types of help people may be willing to give. In contrast, groups and organizations with collaborative norms can foster non-zero-sum views of success that reduce concerns about status loss and increase people’s willingness to give autonomy-oriented help. Of course, while not necessarily unique to organizational contexts, the negative effects of zero-sum beliefs on autonomy-oriented helping may be especially heightened in them. Since zero-sum resource allocation is prevalent in many organizational settings, and since people’s organizational status have important downstream consequences, the belief that others gain at one’s expense may be especially potent in curbing autonomy-oriented workplace helping. Nevertheless, we would expect zero-sum beliefs to impede autonomy-oriented helping in any context where people are concerned about resource allocation and their standing relative to others.

### Future Directions

The relationship between zero-sum beliefs and help giving offers promising avenues for future research. First, since fears about status loss inhibit zero-sum thinkers from giving autonomy-oriented help, asking for help in a way that affirms a helper’s status may increase their willingness to help. Indeed, how people ask for help shapes perceptions of those in need (Nadler, 2020), boosts helpers’ ego (Brooks et al., 2015), and affects their views of recipients as weak or incompetent (Nadler & Chernyak-Hai, 2014; Nadler & Halabi, 2015). Reassuring a colleague’s competence when asking for guidance may therefore remove their concerns about status loss and reduce the negative impact of zero-sum beliefs on autonomy-oriented help. Future research could examine whether different type of help requests—whether recipients ask for autonomy- or dependency-oriented help—affects zero-sum thinkers’ willingness to help.

Second, since many daily interactions occur at the group level (e.g., Chernyak-Hai & Rabenu, 2018), future research could explore how zero-sum beliefs about groups (rather than individuals) affects people’s willingness to help. Just as differences in group status affect people’s willingness to help the outgroup in an autonomy-oriented manner (Halabi et al., 2008; Nadler et al., 2009; Nadler & Halabi, 2006), research could examine whether seeing group-level success as zero-sum affects intergroup helping. To the extent that people view success of workgroups at their organization as zero-sum, they may be reluctant to give colleagues outside of their immediate teams the tools to succeed on their own. Thus, understanding the factors that influence autonomy-oriented and dependency-oriented help giving across divisions and workgroups may be especially important.

Finally, future studies may explore additional moderators and boundary conditions for how zero-sum beliefs impact help giving. For instance, zero-sum beliefs may be especially detrimental for autonomy-oriented help when status hierarchies are unstable, when attaining high-status is important, or when helping others of

equal status. In contrast, when a hierarchy is unlikely to change, when being high-status is not greatly rewarded, or when asked to help others of much higher status, the effect of zero-sum beliefs on autonomy-oriented help may be less pronounced. Finally, although there were no gender differences in how zero-sum beliefs affect help giving, future research may examine whether the recipient’s gender (e.g., Shnabel et al., 2016) moderates the effect of zero-sum beliefs on autonomy-oriented help.

### Conclusion

Viewing success as zero-sum often leads people to worry that helping others comes at their expense, and therefore inhibits them from doing so. Yet, zero-sum beliefs only reduce people’s willingness to give autonomy-oriented help, but not their willingness to give the kind of help that makes others dependent on them. Since this reluctance to give autonomy-oriented help stems from fears about status loss, reassuring people of their social standing eliminates the detrimental effects of zero-sum beliefs on helping. Like fishermen worried about catching less fish than their peers, people who believe that others succeed at their expense may be willing to “give someone a fish,” but not “teach them how to fish.”

