*Article*

# Cultures of Genius at Work: Organizational Mindsets Predict Cultural Norms, Trust, and Commitment

Personality and Social Psychology Bulletin
2020, Vol. 46(4) 626–642

DOI: 10.1177/0146167219872473
journals.sagepub.com/home/pspb
SAGE

**Elizabeth A. Canning[1], Mary C. Murphy[2], Katherine T. U. Emerson[2], Jennifer A. Chatman[3], Carol S. Dweck[4], and Laura J. Kray[3]**

## Abstract

Three studies examine how organizational mindset—whether a company is perceived to view talent as fixed or malleable—functions as a core belief that predicts organizational culture and employees' trust and commitment. In Study 1, *Fortune 500* company mission statements were coded for mindset language and paired with Glassdoor culture data. Workers perceived a more negative culture at fixed (vs. growth) mindset companies. Study 2 experimentally manipulated organizational mindset and found that people evaluated fixed (vs. growth) mindset companies as having more negative culture norms and forecasted that employees would experience less trust and commitment. Study 3 confirmed these findings from more than 500 employees of seven *Fortune 1000* companies. Employees who perceived their organization to endorse a fixed (vs. growth) mindset reported that their company's culture was characterized by less collaboration, innovation, and integrity, and they reported less organizational trust and commitment. These findings suggest that organizational mindset shapes organizational culture.

**Keywords**
lay theories, mindsets, organizational culture, cultural norms, organizational trust

Received July 9, 2018; revised accepted June 19, 2019

Organizational culture is a critical determinant of an organization's success because it influences not only employee satisfaction and retention but also company profits and productivity (Berson, Oreg, & Dvir, 2008; O'Reilly, Caldwell, Chatman, & Doerr, 2014). Indeed, a recent survey of nearly 1,900 CEOs and CFOs revealed that over half of senior executives place company culture as a top-three predictor of firm value and more than 92% believe that improving culture would increase their firm's value (Graham, Harvey, Popadak, & Rajgopal, 2017).

Researchers define organizational culture as the norms that characterize a workgroup or organization (Chatman & O'Reilly, 2016; Schein, 2010; Zou et al., 2009), and research suggests that the cultures of productive and economically successful organizations are often characterized by the norms of (a) collaboration, (b) innovation, and (c) integrity/ethical behavior (Denison & Mishra, 1995; Kotter & Heckett, 1992). These norms characterize successful organizational cultures, in part, by fostering greater trust and commitment among employees (Hartnell, Ou, & Kinicki, 2011; Kristof-Brown, Zimmerman, & Johnson, 2005). Although these cultural norms—and the trust and commitment they inspire—have been shown to predict an organization's success or failure (Chatman, Caldwell, O'Reilly, & Doerr, 2014; Hartnell et al., 2011), little is known about the underlying beliefs that give rise to these positive cultural norms in organizations.

## Organizational Mindset as a Core Belief

Researchers have invoked multiple social psychological models to characterize norms within societies and organizations. For example, although some models spotlight the identity-focused norms of independence and interdependence within different societies (e.g., Markus & Kitayama, 1991), others focus on the processes underlying different norm perceptions, such as how consensus is generated (Zou et al., 2009), and still others focus on alternative dimensions, such

[1]Washington State University, Pullman, USA
[2]Indiana University, Bloomington, USA
[3]University of California, Berkeley, USA
[4]Stanford University, CA, USA

**Corresponding Authors:**
Elizabeth A. Canning, Psychology Department, Washington State University, Pullman, WA 99164, USA.
Email: elizabeth.canning@wsu.edu

Mary C. Murphy, Department of Psychological and Brain Sciences, Indiana University Bloomington, Bloomington, IN 47405, USA.
Email: mcmpsych@indiana.edu

as the tightness versus looseness of cultural norms within society and organizations (Gelfand, Harrington, & Jackson, 2017). We focus on the underlying beliefs or assumptions that give rise to norms within organizations, drawing from Schein's (2010) theory of "core beliefs." According to Schein (2010), cultural norms within organizations are built on a foundation of "core beliefs" or implicit assumptions within a company. Core beliefs define what is important in organizations, and they determine behavior, guide perceptions, and suggest to group members how they should think and behave (Chatman & O'Reilly, 2016). We propose that one of these core beliefs is an organization's *mindset*—or people's perceptions of the organization's belief about the fixed or developmental nature of talent and ability (Emerson & Murphy, 2015; Murphy & Dweck, 2010).

Organizations may be perceived to endorse more of a *fixed mindset*—communicating the belief that talent and ability are fixed, inherent qualities of people that cannot be developed much over time. These organizations may demonstrate a fixed mindset by primarily focusing on identifying, recruiting, and promoting those believed to be naturally talented. Alternatively, other organizations may be perceived to endorse more of a *growth mindset*—the belief that talent and ability are malleable qualities which can be developed through hard work and persistence, good strategies, and quality mentoring. In contrast to fixed mindset organizations, growth mindset organizations may focus more on fostering and rewarding the improvement of employees' abilities. Because organizational mindsets guide perceptions of what is valued by powerful members and shape employees' motivation and behavior (Murphy & Dweck, 2010), we hypothesize that people's perceptions of these organizational mindsets serve as core beliefs that likely shape the cultural norms within a company.

