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Shilpa Madan[1], Anyi Ma[2], Neeraj Pandey[3], Aneeta Rattan[4], and Krishna Savani[5, 6]

[1] Department of Marketing, Pamplin College of Business, Virginia Tech
[2] Management Area, AB Freeman School of Business, Tulane University
[3] Amrut Mody School of Management, Ahmedabad University
[4] Department of Organisational Behaviour, London Business School
[5] Department of Management and Marketing, The Hong Kong Polytechnic University
[6] Department of Leadership, Management, and Organization, Nanyang Technological University

Approximately 44% of U.S. workers are low-wage workers. Recent years have witnessed a raging debate about whether to raise their minimum wages. Why do some decision-makers support raising wages and others do not? Ten studies (four preregistered) examined people's beliefs about the malleability of intelligence as a key antecedent. The more U.S. human resource managers (Study 1) and Indian business owners (Study 2) believed that people's intelligence can grow (i.e., had a growth mindset), the more they supported increasing low-wage workers' compensation. In key U.S. swing states (Study 3a), and a nationally representative sample (Study 3b), residents with a more growth mindset were more willing to support ballot propositions increasing the minimum wage and other compensation. Study 4 provided causal evidence. The next two studies confirmed the specificity of the predictor. People's beliefs about the malleability of intelligence, but not personality (Study 5a) or effort (Study 5b), predicted their support for increasing low-wage workers' compensation. Study 6 examined multiple potential mechanisms, including empathy, attributions for poverty, and environmental affordances. The relationship between growth mindset and support for raising low-wage workers' wages was explained by more situational rather than dispositional attributions for poverty. Finally, Studies 7a and 7b replicated the effect of growth mindset on support for increasing low-wage workers' compensation and provided confirmatory evidence for the mediator—situational, rather than dispositional, attributions of poverty. These findings suggest that growth mindsets about intelligence promote support for increasing low-wage workers' wages; we discuss the theoretical and practical implications.

Keywords: low-wage workers, lay theories, minimum wage, fixed-growth mindsets, attributions

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As many as 53 million Americans, or 44% of all workers aged 18–64, are employed in low-wage jobs (Ross & Bateman, 2019). Often, these workers are unable to afford basic necessities, such as food and shelter, and rely on government programs (e.g., food stamps, public housing) to meet their basic needs (Belser & Rani, 2010; U.S. Census Bureau, 2013; U.S. Department of Labor, 2013a, 2013b). In recent years, perhaps spurred by workers' advocacy and public debate, several entities have taken steps toward increasing the compensation of low-wage workers. For example, some cities (e.g., New York City; Washington, D.C.; San Francisco), states (e.g., Arizona, Colorado, and Maine), and global corporations (e.g., Costco, Ikea, Starbucks, and Whole Foods) have raised their minimum wages in recent years (Kaufman, 2017; National Conference of State Legislatures, 2017). Yet, many corporations, localities, and small businesses continue to comply only with the minimum established compensation standards (Hiltzik, 2020), which have not been raised nationally in the United States since 2009 (Elwell, 2014).

Widespread stereotypes characterize these workers' jobs as low-skilled or unskilled, and the workers themselves are stereotyped as lacking intelligence or competence (Fiske et al., 2002, p. 885). If people's judgments of low-wage workers' compensation are based in part on their views of the workers' intelligence or

competence, then their lay theories about the malleability of ability may come to be relevant. Building on this logic, we propose that people's beliefs about the malleability of intelligence (i.e., mindsets, lay theories, or implicit theories about intelligence; Dweck, 2000) would influence their perceptions of whether low-wage workers should receive greater compensation. Drawing on past research documenting that people's mindsets shape their causal attributions (Dweck, 2000; Dweck & Leggett, 1988; Hoyt & Burnette, 2020; Rattan et al., 2012), we theorize that people who believe that individuals' intelligence can change (i.e., have a more growth mindset) would emphasize external factors as causes of low-wage workers' poverty more than those who believe that intelligence is fixed (i.e., have a more fixed mindset) and support increasing low-wage workers' compensation more.

The Rationale for Raising Low-Wage Workers' Compensation

Low-wage workers' compensation is primarily in the form of an hourly wage rate, which can be either the minimum wage or a wage rate that is closely tied to the minimum wage. Three perspectives—the moral view, the economic view, and the organizational view—have been used to examine the normative question of whether decision-makers *should* raise the minimum wage. For some people, the question of whether we ought to increase the minimum wage is an ethical decision—the argument is that society is being unfair to low-wage workers by not paying them enough to even cover their basic needs (Rawls, 1971; Sen, 2000). In contrast, the microeconomic theory of supply and demand argues that holding all else equal, increasing the cost of low-wage labor by mandating a higher minimum wage would decrease the demand for labor, leading to a reduction in the number of low-wage workers that firms could hire, which would lead to increased unemployment among the relevant population (e.g., Brown et al., 1982; Neumark et al., 2004). However, naturalistic experiments comparing changes in employment have found no net negative effects of increases in the minimum wage on the employment of low-wage workers (Card & Krueger, 1995, 2015). Thus, the current evidence suggests that modest increases in the minimum wage would not reduce employment but would instead lift many workers out of poverty (Congressional Budget Office, 2014; Ropponen, 2011).

From an organizational perspective, managers might expect that increasing low-wage workers' compensation may be at odds with shareholders' interests because it increases the company's costs. However, the economic costs of higher wages may be offset by reduced turnover and increased productivity as workers experience more financial stability. Extensive research has found that living near poverty, which many low-wage workers experience, can impair people's well-being and decision-making and reduce work productivity, ultimately lowering companies' profitability. For example, researchers have found that poverty impedes cognitive functioning (Mani et al., 2013), increases stress and negative affect (Haushofer & Fehr, 2014), increases risk-taking (Guiso & Paiella, 2008), and makes people more intertemporally impatient (Shah et al., 2012). Thus, scholars have argued for "organizational self-interest as a rationale for reducing economic scarcity among employees" (Meuris & Leana, 2015).

Despite these perspectives, even when companies, such as McDonald's and Subway are profitable, they continue to pay low wages to most of their employees (Comen, 2019). Researchers

have identified a number of societal factors that are associated with higher compensation for low-wage workers, such as labor supply and demand (Bosch, 2009), and institutions such as collective bargaining (Rowthorn, 1992), unions (Lucifora et al., 2005), state-funded welfare programs (Schettkat, 2002), and vocational training (Appelbaum et al., 2003). Among psychological factors, Americans' political orientation has been proposed as a key predictor of their support for increasing low-wage workers' compensation (Whitaker et al., 2012), but its effect on citizens' voting behaviors on minimum wage policies is equivocal (Kau & Rubin, 1978; Levin-Waldman, 1998; Uri & Mixon, 1980). Additionally, research has also found that proponents of the Protestant Work Ethic (MacDonald, 1972) and those who believe in a just world (Hirshberg & Ford, 2001) are less willing to support wage increases and government assistance for the poor because they hold the poor responsible for their poverty. In this research, we take a step further toward better understanding the basic psychological constructs underlying people's support for raising the minimum wage. To that end, we propose a novel antecedent of decision makers' support for increasing minimum wages, grounded in theories of motivation and attribution (Dweck, 2000; Smith, 2015)—people's mindsets about intelligence.

Fixed Versus Growth Mindsets in Organizations

Mindsets refer to people's generalized assumptions about whether fundamental human characteristics are fixed or malleable (Carr et al., 2012; Dweck, 2000; Molden & Dweck, 2006). These beliefs are domain-specific, meaning that people can hold different views about the malleability of intelligence, morality, or personality. Thus far, most research on the role of mindsets in organizations has focused on mindsets about personality, not on mindsets about intelligence. For example, managers' mindsets of personality shape the extent to which they mentor subordinates (Heslin et al., 2006) and recognize subordinates' improved job performance (Heslin et al., 2005). Subordinates' mindsets of personality shape the extent to which they trust supervisors (Emerson & Murphy, 2015), perceive supervisors as fair (Heslin & VandeWalle, 2011), and are satisfied with their jobs (Burnette & Pollack, 2013; Rattan & Dweck, 2018). Researchers have also studied people's mindsets about the malleability of leadership ability (Burnette et al., 2010; Hoyt et al., 2012) and their perceptions about the mindset culture prevalent in the workplace (Emerson & Murphy, 2015; Murphy & Dweck, 2010; Murphy & Reeves, 2019).

Research on mindsets began with an examination of people's lay theories of intelligence in achievement contexts (Dweck & Bempechat, 1983) and has largely focused on linking beliefs about the malleability of intelligence to individuals' own performance (Blackwell et al., 2007; Dweck, 1986; Good et al., 2012). We suggest mindsets about intelligence are also relevant to an organizational outcome relevant to both workplace and policy: people's support for increasing low-wage workers' compensation. Mindsets about intelligence fall on a continuum ranging from the belief that intelligence is fixed and unchanging over time (a fixed mindset) to the belief that intelligence can grow and develop over time (a growth mindset; Dweck & Leggett, 1988). These beliefs are shaped by people's accumulated life experiences (He et al., 2020). However, even though people may be predisposed toward either a fixed or growth mindset in a given domain, past research has

found that "both theories present basic modes of thought that are at some level familiar to most individuals" (Chiu et al., 1997, p. 26). Therefore, these beliefs can be experimentally manipulated (Poon & Koehler, 2006).

We theorize that people's mindsets about intelligence are particularly relevant to their support for increasing low-wage workers' compensation for three important reasons. By intelligence, we refer to people's mental ability. In most jobs, even in low-paid jobs (e.g., waiters, plumbers, cooks, and checkout clerks), intelligence is a necessary characteristic for high job performance. Other characteristics, such as personality or physical ability/effort, may be needed for specific types of jobs (e.g., personality for caregivers or effort for purely manual labor), but some level of intelligence is required for virtually all jobs. That is, a restaurant server needs to note down orders and remember who ordered what when serving the dishes. A restaurant line cook needs to learn the appropriate sequence for putting together various orders. A construction worker needs to remember which brick they need to lay where and how. Both public discourse and past research detail widespread stereotypes that characterize low-wage workers' jobs as low-skilled or unskilled and portray the workers as lacking intelligence or competence (Auguste, 2019; Fiske et al., 2002; Hammer, 2022; Johnson, 2022). We seek to challenge this stereotype by arguing that people realize that intelligence is relevant even for low-wage jobs. For this reason, building upon and extending mindset theory, we considered whether lay theories about the malleability of intelligence shape people's support for increasing low-wage workers' compensation. In doing so, we contribute to the nascent literature on mindsets about intelligence in organizations, answering calls to explore new outcomes that these mindsets may shape in workplace contexts (Rattan & Ozgumus, 2019).

