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Perceived Upward Workplace Mobility Shapes Zero-Sum Thinking, Quality of Workplace Relationships, and Acceptance of Higher CEO-to-Median Worker Pay Ratios

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Abstract:	<p>Over the last four decades, the average CEO-to-median worker pay ratio in the United States has seen a ten-fold increase. While prior research predicts widespread employee outrage against such high pay ratios, employees on the whole seem surprisingly tolerant of them. Drawing on theories on the prospect of upward mobility in social psychology and the power of organizational narratives, we propose that this relative lack of outrage stems from organizations' ubiquitous emphasis of employees' potential for promotion, which dampen concern for high pay ratios. Across seven (N=6,388) studies—including experiments, archival data, and a field study at a large financial services institution—we find that perceived upward workplace mobility dampens employees' concern about high pay ratios in their organization. In addition, we find that this relationship is explained in part by the effect of optimistic perceptions of upward workplace mobility on zero-sum beliefs about success as well as the quality of employees' relationships with their managers. That is, believing that other's success has not come at one's own expense, as well as higher quality workplace relationships, foster a sense of fairness and meritocracy. Our theory and findings suggest that organizational narratives that emphasize the prospect of upward workplace mobility may explain the relative paucity of pushback towards high and rising levels of CEO-to-median worker pay ratios.</p>

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10 **Abstract**

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13 ten-fold increase. While prior research predicts widespread employee outrage against such high pay
14 ratios, employees on the whole seem surprisingly tolerant of them. Drawing on theories on the prospect of
15 upward mobility in social psychology and the power of organizational narratives, we propose that this
16 relative lack of outrage stems from organizations' ubiquitous emphasis of employees' potential for
17 promotion, which dampen concern for high pay ratios. Across seven ($N=6,388$) studies—including
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21 perceptions of upward workplace mobility on zero-sum beliefs about success as well as the quality of
22 employees' relationships with their managers. That is, believing that other's success has not come at
23 one's own expense, as well as higher quality workplace relationships, foster a sense of fairness and
24 meritocracy. Our theory and findings suggest that organizational narratives that emphasize the prospect of
25 upward workplace mobility may explain the relative paucity of pushback towards high and rising levels
26 of CEO-to-median worker pay ratios.
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46 *Keywords:* upward workplace mobility, inequality, CEO-to-median worker pay ratio, zero-sum thinking,
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3 In the four decades between 1978 and 2018, the average compensation for CEOs of the 350
4 largest U.S. firms grew by more than 900% (Mishel & Wolfe, 2019). During the same time period, the
5 median income in the U.S. rose by only 12%, resulting in an almost tenfold increase in the CEO-to-
6 median worker pay ratio. A number of theoretical perspectives suggest that this increase in the CEO-to-
7 median worker pay ratio has potentially deleterious consequences for both employees and organizations,
8 including negative employee corporate evaluations (Benedetti & Chen, 2018), lower job performance
9 (Muckenhuber et al., 2014), diminished job satisfaction (Ahn et al., 2016), and reduced employee
10 motivation (Hand & MacLachlan, 2012).
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20 In response to the staggering rise in CEO-to-median worker pay ratios, one might expect
21 employee outrage or retaliation, such as decreased employee motivation or increased employee turnover,
22 due to feelings of anger or relative deprivation (Akerlof & Yellen, 1990). Curiously, such outrage has not
23 materialized on any meaningful scale, and concern about inequality actually tends to be *lower* in more
24 unequal countries (Janmaat, 2013). Indeed, when asked whether the government should curb high CEO-
25 to-median worker pay ratios, American respondents tend to be evenly split in their responses (Larcker et
26 al., 2016). Thus, despite how one might expect employees to react given the negative effects of high
27 CEO-to-median worker pay ratios, employees on the whole seem to be surprisingly tolerant of them. How
28 can research make sense of this apparent tolerance for high pay ratios within organizations?
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39 The current research examines this disconnect between how one may expect employees to react
40 to high CEO-to-median worker pay ratios and what is actually observed in organizations. To understand
41 this tension, we focus on perceived upward workplace mobility—the belief that employees can move up
42 the organizational hierarchy (Laud & Johnson, 2012). Popular narratives regarding the success of CEOs
43 and other executives often extol their journey up the organizational ladder, emphasizing the opportunities
44 they received for upward workplace mobility. Such narratives often appear in popular news outlets (e.g.,
45 Business Insider, 2013), corporate events and interviews (Cautela, 2021; Ignatius, 2017), CEO profiles
46 (e.g., *Doug McMillon*, 2021; *Mary Barra*, 2021), and organizational career statements (e.g., Figures S1-
47 S3), celebrating executives who rise through the ranks by the organization and the public alike.
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3 By bringing such prevalent organizational narratives to the foreground, we examine how
4 perceptions of upward workplace mobility affect employee attitudes toward high CEO-to-median worker
5 pay ratios. Drawing on theories of upward mobility from social psychology (e.g., Day & Fiske, 2017;
6 Shariff et al., 2016) and organizational sensemaking (Daft & Weick, 1984; Weick et al., 2005), we
7 suggest that internalizing this organizational optimism about upward workplace mobility may dampen
8 employees' outrage about high CEO-to-median worker pay ratios. This implicates two mechanisms which
9 may underlie the relationship between optimistic perceptions of upward workplace mobility and
10 employees' tolerance of high CEO-to-median worker pay ratios. First, we suggest that viewing one's
11 workplace as offering more prospects for upward mobility reduces employees' belief that success is zero-
12 sum (i.e., zero-sum thinking; Sirola & Pitesa, 2017), leading them to view the accomplishments of higher-
13 paid colleagues as more legitimate and just (Day & Fiske, 2017; Shariff et al., 2016; Waksalak et al.,
14 2007). Second, we argue that perceived upward workplace mobility fosters warmer perceptions of the
15 organizational culture, such that employees view their workplace relationships as more friendly,
16 welcoming, and supportive (i.e., the quality of workplace relationships; e.g., George et al., 2012).
17 Through both mechanisms, we highlight the close connection between upward mobility narratives within
18 organizations and employees' tolerance of high CEO-to-median earner pay ratios.

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20 We provide evidence for our hypotheses across seven studies ($N = 6,388$; including two
21 supplemental studies). Following a pilot study which analyzed archival data, Study 1 provides initial
22 experimental evidence that perceived upward workplace mobility increases tolerance for high CEO-to-
23 median worker pay ratios. Next, using a correlational design, Studies 2a and 2b examine whether zero-
24 sum thinking and the quality of workplace relationships statistically mediate the effect of perceived
25 upward workplace mobility on tolerance of high CEO-to-median worker pay ratios. In Study 3, we
26 examine whether perceived upward workplace mobility causally influences zero-sum thinking and the
27 quality of workplace relationships, thus leading to greater tolerance for higher CEO-to-median worker
28 pay ratios (as well as tolerance for high gender pay ratios, see General Discussion and Supplementary

Information). Finally, Study 4 examines our findings with a behavioral measure in a real-world setting using a field survey at a Spanish-speaking financial services company.

In doing so, the current research makes two key theoretical contributions. First, by focusing on how perceived upward workplace mobility increases tolerance of high CEO-to-median worker pay ratios, we advance the field's understanding of why, despite a general lack of comfort with such pay ratios (Larcker et al., 2016), they have not fostered broader employee unrest. Second, we advance theory regarding how employees tend to overestimate upward mobility (Davidai & Gilovich, 2018; Kraus & Tan, 2015) and nest this theory within the context of organizational narratives that help organizations maintain high CEO-to-median worker pay ratios (see also Kim et al., 2018, 2020; Rao & Tobias Neely, 2019). Taken together, our work highlights how employee internalization of the narrative of upward workplace mobility can exacerbate societal inequalities, making it more difficult to mitigate them.

Theoretical Background

Mobility within the workplace is defined as the opportunity to move upward within the organizational hierarchy with respect to title and/or position (i.e., “upward hierarchical mobility”; Laud & Johnson, 2012), or laterally to different jobs within the organization (Anderson et al., 1981). A wealth of prior research has documented when and why employees experience such upward workplace mobility, focusing on how work performance, similarities with one's superiors, and the absence of institutional barriers (e.g., discrimination) affect employees' rise up the organizational ladder (Alessandri et al., 2020; Castilla & Benard, 2010; Hull & Nelson, 2000; McGinn & Milkman, 2013). This upward workplace mobility, in turn, can affect organizational outcomes such as increasing employee performance (Benson & Rissing, 2020), but reducing their organizational citizenship behaviors (Hui et al., 2000). Here, we focus on employees' subjective beliefs regarding upward workplace mobility, namely their perceptions about the opportunities employees have to move to a higher status or position within their organization.

We use the term “perceived upward workplace mobility” to refer to employees' *perceptions* of the opportunity to climb the organizational ladder (George et al., 2012). Beliefs about upward workplace mobility are important because (a) they are shaped by what employees observe in the workplace (e.g.,

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3 powerful organizational narratives about upward workplace mobility; Daft & Weick, 1984; Weick et al.,
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5 2005) and (b) they may be inaccurate (Davidai & Gilovich, 2015; Kraus & Tan, 2015). Thus, regardless
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7 of their actual experiences of mobility, strong upward workplace mobility narratives may bias employees'
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9 subjective beliefs about the chances of moving up the organizational ladder which can shape their
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11 attitudes and organizational behaviors (Wenzel, 2000). For example, perceived upward workplace
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13 mobility increases employee identification with their higher-status colleagues (Ellemers et al., 1997) and
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15 bolsters their organization-based self-esteem (George et al., 2012). More broadly, optimism about upward
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17 mobility in society increases motivation and goal persistence, bolsters employees' sense of personal
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19 control and long-term planning, and reduces hostility toward better-off others (Browman et al., 2017;
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21 Sagioglou et al., 2019; van Laar et al., 2010; Yoon & Kim, 2016).

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24 We particularly focus on the close link between perceived upward workplace mobility and
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26 perceptions of fairness (Davidai & Gilovich, 2015; Mandisodza et al., 2006; Tyler, 2011) which plays a
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28 pivotal role in employees' attitudes about, and their satisfaction with, organizational outcomes (J
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30 Brockner, 2002; Joel Brockner & Wiesenfeld, 1996). Because optimism about upward workplace
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32 mobility suggests that the organization rewards high performance, it likely affects how much employees
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34 views CEO salaries as reflecting underlying merit. Although employees may view large CEO-to-median
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36 worker pay ratios as unfair (e.g., Pfeffer & Langton, 1993; Trevor et al., 2012; Trevor & Wazeter, 2006),
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38 such judgments of unfairness are dampened when employees view high CEO pay as signaling future
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40 earning potential (Clark et al., 2016). And, since a focus on upward mobility shifts employees' attention
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42 toward their own future earnings (Park et al., 2017), perceived upward workplace mobility plays a key
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44 role in understanding why employees may tolerate high CEO-to-median worker pay ratios.

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47 We examine employee reactions to high CEO-to-median worker pay ratios by measuring the
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49 effect of perceived upward workplace mobility on employees' self-reported attitudes as well as their
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51 behavioral intentions; in particular, their intention to quit their job (Akerlof & Yellen, 1990). Based on
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53 tournament theory, we suggest that employees remain in organizations as long as they believe in their
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55 potential for upward workplace mobility. In contrast, employees who do not expect to experience upward
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workplace mobility may choose to leave the organization (i.e., “exit the tournament;” Forbes, 1987). Consequently, we suggest that the prospect of upward workplace mobility maintains employees’ willingness to engage in the organizational “tournament” and thus reduces their intentions to quit. That is, employees who view their organization as offering many opportunities to move up the ladder will report lower turnover intentions (see also Pfeffer & Davis-Blake, 1992; Ridge et al., 2017). Thus, perceived upward workplace mobility may influence employees’ tolerance of high CEO-to-median worker pay ratios within their organization, manifesting in both self-reported attitudes and behavioral intentions:

Hypothesis 1. Perceived upward workplace mobility increases employee self-reported and behavioral (i.e., turnover intentions) tolerance for high CEO-to-median worker pay ratios.

Our theory suggests two mechanisms which may underlie the effect of perceived upward workplace mobility on tolerance for high CEO-to-median worker pay ratios. First, we propose that zero-sum thinking about workplace success (i.e., the belief that one employee’s success comes at other employees’ expense) mediates the effect of perceived upward workplace mobility on tolerance for high CEO-to-median worker pay ratios. Consider that people often view success as zero-sum, viewing their colleagues, political adversaries, negotiation counterparts, and outgroup members as gaining at their expense (Bazerman, 1983; Davidai & Ongis, 2019; Esses et al., 2001; Sirola & Pitesa, 2017). These beliefs typically occur when resources are limited (Różycka-Tran et al., 2015; Sirola & Pitesa, 2017). Yet, because optimism about upward workplace mobility implies that high performing employees can access desirable organizational positions (which are therefore *not* limited), we suggest that it reduces zero-sum thinking about success. Consequently, viewing success as *non-zero-sum* implies that higher-paid employees are *not* gaining at lower-paid employees’ expense, thus increasing tolerance for high CEO-to-median worker pay ratios. Thus, we suggest that perceived upward workplace mobility reduces zero-sum thinking about success and, consequently, increases employees’ tolerance for high pay ratios:

Hypothesis 2a. Perceived upward workplace mobility reduces zero-sum thinking about workplace success.

Hypothesis 2b. Zero-sum thinking about workplace success mediates the effect of perceived upward workplace mobility on tolerance for high CEO-to-median worker pay ratios.

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3 As a second mechanism, we suggest that beliefs about one's organizational culture may also
4 mediate the effect of perceived upward workplace mobility on tolerance for high CEO-to-median worker
5 pay ratios. One key component of organizational culture is the quality of workplace relationships, which
6 prior research suggests is key in shaping work-related attitudes such as job satisfaction (Harmer &
7 Findlay, 2005), organizational attachment (Morrison, 2008; Venkataramani et al., 2013), and turnover
8 intentions (Morrison, 2008). We suggest that the potential for upward workplace mobility can improve
9 the quality of workplace relationships by reducing concerns about intraorganizational competition
10 (Bendersky & Hays, 2012) and diminishing harmful comparisons to one's managers, thus increasing the
11 amount of support employees provide to and receive from each other (van Laar et al., 2010). And, since
12 social relationships affect people's attitudes toward economic success (Evans & Kelley, 2017; Flanagan
13 & Kornbluh, 2019; García-Castro et al., 2020), employees may use such cues about their workplace
14 relationships to inform their judgments of pay disparities in their organization. Thus, we suggest that
15 when employees have better quality relationships with their coworkers and managers, they see economic
16 success within their workplace as more fair and just. Consequently, the quality of employees' workplace
17 relationships may affect their tolerance of high CEO-to-median worker pay ratios.