We extend decades of research on how people's *personal* mindset beliefs predict their own motivation and behavior by instead focusing on how people's *perceptions of their organization's* mindset beliefs predict the cultural norms within the organization. Fixed mindset beliefs—when personally endorsed by the individual—engender greater concerns about proving and demonstrating one's talent and ability, leading people to avoid new challenges and hide their mistakes (Blackwell, Trzesniewski, & Dweck, 2007; Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2013; Hong, Chiu, Dweck, Lin, & Wan, 1999; Nussbaum & Dweck, 2008; Pollack, Burnette, & Hoyt, 2012). In organizations, people's personal fixed mindset beliefs affect how managers evaluate their employees, the strategies people use to manage conflict, and people's leadership effectiveness (Heslin, Latham, & VandeWalle, 2005; Heslin & VandeWalle, 2011; Hoyt, Burnette, & Innella, 2012; Kray & Haselhuhn, 2007). These studies suggest that people's personal mindset beliefs can affect employees' goals, motivation, and behavior.

When identifying an organization's beliefs and norms, however, people look to the ideas and patterns of behavior that they perceive to be shared among members (Zou et al., 2009). This is because people are motivated to embody the organization's cultural norms so that they can reap the associated rewards through, for example, positive evaluations and promotions (Berson et al., 2008; Kotter & Heckett, 1992; Murphy & Dweck, 2010). In the present research, we examine how people perceive what those in the organization—as a collective—believe about the fixedness or malleability of talent and ability and how these organizational mindset perceptions influence people's experiences within the organization.

## Organizational Mindset and Employee Behavior

In a fixed mindset organization, members are likely to be valued and rewarded for demonstrating their individual ability and talent. When members perceive that the organization holds fixed mindset beliefs, they are motivated to prioritize getting recognized for their ability and competing with colleagues for star status (Murphy & Dweck, 2010). In contrast, in a growth mindset organization, employees are likely to be rewarded for learning and developing their capabilities. Perceiving that the organization holds growth mindset beliefs motivates employees to grow their skills, prioritize learning from others, and view failure as a learning opportunity. Previous laboratory research showed that an organization's mindset can be detected even by those attempting to join the organization. For example, Murphy and Dweck (2010) examined the effects of organizational mindsets (in this case, an academic tutoring organization) among college students and found that organizational mindset shaped people's self-presentations when applying to the organizations. When applying to organizations that endorsed a fixed mindset people displayed their intelligence, individual awards, and accolades. In contrast, they displayed their motivation, passion, and past history of overcoming challenges when applying to an organization that endorsed a growth mindset (Murphy & Dweck, 2010).

Not only do people change their self-presentation strategies depending on an organization's mindset, but they also reward other people for aligning their behavior with an organization's mindset (Murphy & Dweck, 2010), suggesting that an organization's mindset shapes the regular interactions, expectations, and routines that make up cultural norms in an organization (Sørensen, 2002). Other studies found that people were less trusting of a fictitious consulting company when it endorsed a fixed (vs. growth) mindset, reporting less interest in joining the organization and less engagement when interacting with its members (Emerson & Murphy, 2015). Taken together, this work suggests that organizational mindsets might shape cultural norms and employees' trust in and commitment to their organization.

Although previous studies manipulating organizational mindsets provide some promising preliminary results, all were conducted with convenience samples of college students who have less experience in workplace settings. Moreover, these studies relied on manipulations of organizational mindset

within the context of fictitious organizations. No studies, to our knowledge, have examined the influence of organizational mindset among employees in their actual workplace environments. Furthermore, no studies have employed authentic company materials, created by organizations themselves that reflect an organization's mindset as it naturally appears and is communicated by the organization itself. This is important because it is possible that organizational mindsets are difficult for employees and potential employees to detect because communication approaches and materials may only loosely represent an organization's true mindset beliefs (e.g., Cable & Judge, 1996) and/or because most organizations may be a blend of both fixed and growth mindset orientations. Finally, understanding the relationship between organizational mindset and cultural norms can provide insight into how organizational mindsets are manifested in a company's specific practices and procedures. Organizational mindsets have not yet been explicitly linked to the cultural norms of organizations. We fill these gaps in the literature and advance a theory of organizational mindsets and culture by examining the relationship between organizational mindsets and the cultural norms of collaboration, innovation, and integrity/ethical behavior in organizations.