Fixed-Growth Mindsets About Intelligence, Attributions, and Low-Wage Workers' Compensation

The way people make sense of poverty is critical for understanding how they respond to it and what they are willing to do about it (Davidai, 2022). People rely on their lay theories to make sense of the world (Burnette et al., 2017; Dweck, 2000; Dweck et al., 1995; Dweck & Leggett, 1988), and causal attributions play a pivotal role in this sensemaking process. That is, people's lay theories or mindsets "create a meaning system within which attributions occur" (Hong et al., 1999, p. 588). When faced with a setback, students with a fixed mindset were more likely to attribute the failure to their lack of ability even in the presence of limited evidence, whereas those with a growth mindset attribute failure to lack of effort (Dweck et al., 1993; Erdley & Dweck, 1993; Henderson & Dweck, 1990). Similarly, teachers with a fixed mindset were more likely to attribute students' poor performance to their lack of ability, and those with a growth mindset, to lack of effort (Rattan et al., 2012; Tao et al., 2021; also see Yeager et al., 2013).

Although lack of effort may appear to be a dispositional attribution because it refers to the student's behavior, it is also a contextual attribution because the student could have put in low effort in a specific test but not in other tests or in future tests. However, contextual attributions are less damning than trait-based dispositional attributions because traits are relatively fixed, whereas contextual behaviors can change. Additionally, related research on

mindsets about personality has linked a growth mindset with situational attributions (Chiu et al., 1997; Hong et al., 1999).

Through these established attributional processes, we predict that decision makers with more growth (relative to fixed) mindset about intelligence would be more likely to support increasing low-wage workers' compensation. If people believe that the situation shapes low-wage workers' poverty, they may perceive situational solutions, such as raising the lowest acceptable wage, as appropriate. Following the same logic, if decision makers with a fixed mindset about intelligence believe that low-wage employees' traits and values as responsible for their poverty, they may come to think that low-wage workers do not deserve to be paid more.

Consistent with our hypothesis, research on attribution theory has found that people who attribute negative outcomes to dispositional causes are less likely to help those in need (Weiner et al., 1988). Specifically, people who make more dispositional attributions for poverty are more likely to believe that people deserve poverty, are more comfortable with income inequality, and are more opposed to redistributive policies (Cozzarelli et al., 2001; Heiserman & Simpson, 2017; Wiwad et al., 2021). On the other hand, those who attribute poverty to structural or systemic causes are less likely to accept inequality as justified and are more likely to support organizations advocating an increase in the minimum wage (Piff et al., 2020; Schneider & Castillo, 2015). Our work extends this body of research by identifying a psychological factor that serves as an antecedent of poverty attributions. Perhaps even more importantly, mindsets about intelligence can be experimentally manipulated (Yeager et al., 2019). Thus, the current research has the potential to identify a new way of intervening on people's attributions of poverty and their downstream consequences, which would be useful if there was a desire to support increasing wages for workers at the bottom of the income spectrum.

Three Ways to Increase Low-Wage Workers' Compensation

We tested our key hypothesis that a growth mindset about intelligence is associated with support for increasing low-wage workers' compensation with reference to three concrete policy proposals: increasing the minimum wage, adjusting wages with inflation, and profit-sharing. The established level of minimum wage in a country prescribes a floor wage for full-time low-wage workers. This is perhaps the most well-known measure that can ensure a basic level of compensation for low-wage workers, and therefore, we assessed people's support for increasing the minimum wage. For example, although the nominal federal minimum wage in the United States is 4.5 times higher in 2019 than in 1968; the inflation-adjusted minimum wage is 31% lower in 2019 compared with 1968; and the year in which the real minimum wage had peaked (Cooper et al., 2019). The last revision to the federal minimum wage was in 2009; setting it at $7.25 per hour. If the minimum wage is adjusted for average wage growth, the current minimum wage would be $11.62, while it would have reached $19.33 if it were indexed to productivity (Michaels, 2017).

Second, we assessed managers' support for adjusting wages with inflation. Although the minimum wage prescribes the lowest possible low-wage workers' compensation, as noted above, it can erode over time with inflation. Lack of wage adjustment with inflation is likely to have a disproportionately negative impact on low (vs. high) wage

workers, who might already be having a difficult time making ends meet. Thus, one form of higher compensation for low-wage workers would be to ensure that wages automatically increase with inflation (Cardoso, 1992; Office of National Statistics, 2013).

A third means for increasing low-wage workers' compensation could be profit sharing, particularly in times in which companies make large profits (Kruse, 1993; Lazonick, 2014). These policies distribute a percentage of profits to workers, spreading the benefits of organizational success among both shareholders and employees. For example, to increase workers' productivity and loyalty, one of the largest grocery store chains in Texas decided to share 15% of the company's profits with 55,000 of its low-wage workers (Ghilarducci, 2015). We also assessed decision makers' support for profit-sharing.

Overview of Studies

We conducted 10 studies and one pilot study (total $N = 3,285$) to test our hypotheses with the aim of seeking to replicate the key finding across multiple methods and samples. Study 1 examined whether human resource managers in the United States with a more growth mindset would be more supportive of increasing low-wage workers' compensation. Study 2 (preregistered) sought to replicate this finding in another culture (i.e., India) with a different sample—small business owners and managers employing low-wage workers. Study 3a sought to provide yet another replication by testing whether residents in key U.S. swing states would support ballot propositions increasing the minimum wage more if they believed more that intelligence can grow. Study 3b replicated the finding in a nationally representative sample in the United States. Study 4 (preregistered) tested the causal effect of fixed-growth mindsets on support for raising low-wage workers' compensation. The next two studies tested the specificity of the predictor, comparing people's fixed-growth mindsets about intelligence against fixed-growth mindsets about personality (Study 5a) and fixed-growth mindsets about effort (Study 5b) in predicting their support for increasing low-wage workers' compensation. Study 6 (correlational) explored several potential underlying mechanisms, including people's situational attributions for poverty and empathy for low-wage workers. Studies 7a and 7b (preregistered) sought to provide confirmatory causal evidence for the situational attributions of poverty as the mechanism.

Across all studies, we report all participants run, all conditions included in the study, and all independent and dependent measures. All studies were run in a single wave, except Study 7b, which we preregistered to run in two consecutive waves. All data were analyzed only after the required sample size target was met. The study materials, data, and analysis code are available at https://osf.io/jtqmv/. Across all correlational studies, higher scores on the mindset scale indicate a stronger growth mindset.

We also conducted a mini meta-analysis across all studies reported in this article and other studies reported in the online supplemental materials. This research was approved by Nanyang Technological University's Institutional Review Board (IRB) under protocol IRB-2015-07-018-06, titled "The role of implicit processes in cultural learning."

Pilot Study

This pilot study tested our assumption that people consider intelligence to be a key driver of job performance, even for low-wage jobs. Organizations' compensation decisions are driven by how well they expect employees to perform (Scarpello & Jones, 1996), and employees' intelligence is one of the strongest drivers of their job performance (e.g., Ree et al., 1994). However, this research was conducted in a military setting, which is not a low-paid context, and focused on the actual relationship between intelligence and job performance, rather than people's beliefs about the relationship between the two. Thus, we conducted a pilot study to test whether this assumption extends to low-wage workers.

We recruited 300 U.S. residents from Amazon Mechanical Turk (MTurk; 146 women and 154 men; $M_{age} = 40.703$ years) to test the importance of intelligence among people's conceptions of what drives low-wage workers' performance. Participants were asked: "What is the contribution of the following personal factors in determining people's job performance in jobs that pay low wages (e.g., restaurant cooks, baristas, nail technicians, plumbers, supermarket cashiers, hotel housekeepers, etc.)?" Participants could assign a total of 100 points among the following options: (a) ability or intelligence, (b) personality or temperament, (c) effort or hard work, (d) strategy or smart work, and (e) any other(s). Participants assigned nearly equal points to ability/intelligence ($M = 31.76$, 95% confidence interval, CI [29.86, 33.66], $SD = 16.74$) and effort ($M = 32.75$, 95% CI [30.83, 34.67], $SD = 16.87$), and fewer points to personality ($M = 18.87$, 95% CI [17.60, 20.14], $SD = 11.18$), strategy ($M = 14.43$, 95% CI [13.301, 15.56], $SD = 9.99$), and other factors ($M = 2.19$, 95% CI [1.14, 3.23], $SD = 9.18$). Thus, consistent with our proposition, people believe that intelligence is one of the two most important determinants of low-wage workers' job performance. We return to the question of peoples' beliefs about effort in Study 5b and to their beliefs about personality in Study 5a.

Study 1

Study 1 tested whether people with a growth mindset would be more supportive of providing higher compensation to low-wage workers with a sample of U.S. human resource managers who have decision-making power over low-wage workers' compensation levels. In addition, because increasing low-wage workers' compensation is a partisan issue in the United States and political ideology is a strong predictor of managers' support for increasing low-wage workers' compensation, we sought to show that mindsets predicted support for compensation policies after accounting for their political orientation.

Method

Participants

A survey seeking 100 human resource managers in the United States was posted on www.pollfish.com, a source of reliable survey respondents (Goel et al., 2015). Participants were asked, "In total, how many employees' pay do you have control over?" and "Of all the employees whose pay you have control over, how many earn the minimum wage?" Twenty-seven human resource managers who did not have decision-making power over the compensation levels of at least one employee who earned the minimum wage, and one respondent who indicated that they had worked in human resources for 66566 years, were excluded from the analyses. The final sample consisted of 72 human resource

managers (33 women, 39 men; 15 aged 18–24 years, 22 aged 25–34 years, 19 aged 35–44 years, 13 aged 45–54 years, and three aged 55 years or more; mean job tenure 7.21 years; mean 7.67 years of work experience in human resources; set pay of 28.5 minimum wage employees on average). The results reported below remain virtually unchanged if the 27 participants who did not supervise minimum wage workers are included in the sample. However, as the study was designed to only sample managers supervising minimum wage workers, we report results without these participants.

Measures

Participants first completed an established three-item measure of mindsets about intelligence (e.g., "Your intelligence is something about you that you cannot change very much"; Dweck et al., 1995) on a 6-point scale from *strongly agree* to *strongly disagree*.

Thereafter, participants were asked to indicate their support for three employee compensation policies in their company: (a) increasing the payment of minimum wage workers in their company by 10%; (b) increasing their employees' wages with inflation; and (c) distributing 5% of their corporate profits to their employees (see online supplemental materials for the verbatim measure). For each item, participants were asked, "To what extent do you support this policy?" and responded on 7-point scales ranging from *not at all* to *extremely*.