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35 Given the relative paucity of prior work on the relationship between perceived upward workplace
36 mobility and the quality of workplace relationships, we analyzed an archival dataset of a representative
37 sample of 2,580 employees in the U.S. (see Supplementary Information). Across three waves of the
38 General Social Survey (1988-1991, 1993-1998, and 2006; see Smith et al., 2019 for a description of the
39 data collection), we found that the more participants agreed with the statement "*opportunities for*
40 *advancement are high*," the more positively they described their workplace relationships "*between*
41 *coworkers/colleagues*" ($\beta = .116, p < .001, 95\% \text{ CI } [.078, .154]$) and "*between management and*
42 *employees*" ($\beta = .216, p < .001, 95\% \text{ CI } [.180, .254]$), a relationship which held even when controlling for
43 demographic variables (i.e., age, income, education, gender), workplace characteristics (i.e., the amount
44 of stress experienced at work, employees' interest in their job and level job satisfaction), and survey
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3 wave.¹ Thus, employees who believed that their workplace provides many opportunities to move up the
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5 organizational ladder were more positive about their workplace relationships. Given this data, we
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7 systematically examine the relationship between perceived upward workplace mobility, the perceived
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9 quality of one's workplace relationships, and employees' tolerance for vast CEO-to-median worker pay
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11 ratios within their organization. Thus, our third set of hypotheses suggest that perceived upward
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13 workplace mobility strengthens employees' beliefs about the quality of their workplace relationships and,
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15 consequently, increases their tolerance for high CEO-to-median worker pay ratios:
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18 **Hypothesis 3a.** Perceived upward workplace mobility strengthens the perceived quality of
19 employees' workplace relationships.

20 **Hypothesis 3b.** Quality of workplace relationships mediates the effect of perceived upward
21 workplace mobility on tolerance for high CEO-to-median worker pay ratios.
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24 Five studies test our full hypothesized model, as described in Figure 1. For all studies, we report
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26 all conditions run. We determined sample sizes in advance and conducted analyses upon completion of
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28 data collection. For each study, we report a sensitivity power analyses of the smallest observable effect
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30 size given the achieved sample. The materials and data for Studies 1 through 3 can be accessed through
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32 the Open Science Framework at: https://osf.io/2rzsq/?view_only=579819bd94de42969d1d9a5f31e183a8.²
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36 Figure 1 about here
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39 Study 1

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41 We began by examining the effect of perceived upward workplace mobility on employees'
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43 tolerance for high CEO-to-median worker pay ratios, and explored whether this effect is dependent on the
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45 actual CEO-to-median worker pay ratio in an organization (Davidai, 2018). In line with Hypothesis 1, we
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47 predicted that viewing one's workplace as offering greater opportunities for moving up the organizational
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49 ladder would increase employees' tolerance for high CEO-to-median worker pay ratios.
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54 ¹ In fact, next to perceived job satisfaction, perceived upward workplace mobility was the second strongest predictor
55 of having high quality relationships with management at one's organization.

56 ² Due to confidentiality requirements of our partnering organization, we cannot post the data or materials of Study 4.
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Participants

We aimed to recruit 400 participants for adequate power (80%, $p < .05$) to detect effects as small as $d = .281$. Our final sample consisted of 406 U.S. residents ($M_{\text{age}} = 40.49$, 43.8% Female, 55.7% Male, 0.5% Other/Prefer not to say, $Median_{\text{inc}} = \$60,000-69,999$) recruited from Amazon's Mechanical Turk (we followed best practices for this participant pool, as outlined by Aguinis et al., 2020). 60.3% of participants were fully employed at the time of the study, with an average of 6.43 years working for their current employer. Of these, 70.4% of participants indicated working at "white collar" jobs (i.e., that are administrative or professional in nature and are typically paid in salary) and 29.6% indicated working at "blue collar" jobs (i.e., that involve physical labor and are often paid on an hourly basis).

Materials and Procedure

We randomly assigned participants to one of six conditions in a 2 (condition: *mobility information vs. no mobility information*) x 3 (CEO-to-Median worker pay ratio: *200:1 vs. 50:1 vs. 10:1*) between-participant design. In all conditions, participants imagined working at a large corporation in the United States (modeled off Walmart Inc.) and read a description about the company and its CEO:

David Stewart is the President and Chief Executive Officer (CEO) of a large multinational retail chain called Carter Ltd. which specializes in clothing and home goods. Carter Ltd. employs millions of people across the globe and their main mission is to save people money so that they can live better and more meaningful lives. This is a mission Stewart is truly passionate about. Carter Ltd. is based in the United States but has successfully opened retail stores around the globe. Because of their multinational nature, Carter Ltd. brought in hundreds of billions of dollars in revenue in 2019—an achievement that Stewart is immensely proud of.

To manipulate the pay ratio, participants read one of three descriptions of the CEO's level of compensation. Specifically, they were told that the CEO's "*success has not gone unrewarded, and his salary exceeds [\$5,000,000/\$1,250,000/\$250,000]. According to recent data, Stewart earns more than [200/50/10] times the average worker at his company. That is, for every \$1 the average worker earns at Carter Ltd., David Stewart earns [\$200/\$50/\$10].*"

In addition, participants were assigned to either an *upward workplace mobility information* condition (in which they learned that the CEO rose through the company's ranks throughout his career) or a *no upward workplace mobility information* condition. In the *upward workplace mobility information*

condition, participants read that “*many people don’t know it, but Stewart has spent his entire working life at Carter Ltd. and has worked his way up the corporate ladder. He initially began as a teenager unloading delivery trucks and stocking shelves for minimum wage. Since then, he has moved through the ranks to become an assistant store manager and buyer, and a divisional merchandise manager, an executive, and—eventually—the CEO of the company.*” In the *no upward workplace mobility information* condition, participants simply did not read this passage.

To examine comprehension of, and attention to, the experimental materials, we administered two comprehension checks. First, participants reported whether the CEO (a) climbed up the organizational ladder, (b) was hired from outside the organization, or (c) there was no information about how he became the CEO. Second, participants reported the size of the pay ratio between the CEO and the average worker (“For every \$1 the average worker earns, David Stewart earns” (a) \$200, (b) \$50, or (c) \$10).

Measures. Participants responded to two key measures. For this and all studies going forward, we refer to the Supplemental Information for full scale items.

Perceived Upward Workplace Mobility. First, participants reported their perceptions of upward workplace mobility at Carter Ltd. on four items adapted from Riordan and Shore (1997) (e.g., “If I worked at Carter Ltd., I think I would have opportunities for advancement and promotion;” $M = 5.13$, $SD = 1.04$, Cronbach’s $\alpha = .88$) on a scale ranging from 1 (“Strongly Disagree”) to 7 (“Strongly Agree”).

Tolerance for High Pay Ratios. Next, participants reported their tolerance for high pay gaps at Carter Ltd. using the Support for Economic Inequality Scale (Wiwad et al., 2019) which we modified to be specific to the fictional Carter Ltd. (e.g., “Pay disparity is not a problem at Carter Ltd.”; $M = 3.82$, $SD = 1.41$, Cronbach’s $\alpha = .91$) on a scale ranging from 1 (“Strongly Disagree”) to 7 (“Strongly Agree”).

Results

Manipulation Checks. Reading about the CEO as having experienced upward workplace mobility fostered more optimistic perceptions of it. Participants in the upward workplace mobility information condition believed that the company offers more opportunity to rise up the organizational

ladder ($M = 5.47$, $SD = 0.92$) than in the no upward workplace mobility information condition ($M = 4.73$, $SD = 1.02$; $t(404) = 7.708$, $p < .001$, 95% CI [.554, .933], Cohen's $d = 0.767$). Thus, the experiment successfully manipulated perceived upward workplace mobility.

We next examined how the level of CEO-to-median worker pay ratio affected participants' tolerance for it. Not surprisingly, participants were more tolerant of lower CEO-to-median worker pay ratios ($F(2,403) = 20.519$, $p < .001$, partial $\eta^2 = .092$); planned contrasts revealed higher tolerance for pay gaps when the CEO made 10 times more than the median worker than when they made 50 or 200 times more ($F(1, 403) = 37.796$, $p < .001$). Although tolerance for a pay ratio was higher when the CEO made 50 (vs. 200) times the median worker ($F(1, 403) = 3.241$, $p = .073$), this was not statistically significant.

Perceived Upward Workplace Mobility Predicts Tolerance for High Pay Ratios. We examined how perceived upward workplace mobility affected tolerance for high CEO-to-median worker pay ratio. We predicted that participants would be substantially more tolerant of vast pay ratios when they perceived opportunities for upward workplace mobility within the organization (Hypothesis 1). As predicted, participants who read about a highly-paid CEO ($M = 4.00$, $SD = 1.37$) who experienced upward workplace mobility throughout his career were significantly more tolerant of the vast pay ratios between the CEO and their median worker ($t(404) = 2.910$, $p = .004$, 95% CI [.132, .680], Cohen's $d = 0.290$) relative to those who did not read about upward workplace mobility ($M = 3.60$, $SD = 1.43$).

Robustness Check. Lastly, we examined whether the degree of CEO-to-median worker pay ratio moderated the effect of perceived upward workplace mobility on tolerance for said pay ratios. To do so, we ran a standardized linear regression predicting tolerance for high pay ratios as a function of upward workplace mobility condition (-0.5 = No upward workplace mobility information, 0.5 = upward workplace mobility information; $\beta = 0.146$, $p = .002$, 95% CI [.054, .239]), CEO-to-median worker pay ratio condition (-0.5 = 10:1 and 0.5 = 50:1 and 200:1 CEO-to-Worker pay ratio; $\beta = -0.293$, $p < .001$, 95% CI [-.386, -.200]) and their interaction. We found that there was no statistically significant interaction ($\beta = 0.023$, $p = .634$, 95% CI [-.070, .115]), suggesting that optimistic perceptions of upward workplace mobility predict tolerance for CEO-to-Worker pay ratios ranging from 10:1 to 200:1.

Discussion

Study 1 found that perceived upward workplace mobility increases tolerance of high CEO-to-median worker pay ratios within the organization. Regardless of the degree of CEO-to-median-worker pay ratio in an organization, participants were substantially more tolerant of said pay ratio when the CEO moved up the organizational ladder. In the following studies, we examine the underlying mechanism tying perceived upward workplace mobility and tolerance for high CEO-to-median worker pay ratios.

Studies 2a and 2b

In Studies 2a and 2b, we replicate and extend our findings with a sample of employees thinking about real CEO-to-median worker pay ratios at their own organizations. In addition, we further explore the relationship between perceived upward workplace mobility and employees' tolerance for high pay ratios by examining whether this relationship is mediated by the zero-sum thinking as well as by the perceived quality of employees' relationships with their coworkers and managers. We predicted that participants who believe that their workplace offers opportunities for upward workplace mobility would be less prone to view success as zero-sum (i.e., zero-sum thinking) and more prone to view their workplace relationships as helpful and supportive, thereby exploring Hypotheses 1-3. Consequently, we predicted that viewing success as non-zero-sum (such the one person's success does not come at others' expense) and workplace relationships as helpful and supportive would reduce participants' concern about high CEO-to-median worker pay ratios at their workplace. Given that Study 2b is a high-powered pre-registered replication of Study 2a, we report these studies together.

Study 2a

Participants

Four hundred U.S. full-time employees were recruited using an online surveying agency (CloudResearch's PrimePanel platform) that commissions stratified research samples. By recruiting participants from a wide array of online sources, this service lets researchers set a-priori demographic quotas for sampling, allowing us to limit the target sample to participants who were fully employed at the time of the study. We excluded from analyses participants who failed an attention check ("Please write

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3 the number of letters that appear in the word “Monday”), leaving a final sample of 374 full-time
4 employees ($M_{age} = 38.96$, 55.6% Female, 44.1% Male, 0.27% Other, $Median_{inc} = \$70-70,000$). On
5 average, participants reported having been fully employed for 6.70 years by their current employer with
6 65.2% of participants employed at “white collar” and 34.8% employed at “blue collar” jobs. This sample
7 size allowed for adequate power (80%, $p < .05$) to detect effects as small as $r = .144$.

13 Measures

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16 Participants reflected on the organization at which they currently work and completed a survey
17 containing the following measures in randomized order. Unless otherwise noted, all questions were
18 seven-point Likert scales ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) scale.

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22 ***Perceived Upward Workplace Mobility.*** Participants indicated how much their workplace offered
23 opportunity for upward workplace mobility on a four-item scale (e.g., “I have opportunities for
24 advancement and promotion”; $M = 5.26$, $SD = 1.44$, Cronbach’s $\alpha = .88$; Riordan & Shore, 1997).

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28 ***Zero-sum Thinking.*** Using a six-item adapted version of the Belief in a Zero-Sum Game scale
29 (Różycka-Tran et al., 2015), participants indicated whether success at their workplace is zero-sum, such
30 that employees can only succeed at their colleagues’ expense (e.g., “when one worker at my company
31 makes economic gains, another loses out economically;” $M = 4.16$, $SD = 1.38$, Cronbach’s $\alpha = .85$);).

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37 ***Quality of Workplace Relationships.*** Participants reported the quality of their workplace
38 relationships on two different measures. First, they reported the quality of the relationships among
39 coworkers at their organization (“In general how would you describe the relations in your workplace
40 between coworkers?”; $M = 4.14$, $SD = 0.83$) as well as between employees and their supervisors (“In
41 general how would you describe the relations in your workplace between management and employees?”;
42 $M = 3.96$, $SD = 0.97$), using the same two items from the GSS data (Smith et al., 2019). Second,
43 participants reported how supported they felt by their colleagues ($M = 5.52$, $SD = 1.29$, Cronbach’s $\alpha =$
44 .89) and managers ($M = 5.52$, $SD = 1.43$, Cronbach’s $\alpha = .90$) using the three-item Peer and Supervisory
45 subscales of the Co-worker, Supervisory, and Peer Support Scale (Iverson et al., 1998).
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Tolerance for High CEO-to-Median Worker Pay Ratios. Participants indicated their tolerance for high pay ratios in their workplace using the five-item Support for Economic Inequality Scale (e.g., “Pay disparity in my organization is not a problem”; $M = 3.95$, $SD = 1.17$, Cronbach’s $\alpha = .65$; Wiwad et al., 2019), modified to ask about organizational (rather than societal) inequality.

Results

We first validated our measurement model, conducting a Confirmatory Factor Analysis (CFA) of the correlated latent factors for perceived upward workplace mobility, zero-sum thinking, quality of relationships with managers, quality of relationships with coworkers, and tolerance for high CEO-to-median worker pay ratios. Each individual item was set to freely load on its relevant latent factor, with latent variances fixed to 1. This model exhibited acceptable fit ($\chi^2 = 747.435$, $df = 220$, $p < .001$, CFI = 0.898, RMSEA = 0.080, SRMR = 0.100), and all items loaded significantly on their relevant factors (see Supplemental Information, Figure S4 for full model).

For our subsequent analyses, we predicted that employees who view their workplace as offering opportunities for upward workplace mobility would tolerate high CEO-to-median worker pay ratios at their organization (Hypothesis 1) and that this would be statistically mediated by two variables: zero-sum thinking (Hypotheses 2a and 2b) and the quality of one’s workplace relationships (Hypotheses 3a and 3b).

Perceived Upward Workplace Mobility Predicts Tolerance for High Pay Ratios. To begin, we examined whether perceived upward workplace mobility predicted participants’ tolerance for high CEO-to-median worker pay ratios in their organization. Supporting Hypothesis 1, optimistic beliefs about upward workplace mobility within one’s workplace were significantly related to tolerance for high CEO-to-median worker pay ratios ($\beta = .196$, $SE = .051$, $p < .001$, 95% CI [.096, .296]), a relationship which held when controlling for age, gender, and income ($\beta = .238$, $SE = .055$, $p < .001$, 95% CI [.129, .346]). Thus, the more participants believed their organization offered opportunities to move up the ladder, the less troubled they were by high CEO-to-median worker pay ratios within it.