## Organizational Mindset and Cultural Norms

We hypothesize that employees who work in companies that endorse a fixed (vs. growth) mindset will be less satisfied with their organization's culture overall. In particular, we expected that companies endorsing fixed (vs. growth) mindset beliefs will be seen as less supportive of (a) collaboration, (b) innovation, and (c) integrity/ethical behavior.[1] These norms are considered central to defining an organization's culture. Collaboration, which is a basic dimension of organizing (e.g., Chatman, Greer, Sherman, & Doerr, 2019), increases employees' productivity by emphasizing the importance of coordinating with relevant others to accomplish group and organizational goals and promotes feelings of connectedness at work (Edmondson, 1999). Norms of innovation and adaptability encourage measured risk-taking and experimentation with novel ideas and approaches—leading organizations to develop new products and services (Anderson, Potočnik, & Zhou, 2014; Chatman et al., 2014). Norms of integrity/ethical behavior promote honesty, fairness, and trust among employees and help organizations avoid costly violations (Kish-Gephart, Harrison, & Treviño, 2010). Why might fixed mindset organizations feature less collaborative, innovative, and ethical cultural norms and behavior? We address each norm below.

### *Collaboration*

Research shows that individuals who endorse fixed mindset beliefs strive to prove their abilities by prioritizing performance goals and competitive behavior (Burnette et al., 2013; Dweck & Leggett, 1988; Molden & Dweck, 2006). Perceived fixed mindset beliefs at the organizational level may motivate people to prioritize recognition for their ability and to compete with each other for star status (Murphy & Dweck, 2010). Therefore, it is possible that employees in fixed mindset environments may be more likely to focus on reaping credit for their personal performance rather than sharing it with a team, to garner positive recognition of their own ability. If this is the case, then organizations perceived to endorse more of a fixed mindset would likely be evaluated as having less collaborative norms compared with organizations perceived to endorse a growth mindset.

### *Innovation*

Emphasizing innovation typically requires taking risks (Anderson et al., 2014; Chatman et al., 2014). Research on individuals' mindsets has shown that fixed mindset beliefs reduce risk-taking and engagement with challenging tasks because people do not want to be seen as a failure who lacks ability (Hong et al., 1999; Nussbaum & Dweck, 2008). Thus, one might expect that organizations perceived to endorse a fixed mindset would encourage employees to avoid taking risks, as mistakes or failures at work could cast doubt on their level of ability. If employees are unwilling to take risks and view risk-taking negatively, organizations embracing a fixed mindset may be evaluated as having a culture that does not emphasize innovation.

### *Integrity/Ethical Behavior*

If people in fixed mindset organizations are more likely to compete for star status in an effort to demonstrate their ability and outdo others, then they may also be more willing to cut corners, lie, hoard information, and engage in other unethical behaviors to get ahead of others. Fixed (vs. growth) mindset beliefs have been shown to lead to more cheating behavior and a greater acceptance of unethical behavior (Blackwell et al., 2007; Jordan, 2001; Kray & Haselhuhn, 2012). Thus, taken together, we predicted the following relationships:

**Hypothesis 1:** Employees who work in organizations that are perceived to espouse more of a fixed (vs. more of a growth) mindset will be less satisfied with their company's organizational culture.

**Hypothesis 2:** Organizations perceived to endorse fixed mindset beliefs will be evaluated as having cultures that are less collaborative, less innovative, and less ethical than those perceived to endorse growth mindset beliefs.

## Implications for Employees' Organizational Trust and Commitment

Research has shown that organizational culture has significant impact on employees' behavior and also on their

connection to the organization. For example, researchers have demonstrated that the cultural norms of collaboration and teamwork, support for risk-taking and innovation, and ethical behavior are associated with greater organizational trust and commitment among employees (Hartnell et al., 2011; Kristof-Brown et al., 2005). Organizational trust, which is defined as the extent to which employees believe that their organization will act with integrity, benevolence, and ability, is an important predictor of organizational success because employees who trust their organization experience greater job satisfaction and productivity (Colquitt, Scott, & LePine, 2007; Dirks & Ferrin, 2001). Similarly, employees who are more committed to their organization, or those who are proud to be a member and internalize the company's values, are more likely to engage in prosocial or extra-role behaviors that benefit the whole organization (e.g., O'Reilly & Chatman, 1986) and are more likely to stay in their organization—reducing turnover and training costs (Griffeth, Hom, & Gaertner, 2000). Consistent with this research, we expect that cultural norms will influence employees' trust in, and commitment to, their company. Previous laboratory studies have shown that people expressed more mistrust and disengagement when interacting with members of fixed (vs. growth) mindset hypothetical organizations, because the overreliance on perfect performance in evaluation was perceived as more threatening (Emerson & Murphy, 2015). Thus, we predict an indirect effect of organizational mindset on employees' organizational trust and commitment via the organization's cultural norms:

**Hypothesis 3:** Organizational mindsets will influence perceptions of a company's cultural norms (collaboration, innovation, and ethical behavior), which will, in turn, mediate employees' organizational trust and commitment to the organization.