Finally, participants completed a demographic questionnaire. Given that past research has found that Americans' political orientation influences their support for increasing the minimum wage, we included it as a covariate. We measured participants' political orientation using a single item, a 7-point scale ranging from *strongly conservative* to *strongly liberal* (Nail et al., 2003).

Results

Table 1 presents the means, standard deviations, reliabilities, and bivariate correlations among the study variables. Higher scores on the mindset scale reflect a greater growth mindset about intelligence. As predicted, participants with a more growth mindset about intelligence were more likely to support providing higher compensation to low-wage workers, $r = .30$, 95% CI [.08, .55], $p = .011$. In a linear regression, we regressed support for raising compensation on intelligence mindset and controlled for participants' political orientation. We found that the effect of mindset remained significant, $B = .33$, 95% CI [.096, .57], $SE = .12$, $\beta = .32$, $t(69) = 2.80$, $p = .007$. The effect of political orientation was not significant, $B = .201$, 95% CI [−.051, .45], $SE = .13$, $\beta = .18$, $t(69) =$

1.59, $p = .12$. Please see online supplemental materials for additional analysis.

Discussion

Employing a sample of U.S. human resources managers who had the power to increase the pay of minimum wage workers, Study 1 provided preliminary support for our hypothesis: the more human resource managers held a growth mindset about intelligence, the more likely they were to support increasing low-wage workers' compensation.

Study 2

We sought to replicate the results from Study 1 with a different population in a different country—small business owners and managers supervising minimum wage workers in India. India has a minimum wage of Rupees 4,030 per month of full-time work (approximately $54 at current currency exchange rates, and approximately $192 in purchasing power parity terms; World Bank, 2019). At this income level, minimum wage workers are making less than the World Bank's poverty level of $1.90 in earnings per day for developing countries (Ferreira et al., 2015), suggesting that an increase in the minimum wage would help raise workers out of poverty. Similar to Study 1, in addition to examining people's positions on the minimum wage, we measured their support for two additional compensation policies: adjusting wages with inflation (that would ensure that employees do not sink further into poverty in times of high inflation; Ehrenberg et al., 1983) and sharing a small percentage of the company's profit with employees (that would ensure that good economic times would help increase workers' standard of living; Kruse, 1993).

Method

The hypotheses, power analysis, method, sample size, and pre-selection criteria for this study were preregistered (https://osf.io/7ecqv/).

Participants

We conducted a power analysis based on the results of a pilot study with similar measures. We entered the following inputs in G*Power: type of test: correlation: point biserial model, tail(s): one, effect size $r = .59$ (from Study 1), $\alpha = .05$, power = 80%, which yielded a sample size of 14. However, in keeping with current norms (Gervais et al., 2015), we decided to recruit 100

Table 1
Descriptive Statistics and Correlations Between Study 1 Variables (N = 72)

Variables	M	SD	1	2	3	4	5	6
1. Support for higher compensation	3.64	1.60	(.82)	—	—	—	—	—
2. Fixed-growth mindset	3.72	1.52	.30*	(.84)	—	—	—	—
3. Political orientation	3.36	1.44	.15	−.10	—	—	—	—
6. Years in the company	7.21	8.90	.10	.05	.02	—	—	—
7. Years as HR manager	7.67	9.99	.10	−.05	.10	.91**	—	—
8. Number of low-wage workers supervised	28.45	84.47	−.08	−.21	.08	−.01	−.03	—

Note. Reliabilities are reported in parentheses on the diagonal. HR = human resources.
* $p < .05$. ** $p < .01$ (two-tailed).

participants.[1] We recruited employers of low-wage workers in India, which has a national minimum wage policy and many low-wage workers. We ran this study in Gujrat, where the minimum wage was Rupees 6,624 per month (approximately $89) at the time the study was run. Two research assistants in Ahmedabad, India, visited retail shops and restaurants, which are largely family owned and tend to hire primarily low-wage workers. The research assistants asked the store or restaurant owner, or manager to complete a short survey. The final sample included 100 owners/managers (12 women, 88 men; M_{age} = 37.75 years; average age of business 14.12 years; average number of supervised employees 3.77).

The survey was conducted in Gujrati as it is the most commonly spoken language in Ahmedabad. Two research assistants proficient in Gujrati translated all stimuli into the local language. All respondents confirmed that they were comfortable reading and responding in Gujrati.

Measures

Participants first completed the three-item measure of mindset about intelligence as in Study 1. However, to prevent mindless responding, we switched the scale anchors from *strongly disagree* to *strongly agree* such that the higher end of the scale reflected a stronger fixed mindset.

Participants were then asked to indicate their support for three policies increasing the compensation for low-wage workers: (a) increasing the minimum wage by Rupees 1,500 per month (a 22.3% increase); (b) adjusting employees' wages with inflation; and (c) sharing 5% of the company's profit with employees. Each item was paired with arguments about both the benefits and costs of each policy. For example, participants were told that while this increase in the minimum wage (point 1) could make a big difference to low-wage earners, it would lead to increased costs and decreased profits for companies relying primarily on low-wage labor (see online supplemental materials for the complete measure). For each item, participants were asked, "To what extent do you support this policy?" and they responded on 7-point scales ranging from *do not support at all* to *support extremely*.

Finally, we asked for the respondents' gender, age, role, and the number of employees supervised. We also measured the age of the business because older businesses may be more financially viable and have more financial resources to pay their employees.

Results

Table 2 presents the means, standard deviations, reliabilities, and bivariate correlations among the study variables. We reverse-scored the three items of the mindset scale such that greater values on this scale indicated a stronger growth mindset about intelligence. Managers/owners with a growth mindset about intelligence supported providing higher compensation to low-wage workers, r = .33, 95% CI [.14, .49], p = .0004 (one-tailed as we preregistered a directional hypothesis), p = .0008 (two-tailed). See online supplemental materials for additional analysis.

Discussion

The findings from Study 2 replicate the results from Study 1 that the more people believe that intelligence can be increased over time, the more they support increasing low-wage workers'

compensation. The findings offer additional ecological validity because study participants were small business owners and managers in India who employed low-wage workers. Careful readers may note that the mean for intelligence mindsets (M = 5.33) in the current study (Study 2) was higher than the mean observed in Study 1 (M = 3.72). This is in line with past research on the malleability of intelligence that has found that compared with Americans, Indians are significantly more likely to agree that intelligence can grow (Study 2, Rattan et al., 2012).

Study 3A

Several U.S. states (e.g., Arizona, Colorado, Maine, and Missouri) have used ballot propositions to increase their minimum wage in recent years. This study sought to provide a more ecologically valid test of our key hypothesis by asking residents in key swing states to vote on ballot propositions seeking to increase the minimum wage in their state. This study was run in the third week of September 2020, 6 weeks before the 2020 U.S. presidential election.

Method

Power Analysis

We used the effect size from the most chronologically recent study conducted in the United States to conduct the power analysis.[2] We entered the following inputs in G*Power (test: correlation: point biserial model, tail[s]: 2, Effect size r = .20, α = .05, power = 80%), which yielded a sample size of 191.

Participants

Rounding up this number, we posted surveys seeking 100 residents of Florida and 100 residents of North Carolina on MTurk. This achieved a total sample of 200, which we saw as appropriate given that we did not expect differences to emerge by state. We received 208 responses. We excluded four participants who wrote gibberish/irrelevant responses to an open-ended question in the study (Dennis et al., 2020; Kennedy et al., 2020), leaving 204 participants in the dataset (115 women, 84 men, and five unreported; M_{age} = 44.56 years).

Procedure

Participants first completed the three-item measure of mindsets about intelligence ("People have a certain amount of intelligence, and they cannot really do much to change it;" α = .96; 6-point scale, *strongly disagree* to *strongly agree*). We asked participants to imagine that they were voting in the U.S. Presidential elections in November 2020, and a few state-level propositions were on the ballot. Participants were then presented with three different ballot propositions modeled on an actual ballot (Adler, 2018).

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[1] The power analysis for this study (conducted in India) was based on an earlier pilot study with the same sample, that is, conducted in India. Given that minimum wage is a highly partisan issue in the United States, we did not consider it appropriate to use the effect size from the U.S. study (Study 1) for the Indian study (Study 2). Instead, we conducted a pilot study in India to obtain an effect size more representative of the Indian context.

[2] This study was removed from the article during the review process. Please see online supplemental materials.

Table 2
Descriptive Statistics and Correlations Between Study 2 Variables (N = 100)

Variables	M	SD	1	2	3	4
1. Support for higher compensation	5.66	0.54	—	—	—	—
2. Fixed-growth mindset	5.33	0.39	.33***	—	—	—
3. Age of business	14.12	9.36	−.03	−.05	—	—
4. Number of employees	3.77	2.103	.10	−.08	.32**	—

** *p* < .01.   *** *p* < .001 (two-tailed).

The three propositions sought to mandate the following: (a) increasing the minimum wage per hour to $15, (b) increasing employees' wages with inflation, and (c) distributing 5% of corporate profits to the employees. The details were customized to include the current minimum wage in Florida and North Carolina, respectively. For each proposition, participants were asked to select one of the two options: "For the proposition: Yes" or "Against the proposition: No." Finally, participants completed a demographic questionnaire. We measured participants' political orientation on three 7-point scales ranging from *strongly liberal* to *strongly conservative*, *strongly left* to *strongly right*, and *strongly Democrat* to *strongly Republican* (Nail et al., 2003). The items were highly intercorrelated, α = .97, so they were averaged to form a composite.

Results

We reverse-scored the three items of the mindset scale such that greater values on this scale indicated a stronger growth mindset about intelligence. The total number of propositions on which each participant voted "yes" formed our dependent measure. As hypothesized, participants with a growth mindset about intelligence supported providing higher compensation to low-wage workers, *r* = .14, 95% CI [.007, .28], *p* = .040.

Because this study was conducted in the United States, we regressed this dependent measure on participants' mindsets about intelligence while controlling for their political orientation (higher numbers indicate a more conservative orientation) and the states where we posted the study (Florida = 0, North Carolina = 1). The effect of mindsets was significant (*B* = .12, 95% CI [.019, .21], *SE* = .049, β = .15, *t*(196) = 2.35, *p* = .020).[3] The effect of political orientation (*B* = −.24, 95% CI [−.31, −.17], *SE* = .036, β = −.42, *t*(196) = −6.70, *p* < .001) and the state in which the study was run (*B* = −.27, 95% CI [−.52, −.013], *SE* = .13, β = −.13, *t*(196) = −2.07, *p* = .040), were also significant. See Table 3 for descriptive statistics.

Increasing the minimum wage is a partisan issue in the United States. It is noteworthy that fixed-growth mindsets about intelligence predicted people's support for increasing the minimum wage in key swing states even after controlling for their political orientation and their state of residence.