Mediation Through Zero-sum Thinking and Quality of Workplace Relationships. We next examined whether zero-sum thinking and the quality of one's workplace relationships statistically mediated the relationship between perceived upward workplace mobility and tolerance for high CEO-to-median worker pay ratios. In a parallel mediation model supporting Hypotheses 2a and 2b, we found that optimistic beliefs about upward workplace mobility were related to less zero-sum thinking ($\beta = -.118$, $SE = .051$, $p = .02$, 95% CI [-.218, -.018]), which was in turn related to greater tolerance of high CEO-to-median worker pay ratios within one's organization ($\beta = -.336$, $SE = .045$, $p < .001$, 95% CI [-.424, -.247]; Indirect Effect = .040, $SE = 0.018$, $p = .027$, 95% CI [.005, .075]).

In addition, supporting Hypothesis 3a, we found that optimistic beliefs about upward workplace mobility were related to higher quality relationships among co-workers ($\beta = .358$, $SE = .026$, $p < .001$, 95% CI [.608, .709]) as well as between employees and managers ($\beta = .727$, $SE = .021$, $p < .001$, 95% CI [.686, .768]). However, in contrast to Hypothesis 3b, neither the quality of relationships between co-workers ($\beta = -.007$, $SE = .063$, $p = .912$, 95% CI [-.131, .117]; Indirect Effect = -.005, $SE = .042$, $p = .912$, 95% CI [-.086, .077]) nor employees and managers ($\beta = .123$, $SE = .069$, $p = .074$, 95% CI [-.012, .258]; Indirect Effect = .090, $SE = .050$, $p = .074$, 95% CI [-.009, .188]) significantly mediated the effect on tolerance for high CEO-to-median worker pay ratios, although the latter was marginally significant.

Discussion

Study 2a found support for Hypothesis 1 through 3a. Specifically, we found that perceived upward workplace mobility was related to employees' tolerance of high CEO-to-median worker pay ratios, and that this relationship was mediated by zero-sum thinking. In addition, while perceived upward workplace mobility predicted better relationships with one's colleagues and managers, the quality of the relationships with one's managers only marginally mediated the relationship between perceived upward workplace mobility and tolerance for high CEO-to-median worker pay ratios. Thus, to more reliably test our model and further examine these results, we ran a high-powered pre-registered replication.

Study 2b

Even when thinking about their own workplace, participants in Study 2a exhibited a strong positive relationship between their beliefs about upward workplace mobility within their organization and their acceptance of high CEO-to-median-worker pay ratios. Study 2b replicates this finding in a high-powered, pre-registered study. We predicted that participants who believe that their workplace enables moving up the organizational ladder would be less concerned about high CEO-to-median worker pay ratios in it (Hypothesis 1). Moreover, we predicted that this relationship would be mediated by zero-sum thinking (Hypotheses 2a-2b) and, to a lesser extent, by the quality of relationships between coworkers as well as employees and their supervisors at the organization (Hypotheses 3a-3b).

Participants

An a priori power analysis based on Study 2a determined that 600 participants would have sufficient power (80%, $\alpha < .05$) to detect an effect as small as $r = .115$. Using the same online surveying agency from Study 2a, we were able to recruit 591 U.S. full-time employees. Based on our pre-registered exclusion criteria (<https://aspredicted.org/blind.php?x=iy98nm>), we excluded from analyses 39 participants who failed a simple attention check, leaving a final sample of 552 full-time employees ($M_{\text{age}} = 39.69$, 48.2% Female, 51.6% Male, 0.18% Other, $Median_{\text{inc}} = \$70,000-79,999$). On average, participants reported having been fully employed at their current workplace for 6.43 years with 61.4% of participants employed at “white collar” jobs and 38.6% employed at “blue collar” jobs.

Measures

Using the same measures from Study 2a, participants reported, in randomized order, their perceptions of upward workplace mobility ($M = 5.12$, $SD = 1.32$, Cronbach’s $\alpha = .86$), zero-sum thinking ($M = 4.18$, $SD = 1.26$, Cronbach’s $\alpha = .84$), the quality of their workplace relationships with coworkers ($M = 5.14$, $SD = 0.93$, Cronbach’s $\alpha = .82$) and managers ($M = 4.97$, $SD = 1.23$, Cronbach’s $\alpha = .88$), and their tolerance for high CEO-to-median worker pay ratios within their organization ($M = 4.00$, $SD = 1.13$, Cronbach’s $\alpha = .68$). Responses were made on seven-point Likert scales ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) scale.

Results³

We conducted a CFA of the correlated latent factors for perceived upward workplace mobility, zero-sum thinking, quality of relationships with managers, quality of relationships with coworkers, and tolerance for high CEO-to-median worker pay ratios. Each individual scale item was set to freely load on its relevant latent factor, with latent variances fixed to 1. This model exhibited acceptable fit ($\chi^2 = 1073.288$, $df = 220$, $p < .001$, CFI = 0.878, RMSEA = 0.084, SRMR = 0.104), and all items loaded significantly on their relevant factors (See Supplemental Information, Figure S5 for full model).

For our subsequent analyses, we predicted that perceived upward workplace mobility would be positively correlated with participants' tolerance for high CEO-to-median worker pay ratios at their workplace (Hypothesis 1), negatively correlated with zero-sum thinking (Hypothesis 2a), and positively correlated with the quality of their workplace relationships (Hypothesis 3a).

Perceived Upward Workplace Mobility Predicts Tolerance for High CEO-to-Median Worker Pay Ratios. Replicating Studies 1 and 2a, we found that optimistic beliefs about upward workplace mobility predicted tolerance for high CEO-to-median worker pay ratios ($\beta = .322$, $SE = .040$, $p < .001$, 95% CI [.242, .401]), and this was true even when controlling for age, gender, and income ($\beta = .332$, $SE = .041$, $p < .001$, 95% CI [.253, .413]) The more participants believed that their workplace offered opportunity to move up the organizational ladder, the less troubled they were by high CEO-to-median worker pay ratios and the more they supported the existence of such inequalities.

Mediation Through Zero-sum Thinking and Quality of Workplace Relationships. We predicted that the relationship between perceived upward workplace mobility and tolerance for high CEO-to-median worker pay ratios would be mediated by zero-sum thinking, with both measures of workplace relationships included in the model. In a parallel mediation model, and contrary to Hypothesis 2a and our findings in Study 2a, perceived upward workplace mobility was only marginally related to zero-sum

³ For consistency and clarity, we report regressions (vs. correlations) and an analysis of how zero-sum thinking relates to perceived quality of workplace relationships. For all pre-registered analyses, see Supplemental Results.

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3 thinking ($\beta = -.075$, $SE = .042$, $p = .077$, 95% CI [-.158, .008]). While zero-sum thinking still predicted
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5 lower tolerance of high CEO-to-median worker pay ratios within one's organization ($\beta = -.453$, $SE =$
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7 $.032$, $p < .001$, 95% CI [-.516, -.391]), the mediation effect—in line with Hypothesis 2b—was only
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9 marginal (Indirect Effect = $.034$, $SE = 0.019$, $p = .077$, 95% CI [-.004, .071]).

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11 Consistent with Study 2a and Hypothesis 3a, optimistic beliefs about upward workplace mobility
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13 were related to higher quality relationships between co-workers ($\beta = .579$, $SE = .026$, $p < .001$, 95% CI
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15 [.528, .629]) as well as employees and managers ($\beta = .647$, $SE = .022$, $p < .001$, 95% CI [.604, .690]).
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17 Testing Hypothesis 3b, we found that only the quality of relationship between employees and managers (β
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19 = $.110$, $SE = .046$, $p = .017$, 95% CI [.020, .200]), but not between coworkers ($\beta = -.056$, $SE = .043$, $p =$
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21 $.198$, 95% CI [-.140, .029]), was related to tolerance of high CEO-to-median worker pay ratios.
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23 Consequently, quality of relationships with managers (Indirect Effect = $.071$, $SE = .030$, $p = .017$, 95% CI
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25 [.013, .130]), but not between coworkers (Indirect Effect = $-.032$, $SE = .025$, $p = .199$, 95% CI [-.081,
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27 $.017$]) significantly mediated the relationship between perceived upward workplace mobility and
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29 tolerance for high CEO-to-median worker pay ratios.
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32 Discussion

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34 Studies 2a and 2b found consistent support for the relationship between perceived upward
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36 workplace mobility and tolerance for high CEO-to-median worker pay ratios. However, whereas Study 2a
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38 found that this relationship was mediated by zero-sum thinking (but only marginally by perceived
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40 managerial relationships), Study 2b found that it was mediated by employees' quality of relationship with
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42 their managers (but only marginally by zero-sum thinking). Taken together, these studies suggest that two
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44 constructs—zero-sum thinking and quality of employee-manager relationships—play an important role in
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46 the relationship between perceived upward workplace mobility and tolerance for high CEO-to-median
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48 worker pay ratios. In Study 3, we empirically replicate this relationship and examine the *causal* link
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50 between perceived upward workplace mobility and tolerance for high CEO-to-median worker pay ratios.
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53 Study 3

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3 Studies 1, 2a, and 2b revealed that perceived upward workplace alleviates concerns about high
4 CEO-to-median worker pay ratios. Study 3 replicates and extend these findings in three important ways.
5 First, given the correlational design of Studies 2a and 2b, it is possible that tolerance for high CEO-to-
6 median worker pay ratios increases the belief in upward workplace mobility rather than the other way
7 around. Because high pay ratios can motivate people to climb up the organizational ladder (Connelly et
8 al., 2014), people may view large CEO-to-median worker pay ratios as necessary for creating mobile
9 workplaces and may therefore be more supportive of them. To provide causal evidence for the
10 relationship between perceived upward workplace mobility and tolerance for high CEO-to-median worker
11 pay ratios, we experimentally manipulate perceptions of upward workplace mobility before measuring
12 participants' attitudes regarding high CEO-to-median worker pay ratios.
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24 Second, we rule out perceptions of high CEO-to-median worker pay ratios as an alternative
25 explanation. It is possible that more optimistic perceptions of upward workplace mobility as well as
26 tolerance for the CEO-to-median worker pay ratio at one's organization are simply reflective of
27 perceiving a lower CEO-to-median worker pay ratio (Davidai, 2018). Thus, in Study 3 we measure and
28 statistically control for perceptions of CEO-to-median worker pay ratios.
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35 Lastly, we further examine the mixed results in regard to the variables that mediate this
36 relationship. Whereas the indirect effect through zero-sum thinking was statistically significant in Study
37 2a, it was only marginally significant in Study 2b. In contrast, although the indirect effect through the
38 quality of employee-manager relationship was marginally significant in Study 2a, it was statistically
39 significant in Study 2b. Using an experimental paradigm, Study 3 examines these variables' role in the
40 effect of perceived upward workplace mobility on tolerance for high CEO-to-median worker pay ratios.
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48 **Participants**

49 Based on an a-priori power analysis, we aimed to recruit 300 participants for adequate power
50 (80%, $p < .05$) to detect effect as small as $d = .32$. We recruited 311 U.S. residents from Amazon's
51 Mechanical Turk. In line with previous studies, we excluded from analyses 33 participants who failed a
52 simple attention check, leaving a final sample of 278 participants ($M_{age} = 36.46$, 43.5% Female, 56.5%
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3 Male, $Median_{inc} = \$40,000-49,999$). 92.1% of participants reported being either fully or part-time
4 employed, with an average tenure of 5.98 years at their current workplace, and 59.7% employed at “white
5 collar” jobs and 32.4% employed at “blue collar” jobs.
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8 9 10 **Procedure**

11 Participants were randomly assigned to one of two conditions in which they read about a fictional
12 organization (OpenLane) “that specializes in providing technological solutions to business-to-business
13 (B2B) retailers” (see Supplemental Methods). In the *high upward workplace mobility* condition ($N =$
14 137), the organization was described as a workplace that offers its employees many opportunities to move
15 up the organizational ladder. Specifically, participants learned that, although not everyone gets promoted,
16 this organization has “a long tradition of promoting people from within” and that it was common for
17 employees to “start working in typically low-level jobs and, within a few years, to get promoted to
18 higher-ranking jobs.” In the *low upward workplace mobility* condition ($N = 141$), this same organization
19 was described as a workplace that does not offer much potential for rising up the organizational ladder.
20 Although sometimes people do get promoted, participants learned that this was rare because the
21 organization has “a long tradition of filling higher-rank positions with outside hires” and that it was rare
22 for people “to work their way up the organizational ladder.”
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37 **Measures**

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39 Participants completed a survey containing, in randomized order, the same measures from Studies
40 2a and 2b (modified to refer to the organization about which they read). Unless otherwise noted, all
41 questions were seven-point Likert scales ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) scale.
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45 ***Perceived Upward Workplace Mobility.*** Participants indicated the extent to which they believed
46 that employees at the organization about which they read could move up the organizational ladder on a
47 four-item scale (e.g., “If I worked at OpenLane, I think I would have opportunities for advancement and
48 promotion”; $M = 4.68$, $SD = 1.69$, Cronbach’s $\alpha = .91$; Riordan & Shore, 1997).
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54 ***Zero-sum Thinking.*** Using a six-item adapted version of the Belief in a Zero-Sum Game scale
55 (Różycka-Tran et al., 2015), participants indicated the extent to which they viewed success at the
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organization about which they read as zero-sum (e.g., “When one worker at OpenLane makes economic gains, another loses out economically;” $M = 4.75$, $SD = 1.12$, Cronbach’s $\alpha = .84$;).

Quality of Workplace Relationships. Participants reported the predicted quality of workplace relationships at the organization about which they read on two different measures. First, participants reported the quality of the relationships among coworkers at the organization (“In general, what would you expect the relationships at OpenLane to be like between coworkers/colleagues?”; $M = 3.69$, $SD = 0.90$) as well as between employees and their managers (“In general, what would you expect the relationships at OpenLane to be like between management and employees?”; $M = 3.40$, $SD = 1.16$). Second, participants reported the extent to which they would feel supported by their colleagues ($M = 4.95$, $SD = 1.22$, Cronbach’s $\alpha = .91$) and their managers ($M = 4.79$, $SD = 1.39$, Cronbach’s $\alpha = .91$) in this organization using an adapted version of the three-item Peer and Supervisory subscales of the Co-worker, Supervisory, and Peer Support Scale (Iverson et al., 1998). As before, we composited these items into two scales measuring quality of relationships with (a) coworkers and (b) managers.

Tolerance for High CEO-to-Median Worker Pay Ratios. Participants indicated how much they would tolerate high CEO-to-median worker pay ratios at the organization about which they read using a five-item modified version of the Support for Economic Inequality Scale (e.g., “Pay disparity would not be a problem at OpenLane”; $M = 3.51$, $SD = 1.15$, Cronbach’s $\alpha = .78$; Wiwad et al., 2019).

Perceptions of CEO-to-Median Worker Pay Ratio. Using an adapted common measure of perceived organizational inequality (Kiatpongsan & Norton, 2014), participants reported the scope of the CEO-to-median worker pay ratio that they believe would exist at OpenLane. Specifically, participants answered the question “For every \$100 earned by the CEO of OpenLane, how much do you think that an average worker at OpenLane makes” ($M = \$27.10$, $SD = \$25.18$).

Results

Manipulation Check. As intended, participants in the *high upward workplace mobility* condition were significantly more prone to view the organization as providing ample opportunity for moving up the

organizational ladder than participants in the *low upward workplace mobility* condition, $t(276) = -15.645$, $p < .001$, 95% CI [-2.604, -2.022], Cohen's $d = 1.88$ (see Table 1 for means and standard deviations).