## Implications for Employees' Evaluations

When organizational mindsets and cultural norms permeate a company, research suggests that employees will work to embody these core beliefs and cultural norms so they will be positively evaluated and can reap the rewards of the setting (Berson et al., 2008; Kotter & Heckett, 1992; Murphy & Dweck, 2010). Furthermore, people are more likely to reward and encourage newcomers for behaving in ways that are consistent with an organization's mindset (Murphy & Dweck, 2010). Thus, in organizational settings, we expect that employees should try to embody the organization's norms and display them to those who are in charge (e.g., supervisors or managers), because these are the individuals likely to evaluate and reward them (Heslin et al., 2005; Heslin & VandeWalle, 2011). We, therefore, suggest that *supervisors* in fixed (vs. growth) mindset companies should recognize these behavioral differences in their employees and evaluate them accordingly—rating employees in fixed (vs. growth) mindset companies as less collaborative, innovative, and ethical and perceiving less trust and commitment among them.

**Hypothesis 4:** Supervisors who work in fixed (vs. growth) mindset companies will rate their employees as less collaborative, innovative, and ethical and perceive their employees as less trusting and committed to the organization.

## The Present Research

We conducted three studies to test our hypotheses. In Study 1, we examined the relationship between organizational mindset (communicated via companies' mission statements) and employees' reports of their organization's culture within more than 400 companies listed in the Fortune 500. In Study 2, adults were randomly assigned to read *Fortune 500* mission statements that espoused more of a fixed or more of a growth mindset. We manipulated organizational mindset to determine its causal effect on people's perception of cultural norms. In this study, we examined both how an organization's espoused mindset influences people's expectations about the cultural norms that are likely to characterize the organization, and subjects' forecasts regarding employee trust and commitment in that organization. To assess the external validity and robustness of these forecasts, we also conducted a field study with more than 500 employees in seven Fortune 1000 companies (Study 3). This final study offers the first empirical test of how actual employees and supervisors perceive their organization's core mindset beliefs and how these beliefs relate to the organization's cultural norms, which in turn predict their organizational trust and commitment to their organization. Taken together, these studies provide convergent evidence for the influence of organizational mindset assessed in several ways. For example, we examine trained coders' perceptions of organizational mindset drawn from company materials (Study 1), lay people's perceptions of organization mindset when it is experimentally manipulated (Study 2), and employees' perceptions of their company's organizational mindset (Study 3). Convergent findings across different assessment methods increase our confidence that organizational mindset operates as a core belief of organizations as it is perceived similarly from multiple perspectives and consistently relates to the cultural norms within organizations.

## Study 1

Study 1 tested Hypothesis 1 by exploring whether employees who work in organizations that espouse more of a fixed (vs. growth) mindset (as reflected in their actual company materials) would be less satisfied with their organization's culture. In this study of *Fortune 500* companies, organizational mindset was communicated via the company's goals

and values in their mission statement. Companies develop mission statements to articulate their priorities, vision, and beliefs (Williams, 2008). Executives think of mission statements as tools for communicating strategic plans, values, and purpose to their employees, shareholders, and consumers (Williams, 2008). Therefore, the mindset beliefs communicated via company mission statements likely represent an organization's core beliefs—indeed many Fortune 500 companies even refer to their mission statement as a formal declaration of their "core beliefs."

We then used Glassdoor data to examine employees' satisfaction ratings of their organization's culture. Glassdoor.com is a website that gathers and summarizes anonymous employee ratings of their organization along a series of dimensions (e.g., overall company satisfaction, culture and values, work–life balance, compensation/benefits). Glassdoor is a publicly available website that allows current and future employees to learn about the internal culture and climate of the organization (O'Reilly et al., 2014). Glassdoor enacts a "give-to-get" model in which it requires users to sign up for an account, post a salary report, and write a company review or interview experience to obtain unlimited access to Glassdoor content (Huang, Li, Meschke, & Guthrie, 2015). Glassdoor also screens user-submitted content to detect fraud or gaming. This allows Glassdoor to expand its content while discouraging unrepresentative reviews. Glassdoor has been used in previous research to examine employee satisfaction, organizational culture, and financial performance (Huang et al., 2015; O'Reilly et al., 2014).