Study 3B

This study sought to test the predictive power of fixed-growth mindsets on people's willingness to increase low-wage workers' compensation in a nationally representative sample in the United States. Consistent with the previous studies, we also sought to demonstrate the incremental explanatory power of mindsets relative to political orientation.

Method

Participants

We enlisted the help of a market research firm to recruit a nationally representative sample of 1,000 adults residing in the United States based on gender, age, and ethnicity. The final sample consisted of 997 participants (500 women, 484 men, five others, and eight unreported; M_{age} = 49.34 years). Please see online supplemental materials for details about the sample.

Procedure

As part of a larger study, participants first completed the three-item measure of mindsets about intelligence as in Study 3a on a 6-point scale (*strongly agree* to *strongly disagree*). Participants were also asked to indicate their support for three policies for increasing low-wage workers' compensation, including the following, (a) increasing the minimum wage per hour to $15, (b) increasing employees' wages with inflation, and (c) distributing 5% of corporate profits to the employees, all on 7-point scales from (*do not support* to *support strongly*). As in Study 2, each policy was accompanied by a discussion about its advantages and disadvantages. For example, for policy 2, participants read that this policy will lead to increased costs and decreased profits for businesses in years in which the growth in companies' profits is lower than inflation (please see online supplemental materials for the verbatim measure). Finally, participants completed a demographic questionnaire. We used the three-item measure used in Study 3a to measure political orientation (α = .91; Nail et al., 2003).

Results

Higher scores on the mindset scale reflect a greater growth mindset about intelligence (α = .91). We averaged participants' support for the three policies to form a composite score indicating their willingness to increase low-wage workers' compensation (α = .83). Participants with a growth mindset about intelligence had a marginally higher willingness to support greater compensation for low-wage workers, *r* = .054, 95% CI [−.008, .12], *p* = .088. The effect of mindsets was significant (*B* = .11, 95% CI [.033, .17], *SE* = .039, β = .077, *t*(992) = 2.81, *p* = .005) after controlling for political orientation (*B* = −.57, 95% CI [−.63, −.51], *SE* = .031, β = −.51, *t*(992) = −18.48, *p* < .001) that is expected

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[3] Four participants did not complete the political orientation measure and three participants did not complete the dependent measure.

Table 3
Descriptive Statistics and Correlations Between Study 3a Variables (N = 204)

Variables	M	SD	1	2	3
1. Number of propositions supported	1.95	1.018	—	—	—
2. Fixed-growth mindset	3.93	1.31	.14*	—	—
3. Political orientation	3.72	1.77	−.42***	−.01	—
4. State (Florida = 0, NC = 1)	0.49	0.50	−.12	.04	−.02

$*p < .05.$ $***p < .001$ (two-tailed).

to be the dominant predictor of support for increasing minimum wage in the United States.[4] See Table 4 for descriptive statistics.

Study 4

This study was designed to provide causal evidence for the hypothesis that a growth mindset about intelligence leads to greater support for increasing low-wage workers' compensation. To increase the relevance of the findings to real-world contexts, we referred to fixed-growth mindsets in the context of the company's culture (Murphy & Dweck, 2010). We sought to test whether people would be more willing to increase low-wage workers' compensation in an organization that held a growth mindset about intelligence compared with an organization that held a fixed mindset.

Method

The hypotheses, power analysis, method, sample size, and preselection criteria for this study were preregistered (https://osf.io/yzejg/).

Participants

We conducted a power analysis based on the effect size from a pilot study using similar measures. We entered the following inputs in G*Power: $d = .3659$; $\alpha = .05$ (one-tailed), and power = 80%. The required sample size was 186. A study seeking 186 U.S. residents was posted on MTurk. In response, 195 participants completed the study. As per the preregistered plan, we excluded seven responses from duplicate geo-locations (Dennis et al., 2020), leaving 188 responses in the dataset (114 women, 74 men; $M_{age} = 35.23$ years).

Procedure

We randomly assigned participants to either the *fixed mindset condition* or the *growth mindset condition*. We asked participants to imagine that they were the CEO of the Zeneca Company, a

Table 4
Descriptive Statistics and Correlations Between Study 3b Variables (N = 997)

Variables	M	SD	1	2	3
1. Support for increasing the low-wage workers' compensation	4.11	1.87	—	—	—
2. Fixed-growth mindset	3.95	1.31	.05*	—	—
3. Political orientation	3.96	1.66	−.50***	.04	—

$*p < .1.$ $***p < .001$ (two-tailed).

large multinational pharmaceuticals firm. We then asked them to read a brochure containing company information and values. To manipulate mindsets about intelligence, we created two versions of the company brochure. In the fixed mindset condition, we described the Zeneca Company as an organization that strongly believes that people's intelligence is largely fixed, whereas, in the growth mindset condition, we described the Zeneca Company as an organization that believes in the idea that people can improve even their basic intelligence level considerably (see online supplemental materials for the full text). Below is an excerpt of the company brochure that participants in the fixed mindset condition were presented with:

> The biggest scientists of all times, such as Albert Einstein, Marie Curie, and Thomas Edison, were born brilliant. They worked hard and were exposed to a challenging environment, but without their preexisting high intelligence, all this would have been useless. Their genius was inborn. They worked hard to overcome huge challenges of their times and expressed their brilliance as a result. Similarly, you all can express your intelligence level by working hard and tackling challenges.

Participants in the growth mindset condition were presented with the following excerpt:

> The biggest scientists of all times, such as Albert Einstein, Marie Curie, and Thomas Edison, were not simply born brilliant. Instead, they worked hard and were exposed to a challenging environment that allowed them to grow and develop their intellect. Their genius was not inborn. Instead, they worked hard to overcome huge challenges of their times and became brilliant as a result. Similarly, you all can increase your intelligence by working hard and tackling challenges.

Thereafter, we asked all participants to answer the question, "According to the company brochure, what are the key beliefs held by the Zeneca Company?" Participants in the fixed mindset condition were then asked: "Give one or two examples from your life that support Zeneca's belief that people cannot improve their intelligence." Participants in the growth mindset condition were asked: "Give one or two examples from your life that support Zeneca's belief that people can improve their intelligence." Finally, we included a manipulation check asking to what extent participants believed that "people can increase their intelligence" on a scale from 1 to 100.

Next, we told the participants that as the CEO of the Zeneca Company, they had been appointed to the Federal Policy Board on Minimum Wage. We explained that their task is to make

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[4] Two participants did not complete the political orientation measures.

recommendations to the U.S. government on the level of minimum wage in the country.

Participants were then presented with three policy proposals recommending (a) an increase in the Federal minimum wage from $7.25 per hour to $15 per hour, (b) adjusting employee salary with inflation every year, and (c) sharing 5% of company profits with the employees. Specifically, they were told,

1. Many workers in the U.S. receive just the minimum hourly wage mandated by law, which is typically the Federal minimum wage of $7.25 per hour. Given that many employees cannot afford to pay their essential expenses while working on a minimum wage, there is a proposal to increase the Federal minimum wage for all employees across the country to $15.00 per hour. However, this policy will lead to increase costs and decreased profits for businesses in the country, at least in the short run. As the Zeneca CEO, to what extent do you support this policy?

2. Presently, most companies do not increase employees' wages with inflation. For example, employees would earn the same wage even if everything was 5% more expensive in a given year compared with the previous year. There is a proposal to mandate that employers increase the wages of all employees with inflation every year. That is, if things were 5% more expensive in a given year compared with the last year, then all employees would automatically get a 5% raise. However, this policy can lead to increased costs and decreased profits for businesses in years in which the growth in the company's profits is lower than inflation. As the Zeneca CEO, to what extent do you support this policy?

3. Currently, many companies do not distribute any of their profits to employees. In other words, workers do not necessarily share the company's financial success. There is a proposal to mandate that companies distribute 5% of their profits to employees. However, this policy will reduce the amount of profit that the company's shareholders would receive. As the Zeneca CEO, to what extent do you support this policy?

Participants were asked to indicate their support for each policy proposal on a 7-point scale ranging from *do not support* to *support strongly*. We averaged support for the three policy proposals (α = .81) to form a composite score. Finally, participants completed a demographic questionnaire with the three-item political orientation measure used in Study 3a (α = .94).

Results

Participants in the growth mindset condition agreed more with the manipulation check item asking participants how much they believed that people can increase their intelligence, M = 71.15, 95% CI [59.41, 71.48], SD = 28.301, compared with those in the fixed mindset condition, M = 65.44, 95% CI [66.33, 75.701], SD = 24.29, $t(185)$ = 1.48, p = .069 (one-tailed as we preregistered a directional test), Cohen's d = .22.[5] As per the preregistered

analysis plan, an independent samples t test found that participants in the growth mindset condition were more supportive of increasing low-wage employees' compensation, M = 4.26, 95% CI [3.95, 4.57], SD = 1.59, than those in the fixed mindset condition, M = 3.51, 95% CI [3.13, 3.90], SD = 1.82, $t(186)$ = 3.02, p = .0015 (one-tailed as we preregistered a directional hypothesis), p = .003 (two-tailed), Cohen's d = .44.

Given the partisan nature of the employee compensation issue, we regressed participants' support for increasing employee compensation on the experimental condition (fixed mindset = 0, growth mindset = 1) and their political orientation. The experimental condition had a significant positive effect on support for increasing employee compensation (B = .86, 95% CI [.39, 1.33], SE = .24, β = .25, $t(185)$ = 3.61, p < .001, Cohen's d = .51) even after controlling for political orientation (B = −.32, 95% CI [−.47, −.18], SE = .075, β = −.301, $t(185)$ = −4.32, p < .001).[6]

Discussion

In summary, this study found that participants in the growth mindset condition were more supportive of policy proposals recommending a higher minimum hourly wage, salaries indexed to inflation, and company profit sharing. By manipulating fixed versus growth mindset about intelligence, this study also provided causal evidence for our hypothesis. As we manipulated mindsets by describing the values ingrained in the organizational culture, this study underscored the importance of shared organizational beliefs and values in shaping consequential compensation-related decisions for the low-wage workforce.

Study 5A

The goal of Study 5A was to investigate the specificity of the predictor. The pilot study found that people believe that employees' intelligence is a more important predictor of their job performance than their personality, but it is nonetheless important to confirm our assumption that fixed-growth mindsets about intelligence, not fixed-growth mindsets about personality (Heslin et al., 2005), should be associated with people's support for raising low-wage workers' compensation. We tested this idea in the current study.