### References

- Andrews-Fearon, P., & Davidai, S. (2021). *Is status a zero-sum game? Zero-sum beliefs about status increase preference for dominance but not prestige* [Manuscript in preparation]. Columbia Business School, Columbia University.
- Andrews-Fearon, P., Götz, F. M., Serapio-García, G., & Good, D. (2021). *Zero-sum mindsets and its discontents* (Rebuilding macroeconomics: Social macroeconomics working paper series—SM-WP-2021-001). <https://www.bsg.ox.ac.uk/sites/default/files/2021-02/SM-WP-2021-001%20Zero-sum%20mindset%20and%20its%20discontents.pdf>
- Bar-Tal, D. (2000). From intractable conflict through conflict resolution to reconciliation: Psychological analysis. *Political Psychology, 21*(2), 351–365. <https://doi.org/10.1111/0162-895X.00192>
- Bazerman, M. H. (1983). Negotiator judgment: A critical look at the rationality assumption. *American Behavioral Scientist, 27*(2), 211–228. <https://doi.org/10.1177/000276483027002007>
- Bobo, L., & Hutchings, V. L. (1996). Perceptions of racial group competition: Extending Blumer’s theory of group position to a multiracial social context. *American Sociological Review, 61*(6), 951–972. <https://doi.org/10.2307/2096302>
- Bolino, M. C., & Grant, A. M. (2016). The bright side of being prosocial at work, and the dark side, too: A review and agenda for research on other-oriented motives, behavior, and impact in organizations. *Academy of Management Annals, 10*(1), 599–670. <https://doi.org/10.5465/19416520.2016.1153260>
- Brooks, A. W., Gino, F., & Schweitzer, M. E. (2015). Smart people ask for (my) advice: Seeking advice boosts perceptions of competence. *Management Science, 61*(6), 1421–1435. <https://doi.org/10.1287/mnsc.2014.2054>
- Brown, N. D., & Jacoby-Senghor, D. S. (2021). Majority members misperceive even “win-win” diversity policies as unbeneficial to them. *Journal of Personality and Social Psychology*. Advance online publication. <https://doi.org/10.1037/pspi0000372>
- Chernyak-Hai, L., Halabi, S., & Nadler, A. (2017). Gendered help: Effects of gender and realm of achievement on autonomy- versus dependency-oriented help giving. *Journal of Social and Political Psychology, 5*(1), 117–141. <https://doi.org/10.5964/jsp.p.v5i1.609>