Table 1 about here

Manipulating Perceived Upward Workplace Mobility Does not Shift Perceptions of CEO-to-Median Worker Pay Ratios. First, we examined whether perceptions of the degree of CEO-to-median worker pay ratio changed across conditions. Consistent with our expectations, participants perceived the same scope of CEO-to-median worker pay at the organization, $t(276) = -1.818$, $p = .070$, 95% CI [-1.392, 0.454], Cohen's $d = 0.22$, regardless of whether they received the upward workplace mobility information or not (see Table 1 for means and standard deviations).

Manipulating Perceived Upward Workplace Mobility Shifts Tolerance for High CEO-to-Median Worker Pay Ratios. Next, we examined the effect of perceived upward workplace mobility on tolerance for high CEO-to-median worker pay ratios. We predicted that participants would be less troubled by high pay ratios in the workplace if it offered a lot of chances of moving up the organizational ladder, in line with Hypothesis 1. Indeed, those in the *high upward workplace mobility* condition were significantly more tolerant of this ratio than participants in the *low upward workplace mobility* condition, who imagined an organization where the potential for upward workplace mobility was limited, $t(276) = -7.567$, $p < .001$, 95% CI [-1.203, -0.706], Cohen's $d = 0.91$. This finding held when controlling for perceptions of the CEO-to-median worker pay ratio ($F(1, 274) = 59.586$, $p < .001$, partial $\eta^2 = .179$). Thus, beliefs about moving up the organization ladder affected how large of a CEO-to-median worker pay ratio participants were willing to tolerate rather than how large of a pay ratio they expected to encounter.

Manipulating Perceived Upward Workplace Mobility Shifts Beliefs about the Workplace. We examined how perceived upward workplace mobility affected beliefs about the workplace environment, testing Hypothesis 2a and 3a. Replicating Studies 2a and 2b, upward workplace mobility significantly affected zero-sum thinking. Whereas participants in the *low upward workplace mobility* condition

believed that success can only be achieved at other employees' expense, those in the *high upward workplace mobility* condition were significantly less prone to zero-sum thinking, $t(276) = 5.093, p < .001$, 95% CI [0.400, 0.905], Cohen's $d = 0.61$. Additionally, participants in the *high upward workplace mobility* condition expected to have significantly better relationships with their managers ($t(276) = -11.448, p < .001$, 95% CI [-1.702, -1.202], Cohen's $d = 1.38$) and coworkers ($t(276) = -7.769, p < .001$, 95% CI [-1.148, -0.684], Cohen's $d = 0.94$) than participants in the *low upward workplace mobility* condition. Whereas considering an organization with limited opportunities for upward workplace mobility led participants to view success as zero-sum and to expect worse relationships, thinking about a company that offers ample opportunity for climbing the organizational ladder led them to expect a supportive workplace environment where employees' success does not necessarily come at others' expense.

Mediation Through Zero-sum Thinking and Workplace Relationships. In line with Hypothesis 2b and 3b, we predicted that the effect of perceived upward workplace mobility on tolerance for high CEO-to-median worker pay ratios would be mediated by the zero-sum thinking and the quality of workplace relationships. To examine this, we conducted a multiple mediation analysis with condition (*high upward workplace mobility* versus *low upward workplace mobility*) as the independent variable, tolerance for high CEO-to-median worker pay ratios as the dependent variable, and zero-sum thinking, as well as quality of relationships among coworkers and managers as three potential mediators. This analysis revealed that the relationship between perceived upward workplace mobility and tolerance for high CEO-to-median worker pay ratios was mediated by zero-sum thinking (Indirect Effect = 0.067, $SE = 0.020, p = .001$, 95% CI [0.028, 0.106]) as well as by the perceived quality of employee-manager relationships (Indirect Effect = 0.146, $SE = 0.036, p < .001$, 95% CI [0.075, 0.216]). As in Studies 2a and 2b, the perceived quality of relationships among coworkers did not mediate the effect (Indirect Effect = .037, $SE = 0.024, p = .131$, 95% CI [-0.011, 0.084]). Thus, viewing a workplace as offering opportunities to move up the organizational ladder reduced zero-sum thinking and increased expectations regarding relationships with one's managers. Consequently, reduced zero-sum thinking and perceiving better employer-employee relationships increased acceptance of high CEO-to-median worker pay ratios.

Discussion

Supporting Hypotheses 1-3, Study 3 experimentally replicated and extended our results, demonstrating that perceived upward workplace mobility *causally* increases participants' tolerance of high CEO-to-median worker pay ratios but not their perceptions of actual CEO-to-median worker pay ratios. Additionally, the relationship between perceived upward workplace mobility held controlling for perceptions of perceived actual CEO-to-median worker pay ratio. Moreover, we found additional support for zero-sum thinking and quality of relationships with managers as mediators of this relationship. In the Supplementary Materials, we report an additional study we conducted which replicated these results in the context of an additional pernicious organizational disparity—gender pay ratios (see General Discussion for more details). Specifically, we found that perceived upward workplace mobility increases participants' tolerance with disparities in pay between male and female employees.

One shortcoming of our Studies 1-3 is their focus on self-reported attitudes. In Study 4, we examine a behavioral manifestation of tolerance for CEO-to-median worker pay ratios and a critical organizational outcome—employee turnover intentions—in a field study.

Study 4

In Study 4, we surveyed employees of a large financial services organization to examine whether perceived upward workplace mobility affects employees' zero-sum thinking as well as the quality of their workplace relationships, in line with Hypothesis 2 and 3. In addition, and in line with Hypothesis 1, Study 4 examines an additional measure of tolerance toward CEO-to-median worker pay ratios and a critical and consequential impact of perceived upward workplace mobility: employee turnover intentions (Akerlof & Yellen, 1990). Tournament theory predicts that employees who view high CEO-to-median worker pay ratios as unacceptably high would opt to leave their current tournaments (Forbes, 1987). Thus, because optimism about upward workplace mobility placates employees' objection to high CEO-to-median worker pay ratios, we suggest that it results in a reduced intent to quit.

Participants

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3 Out of a total of 6,000 employees who received an e-mail invitation to participate in the survey,
4 2,008 employees responded to the survey (response rate: 33.5%; employed for an average of 11.28 years
5 and a median of 10 years) at a large financial services company located in a Spanish-speaking country
6 completed the survey.⁴ We excluded all employees who did not complete the key measure of perceived
7 upward workplace mobility, resulting in a final sample of 1,615 ($M_{\text{age}} = 35.98$; Gender data was not
8 collected). Since these data were part of a larger survey conducted by the field partner, we discuss only
9 the relevant measures here.
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18 Measures

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20 ***Perceived Upward Workplace Mobility.*** Employees reported how likely they were to move up
21 their organization on a single item (“How likely do you think it is that you will be promoted in the next 12
22 months?”; $M = 3.56$, $SD = 2.12$) on a scale ranging from 1 (“Very Unlikely”) to 7 (“Very Likely”).
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26 ***Zero-Sum Thinking.*** Employees reported the extent to which success at their organization is
27 zero-sum on three items from the Belief in a Zero-sum Game Scale ($M = 2.34$, $SD = 1.39$, Cronbach’s $\alpha =$
28 .35; Różycka-Tran et al., 2015)⁵ on a scale ranging from 1 (“Strongly Disagree”) to 9 (“Strongly Agree”).
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33 ***Quality of Workplace Relationships.*** Employees reported the quality of their relationship with
34 their manager (“I can rely upon my supervisor when things get tough at work” and “When necessary, I
35 can ask my immediate supervisor for help”; $M = 6.07$, $SD = 1.17$, $r(1,613) = .87$) and coworkers (e.g., “I
36 can rely upon my co-workers when things get tough at work” and “When necessary, I can ask my co-
37 workers for help”; $M = 6.33$, $SD = 1.28$, $r(1,613) = .77$) on two items each, with scales ranging from 1
38 (“Strongly Disagree”) to 7 (“Strongly Agree”).
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46 ***Turnover Intentions.*** To examine a critical behavioral measure of tolerance for high CEO-to-
47 median worker pay ratios, employees reported whether they plan to leave their current employer in the
48 near future (“I frequently think of quitting my job” and “I am planning to search for a new job in the next
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53 ⁴ Because we do not have demographic information for employees who received an invite but did not respond, we
54 are unable to compare responders to non-responders.

55 ⁵ Omitting the third item of this measure slightly increases its reliability ($r(1606) = .49$, $p < .001$) and yields an
56 indirect effect that falls just short of significance (Indirect Effect = $-.007$, $SE = .003$, $p = .051$, 95% CI $[-.013, .000]$).
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twelve months”; $M = 1.61$, $SD = 1.17$, $r(1,613) = .52$), using a scale ranging from 1 (“Strongly Disagree”) to 7 (“Strongly Agree”).

Results

Perceived Upward Workplace Mobility Predicts Lower Turnover Intent. In line with Hypothesis 1, we first examined the relationship between perceived upward workplace mobility and employees’ intentions to quit. As predicted, the more employees believed that their organization offers opportunity for moving up the corporate ladder, the less they intended to seek other employment and the more they expected to stay at the company for the long-run, ($\beta = -.143$, $SE = .025$, $p < .001$, 95% CI [-.191, -.094]).

Perceived Upward Workplace Mobility Predicts Workplace Environment. Next, we examined whether perceived upward workplace mobility predicted zero-sum thinking and the quality of employees’ workplace relationships. In line with Hypothesis 2a and 3a, and replicating Studies 2 and 3, higher perceived upward workplace mobility was related to less zero-sum thinking ($\beta = -.078$, $SE = .025$, $p < .001$, 95% CI [-.127, -.029]). Moreover, perceived upward workplace mobility predicted better relationships with both managers ($\beta = .172$, $SE = .025$, $p < .001$, 95% CI [.123, .220]) and coworkers ($\beta = .155$, $SE = .025$, $p < .001$, 95% CI [.106, .204]).

Mediation Through Zero-sum Thinking and Quality of Workplace Relationships. Finally, we examined whether zero-sum thinking and quality of workplace relationships mediated the effect of perceived upward workplace mobility on turnover intentions, in line with Hypothesis 2b and 3b. In a parallel mediation model echoing Studies 2 and 3, the relationship between perceived upward workplace mobility and turnover intentions was significantly mediated by zero-sum thinking (Indirect Effect = $-.010$, $SE = .004$, $p = .006$, 95% CI [-.017, -.003]) as well as by the quality of employee’s relationships with their managers (Indirect Effect = $-.040$, $SE = .007$, $p < .001$, 95% CI [-.053, -.026]). Moreover, this relationship was additionally mediated by the quality of relationships with coworkers, although the indirect effect was substantially smaller (Indirect Effect = $-.012$, $SE = .004$, $p = .006$, 95% CI [-.020, -.003]) than zero-sum thinking or quality of relationships with managers.

Discussion

In a high-powered field study at a financial services organization, we found that employees who believe that their organization offers greater opportunities for upward workplace mobility were less prone to view success as zero-sum and reported higher quality relationships with their coworkers and managers. As a result, viewing success as non-zero-sum and having good relationships with one's coworkers and managers was related to lower turnover intentions. Consistent with tournament theory, we found that by reducing concerns about high CEO-to-median worker pay ratios, perceived upward workplace mobility may reduce employee's intent to "exit the tournament" and quit.

General Discussion

Why do high CEO-to-median earner pay ratios persist? Across seven ($N=6,388$) studies—including experiments, archival data, and a field study at a large financial services institution—we find support for the notion that perceived upward workplace mobility plays a crucial role, shaping employees' tolerance for high CEO-to-median worker pay ratios. In addition, we find that this is due to, in part, reduced zero-sum thinking and better workplace relationships (particularly between employees and their managers). Finally, using a large sample of employees at a major financial services company, we find that due to its effect on zero-sum thinking and the quality of workplace relationships, perceived upward workplace mobility reduces turnover intentions—an important organizational outcome associated with pushback against high CEO-to-median worker pay ratios (Akerlof & Yellen, 1990).

Theoretical Contributions

By highlighting the tension between growing CEO-to-median worker pay ratios on the one hand, and the relative lack of employee outrage on the other (Janmaat, 2013; Larcker et al., 2016), our findings suggest that perceived upward workplace mobility can be a double-edged sword. On an organizational level, perceived upward workplace mobility can improve workplace relationships, reduce the competitive and self-focused implications of zero-sum thinking (Sirola & Pitesa, 2017), and decrease employee attrition. At the same time, by increasing tolerance of high CEO-to-median worker pay ratios, perceived upward workplace mobility can facilitate their negative consequences (e.g., lower corporate evaluations, job performance, satisfaction, and motivation; Ahn et al., 2016; Benedetti & Chen, 2018; Hand &

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3 MacLachlan, 2012; Muckenhuber et al., 2014). Thus, while perceived upward workplace mobility can
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5 have personally positive consequences, employee internalization of ubiquitous narratives of upward
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7 workplace mobility may exacerbate inequalities in the long run. Consequently, our work suggests the
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9 need for a more critical examination of such optimistic workplace mobility narratives and their
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11 detrimental effects on employees, organizations, and society.
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14 In doing so, we situate the current research within prior work regarding the power of
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16 organizational narratives (Daft & Weick, 1984; Weick et al., 2005) and their potential for promoting
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18 inequality. For example, popular narratives about gender (Kim et al., 2018) and the role of passion (Kim
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20 et al., 2020; Rao & Tobias Neely, 2019) have both been shown to exacerbate organizational inequalities.
21
22 Consistent with this literature, our findings suggest that organizational narratives about upward workplace
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24 mobility can foster tolerance for, and potentially exacerbate, large CEO-to-median worker pay ratios.
25
26 Viewing organizational inequalities through the lens of upward workplace mobility narratives can
27
28 therefore shed new light on existing findings. For instance, the fact that people tend to overestimate
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30 upward mobility (Davidai & Gilovich, 2018; Kraus & Tan, 2015) may reflect carefully crafted
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32 organizational narratives in addition to mere motivated reasoning. Similarly, the fact that perceived
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34 upward mobility is often related to perceptions of procedural justice (Davidai & Gilovich, 2015;
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36 Mandisodza et al., 2006; Tyler, 2011) may be bolstered by organizational narratives' emphasis on the role
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38 of meritocracy in promotion decisions, thereby heightening employees' tolerance of CEO-to-median
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40 worker pay ratios. Such critical views highlight the important role organizations play in exacerbating
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42 societal inequalities, as well as their potential to mitigate them.
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46 Our work also has theoretical implications at the employee-level. Employees are often motivated
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48 to view their workplaces as fair (Otto & Schmidt, 2007) and reduce their cognitive dissonance by
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50 committing to and identifying with them. One potential way employees may do so is by overestimating
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52 the actual level of upward workplace mobility in their organization. This suggests that employees may
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54 themselves also play a role in the perpetuation of organizational narratives of upward workplace mobility.
55
56 For instance, employees may contribute to these narratives by emphasizing to new recruits how their hard
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work has paid off and what their upward trajectory within the organization has been like (e.g., see Gielnik et al., 2015). Moreover, employees may also treat their colleagues' tolerance of high CEO-to-median worker pay ratios as indicating a general belief in the possibility of upward workplace mobility, therefore strengthening their own beliefs (Malle et al., 2007). Thus, perceived upward workplace mobility may help explain the perpetuation of inequalities at both the organizational and employee level.