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[5] As the difference here is marginally significant, we conducted a pretest to check whether the company brochures were effective in getting participants to temporarily adopt a fixed or growth mindset about intelligence. We recruited 267 participants from the United States on MTurk. As in the main study, after they read the respective company brochure, we asked participants to report extent to which they believed that "people can increase their intelligence" on a scale from 1 to 100. Participants in the growth mindset condition indicated greater belief in the idea that people can increase their intelligence, M = 73.68, 95% CI [69.63, 77.73], SD = 24.17, than those in the fixed mindset condition, M = 66.74, 95% CI [62.20, 71.28], SD = 25.95, $t(265)$ = 2.26, p = .024, Cohen's d = .28. This finding indicates that this experimental manipulation is effective, that is, it can successfully influence people's beliefs about whether intelligence can grow or not.

[6] We computed the Cohen's d of condition on the residuals after accounting for the effect of the covariate, political orientation, on the dependent variable.

Method

Participants

As this was one of the first studies conducted for this project, we did not have a basis for power analysis. We assumed an effect size $r = .15$ (equivalent to $f^2 = .024$) for the relationship between fixed-growth mindsets about intelligence and support for increasing low-wage workers' compensation. We entered the following inputs in G*Power 3.1 for a "Linear multiple regression:" effect size $f^2 = .024$, $\alpha = .05$, and power = 80%. The power analysis indicated that we would need to recruit 405 participants. A survey seeking 405 U.S. residents was posted on MTurk. In response, 416 participants completed the survey (229 women, 186 men, one unreported; $M_{age} = 33.05$ years).

Measures

Participants completed the three-item measure of fixed-growth mindsets about intelligence, same as Study 1), the three-item measure of fixed-growth mindsets about personality (e.g., "The kind of person someone is, is something very basic about them and it cannot be changed very much," 6-point scale; *strongly agree* to *strongly disagree*; Chiu et al., 1997), a three-item measure of employees' right to greater compensation (see below), and a three-item political orientation measure ($\alpha = .94$; same as Study 3a).

Participants were presented with three items stating that employees have: (a) a right to receive a living wage; (b) a right to have their wages adjusted with inflation; and (c) a right to receive some share of the company's profits (see online supplemental materials for the complete measure). Participants were asked to respond on 7-point scales ranging from *strongly disagree* to *strongly agree* ($\alpha = .79$).[7]

Results

Table 5 presents the means, standard deviations, reliabilities, and bivariate correlations among the study variables. Higher scores on the mindset scales reflect a greater growth mindset about intelligence ($\alpha = .95$) and personality ($\alpha = .91$), respectively. We regressed participants' support for employees' right to greater compensation on their fixed-growth mindsets about intelligence. As predicted, participants with a growth mindset about intelligence were more likely to support employees' right to greater compensation, $r = .103$, 95% CI [.007, .201], $p = .036$. Participants' fixed-growth mindsets about personality were not significantly correlated with their support for employees' right to greater compensation, $r = .0069$; 95% CI [$-.089$, .103], $p = .89$. Finally, in a multiple regression, we regressed employees' right to greater compensation on participants' fixed-growth mindsets about intelligence, fixed-growth mindsets about personality, and political orientation, and found that the effect of participants' mindset about intelligence remained significant, $B = .13$, 95% CI [.034, .22], $SE = .048$, $\beta = .13$, $t(412) = 2.68$, $p = .008$.

Study 5B

The pilot study found that people believe that effort plays an equally important role as intelligence in determining low-wage employees' job performance. Thus, we tested whether people's

fixed-growth mindsets about effort also predict their support for low-wage workers' compensation. We did not have an a priori hypothesis about this relationship. It is possible that people with a growth mindset about effort would support raising low-wage workers' compensation because they believe that employees would reciprocate higher wages by putting in more effort. On the other hand, people with a growth mindset about effort may be less willing to increase low-wage workers' compensation because they believe workers can simply work harder and longer to earn more. As intelligence and effort are distinct constructs, we expected the hypothesized effect of fixed-growth mindsets about intelligence to hold even after controlling for fixed-growth mindsets about effort.

Method

Participants

We used the effect size from the most chronologically recent study conducted in the United States (Study 6) for the power analysis. We entered the following inputs in G*Power (test: correlation: point biserial model, tail[s]: 2, Effect size $r = .20$, $\alpha = .05$, power = 80%), which yielded a sample size of 191. Rounding up this number, we sought to recruit 200 participants.

A survey seeking 200 U.S. residents was posted on MTurk. In response, 210 participants completed the survey (99 women, 101 men, 10 unreported; $M_{age} = 42.15$ years).

Measures

As we could not locate a preexisting scale to assess mindsets about effort, we created a scale by making the minimum changes needed to the mindsets about intelligence scale (e.g., "People can exert a certain amount of effort, and they can't really do much to change it;" see online supplemental materials for all items). Participants completed this scale (6-point scale ranging from *strongly agree* to *strongly disagree*), the three-item measure of fixed-growth mindsets about intelligence used in Study 3b, the three-item measure of support for policies for increasing low-wage workers' compensation used in Study 3b (7-point scale ranging from *do not support* to *support strongly*; $\alpha = .87$), and the three-item political orientation measure used in Study 3b ($\alpha = .96$).

Results

Table 6 presents the means, standard deviations, reliabilities, and bivariate correlations among the study variables. Higher scores on the mindset scale reflect a greater growth mindset about effort ($\alpha = .90$), and intelligence ($\alpha = .93$), respectively. As expected, participants with a growth mindset about intelligence were more likely to support policies for increasing low-wage

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[7] In addition, our study also had three exploratory items as a pilot for other research assessing whether participants believed that employees had a right to receive some paid sick days, right to receive parental leave, and right to receive paid vacation days ($\alpha = .89$, see online supplemental materials for more details regarding these items). We found that fixed-growth mindsets about intelligence were associated with greater belief that employees had the right to receive these benefits, $B = .10$, 95% CI [.02, .18], $SE = .041$, $\beta = .12$, $t(414) = 2.37$, $p = .018$. This relationship was robust after controlling for participants' gender, age, fixed-growth mindsets about personality, and political orientation, $B = .10$, 95% CI [.02, .18], $SE = .041$, $\beta = .11$, $t(409) = 2.37$, $p = .018$.

Table 5
Descriptive Statistics and Correlations Between Study 5a Variables (N = 416)

Variables	M	SD	1	2	3	4
1. Support for employees' right to higher compensation	5.61	1.38	(0.79)	—	—	—
2. Political orientation	4.48	1.51	.42**	(.94)	—	—
3. Fixed-growth personality mindset	3.40	1.19	.01	.10*	(.91)	—
4. Fixed-growth intelligence mindset	4.02	1.35	.10*	.01	.33**	(.95)

Note. Reliabilities are reported in parentheses on the diagonal.
* *p* < .05.   ** *p* < .01 (two-tailed).

workers' compensation, $r = .18$, 95% CI [.041, .304], $p = .011$. Participants' fixed-growth mindsets about effort were uncorrelated with their support for increasing low-wage workers' compensation, $r = -.071$, 95% CI [−.21, .61], $p = .303$. Next, we regressed participants' support for raising low-wage worker's compensation on their fixed-growth mindsets about intelligence, fixed-growth mindsets about effort, and political orientation; we found significant effects of mindset about intelligence, $B = .22$, 95% CI [.061, .39], $SE = .08$, $\beta = .16$, $t(198) = 2.70$, $p = .008$ and political orientation, $B = -.68$, 95% CI [−.80, −.55], $SE = .06$, $\beta = -.13$, $t(198) = -10.40$, $p < .001$. Participants' mindset about effort was also significant but in the opposite direction, $B = -.26$, 95% CI [−.49, −.03], $SE = .12$, $\beta = -.58$, $t(198) = -2.23$, $p = .027$, such that the more participants held a growth mindset about effort, the *less* they supported increasing low-wage workers' compensation.

Discussion

Studies 5A and 5B provided support for the specificity of the predictor—only mindsets about intelligence, not mindsets about personality, predicted participants' support for increasing low-wage workers' compensation. The effect of fixed-growth mindsets about intelligence was also significant even after controlling for fixed-growth mindsets about effort. After controlling for fixed-growth mindsets about intelligence, a growth mindset about effort was associated with lower willingness to support increasing low-wage workers' compensation. A possible explanation is that individuals with a growth mindset believe that workers can work harder or longer to earn more money, so organizations do not need to increase their wages.

Study 6

This study sought to test our proposed mechanism, situational versus dispositional attributions of poverty, relative to other competing explanations. Using a correlational design, we measured people's mindsets about intelligence, our hypothesized mechanism of situational

versus dispositional attributions, and two potential competing mechanisms—people's empathy for low-wage workers and people's beliefs about environmental affordances—that is, whether low-wage workers' basic needs have to be met for them to perform well at work. We predicted that attributions of poverty would mediate the effect of growth mindsets about intelligence on support for higher compensation for low-wage workers even after accounting for these other constructs.

To explain the proposed alternative mechanisms we tested, first, we considered the possibility that people with a growth mindset about intelligence may feel greater empathy for the poor, which could increase their support for higher compensation. Indeed, if people believe that intelligence can be developed, they may be less likely to ascribe to the stereotype of low-wage workers as unintelligent or unskilled and might have more empathy for individuals doing these jobs. Second, we assessed people's beliefs about whether employees' basic needs have to be met before they can perform well at work.

Mindset theory emphasizes that the growth mindset can only yield downstream consequences in terms of cognition, affect, and behavior that inform performance outcomes when the environment offers a baseline level of resources, known as *affordances* (Hecht et al., 2021; Rege et al., 2021). Extending this theoretical perspective to the context of low-wage workers, people who hold a growth mindset likely attend to the affordances in the low-wage workplace context. To assess this idea, we measured whether participants who held a growth mindset also think that employees' basic needs must be met for them to perform well at work, which in turn might promote their support for increasing compensation to minimum wage workers. We tested these ideas in the current study.

Method

Power Analysis

We used the effect size from the most chronologically recent study conducted in the United States (in online supplemental

Table 6
Descriptive Statistics and Correlations Between Study 5B Variables (N = 210)

Variables	M	SD	1	2	3	4
1. Support for raising low-wage worker's compensation	4.06	1.99	(.87)	—	—	—
2. Political orientation	3.61	1.73	−.60***	(.96)	—	—
3. Fixed-growth effort mindset	4.73	1.04	−.07	.01	(.90)	—
4. Fixed-growth intelligence mindset	3.87	1.44	.18*	−.11	.36***	(.93)

Note. Sixteen participants did not provide either their gender, age, or political orientation. Reliabilities are reported in parentheses on the diagonal.
* *p* < .05.   *** *p* < .001.

materials Study S8) to conduct the power analysis. We entered the following inputs in G*Power (test: correlation: point biserial model, tail[s]: 2, Effect size $r = .20$, $\alpha = .05$, power = 80%), which yielded a sample size of 191. Rounding up this number, we sought to recruit 200 participants. We posted a survey seeking 200 U.S. residents on MTurk. In response, 201 participants completed the survey (93 women, 108 men, $M_{age} = 43.313$ years).