- Chernyak-Hai, L., & Rabenu, E. (2018). The new era workplace relationships: Is social exchange theory still relevant? *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 11(3), 456–481. <https://doi.org/10.1017/iop.2018.5>
- Cohen, G. L., & Sherman, D. K. (2014). The psychology of change: Self-affirmation and social psychological intervention. *Annual Review of Psychology*, 65, 333–371. <https://doi.org/10.1146/annurev-psych-010213-115137>
- Davidai, S., & Ongis, M. (2019). The politics of zero-sum thinking: The relationship between political ideology and the belief that life is a zero-sum game. *Science Advances*, 5(12), eaay3761. <https://doi.org/10.1126/sciadv.aay3761>
- Davidai, S., White, W. M., & Gregorich, V. (2021). *Zero-sum aversion* [Manuscript in preparation]. Columbia Business School, Columbia University.
- Ent, M. R., Sjästad, H., von Hippel, W., & Baumeister, R. F. (2020). Helping behavior is non-zero-sum: Helper and recipient autobiographical accounts of help. *Evolution and Human Behavior*, 41(3), 210–217. <https://doi.org/10.1016/j.evolhumbehav.2020.02.004>
- Esses, V. M., Dovidio, J. F., Jackson, L. M., & Armstrong, T. L. (2001). The immigration dilemma: The role of perceived group competition, ethnic prejudice, and national identity. *Journal of Social Issues*, 57(3), 389–412. <https://doi.org/10.1111/0022-4537.00220>
- Fisher, R., Ury, W. L., & Patton, B. (2011). *Getting to yes: Negotiating agreement without giving in*. Penguin.
- Foster, G. M. (1965). Peasant society and the image of limited good. *American Anthropologist*, 67(2), 293–315. <https://doi.org/10.1525/aa.1965.67.2.02a00010>
- Halabi, S., & Nadler, A. (2017). The intergroup status as helping relations model: Giving, seeking and receiving help as tools to maintain or challenge social inequality. In E. van Leeuwen & H. Zagefka (Eds.), *Intergroup helping* (pp. 205–221). Springer. [https://doi.org/10.1007/978-3-319-53026-0\\_10](https://doi.org/10.1007/978-3-319-53026-0_10)
- Halabi, S., Dovidio, J. F., & Nadler, A. (2008). When and how do high status group members offer help: Effects of social dominance orientation and status threat. *Political Psychology*, 29(6), 841–858. <https://doi.org/10.1111/j.1467-9221.2008.00669.x>
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Inglehart, R., Haerpfer, C., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., & Puranen, B. (Eds.). (2014). *World values survey: Round six—Country-pooled datafile*. JD Systems Institute.
- Jiang, X., Hu, X., Liu, Z., Sun, X., & Xue, G. (2020). Greed as an adaptation to anomie: The mediating role of belief in a zero-sum game and the buffering effect of internal locus of control. *Personality and Individual Differences*, 152(1), 109566. <https://doi.org/10.1016/j.paid.2019.109566>
- Johnson, S. G. B., Zhang, J., & Keil, F. C. (2021). Win-win denial: The psychological underpinnings of zero-sum thinking. *Journal of Experimental Psychology: General*. Advance online publication. <https://doi.org/10.1037/xge0001083>
- Kakkar, H., & Sivanathan, N. (2021). The impact of leader dominance on employees' zero-sum mindset and helping behavior. *The Journal of Applied Psychology*. Advance online publication. <https://doi.org/10.1037/apl0000980>
- Kantor, J., & Streitfeld, D. (2015, August 15). Inside Amazon: Wrestling big ideas in a bruising workplace. *The New York Times*. <https://www.nytimes.com/2015/08/16/technology/inside-amazon-wrestling-big-ideas-in-a-bruising-workplace.html>
- Kende, A., & Shnabel, N. (2017). Benevolent sexism and cross-gender helping: A subtle reinforcement of existing gender relations. In E. van Leeuwen & H. Zagefka (Eds.), *Intergroup helping* (pp. 23–43). Springer. [https://doi.org/10.1007/978-3-319-53026-0\\_2](https://doi.org/10.1007/978-3-319-53026-0_2)
- Kosakowska-Berezecka, N., Besta, T., Bosson, J. K., Jurek, P., Vanello, J. A., Best, D. L., Włodarczyk, A., Safdar, S., Zawisza, M., Zadkowska, M., Sobiecki, J., Agyemang, C. B., Akbas, G., Ammirati, S., Anderson, J., Anjum, G., Aruta, J. J. B. R., Ashraf, M., Bakaityte, A., . . . Zukauskienė, R. (2020). Country-level and individual-level predictors of men's support for gender equality in 42 countries. *European Journal of Social Psychology*, 50(6), 1276–1291. <https://doi.org/10.1002/ejsp.2696>
- Krosch, A. R., & Amodio, D. M. (2014). Economic scarcity alters the perception of race. *Proceedings of the National Academy of Sciences of the United States of America*, 111(25), 9079–9084. <https://doi.org/10.1073/pnas.1404448111>
- Louis, W. R., Esses, V. M., & Lalonde, R. N. (2013). National identification, perceived threat, and dehumanization as antecedents of negative attitudes toward immigrants in Australia and Canada. *Journal of Applied Social Psychology*, 43, E156–E165. <https://doi.org/10.1111/jasp.12044>
- Maki, A., Vitriol, J. A., Dwyer, P. C., Kim, J. S., & Snyder, M. (2017). The helping orientations inventory: Measuring propensities to provide autonomy and dependency help. *European Journal of Social Psychology*, 47(6), 677–693. <https://doi.org/10.1002/ejsp.2267>
- Maoz, I., & McCauley, C. (2005). Psychological correlates of support for compromise: A polling study of Jewish-Israeli attitudes toward solutions to the Israeli-Palestinian conflict. *Political Psychology*, 26(5), 791–808. <https://doi.org/10.1111/j.1467-9221.2005.00444.x>
- Menon, T., Thompson, L., & Choi, H. S. (2006). Tainted knowledge vs. tempting knowledge: People avoid knowledge from internal rivals and seek knowledge from external rivals. *Management Science*, 52(8), 1129–1144. <https://doi.org/10.1287/mnsc.1060.0525>
- Nadler, A. (2002). Inter-group helping relations as power relations: Maintaining or challenging social dominance between groups through helping. *Journal of Social Issues*, 58(3), 487–502. <https://doi.org/10.1111/1540-4560.00272>
- Nadler, A. (2020). *Social psychology of helping relations: Solidarity and hierarchy*. Wiley.
- Nadler, A., & Chernyak-Hai, L. (2014). Helping them stay where they are: Status effects on dependency/autonomy-oriented helping. *Journal of Personality and Social Psychology*, 106(1), 58–72. <https://doi.org/10.1037/a0034152>
- Nadler, A., & Halabi, S. (2006). Intergroup helping as status relations: Effects of status stability, identification, and type of help on receptivity to high-status group's help. *Journal of Personality and Social Psychology*, 91(1), 97–110. <https://doi.org/10.1037/0022-3514.91.1.97>
- Nadler, A., & Halabi, S. (2015). Helping relations and inequality between individuals and groups. In M. Mikulincer, P. R. Shaver, J. F. Dovidio, & J. A. Simpson (Eds.), *APA handbook of personality and social psychology. Volume 2: Group processes* (pp. 371–393). American Psychological Association. <https://doi.org/10.1037/14342-014>
- Nadler, A., Harpaz-Gorodeisky, G., & Ben-David, Y. (2009). Defensive helping: Threat to group identity, ingroup identification, status stability, and common group identity as determinants of intergroup help-giving. *Journal of Personality and Social Psychology*, 97(5), 823–834. <https://doi.org/10.1037/a0015968>
- Ongis, M., & Davidai, S. (2021). Personal relative deprivation and the belief that wealth is zero-sum. *Journal of Experimental Psychology: General*. Advance online publication. <https://doi.org/10.1037/xge0001144>
- Piotrowski, J., Różycka-Tran, J., Baran, T., & Żemajtė-Piotrowska, M. (2019). Zero-sum thinking as mediator of the relationship of national attitudes with (un)willingness to host refugees in own country. *International Journal of Psychology*, 54(6), 722–730. <https://doi.org/10.1002/ijop.12538>
- Podsakoff, N. P., Whiting, S. W., Podsakoff, P. M., & Blume, B. D. (2009). Individual- and organizational-level consequences of organizational citizenship behaviors: A meta-analysis. *The Journal of Applied Psychology*, 94(1), 122–141. <https://doi.org/10.1037/a0013079>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the

- literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Roberts, R., & Davidai, S. (2021). The psychology of asymmetric zero-sum beliefs. *Journal of Personality and Social Psychology*. Advance online publication. <https://doi.org/10.1037/pspi0000378>
- Różycka-Tran, J., Boski, P., & Wojciszke, B. (2015). Belief in a zero-sum game as a social axiom: A 37-nation study. *Journal of Cross-Cultural Psychology*, 46(4), 525–548. <https://doi.org/10.1177/0022022115572226>
- Różycka-Tran, J., Jurek, P., Olech, M., Piotrowski, J., & Żemojtel-Piotrowska, M. (2019). A warrior society: Data from 30 countries show that belief in a zero-sum game is related to military expenditure and low civil liberties. *Frontiers in Psychology*, 9, 2645. <https://doi.org/10.3389/fpsyg.2018.02645>
- Różycka-Tran, J., Piotrowski, J. P., Żemojtel-Piotrowska, M., Jurek, P., Osin, E. N., Adams, B. G., Ardi, R., Baõltaõtescu, S., Bhomi, A. L., Bogomaz, S. A., Ciecuch, J., Clinton, A., de Clunie, G. T., Czarna, A. Z., Esteves, C. S., Gouveia, V., Halik, M. H. J., Kachatryan, N., Kamble, S. V., . . . Maltby, J. (2021). Belief in a zero-sum game and subjective well-being across 35 countries. *Current Psychology*, 40, 3575–3584. <https://doi.org/10.1007/s12144-019-00291-0>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *The American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Sherman, D. K., & Cohen, G. L. (2006). The psychology of self-defense: Self-affirmation theory. *Advances in Experimental Social Psychology*, 38, 183–242. [https://doi.org/10.1016/S0065-2601\(06\)38004-5](https://doi.org/10.1016/S0065-2601(06)38004-5)
- Shin, J. E., & Kim, J. K. (2018). How a good sleep predicts life satisfaction: The role of zero-sum beliefs about happiness. *Frontiers in Psychology*, 9, 1589. <https://doi.org/10.3389/fpsyg.2018.01589>
- Shnabel, N., Bar-Anan, Y., Kende, A., Bareket, O., & Lazar, Y. (2016). Help to perpetuate traditional gender roles: Benevolent sexism increases engagement in dependency-oriented cross-gender helping. *Journal of Personality and Social Psychology*, 110(1), 55–75. <https://doi.org/10.1037/pspi0000037>
- Sirola, N., & Pitesa, M. (2017). Economic downturns undermine workplace helping by promoting a zero-sum construal of success. *Academy of Management Journal*, 60(4), 1339–1359. <https://doi.org/10.5465/amj.2015.0804>
- Spencer, S. J., Zanna, M. P., & Fong, G. T. (2005). Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes. *Journal of Personality and Social Psychology*, 89(6), 845–851. <https://doi.org/10.1037/0022-3514.89.6.845>
- Thompson, L., & Hastie, R. (1990). Social perception in negotiation. *Organizational Behavior and Human Decision Processes*, 47(1), 98–123. [https://doi.org/10.1016/0749-5978\(90\)90048-E](https://doi.org/10.1016/0749-5978(90)90048-E)
- Wilkins, C. L., Wellman, J. D., Babbitt, L. G., Toosi, N. R., & Schad, K. D. (2015). You can win but I can't lose: Bias against high-status groups increases their zero-sum beliefs about discrimination. *Journal of Experimental Social Psychology*, 57, 1–14. <https://doi.org/10.1016/j.jesp.2014.10.008>

Received August 10, 2021

Revision received January 4, 2022

Accepted January 7, 2022 ■