In the Supplementary Information, we report the results of an additional experiment which extends our findings to tolerance of gender pay gaps. Due to gender discrimination (Graf et al., 2018), occupational segregation (White & Brinkerhoff, 1981), and differential treatment of mothers and fathers (Correll et al., 2007), the average American female still earns almost 20% less than the average American male (Bureau of Labor Statistics, 2019). Based on our findings, we predicted that the belief that male and female employees' can climb the organizational ladder may foster tolerance for such gender pay gaps. Indeed, we found that participants who imagined working at an organization with many opportunities for upward workplace mobility demonstrated higher tolerance for a gender pay gap than those who imagined an organization with limited opportunity for climbing the organizational ladder, $F(1,197) = 5.048, p = .026$, partial $\eta^2 = .025$. In addition, the effect on tolerance of gender pay gaps was mediated by zero-sum thinking, suggesting that opportunities for upward workplace mobility may lead employees to view success as earned and higher gender pay ratios as reflecting a meritocratic process rather than discrimination. Although preliminary these findings emphasize the importance of perceived upward workplace mobility in understanding various organizational disparities beyond CEO-to-median-worker pay ratios and highlight the importance of further research on the topic.

Future Directions

Although perceived upward workplace mobility consistently affected tolerance for high CEO-to-median worker pay ratios, the mediation results regarding coworker relationships were somewhat mixed, reaching significance in only one study (Study 4). This suggests that the effect of coworker relationships on tolerance for high CEO-to-median worker pay ratios merits further exploration. In addition, because we were interested in examining the implications of perceived upward workplace mobility, the studies

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2
3 relied on self-report data, and future research would benefit from comparing the effects of actual and
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5 perceived upward workplace mobility. Just as research on mobility in society examines how lay
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7 perceptions compare to reality (e.g., Davidai & Gilovich, 2015), future research can compare employees'
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9 beliefs about moving up *within their organization* to the actual likelihood of doing so.

11
12 Finally, in addition to the consequences of perceived upward workplace mobility, future research
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14 could examine what shapes these beliefs in the first place. As noted above, perceived upward workplace
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16 mobility may be shaped by organizational narratives about employees who have “risen through the
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18 ranks,” internal organizational communication (e.g., programs for career advancement), or a general
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20 feeling that one’s supervisors notice and reward stellar performance. Are employees less prone to believe
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22 in upward workplace mobility when working remotely (thus making those who “move up the ranks” less
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24 visible on a day-to-day basis?) Alternatively, are employees of organizations that celebrate opportunities
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26 for mobility (e.g., in their mission statements) more prone to believe in upward workplace mobility?
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28 Understanding what leads employees to view their organization as offering ample opportunity to move up
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30 the ladder may be important for reducing zero-sum thinking, improving workplace relationships, affecting
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32 their tolerance for high pay ratios and, ultimately, increasing their desire to stay at their organization.

34 35 **Conclusion**

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37 Upward workplace mobility narratives of employees working their way from the checkout
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39 counter to the C-Suite corner office are ubiquitous in organizations. Our theory and research find that
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41 while these narratives can have beneficial effects on employees’ perceptions of their organizations,
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43 internalizing the message of upward workplace mobility may also foster tolerance for vast CEO-to-
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45 median worker pay ratios. By further unveiling perceptions of upward workplace mobility, we can get a
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47 better understanding of why there has been little meaningful pushback among employees towards
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49 damagingly high levels of CEO-to-median worker pay.

References

- Business Insider (2013). 15 CEOs who spent their entire careers at their companies. (2013, December 27). *Business Insider*. <https://financialpost.com/business-insider/15-ceos-who-spent-their-entire-careers-at-their-companies>
- Aguinis, H., Villamor, I., & Ramani, R. S. (2020). MTurk Research: Review and Recommendations. *Journal of Management*, 1–15. <https://doi.org/10.1177/0149206320969787>
- Ahn, H., Roll, S. J., Zeng, W., Frey, J. J., Reiman, S., & Ko, J. (2016). Impact of Income Inequality on Workers' Life Satisfaction in the U.S.: A Multilevel Analysis. *Social Indicators Research*, 128(3), 1347–1363. <https://doi.org/10.1007/s11205-015-1082-7>
- Akerlof, G. A., & Yellen, J. L. (1990). The Fair Wage-Effort Hypothesis and Unemployment. *The Quarterly Journal of Economics*, 105(2), 255–283.
- Alessandri, G., Cortina, J. M., Sheng, Z., & Borgogni, L. (2020). Where You Came From and Where You Are Going: The Role of Performance Trajectory in Promotion Decisions. *Journal of Applied Psychology*. <https://doi.org/10.1037/apl0000696>
- Anderson, J. C., Milkovich, G. T., & Tsui, A. (1981). A Model of Intra-Organizational Mobility. *Academy of Management Review*, 6(4), 529–538. <https://doi.org/10.5465/amr.1981.4285665>
- Bazerman, M. H. (1983). Negotiator Judgment: A Critical Look at the Rationality Assumption. *American Behavioral Scientist*, 27(2), 211–228.
- Bendersky, C., & Hays, N. A. (2012). Status conflict in groups. *Organization Science*, 23(2), 323–340. <https://doi.org/10.1287/orsc.1110.0734>
- Benedetti, A. H., & Chen, S. (2018). High CEO-to-worker pay ratios negatively impact consumer and employee perceptions of companies. *Journal of Experimental Social Psychology*, 79(September), 378–393. <https://doi.org/10.1016/j.jesp.2018.09.003>
- Benson, A., & Rissing, B. A. (2020). Strength from Within: Internal Mobility and the Retention of High Performers. *SSRN Electronic Journal*, October. <https://doi.org/10.2139/ssrn.3503708>
- Brockner, J. (2002). Making Sense of Procedural Fairness : How High Procedural Fairness Can Reduce or Heighten the Influence of Outcome Favorability. *Academy of Management Review*, 27(1), 58–76.
- Brockner, Joel, & Wiesenfeld, B. M. (1996). An integrative framework for explaining reactions to decisions: Interactive effects of outcomes and procedures. *Psychological Bulletin*, 120(2), 189–208. <https://doi.org/10.1037/0033-2909.120.2.189>
- Browman, A. S., Destin, M., Carswell, K. L., & Svoboda, R. C. (2017). Perceptions of socioeconomic mobility influence academic persistence among low socioeconomic status students. *Journal of Experimental Social Psychology*, 72(September 2016), 45–52. <https://doi.org/10.1016/j.jesp.2017.03.006>
- Bureau of Labor Statistics, U. S. D. of L. (2019). *Women had higher median earnings than men in relatively few occupations in 2018*. <https://www.bls.gov/opub/ted/2019/women-had-higher-median-earnings-than-men-in-relatively-few-occupations-in-2018.htm>
- Castilla, E. J., & Benard, S. (2010). The paradox of meritocracy in organizations. *Administrative Science Quarterly*, 55(4), 543–576. <https://doi.org/10.2189/asqu.2010.55.4.543>
- Cautela, M. (2021). *Walmart CEO Doug McMillon to be Harvard Business School's Class Day Speaker*.
- Clark, A. E., Kristensen, N., Westergård-nielsen, N., The, S., Journal, E., Mar, C. P., Clark, A. E., Kristensen, N., & Westergard-nielsen, N. (2016). *Job Satisfaction and Co-Worker Wages : Status or Signal?* 119(536), 430–447.
- Connelly, B. L., Tihanyi, L., Crook, T. R., & Gangloff, K. A. (2014). Tournament Theory: Thirty Years of Contests and Competitions. *Journal of Management*, 40(1), 16–47. <https://doi.org/10.1177/0149206313498902>
- Correll, S. J., Benard, S., & Paik, I. (2007). Getting a job: Is there a motherhood penalty? *American Journal of Sociology*, 112(5), 1297–1338. <https://doi.org/10.1086/511799>
- Daft, R. L., & Weick, K. E. (1984). Toward a Model of Organizations as Interpretation Systems. *Academy of Management Review*, 9(2), 284–295.

- Davidai, S. (2018). Why do Americans believe in economic mobility? Economic inequality, external attributions of wealth and poverty, and the belief in economic mobility. *Journal of Experimental Social Psychology*, 79(July), 138–148. <https://doi.org/10.1016/j.jesp.2018.07.012>
- Davidai, S., & Gilovich, T. (2015). Building a More Mobile America—One Income Quintile at a Time. *Perspectives on Psychological Science*, 10(1), 60–71. <https://doi.org/10.1177/1745691614562005>
- Davidai, S., & Gilovich, T. (2018). How should we think about Americans' beliefs about economic mobility? *Judgment and Decision Making*, 13(3), 297–304.
- 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), 1–11. <https://doi.org/10.1126/sciadv.aay3761>
- Day, M. V., & Fiske, S. T. (2017). Movin' on Up? How Perceptions of Social Mobility Affect Our Willingness to Defend the System. *Social Psychological and Personality Science*, 8(3), 267–274. <https://doi.org/10.1177/1948550616678454>
- Doug McMillon. (2021). <https://corporate.walmart.com/our-story/leadership/executive-management/doug-mcmillon/>
- Ellemers, N., Spears, R., & Doosje, B. (1997). Sticking Together or Falling Apart: In-Group Identification as a Psychological Determinant of Group Commitment Versus Individual Mobility. *Journal of Personality and Social Psychology*, 72(3), 617–626. <https://doi.org/10.1037/0022-3514.72.3.617>
- 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.
- Evans, M. D. R., & Kelley, J. (2017). Communism, Capitalism, and Images of Class: Effects of Reference Groups, Reality, and Regime in 43 Nations and 110,000 Individuals, 1987-2009. *Cross-Cultural Research*, 51(4), 315–359. <https://doi.org/10.1177/1069397116677963>
- Flanagan, C. A., & Kornbluh, M. (2019). How Unequal Is the United States? Adolescents' Images of Social Stratification. *Child Development*, 90(3), 957–969. <https://doi.org/10.1111/cdev.12954>
- Forbes, J. B. (1987). Early Intraorganizational Mobility: Patterns and Influences. *Academy of Management Journal*, 30(1), 110–125. <https://doi.org/10.2307/255898>
- García-Castro, J. D., Rodríguez-Bailón, R., & Willis, G. B. (2020). Perceiving economic inequality in everyday life decreases tolerance to inequality. *Journal of Experimental Social Psychology*, 90(December 2019), 104019. <https://doi.org/10.1016/j.jesp.2020.104019>
- George, E., Chattopadhyay, P., & Zhang, L. L. (2012). Helping hand or competition? The moderating influence of perceived upward mobility on the relationship between blended workgroups and employee attitudes and behaviors. *Organization Science*, 23(2), 355–372. <https://doi.org/10.1287/orsc.1100.0606>
- Gielnik, M. M., Spitzmuller, M., Schmitt, A., Klemann, D. K., & Frese, M. (2015). “I put in effort, therefore I am passionate”: Investigating the path from effort to passion in entrepreneurship. *Academy of Management Journal*, 58(4), 1012–1031. <https://doi.org/10.5465/amj.2011.0727>
- Graf, N., Brown, A., & Patten, E. (2018). *The narrowing, but persistent, gender gap in pay.*
- Hand, K., & MacLachlan, M. (2012). An unequal balance? - The effects of unequal pay systems on societal motivation in Ireland. *Irish Journal of Psychology*, 33(2–3), 129–136. <https://doi.org/10.1080/03033910.2012.708902>
- Harmer, R. J., & Findlay, B. M. (2005). The effect of workplace relationships on employee job satisfaction for 25 to 35 year olds . *The 5th Annual Conference of the Australian Psychological Societys Interest Group on Psychology of Relationships*, 76–79.
- Hui, C., Lam, S. S. K., & Law, K. K. S. (2000). Instrumental values of organizational citizenship behavior for promotion: A field quasi-experiment. *Journal of Applied Psychology*, 85(5), 822–828. <https://doi.org/10.1037/0021-9010.85.5.822>
- Hull, K. E., & Nelson, R. L. (2000). Assimilation, choice, or constraint? Testing theories of gender differences in the careers of lawyers. *Social Forces*, 79(1), 229–264.

- 1
2
3 <https://doi.org/10.1093/sf/79.1.229>
- 4 Ignatius, A. (2017). We need people to lean into the future. *Harvard Business Review*, April.
- 5 Iverson, R. D., Olekalns, M., & Erwin, P. J. (1998). Affectivity, organizational stressors, and
6 absenteeism: A causal model of burnout and its consequences. *Journal of Vocational Behavior*,
7 52(1), 1–23. <https://doi.org/10.1006/jvbe.1996.1556>
- 8 Janmaat, J. G. (2013). Subjective inequality: A review of international comparative studies on people's
9 views about inequality. *Archives Europeennes de Sociologie*, 54(3), 357–389.
10 <https://doi.org/10.1017/S0003975613000209>
- 11 Kiatpongsan, S., & Norton, M. I. (2014). How Much (More) Should CEOs Make? A Universal Desire for
12 More Equal Pay. *Perspectives on Psychological Science*, 9(6), 587–593.
13 <https://doi.org/10.1177/1745691614549773>
- 14 Kim, J. Y., Campbell, T. H., Shepherd, S., & Kay, A. C. (2020). Understanding contemporary forms of
15 exploitation: Attributions of passion serve to legitimize the poor treatment of workers. *Journal of*
16 *Personality and Social Psychology*, 118(1), 121–148. <https://doi.org/10.1037/pspi0000190>
- 17 Kim, J. Y., Fitzsimons, G. M., & Kay, A. C. (2018). Lean in messages increase attributions of women's
18 responsibility for gender inequality. *Journal of Personality and Social Psychology*, 115(6), 974–
19 1001. <https://doi.org/10.1037/pspa0000129>
- 20 Kraus, M. W., & Tan, J. J. X. (2015). Americans overestimate social class mobility. *Journal of*
21 *Experimental Social Psychology*, 58, 101–111. <https://doi.org/10.1016/j.jesp.2015.01.005>
- 22 Larcker, D. F., Donatiello, N., & Tayan, B. (2016). *Americans And CEO Pay : 2016 Public Perception*
23 *Survey*. 17. [www.gsb.stanford.edu/faculty-research/publications/americans-ceo-pay-2016-public-](http://www.gsb.stanford.edu/faculty-research/publications/americans-ceo-pay-2016-public-perception-survey-ceo-compensation)
24 [perception-survey-ceo-compensation](http://www.gsb.stanford.edu/faculty-research/publications/americans-ceo-pay-2016-public-perception-survey-ceo-compensation)
- 25
26
27 Laud, R. L., & Johnson, M. (2012). Upward Mobility: A Typology of Tactics and Strategies for Career
28 Development. *Career Development International*, 17(3), 231–254.
29 <https://doi.org/10.1108/13620431211241072>
- 30 Malle, B. F., Knobe, J. M., & Nelson, S. E. (2007). Actor-Observer Asymmetries in Explanations of
31 Behavior: New Answers to an Old Question. *Journal of Personality and Social Psychology*, 93(4),
32 491–514. <https://doi.org/10.1037/0022-3514.93.4.491>
- 33 Mandisodza, A. N., Jost, J. T., & Unzueta, M. M. (2006). “Tall poppies” and “American dreams”
34 reactions to rich and poor in Australia and the United States. *Journal of Cross-Cultural Psychology*,
35 37(6), 659–668. <https://doi.org/10.1177/0022022106292076>
- 36 Mary Barra. (2021). <https://www.gm.com/our-company/leadership/mary-t-barra.html>
- 37 McGinn, K. L., & Milkman, K. L. (2013). Looking up and looking out: Career mobility effects of
38 demographic similarity among professionals. *Organization Science*, 24(4), 1041–1060.
39 <https://doi.org/10.1287/orsc.1120.0778>
- 40 Mishel, L., & Wolfe, J. (2019, August). CEO Compensation has Grown 940% Since 1978. *Economic*
41 *Policy Institute*.
- 42 Morrison, R. L. (2008). Negative relationships in the workplace: Associations with organisational
43 commitment, cohesion, job satisfaction and intention to turnover. *Journal of Management &*
44 *Organization*, 14(4), 330–344. <https://doi.org/10.1017/s1833367200003126>
- 45 Muckenhuber, J., Burkert, N., Großschädl, F., & Freidl, W. (2014). Income inequality as a moderator of
46 the relationship between psychological job demands and sickness absence, in particular in men: An
47 international comparison of 23 countries. *PLoS ONE*, 9(2).
48 <https://doi.org/10.1371/journal.pone.0086845>
- 49 Otto, K., & Schmidt, S. (2007). Dealing with stress in the workplace: Compensatory effects of belief in a
50 just world. *European Psychologist*, 12(4), 272–282. <https://doi.org/10.1027/1016-9040.12.4.272>
- 51 Park, T. Y., Kim, S., & Sung, L. K. (2017). Fair pay dispersion: A regulatory focus theory view.
52 *Organizational Behavior and Human Decision Processes*, 142, 1–11.
53 <https://doi.org/10.1016/j.obhdp.2017.07.003>
- 54 Pfeffer, J., & Davis-Blake, A. (1992). Salary Dispersion, Location in the Salary Distribution, and
55 Turnover among College Administrators. *Industrial and Labor Relations Review*, 45(4), 753.
56
57
58
59
60