We also wanted to establish discriminant validity and rule out the possibility that companies espousing a growth (vs. fixed) mindset would simply be perceived more positively overall—a "halo effect" across multiple dimensions beyond organizational culture. We hypothesized that the relationship between organizational mindset and culture would be more precise and focused, such that organizational mindset as espoused on company mission statements would relate to employees' perceptions of organizational culture but would *not* relate to other, conceptually unrelated organizational dimensions (e.g., work–life balance). We established discriminant validity in two ways. First, when examining the effect of organizational mindset on satisfaction with the organization's culture, we controlled for general company satisfaction ratings and company-level indicators that could be linked to satisfaction ratings (e.g., company size, financial performance). We hypothesized that organizational mindset would predict employees' ratings of the company's culture above and beyond their ratings of their general satisfaction with the company and other company-level characteristics. Second, we examined the relationship between organizational mindset and employees' satisfaction with other indicators of a positive work environment (i.e., work–life balance, compensation/benefits). We expected that organizational mindset would *not* predict other positive company characteristics like work–life balance or compensation and benefits that are not theoretically linked to organizational mindset.[2]

## Method

*Sample.* We collected and analyzed mission statements from companies listed in the 2013 Fortune 500. In total, Fortune 500 Companies (2017) represent two thirds of the U.S. gross domestic product (GDP) and employ 28.2 million people worldwide. Eight companies did not have a mission statement posted on their website and an additional 14 companies did not have Glassdoor ratings of "culture and values" and were therefore excluded from the study. Five organizations were acquired by other companies after the mission statements were coded and before the Glassdoor ratings were collected and were therefore excluded from the study. Fiscal data could not be obtained for 40 companies (18 were not publicly traded, 17 did not have fiscal data available on Compustat North America, five were missing one or more covariates), leaving a final sample of 433 companies. According to a power analysis conducted in G*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007), the current sample size of 433 companies has 0.99 power to detect an effect size of $f^2 = 0.05$, and 0.95 power to detect an effect size of $f^2 = 0.03$ in a linear regression analysis with six predictors. Both of these effect sizes are considered small-to-medium (Kotrlik & Williams, 2003).

*Mission statements.* All publicly available Fortune 500 mission statements were downloaded from the companies' websites and were anonymized to remove the company name or industry to avoid potentially confounding perceptions of well-known companies. Using a 1 (*strongly disagree*) to 6 (*strongly agree*) scale, two independent coders, blind to our study hypotheses, rated each mission statement with eight items adapted from previous organizational mindset research (Murphy & Dweck, 2010) (e.g., "This company seems to believe that employees have a certain amount of talent and they can't really do much to change it," $\alpha = .92$). Mission statements espousing more of a fixed mindset emphasized the importance of natural talent and performance (e.g., "our success has resulted directly from the talent of our people; we are interested in attracting . . . talented people"), and mission statements espousing more of a growth mindset emphasized the importance of growth and development (e.g., "we offer opportunities for personal growth and professional development"). Interrater agreement was high, $r = .66$, $p < .001$, with coders providing similar scores (within 2 scale points) for 89.4% of companies. Discrepant scores were averaged between the two raters.

*Glassdoor ratings.* We gathered anonymous employee ratings using Glassdoor's 5-point scale ranging from 1 to 5 "stars" from www.glassdoor.com. The average number of employee

**Table 1.** Zero-Order Correlations and Descriptive Statistics for Study 1.

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. Organizational mindset | — | | | | | | | |
| 2. Overall satisfaction | −.03 | — | | | | | | |
| 3. Culture and values | −.07 | .90*** | — | | | | | |
| 4. Work–life balance | −.05 | .74*** | .75*** | — | | | | |
| 5. Compensation and benefits | −.06 | .73*** | .59*** | .52*** | — | | | |
| 6. Log number of employees (thousands) | .07 | .00 | .04 | −.13** | −.21*** | — | | |
| 7. Log revenue (US$ millions) | .09 | .20*** | .19*** | .07 | .16** | .57*** | — | |
| 8. Log assets (US$ millions) | .05 | .28*** | .25*** | .27*** | .29*** | .31*** | .66*** | — |
| *M* | 2.65 | 3.36 | 3.26 | 3.22 | 3.43 | 3.39 | 9.57 | 9.87 |
| *SD* | 1.48 | 0.38 | 0.45 | 0.41 | 0.45 | 1.15 | 0.93 | 1.35 |

*Note.* Higher scores on organizational mindset reflect a more fixed mindset.
*$p < .05$. **$p < .01$. ***$p < .001$.

ratings per company was 2,041 ($SD$ = 3,531.8). For each company in our sample, we obtained employees' overall company satisfaction ratings ($M$ = 3.36, $SD$ = 0.38, range = 2.1-4.5), their satisfaction with the company's "culture and values" ($M$ = 3.26, $SD$ = 0.45, range = 2.0-4.6), satisfaction with the company's "work–life balance" ($M$ = 3.22, $SD$ = 0.41, range = 2.0-4.5), and satisfaction with the company's "compensation and benefits" ($M$ = 3.43, $SD$ = 0.45, range = 2.1-4.6).