Procedure

Participants first completed the three-item measure of mindsets about intelligence (6-point scale, *strongly agree* to *strongly disagree*, as in Study 3b). Participants were then presented with three policy proposals used in Study 3b, measured on a 7-point scale ranging from *do not support* to *support strongly* ($\alpha = .88$). Participants next completed multiple measures that were randomized to avoid order effects. Specifically, participants completed a seven-item measure of dispositional empathetic concern (e.g., "I often have tender, concerned feelings for people less fortunate than me;" $\alpha = .90$; Davis, 1980), which was measured on a 5-point scale (1 = *does not describe me well*, 5 = *describes me very well*).

We used an eight-item measure of attributions of poverty assessing the importance of various situational and dispositional factors in explaining the extent of poverty in the United States (Guimond et al., 1989), measured on a 5-point scale (1 = *not at all important*, 5 = *very important*). This measure included four items assessing dispositional attributions (e.g., "Poor people do not save; they spend foolishly") and four items assessing situational attributions (i.e., "The economic situation in the US is unfavorable"). Participants also responded to a four-item scale assessing whether the workplace performance of low workers is contingent on whether workers' basic needs being met (e.g., "Only when employees do not have to worry about food and shelter, can they perform well at work;" $\alpha = .93$; see online supplemental materials for all items), which was assessed on a 7-point scale (1 = *do not agree*, 7 = *agree strongly*). Finally, participants completed a demographic questionnaire with the three-item political orientation measure used in Study 3a ($\alpha = .96$).

Results

Table 7 presents the means, standard deviations, reliabilities, and bivariate correlations among the study variables. Higher scores on the mindset scale reflect a greater growth mindset about intelligence ($\alpha = .94$).

Consistent with the previous studies, people with a growth mindset about intelligence supported providing higher compensation to low-wage workers, $r = .20$, 95% CI [.064, .33], $p = .004$. We regressed participants' support for raising compensation on intelligence mindset and controlled for participants' political orientation, and found that the effect of mindset remained significant, $B = .21$, 95% CI [.032, .391], $SE = .09$, $\beta = .20$, $t(198) = 2.32$, $p = .021$; the effect of political orientation was also significant, $B = -.51$, 95% CI [-.658, -.365], $SE = .07$, $\beta = -.43$, $t(198) = -6.88$, $p < .001$.

Next, we tested whether the effect of growth mindset on support for increasing low-wage workers' compensation was mediated by the tendency to make situational rather than dispositional attributions for poverty. Past research suggests that situational and dispositional attributions are "not ideological alternatives—they are commonly combined in people's thinking" (Piff et al., 2020, p. 497). Thus, we averaged the two sets of four-items each measuring situational and dispositional attributions to form composite scores for situational and dispositional attributions, respectively. As expected, we found that growth mindset was positively correlated with more situational attributions ($r = .31$, 95% CI [.18, .43], $p < .001$). Further, growth mindset was negatively correlated with dispositional attributions for poverty ($r = -.29$, 95% CI [-.41, -.16], $p < .001$). We then conducted a bootstrapped analysis with 20,000 samples using Model 4 of Hayes' PROCESS macro (Hayes, 2017) using growth mindset scores as the independent measure, support for increasing low-wage workers' compensation as the dependent measure, situational attributions for poverty as the mediator, and political orientation as a covariate. We found a positive indirect effect of growth mindset on greater support for increasing low-wage workers' compensation through situational attributions for poverty, $B = .16$, $SE = .052$, 95% CI [.068, .27].

Given the high coherence between situational and dispositional attribution items ($\alpha = .88$), we also reverse-coded the dispositional attribution items and averaged all items to form a composite index reflecting greater situational (vs. dispositional) attributions. A similar bootstrapped analysis as above indicated a significant indirect effect of growth mindset on support for increasing low-wage workers' compensation through greater situational rather than dispositional attributions for poverty, $B = .19$, $SE = .051$, 95% CI [.101, .301]; the indirect effect was numerically larger than that through situational attributions alone, $B = .16$. Finally, we included the other potential mediators—empathy and whether basic needs have to be met—as parallel mediators in the previous model. A bootstrapped analysis with 20,000 samples using Model 4 of

Table 7
Descriptive Statistics and Correlations Between Study 6 Variables (N = 201)

Variables	M	SD	1	2	3	4	5	6	7
1. Support for higher compensation	3.99	2.04							
2. Fixed-growth mindset	4.05	1.41	.20**						
3. Situational attributions	3.48	1.14	.52***	.31***					
4. Dispositional attributions	2.63	1.16	−.43***	−.29***	−.42***				
5. Situational (vs. dispositional) attributions composite	3.42	0.97	.56***	.35***	.84***	−.85***			
6. Basic needs met	4.93	1.79	.52***	.099	.35***	−.26***	.36***		
7. Empathy	3.13	0.37	.18*	.066	.19**	.0202	.101	.16*	
8. Political orientation	3.46	1.73	−.45***	−.12	−.33***	.41***	−.44***	−.36***	−.17*

Note. N = 201. Reliabilities are reported in parentheses on the diagonal.
* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Hayes' PROCESS macro (Hayes, 2017) indicated a positive indirect effect of growth mindset on greater support for increasing low-wage workers' compensation through situational attributions for poverty, $B = .16$, $SE = .043$, 95% CI [.0801, .25]. Neither of the other indirect effects were supported, empathy: $B = .0041$; $SE = .0088$; 95% CI [−.014, .024] and perception that basic needs must be met: $B = .026$, $SE = .033$, 95% CI [−.037, .094].

Discussion

The findings from Study 6 replicate the core result from the previous studies—the more people believe that intelligence can be developed, the more they support increasing low-wage workers' compensation. Further, this study also identified that greater situational, rather than dispositional, attributions for poverty underlie the effect of growth mindset about intelligence on support for increasing low-wage worker's compensation compared with other potential mechanisms. We tested two potential alternative explanations but did not find support for the role of empathy or affordances as the underlying mechanism explaining the effect of growth mindset about intelligence on support for increasing low-wage workers' compensation. Please see the online supplemental materials for additional measures and exploratory analysis in which we tested for sequential indirect effects.

Study 7A

Study 6 provided correlational evidence for our underlying mechanism—situational attributions of poverty. The goal of Study 7a was to provide causal evidence for this mechanism.

Method

The hypotheses, power analysis, method, sample size, and pre-selection criteria for this study were preregistered (https://osf.io/muhga/).

Power Analysis

We conducted the power analysis using the effect size from Study 6. We first regressed situational (vs. dispositional) attributions index on mindsets about intelligence and political orientation. We then converted the partial eta square (.11) for the effect of mindsets about intelligence on the mediator from this analysis into Cohen's d (equivalent to .7127). A power analysis with $d = .7126$; $\alpha = .05$ (one-tailed), and power = 80% indicated that we need to recruit a sample size of 52. However, given the current sample size norms, we set our sample size at 200 and posted a study seeking 200 U.S. residents on CloudResearch.

Participants

In response, 201 participants completed the survey. As per the preregistration, we excluded five participants who provided gibberish responses to an open-ended question asking them to summarize the content of the mindset manipulation. The final sample consisted of 196 participants (105 women, 85 men, four others, and two unreported; $M_{age} = 44.44$ years).

Procedure

We randomly assigned participants to either the *fixed mindset* condition or the *growth mindset* condition. We used the same organizational scenario to manipulate fixed-growth mindsets about intelligence as in Study 4, from the scenario to the manipulation check questions.

Next, as in Study 4, participants were presented with three policy proposals recommending (a) an increase in the federal minimum wage from $7.25 per hour to $15 hour, (b) adjusting employee salary with inflation every year, and (c) sharing of 5% of company profits with the employees. Participants indicated their support for these proposals as the Zeneca CEO on a 7-point scale ranging from *do not support* to *support strongly*. We averaged support for the three policy proposals ($\alpha = .84$) to form a composite score.

We then assessed our key potential mechanism. Participants indicated their attributions of poverty using the eight-items in Study 6. Specifically, we asked, "As the Zeneca CEO, how important do you think each of these factors is in explaining the issue of poverty?" on a 5-point scale ranging from (1 = *not at all important* to 5 = *very important*). As in Study 6, four items assessed dispositional attributions for poverty (e.g., "Poor people do not try hard enough"), and four items assessed situational attributions (e.g., "Government policies are inadequate"). Finally, participants completed a demographic questionnaire with the three-item political orientation measure used in Study 3a ($\alpha = .84$).

Results

Participants in the growth mindset condition agreed more with the three manipulation check items asking participants how much they, as the Zeneca CEO, believed that people can increase their intelligence, $M = 5.00$, 95% CI [4.77, 5.23], $SD = 1.19$, compared with those in the fixed mindset condition, $M = 3.087$, 95% CI [2.69, 3.48], $SD = 1.89$, $t(194) = 8.55$, $p < .001$, Cohen's $d = 1.22$, indicating that the manipulation was effective.

Given the partisan nature of the minimum wage issue, we preregistered all analyses controlling for political orientation. We regressed participants' support for increasing low-wage workers' compensation on the experimental condition (fixed mindset = 0, growth mindset = 1) and their political orientation. We found a significant effect of the experimental condition ($B = .67$, 95% CI [.18, 1.17], $SE = .25$, $\beta = .18$, $t(193) = 2.70$, $p = .008$, Cohen's $d = .38$) and of political orientation ($B = −.43$, 95% CI [−.56, −.29], $SE = .069$, $\beta = −.41$, $t(193) = −6.19$, $p < .001$).

As per the preregistered analysis plan, we reverse-coded dispositional attributions and averaged all items to form a composite score reflecting greater situational (vs. dispositional) attributions of poverty ($\alpha = .87$).[8] Next, we regressed participants' situational (vs. dispositional) attributions for poverty on mindset condition while controlling for their political orientation. As hypothesized, this analysis revealed a significant effect of condition, $B = .22$, 90% CI = [.012, .43], $SE = .13$, $\beta = .11$, $t(193) = 1.75$, $p = .041$ (one-tailed, as we preregistered a directional hypothesis), $p = .081$

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[8] We also replicated these results using only the situational attributions of poverty. Please see online supplemental materials for the detailed analysis.