- <https://doi.org/10.2307/2524591>
- Pfeffer, J., & Langton, N. (1993). The Effect of Wage Dispersion on Satisfaction, Productivity, and Working Collaboratively: Evidence from College and University Faculty. *Administrative Science Quarterly*, 38(3), 382. <https://doi.org/10.2307/2393373>
- Rao, A. H., & Tobias Neely, M. (2019). What's love got to do with it? Passion and inequality in white-collar work. *Sociology Compass*, 13(12), 1–14. <https://doi.org/10.1111/soc4.12744>
- Ridge, J. W., Hill, A. D., & Aime, F. (2017). Implications of Multiple Concurrent Pay Comparisons for Top-Team Turnover. *Journal of Management*, 43(3), 671–690. <https://doi.org/10.1177/0149206314539349>
- Riordan, C. M., & Shore, L. M. (1997). Demographic Diversity and Employee Attitudes. *Journal of Applied Psychology*, 82(3), 342–358.
- 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>
- Sagioglou, C., Forstmann, M., & Greitemeyer, T. (2019). Belief in Social Mobility Mitigates Hostility Resulting From Disadvantaged Social Standing. *Personality and Social Psychology Bulletin*, 45(4), 541–556. <https://doi.org/10.1177/0146167218789073>
- Shariff, A. F., Wiwad, D., & Aknin, L. B. (2016). Income Mobility Breeds Tolerance for Income Inequality: Cross-National and Experimental Evidence. *Perspectives on Psychological Science*, 11(3), 373–380. <https://doi.org/10.1177/1745691616635596>
- 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>
- Smith, T. W., Davern, M., Freese, J., & Morgan, S. L. (2019). *General Social Surveys, 1972-2018 [machine-readable data file]*.
- Trevor, C. O., Reilly, G., & Gerhart, B. (2012). Reconsidering pay dispersion's effect on the performance of interdependent work: Reconciling sorting and pay inequality. *Academy of Management Journal*, 55(3), 585–610. <https://doi.org/10.5465/amj.2006.0127>
- Trevor, C. O., & Wazeter, D. L. (2006). A contingent view of reactions to objective pay conditions: Interdependence among pay structure characteristics and pay relative to internal and external referents. *Journal of Applied Psychology*, 91(6), 1260–1275. <https://doi.org/10.1037/0021-9010.91.6.1260>
- Tyler, T. (2011). Procedural justice shapes evaluations of income inequality: Commentary on Norton and Ariely (2011). *Perspectives on Psychological Science*, 6(1), 15–16. <https://doi.org/10.1177/1745691610393981>
- van Laar, C., Derks, B., Ellemers, N., & Bleeker, D. (2010). Valuing Social Identity: Consequences for Motivation and Performance in Low-Status Groups. *Journal of Social Issues*, 66(3), 602–617. <https://doi.org/10.1111/j.1540-4560.2010.01665.x>
- Venkataramani, V., Labianca, G. J., & Grosser, T. (2013). Positive and negative workplace relationships, social satisfaction, and organizational attachment. *Journal of Applied Psychology*, 98(6), 1028–1039. <https://doi.org/10.1037/a0034090>
- Wakslak, C. J., Jost, J. T., Tyler, T. R., & Chen, E. S. (2007). Moral outrage mediates the dampening effect of system justification on support for redistributive social policies. *Psychological Science*, 18(3), 267–274. <https://doi.org/10.1111/j.1467-9280.2007.01887.x>
- Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science*, 16(4), 409–421. <https://doi.org/10.1287/orsc.1050.0133>
- Wenzel, M. (2000). Justice and identity: The significance of inclusion for perceptions of entitlement and the justice motive. *Personality and Social Psychology Bulletin*, 26(2), 157–176. <https://doi.org/10.1177/0146167200264004>
- White, L. K., & Brinkerhoff, D. B. (1981). The Sexual Division of Labor: Evidence from Childhood. *Social Forces*, 60(1), 170. <https://doi.org/10.2307/2577938>

Wiwad, D., Mercier, B., Maraun, M. D., Robinson, A. R., Piff, P. K., Aknin, L. B., & Shariff, A. F. (2019). The support for economic inequality scale: Development and adjudication. *PLoS ONE*, *14*(6), 1–29. <https://doi.org/10.1371/journal.pone.0218685>

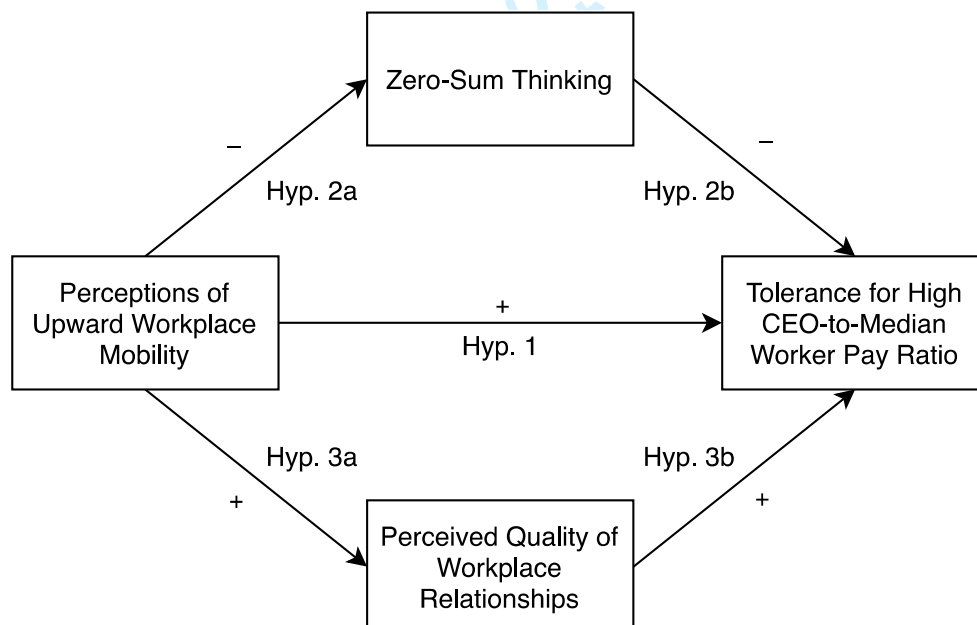
Yoon, S., & Kim, H. C. (2016). Keeping the American Dream Alive: The Interactive Effect of Perceived Economic Mobility and Materialism on Impulsive Spending. *Journal of Marketing Research*, *53*(5), 759–772.

TABLE 1
Means and Standard Deviations for Study 3 Variables

	Condition	
	Low Upward Mobility	High Upward Mobility
	M (SD)	M (SD)
Perceived Upward Mobility	3.54 (1.55)	5.85 (0.79)
Tolerance for High Pay Ratio	3.04 (1.08)	4.00 (1.02)
Zero-sum Thinking	5.08 (1.01)	4.42 (1.13)
Manager Relationships	3.73 (1.28)	5.18 (0.76)
Coworker Relationships	4.18 (1.18)	5.10 (0.72)
Perceived Inequality	24.40 (26.80)	29.87 (23.18)

FIGURE 1

Theoretical Model



Note. This model predicts that perceptions of upward workplace mobility will increase tolerance for high CEO-to-median worker pay ratios, and that this effect will be mediated by lower zero-sum thinking and better perceived quality of one's workplace relationships. Note that empirically we separate perceived quality of workplace relationships into two mediators: perceived quality of workplace relationships with (a) one's coworkers and (b) one's managers.

Supplemental Information

Supplemental Methods

Study 1

Full Measures from Reported Analyses.

Perceptions of Upward Mobility. We adapted Riordan & Shore's (1997) measure of perceived potential for promotion within one's organization. Specifically, for each item we added information to make it clear that participants were to predict how they would feel working at Carter Ltd. Items were presented in random order.

1. If I worked at Carter Ltd., I think I would have opportunities for advancement and promotion.
2. If I performed my job well at Carter Ltd., I would be more likely to be promoted.
3. People promoted at Carter Ltd. Are generally the most qualified among potential candidates.
4. The policies and practices of Carter Ltd. Ensure all employees – regardless of their gender, racial origin, of physical abilities – have an equal chance for advancement.

Tolerance for High Pay Ratios. We adapted Wiwad et al.'s (2019) measure of support for economic inequality to reflect support for the pay disparity within the fictional Carter Ltd. Items were presented in random order.

1. High pay disparity causes many problems for Carter Ltd.
2. I am very disturbed by the degree of pay disparity at Carter Ltd.
3. Carter Ltd. needs to do everything possible to reduce pay disparity in the company.
4. High pay disparity at Carter Ltd. does not lead to many negative consequences.
5. Pay disparity is not a problem at Carter Ltd.

Study 2a and 2b

Full Measures from Reported Analyses.

Perceptions of Upward Mobility. We used Riordan & Shore's (1997) measure of perceived potential for promotion within one's organization. Items were presented in random order. Participants were asked to “[think] about the place where you work right now” and “please rate your agreement with each of the following statements using the scales provided below.”

1. I have opportunities for advancement and promotion.
2. If I perform my job well, I am more likely to be promoted.
3. People promoted are generally the most qualified among potential candidates.
4. The policies and practices of this company ensure all employees – regardless of their gender, racial origin, of physical abilities – have an equal chance for advancement.

Zero-Sum Thinking. We used a modified version of Różycka-Tran et al.'s (2015) Belief in a Zero-Sum Game Scale. Specifically, we modified the items to refer to the organization where the participant works as opposed to in the world broadly. Participants were asked to “use the scale provided to rate the following items about how things are in your organization” in random order.

1. When one worker at my company makes economic gains, another loses out economically.

2. People at my company who want to get ahead economically must do so at the expense of others.
3. The more employees a company employs, the harder it is for existing employees to advance.
4. At my company, more good jobs for some employees means fewer good jobs for other employees.
5. Not everyone at my company can be wealthy.
6. For every rich person at my company there is usually someone experiencing financial hardship.

Quality of Workplace Relationships. We used the peer and supervisory subscales to measure how much support one receives from their peers and managers. Participants were asked to respond to the following statements about [the person you are responsible to/people in the same occupation or profession that you work with], in random order.

1. My manager is very concerned about the welfare of those under her/him. (Manager)
2. My manager is willing to listen to work related problems. (Manager)
3. My manager can be relied upon when things get difficult. (Manager)
4. My peers can be relied upon when things get difficulty at my job. (Peers)
5. My peers are willing to listen to my job-related problems. (Peers)
6. My peers are helpful to me in getting the job done. (Peers)

Tolerance for High Pay Ratios. We adapted Wiwad et al.'s (2019) measure of support for economic inequality to reflect support for the pay disparity within the organization participants currently work. Items were presented in random order.

1. Pay disparity is causing many of my organization's problems.
2. I am very disturbed by the degree of pay disparity in my organization today.
3. We need to do everything possible to reduce pay disparity in my organization.
4. The negative consequences of pay disparity in my organization have been largely exaggerated.
5. Pay disparity in my organization is not a problem.

Study 3

Manipulations

Low Mobility Condition

OpenLane is an organization that specializes in providing technological solutions to business-to-business (B2B) retailers. Among other things, OpenLane helps business-to-business retailers manage their inventory and sales team and provides efficient and cost-effective ways to manage client support.

One thing that OpenLane is famous for is its ability to attract young talent. However, like many other organizations, employee turnover at OpenLane is relatively high. Employees at OpenLane tend stay in the same role for many years and often have to leave the company in order to advance their careers. This is because OpenLane has a long tradition of filling higher-rank positions with outside hires rather than promoting people from within. It is very rare for people

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3 at OpenLane to work their way up the organizational ladder since most of the higher-ranking
4 jobs tend to be filled by external hires.
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7 The tradition of attracting young talent is so integral to the culture of OpenLane that it is even
8 stated in the company's mission statement:
9

10 **"OpenLane strives to create an environment that attracts hardworking and talented**
11 **employees. It is for this reason that we invest in identifying, screening, and recruiting**
12 **people from other organizations whenever possible rather than promoting people from**
13 **within the organization."**
14

15
16 Of course, sometimes people in OpenLane do get promoted. However, even employees who are
17 smart and competent and who work hard and put in the effort often get "stuck" doing the same
18 job for many years. In fact, many of the managers and executives at OpenLane were hired from
19 "the outside" and have only been in the company for a few years. For example, both the current
20 CEO of OpenLane and the previous CEO were hired from outside the organization.
21

22
23 When asked why OpenLane doesn't typically promote its own people, the current CEO remarked
24 that "we want to get the best talent out there. I came from somewhere else, and I don't see any
25 problem with that. My goal is to get the most talented employees."
26

27 *High Mobility Condition*

28 OpenLane is an organization that specializes in providing technological solutions to business-to-
29 business (B2B) retailers. Among other things, OpenLane helps business-to-business retailers
30 manage their inventory and sales team and provides efficient and cost-effective ways to manage
31 client support.
32

33
34 One thing that OpenLane is famous for is its ability to cultivate young talent and promote people
35 from within the ranks. Unlike many other organizations, employee turnover at OpenLane is
36 relatively low. Whereas employees in other organizations in the industry often leave their jobs
37 quite quickly, people in OpenLane tend to stay in the organization for many years. This is
38 because OpenLane has a long tradition of promoting people from within. It is not uncommon for
39 people at OpenLane to start working in a typically low-level job and, within a few years, to get
40 promoted to higher-ranking jobs.
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42
43 The tradition of cultivating young talent is so integral to the culture of OpenLane that it is even
44 stated in the company's mission statement:
45

46
47 **"OpenLane strives to create an environment where hardworking and talented employees**
48 **move up the organizational ladder. It is for this reason that we believe in cultivating,**
49 **mentoring, and promoting people from within the organization whenever possible rather**
50 **than recruiting people from the outside."**
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52
53 Of course, not everyone in OpenLane gets promoted. However, employees who are smart and
54 competent and who work hard and put in the effort typically find their way up the organizational
55 ladder. In fact, many of the managers and executives at OpenLane have been in the company for
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3 many years and were promoted from within the ranks. For example, both the current CEO of
4 OpenLane and the previous CEO started as sales representatives in the company and worked
5 their way up the organizational ladder.