*Control variables.* To more precisely estimate the relationship between organizational mindset and culture, we controlled for confounding heterogeneity between companies. These company characteristics included organizational features such as industry, company size, and financial performance—factors that could be associated with employee satisfaction and/or organizational culture. Because industry has been associated with company satisfaction ratings on Glassdoor (Huang et al., 2015) and with organizational culture (Chatman & Jehn, 1994), we used hierarchical linear modeling to account for industry by nesting companies (Level 1) within the 16 industry sectors in our sample (level 2; Raudenbush Bryk, 2002). We identified each company's sector using two-digit Standard Industrial Classification (SIC) codes from Compustat North America. Because company size has been linked to culture and employee satisfaction (Huang et al., 2015), we controlled for company size with two variables: the number of employees within each company (natural log of the number of employees for the fiscal year 2013) and company assets (natural log of total assets for the fiscal year 2013). Because financial performance has been associated with employee satisfaction and organizational culture (O'Reilly et al., 2014), we included company financial performance (natural log of total revenue for the fiscal year 2013) as a covariate in our analyses. Finally, as mentioned earlier, we also controlled for overall company satisfaction ratings on Glassdoor to examine the effect of organizational mindset on employees' ratings of their organization's culture above and beyond their overall company satisfaction ratings. See Table 1 for descriptive statistics and zero-order correlations.

## Results

Organizational mindsets (communicated via the Fortune 500 companies' mission statements) predicted employees' satisfaction with their company's culture and values, $t(420) = 2.69$, $p = .007$, $B = -.02$, over and above employees' global satisfaction with the company (see Table 2 for estimates of fixed effects), offering support for Hypothesis 1. Employees who worked for companies that espoused more of a fixed mindset were less satisfied with their company's culture and values, compared with employees who worked for companies that espoused more of a growth mindset. Organizational mindset did not, however, predict other indicators of positive company characteristics such as work–life balance, $t(419) = 0.91$, $p = .365$, $B = -.01$, or compensation and benefits, $t(417) = 0.71$, $p = .480$, $B = -.01$, establishing discriminant validity.

## Discussion

In Study 1 we found that employees from Fortune 500 companies with more of a fixed (vs. growth) mindset (communicated via company mission statements) were less satisfied with their company's organizational culture as reported on Glassdoor. Importantly, organizational mindset did *not* predict other positive company characteristics, such as perceptions of work–life balance and compensation and benefits, suggesting that organizational mindset uniquely predicted employees' experiences of organizational culture. In other words, companies espousing a growth mindset did not

**Table 2.** Fixed Effects Estimates for Variables in Study 1.

| | Culture and values | Work–life balance | Compensation and benefits |
|---|---|---|---|
| Organizational mindset | −0.02** (0.01) | −0.01 (0.01) | −0.01 (0.01) |
| Log number of employees (thousands) | 0.02 (0.01) | −0.02 (0.02) | −0.12*** (0.02) |
| Log revenue (US$ millions) | −0.01 (0.02) | −.05* (0.02) | 0.09*** (0.02) |
| Log assets (US$ millions) | −0.01 (0.01) | 0.04* (0.02) | 0.02 (0.02) |
| Overall satisfaction | 1.12*** (0.03) | 0.76*** (0.04) | 0.75*** (0.04) |

*Note*. Unstandardized coefficients and SEs are reported for each predictor (SEs are reported in parentheses). Higher scores on organizational mindset reflect a more fixed mindset.
*$p < .05$. **$p < .01$. ***$p < .001$.

exhibit a "halo effect"—simply being perceived more positively across all dimensions. This study provides initial evidence that organizational mindsets give rise to employees' perceptions of organizational culture.

Although we found initial support for Hypothesis 1 in this large sample of Fortune 500 companies, we were unable to test how organizational mindset might be linked to specific norms that make up a company's organizational culture, such as norms of collaboration, innovation, and integrity/ethical behavior (Denison & Mishra, 1995; Kotter & Heckett, 1992). Moreover, given that prior research has shown that these specific cultural norms are tied to greater employee trust and commitment (Hartnell et al., 2011; Kristof-Brown et al., 2005), we sought to replicate and extend this work by establishing organizational mindsets as an antecedent in Study 2. Finally, given the potential that Glassdoor ratings are subject to selection bias, in the next study we conducted an experiment in which participants were randomly assigned to organizations, which allowed us to establish a causal link between organizational mindsets and cultural norms.

## Study 2

In Study 2, we manipulated organizational mindset to examine its causal role in the perception of the specific cultural norms of collaboration, innovation, and integrity/ethical behavior. We manipulated perceived organizational mindset in a randomized, between-subjects, two-factor, experimental design to assess the relationships between organizational mindset, the specific cultural norms inferred from those core beliefs (Hypothesis 2), and people's forecasts of the trust and commitment experienced by employees at the organization (Hypothesis 3).

### Method

*Participants.* To achieve at least 80% power, we estimated small-to-medium effect sizes (Cohen's $d = .40$) based on previous research (Emerson & Murphy, 2015; Murphy & Dweck, 2010), and determined an acceptable sample size of 100 participants per condition (fixed vs. growth mindset mission statement). Two hundred fourteen adults were recruited via Amazon Mechanical Turk (58% female, average age = 35.23 years, range = 18-71). Seven participants were excluded from analyses because they did not complete the study, leaving a final sample of 207 participants. Fluctuations in degrees of freedom are due to a small amount of missing data (less than 2% on each measure).