(two-tailed) and a significant effect of political orientation, $B = -.23$, 95% CI [$-.303$, $-.17$], $SE = .034$, $\beta = -.44$, $t(193) = -6.80$, $p < .001$. Additionally, we found a significant positive correlation between participants' greater situational (vs. dispositional) attributions of poverty and their support for policies increasing low-wage workers' compensation, $r = .56$, 95% CI [.46, .65], $p < .001$ (one-tailed as we preregistered a directional hypothesis), $p < .001$ (two-tailed).

Given these patterns, as per the preregistered analysis plan, we tested whether the indirect effect of growth mindset on support for increasing low-wage workers' compensation through greater situational attributions for poverty was significant, including political orientation as a covariate. A bootstrapped analysis with 20,000 samples using Model 4 of Hayes' PROCESS macro (Hayes, 2017) indicated a significant positive indirect effect of the growth mindset condition on greater support for increasing low-wage workers' compensation through greater situational (vs. dispositional) attributions for poverty $B = .21$, $SE = .12$, 90% CI = [.029, .43].[9] The obtained significant results can be predicted if the assumption of a mediation model is correct.

Study 7a provided causal evidence that mindsets shape both support for increasing low-wage workers' compensation and dispositional versus situational attributions for poverty. The results also offer experimental evidence of our theorized process: through their greater situational attributions for poverty, participants randomly assigned to the growth (vs. fixed) mindset condition supported increasing low-wage workers' compensation more.

Study 7B

This study was designed to accomplish two key objectives. First, the sample size in the previous study was powered to detect the main effect and might have been underpowered to detect the indirect effect. Hence, Study 7b sought to replicate Study 7a with a sample size that is adequately powered to detect a mediation effect (Fritz & Mackinnon, 2007). Second, we again tested the alternate mediator of empathy. It is possible that an organization that believes that intelligence can change (rather than is fixed) may be perceived as more empathetic toward those less fortunate, and this increased empathy may lead to greater support for increasing low-wage workers' compensation. We tested this idea in the current study, alongside our proposed mechanism—greater situational rather than dispositional attributions for poverty.

Method

The hypotheses, power analysis, method, sample size, and selection criteria for this study were preregistered (https://osf.io/364ep/).

Power Analysis

We conducted the power analysis using the effect size from Study 7a. After partialing out political orientation, the IV-mediator alpha path was $r = .1336$, $R^2 = 1.78\%$, close to Fritz and Mackinnon (2007, p. 236) small effect size ($R^2 = 1.78\%$). After partialing out political orientation and the IV, the mediator-DV beta path was $r = .4566$, $R^2 = 20.84\%$, close to Fritz and Mackinnon (2007, p. 236) large effect size ($R^2 = 26\%$). According to Fritz and Mackinnon (2007), Table 3 (column "SL," row "Percentile bootstrap"),

to detect a small effect size for the alpha path and a large effect size for the beta path, we had to recruit 398 participants to have 80% power. Even if we assume a medium effect size for the beta path (i.e., focusing on Fritz & Mackinnon, 2007; Table 3, column "SM," row "Percentile bootstrap"), the required sample size is 406 participants. Rounding this number, we posted the study seeking 400 U.S. residents on CloudResearch.

Participants

In response, 401 participants completed the study. Per the preregistration, we excluded six participants who provided gibberish responses to an open-ended question asking them to summarize the content of the mindset manipulation. The final sample consisted of 395 participants (193 women, 201 men, and one other; $M_{age} = 41.33$ years).

Procedure

We randomly assigned participants to either the *fixed mindset condition* or the *growth mindset condition* and followed the same procedure as in Study 7a, including the manipulation check ($\alpha = .98$), the dependent variable ($\alpha = .85$), and situational and dispositional attributions ($\alpha = .86$).[10] To assess if the organization was perceived as more empathic in the growth mindset condition, we asked participants to respond to the seven-item empathy scale used in Study 6. Specifically, we stated, "As the Zeneca CEO, how much do you agree or disagree with the following statements?" A sample item is, "I would have tender, concerned feelings for people less fortunate than me" ($\alpha = .90$). Finally, participants completed a demographic questionnaire with the three-item political orientation measure used in Study 3a ($\alpha = .97$).

Results

Participants in the growth mindset condition agreed more with the three manipulation check items asking participants how much they, as the Zeneca CEO, believed that people can increase their intelligence, $M = 4.83$, 95% CI [4.64, 5.02], $SD = 1.37$, compared with those in the fixed mindset condition, $M = 2.89$, 95% CI [2.65, 3.14], $SD = 1.72$, $t(393) = 12.40$, $p < .001$, Cohen's $d = 1.25$, confirming the manipulation was effective.

We next regressed participants' support for increasing low-wage workers' compensation on the experimental condition (fixed mindset = 0, growth mindset = 1) and their political orientation. We found a significant effect of the experimental condition ($B = .98$, 95% CI [.64, 1.32], $SE = .17$, $\beta = .26$, $t(391)) = 5.65$, $p < .001$, Cohen's $d = .57$) and political orientation ($B = -.34$, 95% CI [$-.44$, $-.24$], $SE = .0501$; $\beta = -.31$, $t(391) = -6.75$, $p < .001$).[11]

Per the preregistered analysis plan, we also regressed participants' situational attributions for poverty while controlling for their political orientation. As hypothesized, this analysis revealed

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[9] We used a 90% CI because we pre-registered a directional hypothesis. The 95% CI [$-.0076$, .48] included zero.

[10] We also replicated these results using only the situational attributions of poverty. Please see online supplemental materials for the detailed analysis.

[11] One participant did not respond to the political orientation measure (we did not force participants to respond for any question as per IRB guidelines).

a significant effect of condition, $B = .35$, 95% CI [.17, .52], $SE = .089$, $\beta = .18$, $t(391) = 3.92$, $p < .001$ (one-tailed, as we preregistered a directional hypothesis), $p < .001$ (two-tailed), and political orientation, $B = -.16$, 95% CI [−.21, −.11], $SE = .026$, $\beta = -.301$, $t(391) = -6.37$, $p < .001$. We found a significant positive correlation between situational attributions for poverty and support for policies increasing low-wage workers' compensation, $r = .62$, 95% CI [.55, .68], $p < .001$ (one-tailed, as we preregistered a directional hypothesis), $p < .001$ (two-tailed).

Next, per the preregistered analysis plan, we tested whether the indirect effect of growth mindset on support for increasing low-wage workers' compensation through greater situational attributions for poverty was significant, with political orientation included as a covariate. A bootstrapped analysis with 20,000 samples using Model 4 of Hayes' PROCESS macro (Hayes, 2017) revealed a significant positive indirect effect of growth mindset condition on greater support for increasing low-wage workers' compensation through greater situational (vs. dispositional) attributions for poverty, $B = .41$, $SE = .11$, 90% CI [.22, .59].[12]

Finally, we entered situational attributions for poverty and empathy as parallel mediators in the above model. As hypothesized, the indirect effect through greater situational (vs. dispositional) attributions continued to be significant ($B = .31$, $SE = .089$, 95% CI [.14, .49]). The indirect effect through greater empathy was also supported ($B = .303$, $SE = .083$, 95% CI [.15, .47]).

Discussion

This study provided an additional, confirmatory replication of the role of situational attributions as a mechanism by which a growth mindset about intelligence strengthens people's support for increasing low-wage workers' compensation. The indirect effect through situational attributions of poverty was significant even after empathy was included as a competing mediator in the model. Unexpectedly, we found that participants perceived the company endorsing a growth mindset as being more empathetic toward low-wage workers, and empathy served as a parallel mediator explaining the relationship between mindsets and support for increasing low-wage workers' compensation. This finding contradicts the results of Study 6, which did not support the mediating effect of empathy (i.e., the indirect effect was nonsignificant). Given these inconsistent findings, we are hesitant to overinterpret this effect as it could simply be an artifact of this particular experimental manipulation. Future research should further explore the role of empathy in the processes under investigation, as well as evaluate whether alternate manipulations would similarly yield effects on both empathy and attributions.

General Discussion

Ten studies identify a novel antecedent of people's support for increasing low-wage workers' compensation. Several correlational studies replicated our core effect across diverse contexts and populations—Study 1 with U.S. human resource managers, Study 2 with Indian business owners and managers, Study 3a with U.S. residents in key swing states, Study 3b with a nationally representative sample in the United States, and Studies 5a and 5b with samples of U.S. adults. Consistently, those who held a more growth (relative to fixed) mindset about intelligence exhibited

greater support for increasing low-wage workers' compensation. Using a novel manipulation of organizations' fixed-growth mindsets, Study 4 found that participants in the growth mindset condition were more supportive of policies that increase low-wage workers' compensation than those in the fixed mindset condition. Studies 5a and 5b documented the specificity of the predictor by showing that people's mindsets about the malleability of intelligence, not their mindsets about the malleability of personality or effort, predict their support for increasing low-wage workers' compensation. Study 6 explored multiple potential underlying mechanisms and found that people with a growth mindset about intelligence are more supportive of increasing low-wage workers' compensation because they make more situational rather than dispositional attributions about poverty. Finally, Studies 7a and 7b provided causal evidence for the underlying mechanism. Across studies, we also controlled for political orientation and found that the growth (vs. fixed) mindset predicted greater support for increasing compensation for low-wage workers, even controlling for this strong predictor.

Theoretical Contributions

The current research advances psychological science by highlighting a novel, meaningful consequence of people's mindsets about intelligence. Research on mindsets about the malleability of intelligence has largely focused on outcomes such as academic motivation, persistence, and performance (see Dweck, 2008; Rattan et al., 2015, for reviews). However, recent reviews have called for more research on the role of mindsets in influencing employees' and managers' treatment of understudied populations (Murphy & Reeves, 2019; Rattan & Ozgumus, 2019). Our research contributes to the mindset literature by documenting the relevance of intelligence mindsets to organizational and policy outcomes relevant to low-wage workers (Rattan et al., 2012, 2015; Rattan & Ozgumus, 2019). The present work also helps differentiate the contexts in which different types of mindsets (e.g., about intelligence, personality, and effort) have unique effects (Rattan & Ozgumus, 2019). We found that mindsets about employees' intelligence, but not personality and effort, predicted their support for increasing wages. This finding helps provide discriminant validity, a step essential to theory building about mindsets in workplace contexts. Future research can similarly assess whether the relationships of interest generalize to other related mindsets or are specific to the particular mindset of interest. We also found that participants with a growth mindset about effort were less willing to support increasing low-wage workers' compensation, possibly because they believe that workers can work harder or longer to earn more money, so organizations do not need to increase their wages. Future research can replicate and extend this exploratory finding further.