6
7 When asked why OpenLane so often promotes its own people, the current CEO remarked that
8 “we want to give everyone a chance to succeed. I was one of those people who started at the
9 bottom and moved all the way up to the top, and I don’t see any problem with that. My goal is
10 give our employees the opportunity to grow, succeed, and move upwards.”
11

12 **Full Measures from Reported Analyses.**

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15 ***Perceptions of Upward Mobility.*** We used a modified version of Riordan & Shore’s (1997)
16 measure of perceived potential for promotion within one’s organization. Items were presented in
17 random order. Participants were asked to “[think] about how they would feel working at
18 OpenLane” and “please rate your agreement with each of the following statements using the
19 scales provided below.”

- 20 1. If I worked at OpenLane, I would have opportunities for advancement and promotion.
- 21 2. If I perform my job well at OpenLane, I would be more likely to be promoted.
- 22 3. People promoted at OpenLane are generally the most qualified among potential
23 candidates.
- 24 4. The policies and practices of OpenLane ensure all employees – regardless of their gender,
25 racial origin, of physical abilities – have an equal chance for advancement.
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29 ***Zero-Sum Thinking.*** We used a modified version of Rózycka-Tran et al.’s (2015) Belief in a
30 Zero-Sum Game Scale. Specifically, we modified the items to refer to the fictional OpenLane as
31 opposed to in the world broadly. Participants were asked to “use the scale provided to rate the
32 following items about how things are in your organization” in random order.

- 33 1. When one worker at OpenLane makes economic gains, another loses out economically.
- 34 2. People at OpenLane who want to get ahead economically must do so at the expense of
35 others.
- 36 3. The more employees OpenLane employs, the harder it is for existing employees to
37 advance.
- 38 4. At OpenLane, more good jobs for some employees means fewer good jobs for other
39 employees.
- 40 5. Not everyone at OpenLane could be wealthy.
- 41 6. For every rich person at OpenLane there is usually someone experiencing financial
42 hardship.
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46
47 ***Quality of Workplace Relationships.*** We used the peer and supervisory subscales to measure
48 how much support one predicts they would receive from their peers and managers. Participants
49 were asked to respond to the following statements about [the person you are responsible
50 to/people in the same occupation or profession that you work with] at OpenLane, in random
51 order.

- 52 1. If I worked at OpenLane, my manager would be very concerned about the welfare of
53 those under her/him. (Manager)
- 54 2. If I worked at OpenLane, my manager would be willing to listen to work related
55 problems. (Manager)
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3. If I worked at OpenLane, my manager could be relied upon when things get difficult.
(Manager)
4. If I worked at OpenLane, my peers could be be relied upon when things get difficulty at my job. (Peers)
5. If I worked at OpenLane, my peers would be willing to listen to my job-related problems.
(Peers)
6. If I worked at OpenLane, my peers would be helpful to me in getting the job done.
(Peers)

Tolerance for High Pay Ratios. We adapted Wiwad et al.'s (2019) measure of support for economic inequality to reflect predicted tolerance for the pay disparity within OpenLane. Items were presented in random order.

1. High Pay disparity would cause many problems for OpenLane.
2. I would be very disturbed by the degree of pay disparity at OpenLane.
3. OpenLane needs to do everything possible to reduce pay disparity in the company.
4. High pay disparity at OpenLane would not lead to many negative consequences.
5. Pay disparity would not be a problem at OpenLane.

Study 3 Supplemental Replication Full Measures from Reported Analyses.

Tolerance for High Gender Pay Ratios. We adapted Wiwad et al.'s (2019) measure of support for economic inequality to reflect predicted tolerance for the gender pay disparity within OpenLane. Items were presented in random order.

1. High Pay disparity between male and female employees would cause many problems for OpenLane.
2. I would be very disturbed by the degree of pay disparity between men and women at OpenLane.
3. OpenLane needs to do everything possible to reduce pay disparity between men and women in the company.
4. High pay disparity between men and women at OpenLane would not lead to many negative consequences.
5. Pay disparity between men and women would not be a problem at OpenLane.

Study 4 Full Measures from Reported Analyses.

Zero-sum Thinking. Participants completed three items from the Różycka-Tran et al. (2015) Belief in a Zero Sum Game Scale.

1. Successes of some people are usually failures of others
2. Life is devised that when somebody gains, others have to lose
3. When a person does much for the good of others, he or she profits as well (R)

Supplemental Results

Full Analysis of General Social Survey Data

Participants. We restricted the sample within the General Social Survey data to contain only the survey waves in which our key questions were asked (1988-1991, 1993-1998, and 2006). This resulted in a sample of 2,580 survey respondents ($M_{age} = 40.53$, 68.1% Male, $M_{income} = \$23,405.53$, $Median_{educ} =$ “1 year of college”). This sample size allowed for sufficient power (80%, $\alpha = .05$) to detect an effect as small as $\beta = .055$.

Measures. Participants reported their perceptions of upward mobility within their organization by rating their agreement with the item “my opportunities for advancement are high” ($M = 3.06$, $SD = 1.11$) on a five-point scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree). Participants reported the quality of their workplace relationships on two separate items with the same stem (“in general, how would you describe relations in your workplace...”), both on five-point scales ranging from 1 (Very Good) to 5 (Very Bad). Participants first reported the quality of the relationships “between management and employees” ($M = 2.13$, $SD = 0.95$), followed by “between coworkers/colleagues” ($M = 1.88$, $SD = 0.79$).

As covariates, we included measures of stress at work, interest in one’s job, and job satisfaction, and survey wave. Participants reported their stress at work by responding to the single item “do you find work stressful” ($M = 2.72$, $SD = 1.01$) on a five-point scale ranging from 1 (Always) to 5 (Never). Participants reported interest in their job on the single item “my job is interesting” ($M = 2.06$, $SD = 0.95$) on a five-point scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree). Participants reported their job satisfaction by responding to the item stem “how satisfied are you in your job” ($M = 2.59$, $SD = 1.21$) on a seven-point scale ranging from 1 (Completely Satisfied) to 7 (Completely Dissatisfied).

Results. Given that these data were collected across three separate waves, we first conducted computed an Intraclass Correlation Coefficient (ICC) to explore whether our key dependent variables (relationships with coworkers as well as between employees and managers) were clustered significantly by survey wave. We found that neither relationships among colleagues (ICC = .006) nor employees and managers (ICC = .001) were clustered by survey wave. Thus, we determined that multilevel modeling was not required for these data, and thus continued with linear regression analyses.

First, we found that participants who saw greater potential for upward mobility within their organization reported both better workplace relationships among their colleagues (Table S1, Model 1), as well as between managers and employees (see Table S2, Model 1). Secondly, we found that when controlling for various demographic and workplace satisfaction characteristics perceptions of upward mobility within one’s organization only predicted the quality of employee-management relationships (Table S2, Model 2), but not relationships between colleagues (Table S1, Model 2).

Study 2b Pre-Registered Analyses

Main Analyses. First, we found that optimistic beliefs about upward mobility predicted support for inequality ($r(550) = .322, p < .001$). The more participants believed that their workplace offered opportunity to move up the organizational ladder, the less troubled they were by high pay disparities at their organization and the more they supported the existence of such inequalities.

In our pre-registered analyses we found that optimistic beliefs about upward mobility at one's workplace were positively correlated with the perceived quality of relationships with one's managers ($r(550) = .647, p < .001$) as well as the perceived quality of relationships with one's coworkers ($r(550) = .579, p < .001$). The more participants felt that they could move up their organization's ladder, the better they felt about their relationships with their colleagues and managers, and the more they felt supported by them. Finally, although in the direction predicted in Hypothesis 2a, optimistic beliefs about upward mobility were not significantly correlated with zero-sum thinking ($r(550) = -.075, p = .079$).

We predicted that zero-sum beliefs about success would be negatively correlated with the perceived quality of one's work relationships. This hypothesis received mixed support. Although zero-sum thinking was negatively correlated with the perceived *quality* of relationships among coworkers, $r(550) = -.086, p = .048$, and between employees and management, $r(550) = -.102, p = .016$, it was only directionally related to the perceived *level* of support participants receive from their coworkers, $r(550) = -.057, p = .179$, or managers, $r(550) = -.064, p = .131$. Thus, the more participants believed that success at their workplace is zero-sum, the more positive they felt about the quality of their relationships with their coworkers and supervisors.

Analyses with Controls. We pre-registered a series of supplementary analyses to examine each hypothesis controlling for age, gender, income, perceived hierarchy in the workplace, and political ideology. As predicted, all the observed correlations remained significant even when including these control variables. In addition, as further support of our hypotheses, we found that including covariates in the model revealed a significant negative correlation between perceived potential for promotion and zero-sum thinking about workplace success. See Table S3 for full analyses.

Study 3 Replication: Tolerance for Gender Pay Ratios

Study 3 provided causal evidence for the relationship between the perceived potential for promotion and tolerance for high pay ratios. Moreover, using a high-powered experimental design, we found evidence for mediation both through zero-sum views of organizational success and through the quality of employee-manager relationships. Here we replicate and extend these results. Specifically, we examined whether the optimistic perceptions of upward mobility influence participants' attitudes toward an especially pernicious source of inequality in the workplace – gender pay ratios. We predicted that participants would be significantly more willing to accept high gender pay ratios when thinking about organizations that offer opportunity for upward mobility, and that this relationship would be mediated by zero-sum thinking and workplace relationship quality.

Participants

Based on the large effects observed in Study 3a, we aimed to recruit 200 participants, for adequate power (80%, $p < .05$) to detect effects as small as Cohen's $d = .40$. Our final sample consisted of 201 U.S. resident recruited from Amazon's Mechanical Turk. In line with the

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3 previous studies, we excluded from analyses 11 participants who failed a simple attention check,
4 leaving a final sample of 190 ($M_{age} = 37.78$, 56.3% Male, 41.6% Female, 1.1% Other, 1.1%
5 Prefer not to say, $Median_{inc} = \$50$ -50,000, 74.7% of participants were fully employed at the time
6 of the study, with an average of 5.76 years working for their current employer ($Median_{tenure} = 5$
7 years). Of these, 62.6% were employed at “white collar” jobs and 37.3% were employed at “blue
8 collar” jobs.

9 10 **Materials and Procedure.**

11 Identical to Study 3, participants were randomly assigned to one of two conditions, in
12 which they read about a company that was known for promoting employees from within the
13 organization (*high upward* mobility condition; $n = 97$) or about a company that was known for
14 hiring employees from the outside (*low upward* mobility condition; $n = 93$). Following,
15 participants completed the same exact measures from Study 3 with one important exception.
16 Rather than measuring participants tolerance for (and perceptions of) general pay disparity at the
17 fictional OpenLane, here we measured tolerance for (and perceptions of) *gender* pay disparities.
18 Specifically, participants reported the extent to which they expected the compensation at the
19 organization to differ between male and female employees and males and females in supervisory
20 roles (“For every \$100 earned by the average male [employee/supervisor] at [this organization],
21 how much do you think that an average female [employee/supervisor] at [this organization]
22 makes?”) as well as their tolerance for such gender-based pay disparities (See Supplemental
23 Methods for full scale items).

24 25 **Results**

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27 **Manipulation Check.** As before, the manipulation successfully affected participants’
28 perceptions of upward mobility. Participants in the *high upward mobility* condition (versus
29 immobile) condition were significantly more prone to view the organization as providing a lot of
30 potential for promotion than participants in the *low upward mobility*, $t(188) = -11.07$, $p < .001$,
31 95% CI [-2.68, -1.87], Cohen’s $d = 1.61$ (see Table S4 for means and standard deviations).

32
33 **Key Results.** Next, we examined the effect of perceived potential for mobility on
34 participants’ support for gender-based pay disparity. Conceptually replicating Study 3, we found
35 that participants in the *high upward mobility* condition were significantly more supportive of
36 high gender pay gaps at their organization than participants in the *low upward mobility*
37 condition, $t(188) = -2.24$, $p = .026$, 95% CI [-0.69, -0.04], Cohen’s $d = 0.33$. In addition, relative
38 to participants in the *low upward mobility* condition, participants in the *high upward mobility*
39 condition expected the gender pay gap to be significantly lower both between the average male
40 and female employees, ($t(188) = -2.92$, $p = .004$, 95% CI [-15.10, -2.92], Cohen’s $d = 0.42$) as
41 well as between male and female employees in supervisory roles, $t(188) = -2.35$, $p = .020$, 95%
42 CI [-13.53, -1.17], Cohen’s $d = 0.34$. Thus, the potential for moving up the organizational ladder
43 increased participants’ tolerance for gender pay disparity at the organization and led them to view
44 such inequality as a less pressing issue.

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47 Following, we examined the influence of perceived upward mobility on participants’
48 beliefs regarding the workplace environment they may encounter. As before, we found that
49 participants in the *high upward mobility* condition were significantly less prone to view success
50 at the organization as zero-sum than participants in the *low upward mobility* condition, $t(188) =$
51 6.03 , $p < .001$, 95% CI [0.65, 1.27], Cohen’s $d = 0.89$. Additionally, relative to participants in the
52 *low upward mobility* condition, participants in the *high upward mobility* condition expected to
53 have better relationships with both their managers ($t(188) = -7.87$, $p < .001$, 95% CI [-1.71, -
54 1.02], Cohen’s $d = 1.14$) and their coworkers ($t(188) = -5.33$, $p < .001$, 95% CI [-1.18, -0.54],
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3 Cohen's $d = 0.77$). Thus, viewing one's workplace as offering the potential for moving up the
4 organizational ladder reduced participants' tendency to view success as a zero-sum game and
5 reduced their expectations for having warm and supportive relationships with their colleagues
6 and supervisors.
7

8 **Mediation Analysis.** As in Study 3a, we conducted a multiple mediation analysis to
9 examine whether the relationship between perceived potential for mobility and support for pay
10 disparity is mediated by the degree to which participants view success as a zero-sum game and
11 the quality of their workplace relationships (Figure S6). As further support for our hypotheses,
12 we found that the relationship between perceived potential for promotion and support for pay
13 disparity was significantly mediated by zero-sum thinking about workplace success (Indirect
14 Effect = 0.050, $SE = 0.022$, $p = .024$, 95% CI [.007, .093]). In contrast, participants' expectation
15 regarding the quality of relationships between employees and their managers (Indirect Effect =
16 0.086, $SE = 0.108$, $p = .422$, 95% CI [-.124, .297]) or among colleagues (Indirect Effect = .048,
17 $SE = 0.057$, $p = .404$, 95% CI [-.065, .160]) did not significantly mediate this relationship. Thus,
18 participants who read about a workplace that offered a lot of opportunity for upward mobility was
19 significantly less prone to view success as a zero-sum game and, as a result, were significantly
20 more tolerant of large pay disparities between men and women in the organization.
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Table S1. Standardized linear regressions from the General Social Survey, with and without covariates, predicting workplace relationships among colleagues from perceptions of upward mobility in the workplace ($n = 2,580$). * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