*Mission statement manipulation.* Participants were randomly assigned to read one of six company mission statements (three espoused growth mindset values such as growth and development and three espoused fixed mindset values such as natural talent and effortless performance). The mission statements were from actual Fortune 500 companies and were rated on a 1 to 6 scale by the independent coders in Study 1 to be the three most fixed ($M = 6.00$, $SD = 0.00$) and the three most growth mindset ($M = 1.00$, $SD = 0.00$) mission statements within the Fortune 500. We used three examples of highly rated fixed and growth mindset mission statements to eliminate the likelihood that effects could be attributed to one specific company exemplar. Three mission statements espoused more of a fixed mindset—emphasizing the importance of natural talent and performance (e.g., *our success has resulted directly from the talent of our people; we are interested in attracting . . . talented people*) and three espoused more of a growth mindset—emphasizing the importance of growth and development (e.g., *we offer opportunities for personal growth and professional development*). Mission statements were matched on their ranking within the Fortune 500, of similar word length ($M = 276$ words, $SD = 123$ words), and were anonymized to remove the company name or industry to avoid potentially confounding perceptions of well-known companies. Participants were instructed to read the mission statement in its entirety.

*Measures.* After participants read the mission statement, they completed a questionnaire. All questionnaire items were assessed using a 1 (*strongly disagree*) to 7 (*strongly agree*) scale.

As our dependent variables, participants were asked to evaluate the cultural norms likely to characterize the company. To measure cultural norms, we developed items based on dimensions of organizational culture that have been

empirically identified in previous research (Chatman et al., 2014; O'Reilly et al., 2014; O'Reilly, Chatman, & Caldwell, 1991). The cultural norms composite included 14 items ($\alpha$ = .88) and consisted of three subscales: collaboration norms (one item, "At this company, people get points for working together"), innovation norms (seven items, for example, "People are encouraged to be innovative in this company—creativity is welcomed," $\alpha$ = .81), and norms regarding integrity/ethical behavior (six items, for example, "In this company, there is a lot of cheating, taking short-cuts, and cutting-corners," $\alpha$ = .83). Although we combine the three subscales into a composite measure of cultural norms ($\alpha$ = .88), they likely represent distinct constructs. Thus, we report results from the composite measure as well as each individual subscale.

We also asked participants to report the extent to which they believed current employees trusted and were committed to the organization. To measure organizational trust and commitment, we adapted items from previous research (Emerson & Murphy, 2015; O'Reilly & Chatman, 1986; Purdie-Vaughns, Steele, Davies, Ditlmann, & Crosby, 2008). Organizational trust was assessed with four items (e.g., "People are trustworthy in this organization," $\alpha$ = .92), and commitment to the company was assessed with four items (e.g., "Employees rarely think about quitting their current job and going to a different organization," $\alpha$ = .90).

*Control variables.* Participants' own personal mindset was measured with two items adapted from Dweck's (1999) implicit theory scale (e.g., "I personally believe that when it comes to being successful, you have a certain amount of talent, and you can't really do much to change it," $\alpha$ = .87) and was included as a covariate to examine organizational mindset over and above participants' own personal mindsets. Participants' self-reported gender and age were included as covariates to control for gender effects and age-related effects (e.g., older participants likely have more work experience, which could influence their perceptions of companies). See *Supplemental Materials* for covariate analyses, a confirmatory factor analysis of the primary measures, an analysis of the manipulation check and discriminant validity, and all scales and reliabilities.

*Analytic model.* Ordinary least squares (OLS) regression tested the effect of experimental condition (growth mindset mission statement = 0, fixed mindset mission statement = 1) on participants' perceptions of the organization's cultural norms, and their trust and commitment forecasts (see Figure 1). Participant gender, age, and personal mindset were included as covariates in all analyses, but significance did not differ when covariates were removed from the models. See Table 3 for descriptive statistics and zero-order correlations, Table 4 for condition means, and Table 5 for full regression models.

## Results

*Organizational mindsets predict cultural norms.* As predicted in Hypothesis 2, organizational mindsets (communicated via the Fortune 500 companies' mission statements) influenced participants' composite rating of the company's cultural norms, $t(200) = 3.43$, $p = .001$, $\beta = -.23$. Examining each cultural norm individually, those exposed to a fixed mindset organization expected the company to be (a) less supportive of collaboration, $t(198) = 2.00$, $p = .047$, $\beta = -.14$; (b) less innovative and supportive of intellectual risk-taking, $t(200) = 2.68$, $p = .008$, $\beta = -.19$; and (c) less likely to endorse norms of integrity and more likely to engage in unethical behavior, $t(200) = 4.16$, $p = .000$, $\beta = -.27$, relative to those exposed to the growth mindset organization.