The present research also advances psychological science by investigating a novel antecedent of people's willingness to increase low-wage workers' compensation. Understanding people's views on the minimum wage and other forms of compensation for workers (e.g., profit sharing, indexing wages to inflation) is important because the decisions of individual citizens about

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[12] We used a 90% CI because we pre-registered a directional hypothesis. The 95% CI [.19, .63] also did not include zero.

what the low end of the wage spectrum should look like directly impact the estimated 1.8 million workers in the United States who are paid at or below the minimum wage (Bureau of Labor Statistics, 2018), and the estimated 327 million workers globally who are paid at or below the minimum wage in their countries (International Labor Organization, 2020). Past research has identified political orientation (Whitaker et al., 2012), Protestant Work Ethic (MacDonald, 1972), belief in a just world (Hirshberg & Ford, 2001), and attributions of poverty (Piff et al., 2020) as predictors. Despite the accumulated evidence on the link between attributions for poverty and support for poverty-reducing measures, this research is limited in that directly altering people's attributions for poverty has been previously understood as difficult, especially given the politically polarized context (Nickols & Nielsen, 2011). Answering the longstanding question of how to alter these attributions, the current research identifies mindsets as an important factor. Indeed, if people's mindsets about intelligence shape their attributions for poverty, then mindsets can serve as a potential intervention to change people's attributions and subsequent positions on low-wage workers' compensation. Especially important, our research suggests that a mindset message can do so without invoking political polarization (i.e., the effect of mindsets was consistent across the spectrum of political ideology in our studies). Future research should investigate the types of interventions that may be most impactful, and that would sustain their effects over the long term in this domain. Further, this research extends prior work connecting mindsets with attribution theory (e.g., Hoyt & Burnette, 2020) by demonstrating that mindsets can shape people's policy positions on compensation issues through attributional processes.

Given that the level of the minimum wage plays an important role in shaping the degree of income inequality in society (Lee, 1999), the current findings suggest that people's beliefs about intelligence have broader implications for economic inequality in society. Past research on inequality has largely focused on people's desire for lower inequality than that currently exists in society (Kiatpongsan & Norton, 2014; Norton & Ariely, 2011), misperceptions of racial economic inequality (Kraus et al., 2019), and the influence of national income inequality on citizens' happiness and well-being (Oishi et al., 2011, 2012). Research on antecedents of people's views on income inequality has found that when the concept of choice is salient, people are less concerned with income inequality (Savani et al., 2011; Savani & Rattan, 2012). The current research suggests that people's mindsets about intelligence might be another key antecedent of the extent to which people are concerned about income inequality, an exciting possibility for future research that arises from the theoretical groundwork of the current work. Future work might even examine whether mindsets relate to compensation outlooks for middle or even high-income brackets or job types.

Practical Contributions

The present research has practical implications, particularly as the global COVID-19 pandemic has exerted disproportionate pressure on the livelihood of low-wage workers around the world. The purchasing power of the minimum wage has severely eroded with time (Elwell, 2014), and increasing inflation as a function of the global pandemic, leading to a fierce debate on raising the minimum wage in the United States and globally. Although many factors undoubtedly contribute to the debate, including supply and demand, the current research suggests that people's generalized mindsets about intelligence may also be a factor that shapes people's willingness to increase low-wage workers' compensation during, and after the COVID-19 pandemic.

Our experimental study manipulated the mindset of the organization by asking participants to take the role of the organization's leader; we did not seek to manipulate participants' personal beliefs (cf. Emerson & Murphy, 2015; Murphy & Dweck, 2010). These distinctions are important because they imply that organizational leaders or public policymakers who want to generate support for plans to increase low-wage employees' compensation may benefit from communicating a growth belief about intelligence to their employees and constituents. The current findings indicate that even if people personally do not endorse the communicated belief if they are aware that their broader organization endorses the belief that intelligence can grow, they may make decisions that are consistent with that mindset. Managers who wish to rally support for increasing the wages for low-wage employees could consider implementing interventions to change decision makers' beliefs about intelligence, for example, by conveying growth-oriented messages in emails and notice boards to potentially nudge decision makers' compensation decisions. Of course, these interventions should be rigorously studied to test whether the same effects observable in the lab also emerge in the field.

Limitations and Future Directions

We found evidence supporting the link between mindsets about intelligence and support for increasing compensation to low-wage workers with multiple different types of decision makers—small business owners and managers in India, and human resources managers in the United States, all of whom were supervising low-wage workers, and U.S. American adults. However, future research needs to assess whether the current findings generalize beyond the United States and India to other national contexts. For example, in countries with more versus less availability of governmental social safety net practices for those at the lower end of the income spectrum, these relationships may differ. Further, the current studies did not directly assess behaviors. The ballot proposition study (Study 3a) provided a stricter test of the hypothesis by assessing participants' support for minimum wage policies in their state using a binary (yes/no) response option. However, future research could examine whether decision makers' beliefs relate to their actual decisions on whether to increase the pay of low-wage workers.

As the pilot study shows, people overwhelmingly believe that intelligence plays a more important role than personality in predicting low-wage workers' performance in the workplace. We included customer-facing jobs as examples of jobs paying low wages as personality may play a more important role in such jobs; however, we still found that participants perceived ability as more important than personality (or the kind of person someone is). However, it is indeed plausible that for some jobs where people may consider personality to be a core aspect of performance (e.g., caregivers) that these dynamics would vary. Future research may test the specificity of the type of mindset in predicting support for

increasing compensation for low-wage workers specifying different types of jobs.

Relatedly, we have conceptualized intelligence as mental ability, and our pilot studies found that people believe that mental ability is relevant to job performance even in many low-paid jobs (e.g., waiters, plumbers, cashiers, and restaurant line cooks). To illustrate, consider jobs like waitressing, which may be characterized as "unskilled." Yet, these jobs require various mental abilities for optimal performance. For example, servers need to quickly and accurately note down orders or remember orders, and serve various dishes to the right customers, both of which require working memory (that is highly correlated with general intelligence; Conway et al., 2005). Thus, our work speaks to an emerging public discourse on whether it is appropriate to t characterize low-wage jobs as unskilled when they actually require highly specialized knowledge and abilities. If this perspective were to become more widespread, the label "unskilled work" would no longer be applied to low-wage work, and low-wage workers would no longer be called "unintelligent workers." This is an exciting possibility for future research to explore.

Future research would also benefit from returning to the inconsistent findings we observed on empathy across our studies. Recall that in the experimental Study 7b, the indirect effect of mindsets on empathy and support for increasing low-wage workers' compensation was supported, but there was no such effect in the correlational Study 6. Future research should evaluate whether this is an artifact of this particular manipulation, or whether other manipulation would cohere more with the correlational results. Alternatively, the lack of relationship between mindsets and empathy in Study 6 may also be due to the fact that we measured empathy as a trait variable assessing general empathic concern, rather than as empathy for poor people in particular. Additionally, it may be that there is a not-yet-understood moderator that shapes when empathy comes into play. Finally, future research can investigate whether fixed-growth mindsets shape people's outlook on wages and employment policies for individuals who may be even worse off than low-wage workers. These include millions of individuals in the invisible workforce, such as undocumented immigrants working in agriculture or in household cleaning and childcare, who are often paid below the minimum wage and experience exploitative employment practices (Byrd, 2009).

Constraints on Generality

Our studies were conducted with multiple samples (e.g., MTurk workers, American HR managers, Indian business owners, residents of key swing states in the United States, and a nationally representative sample in the United States, U.S. American adults), suggesting generalizability within the United States and offering one datapoint for generalizability outside the United States. However, we do not know whether the findings would generalize globally, as different nations have different standards and policies around compensation for low-wage workers. There may be moderators in the historical and cultural context that could influence the strength of the effect that we observe (cf. Georgeac et al., 2019). For example, it would be essential to test whether the hypothesized relationship holds in countries or cultures with different or less negative stereotypes about low-wage workers than in the cultures sampled in our article

(e.g., in which low-wage workers are viewed as survivors rather than as unskilled).

It is also important to acknowledge that the effect size varies significantly across studies for unknown reasons, which is not necessarily uncommon in psychological science (Cumming, 2014). For this reason, we included larger sample sizes in subsequent studies to obtain narrow confidence intervals around the effect size. This is also why we provided a minimeta analysis in the online supplemental materials, which can more reliably estimate the overall effect size ($M_r = .13$, $z = 9.00$, $p < .001$).

People's attitudes toward low-wage workers may also be affected by how essential their jobs are to the working of the economy. For example, people might have been more aware of the challenges low-wage workers face at the peak of the COVID-19 pandemic, which may intercede on the effect of mindsets. Study 3b, where we again observed a much smaller effect size, was conducted in April 2021, at the peak of the low wage "worker shortage" in the United States, allegedly driven by the generous unemployment benefits and stimulus checks that made people less willing to take up low paying jobs again (Long, 2021; Romm, 2021). It is possible that the effect of mindset on support for raising low-wage workers' compensation was clouded by the rhetoric prevalent at that time that the unemployed were unwilling to reenter the workplace because of unemployment benefits.

It is an open question whether low-wage workers themselves would show these effects. Although online samples often include more economic diversity than university student samples, which used to be the standard participant pool for psychological studies, it is possible that low-wage workers themselves might not exhibit the hypothesized effect because their support for increasing low-wage workers' compensation would be at a ceiling. Finally, we used specific criteria for recruiting participants on MTurk (see online supplemental materials for details) and excluded participants who provided gibberish respondents in response to open-ended questions in the preregistered studies. We have no reason to believe that the results depend on other characteristics of the participants, materials, or context.

Context of Research Statement

The question of whether or not low-wage workers deserve increased compensation has been raging in the public and political discourse since the two senior authors' graduate school days. Given the role of economic inequality in limiting human functioning and flourishing and the disproportionate impact of low wages in the lives of racial minority groups, the topic captured the collective interest of our author group, who were linked through our shared interest in the study of mindsets. Observing the discourse, we could not help but see mindset-resonant language on both sides of the debate. Thus, this research extends our programs of work investigating how the science of mindsets can shape people's policy positions (e.g., Madan et al., 2019, Madan, Savani, et al., 2022; Rattan et al., 2012, 2015, 2018; Savani et al., 2017), our work on developing motivational approaches to understanding economic inequities (Rattan et al., 2012; Savani & Rattan, 2012), and our work extending the study of mindsets to organizational contexts (Rattan & Ozgumus, 2019). The current research highlights the crucial theoretical and practical value that can be generated by drawing the psychology of mindsets into the study of

workplace dynamics, such as around minimum wage. We hope to encourage more research that focuses on uncovering psychological factors that shape managers' decision-making in contexts that have the potential to improve the lives of millions of the "working poor" around the world (Leana et al., 2012; Leana & Meuris, 2015; Meuris & Leana, 2015).

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