	Relationships with Colleagues			
	Model 1		Model 2	
	β	SE	β	SE
Intercept	0.000	0.020	0.021	0.020
Upward Mobility	0.116 ***	0.020	-0.009	0.023
Year	--	--	-0.052 *	0.020
Age	--	--	-0.025	0.022
Income	--	--	0.025	0.022
Gender	--	--	-0.016	0.020
Education	--	--	-0.035	0.021
Workplace Stress	--	--	-0.082 ***	0.021
Job Satisfaction	--	--	0.346 ***	0.025
Interest in Job	--	--	0.029	0.025
Adjusted R ²	0.013		0.144	

Table S2. Standardized linear regressions from the General Social Survey, with and without covariates, predicting workplace relationships between management and employees from perceptions of upward mobility in the workplace ($n = 2,580$). * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

	Relationships with Managers			
	Model 1		Model 2	
	β	SE	β	SE
Intercept	0.000	0.020	0.019	0.020
Upward Mobility	0.218 ***	0.020	0.092 ***	0.021
Year	--	--	-0.029	0.019
Age	--	--	-0.025	0.020
Income	--	--	0.031	0.021
Gender	--	--	-0.006	0.019
Education	--	--	0.010	0.020
Workplace Stress	--	--	-0.085 ***	0.020
Job Satisfaction	--	--	0.415 ***	0.023
Interest in Job	--	--	0.026	0.023
Adjusted R ²	0.047		0.236	

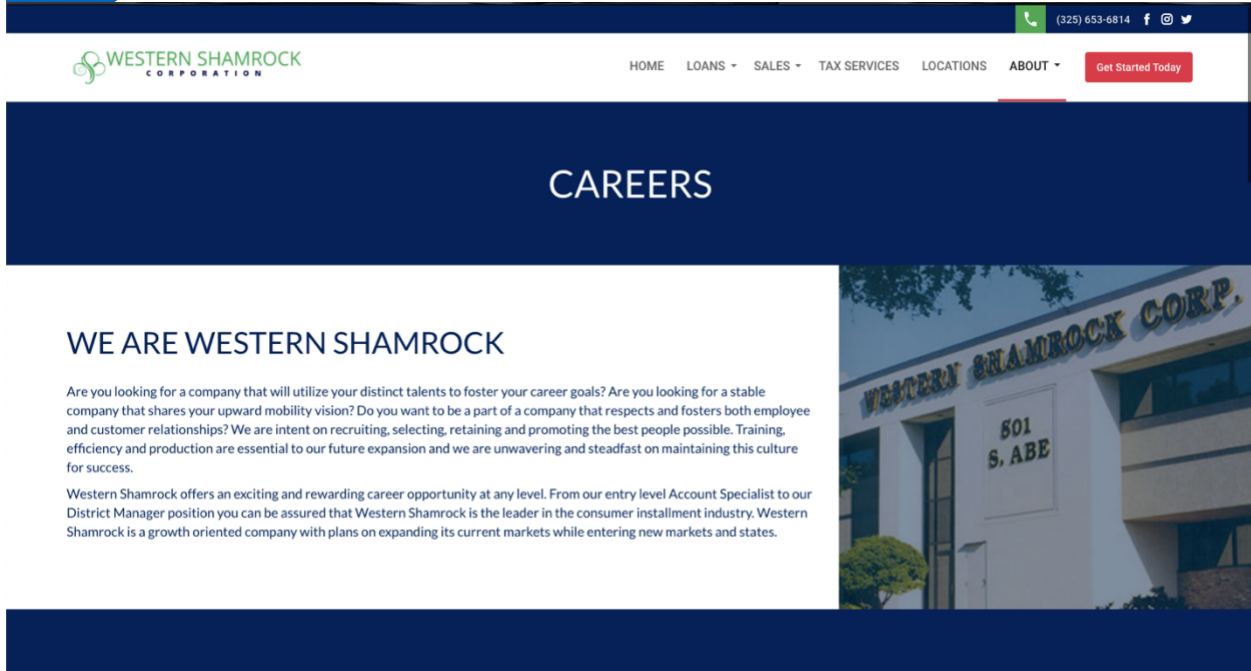
Table S3. Pre-registered standardized linear regressions with covariates in Study 2b ($n = 552$). * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

	Outcome Variable							
	Tolerance for Inequality	Manager Support	Coworker Support	Manager Support	Coworker Support	Manager Relationships	Coworker Relationships	Zero-Sum Thinking
	β	β	β	β	β	β	β	β
Intercept	0.000	-0.001	0.001	0.001	0.004	0.003	0.000	0.001
Upward Mobility	0.336 ***	0.632 ***	0.568 ***	--	--	--	--	-0.138 **
Zero-Sum Thinking	--	--	--	-0.082	-0.081	-0.139 ***	-0.093 *	--
Age	0.153 ***	0.060	0.017	-0.036	-0.087 *	-0.088 *	-0.016	-0.207 ***
Gender	-0.043	0.018	0.029	-0.013	0.009	-0.036	-0.055	0.006
Income	0.043	0.052	0.083 *	0.046	0.074	0.046	0.072	-0.127 **
Political Ideology	0.080 *	0.006	0.051	0.016	0.068	0.081 *	0.059	0.075
Perc. Place in hierarchy	0.024	-0.071	-0.012	-0.235 ***	-0.167 ***	-0.301 ***	-0.181 ***	-0.151 **
Adjusted R ²	0.131	0.427	0.336	0.060	0.043	0.122	0.056	0.068

Table S4. Means and Standard Deviations for all Key Variables in the Study 3 Supplemental Replication.

	Condition		
	Overall	Low Mobility Condition	High Mobility Condition
	M (SD)	M (SD)	M (SD)
Perceptions of Upward Mobility	4.73 (1.81)	3.57 (1.85)	5.85 (0.79)
Support for Gender Pay Disparity	3.19 (1.15)	3.00 (1.14)	3.37 (1.13)
Zero-sum Thinking	4.86 (1.20)	5.35 (0.93)	4.39 (1.24)
Manager Relationships	4.60 (1.38)	3.90 (1.51)	5.27 (0.78)
Coworker Relationships	4.77 (1.19)	4.33 (1.32)	5.19 (0.87)
Perceived Employee Gender Wage Gap	81.77 (21.69)	77.17 (22.43)	86.16 (20.10)
Perceived Supervisor Gender Wage Gap	82.53 (21.83)	78.77 (22.45)	86.12 (20.70)

Figure S1. Career Statement from Western Shamrock (<https://westernshamrock.com/our-careers/>)



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Figure S2. Upward Mobility Program from United States Geological Survey
 (https://www.usgs.gov/about/organization/science-support/human-capital/upward-mobility-program-and-career-development)

The screenshot shows the USGS website's 'Human Capital' section. The top navigation bar includes links for SCIENCE, PRODUCTS, NEWS, CONNECT, and ABOUT, along with a search bar. The main content area is titled 'Human Capital' and features a sidebar with various links. The primary heading is 'Upward Mobility Program and the Career Development Program Differences'. Below this, a paragraph explains that employees selected for these programs at a lower grade than their current position are not entitled to pay retention. A section titled 'Purpose' lists two programs: the 'Upward Mobility Program' and the 'Career Development Program', each with a brief description of their goals.

Human Capital

HOME

A-Z LIST

NEW EMPLOYEE INFORMATION

PAY AND BENEFITS

ANTI-HARASSMENT PROGRAM

CONFLICT MANAGEMENT

EMPLOYEE AND CAREER DEVELOPMENT

ORGANIZATION DEVELOPMENT

PERFORMANCE AND AWARDS

STAFFING AND WORKFORCE

Upward Mobility Program and the Career Development Program Differences

Employees selected for Upward Mobility Program opportunities at a lower grade than the position they currently hold are entitled to pay retention if their existing salary cannot be accommodated within the salary range of the lower Upward Mobility Program grade.

While the [USGS Upward Mobility Program](#) and [Career Development Program](#) are very similar in their operation, there are a few differences due to Federal regulations, DOI policy, etc. The differences are as follows:

Purpose

- **Upward Mobility Program** - To provide training, career development and growth opportunities for underutilized or underdeveloped employees whose current assignments do not permit further advancement.
 - Underutilized employees are those whose present education, training, and capabilities are not fully utilized in their current position. These employees meet all qualification requirements for the Upward Mobility Program entry position for which they apply, including positive education requirements.
 - Underdeveloped employees are those whose talent and potential can be identified and developed through special training and work experience, thus enabling them to perform duties of higher than their current positions require. These employees require additional training and experience to qualify for the Upward Mobility Program entry and target positions for which they apply.
- **Career Development Program** - To provide employees an opportunity to obtain the qualifications needed for successful performance in a different career field.

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Figure S4. Bank of America Career Mobility Statement
(<https://careers.bankofamerica.com/en-us/benefits/career-growth>)

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BANK OF AMERICA Company Culture Joining us Benefits Search jobs Employee login Resources

Career mobility

Helping our employees develop their skills and grow their careers is critical to how we retain our talent and sustain our business. We do this by offering our teammates a variety of leadership-supported programs and learning and development resources for every stage of their professional development. We know that our employees are our most valuable resource – they’re how we grow our business and serve our clients and communities.

Not Distribute

Figure S4. Confirmatory Factor Analysis, Study 2a.

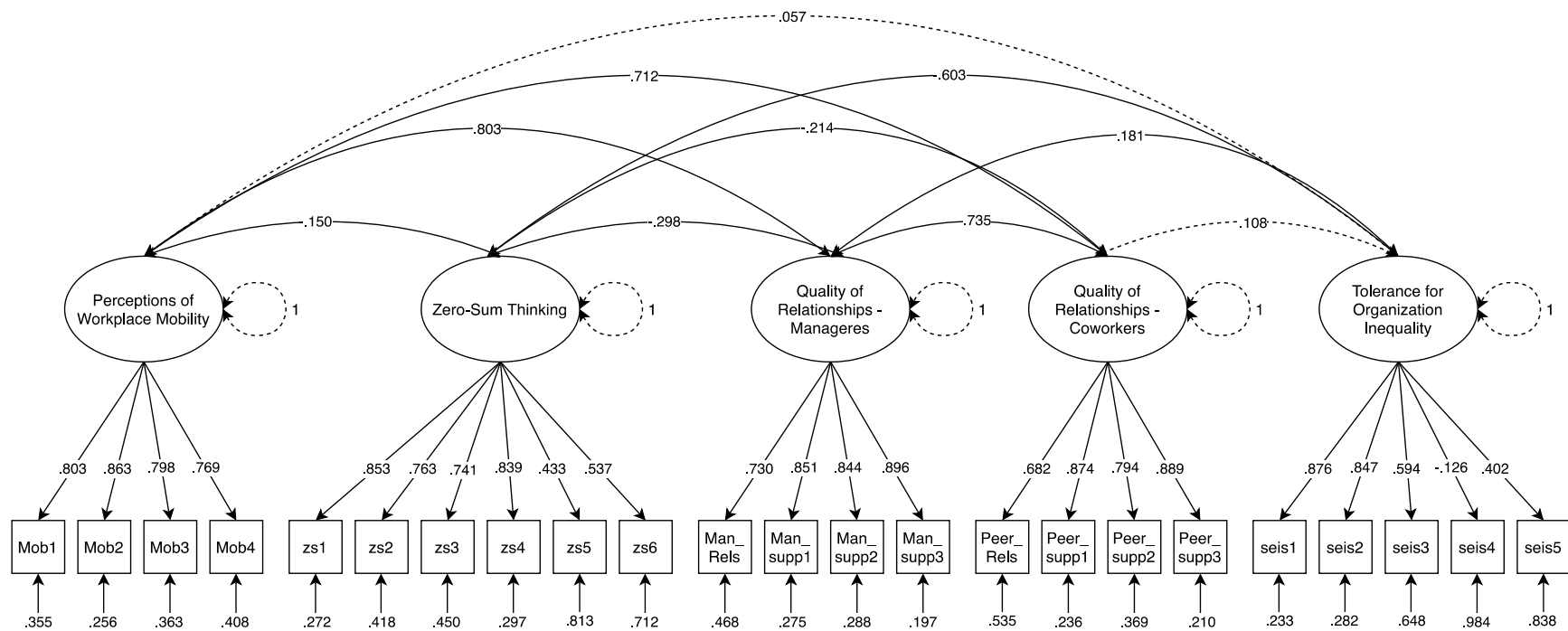


Figure S5. Confirmatory Factor Analysis, Study 2b.

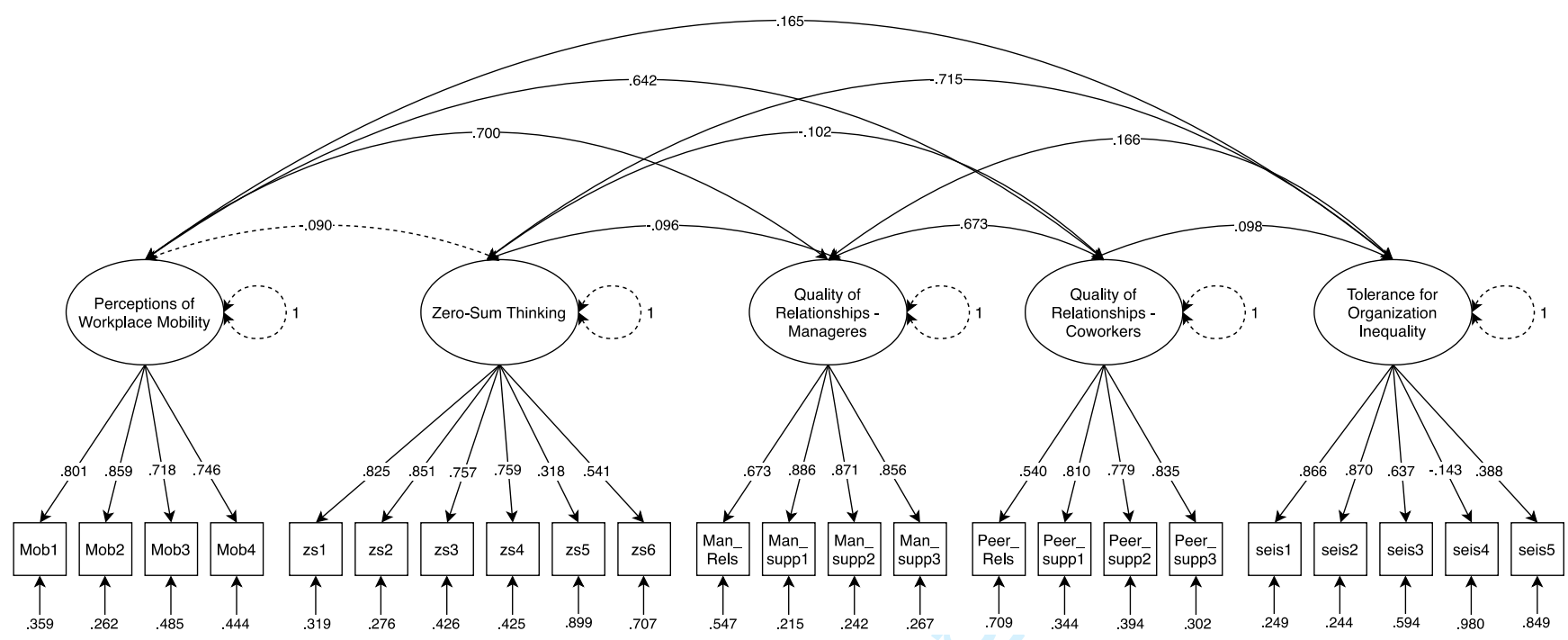


Figure S6. Mediation analysis from supplemental Study 3 Replication.