*Cultural norms mediate organizational trust and commitment.* We predicted that organizational mindset condition would influence respondents' assessments of the company's cultural norms, which would in turn predict their forecasts of employees' organizational trust and commitment (Hypothesis 3). Mediation analyses with 5,000 bootstrapped samples indicated that the indirect effects of organizational mindset condition via cultural norms on respondents' forecasts of organizational trust (.43, 95% confidence interval [CI] = [.1805, .6938]) and organizational commitment (.39, 95% CI = [.1604, .6394]) were statistically significant (i.e., neither CI crossed zero; see *Supplemental Materials* for more details). In other words, Fortune 500 companies with mission statements that communicated more fixed mindset beliefs were viewed as embodying less collaboration, innovation, and integrity/ethical behavior, which in turn led to lower forecasts of trust and commitment among employees in those organizations.

## Discussion

Study 2 revealed that an organization's mindset beliefs—as expressed through the company's mission statement—shape lay people's expectations about the specific norms that are likely to characterize the company's culture. In turn, these cultural norms predicted people's forecasts of employees' organizational trust and commitment. One limitation of this study is that participants had no direct experience with the organization they were rating—they simply relied on the organization's mission statement to make their judgments, which is a much thinner slice of information than actual employees would have access to in evaluating their company's mindset. An important question, then, is whether these relationships hold among employees embedded in their workplace settings. In Study 3 we examine this question among more than 500 randomly selected workers employed at seven Fortune 1000 companies.

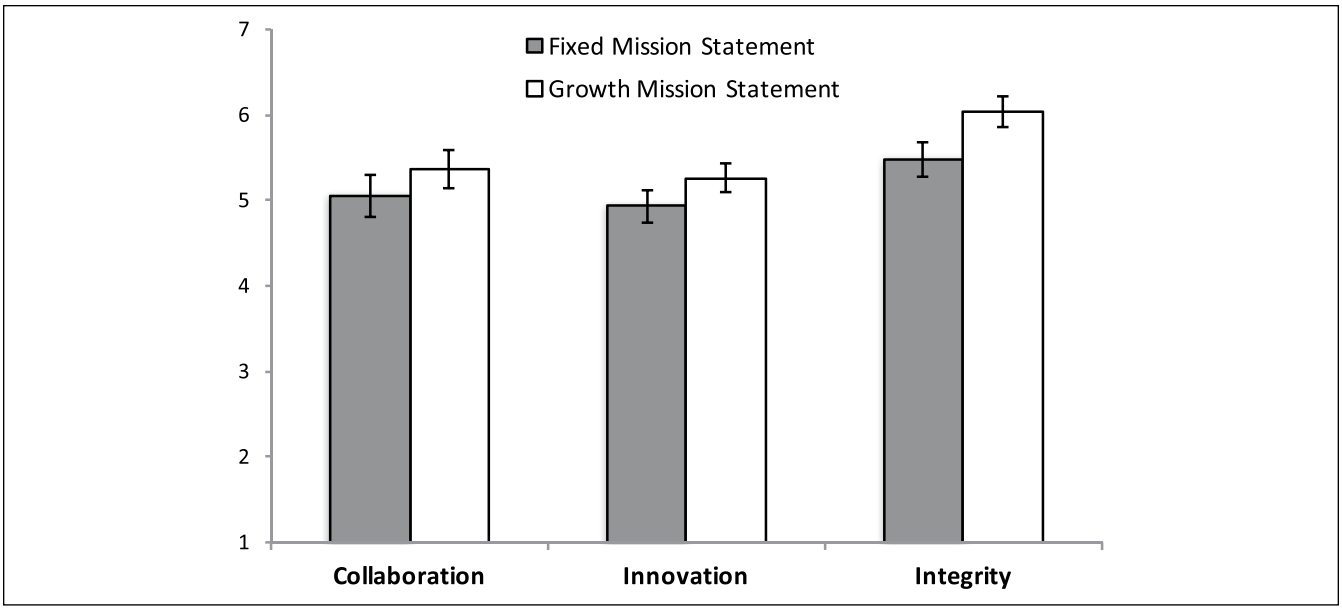


**Figure 1.** The effect of mission statement condition on perceptions of cultural norms in Study 2.
*Note.* Columns reflect means and error bars represent 95% confidence intervals.

**Table 3.** Zero-Order Correlations and Descriptive Statistics for Study 2.

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Organizational mindset | — | | | | | | | | | |
| 2. Mission statement sincerity | −.14 | — | | | | | | | | |
| 3. Perceived prestige | −.17* | .62*** | — | | | | | | | |
| 4. Personal mindset | .43*** | −.03 | −.11 | — | | | | | | |
| 5. Organizational culture (composite) | −.38*** | .62*** | .56*** | −.16* | — | | | | | |
| 6. Collaboration | −.07 | .33*** | .33*** | .00 | .57*** | — | | | | |
| 7. Integrity/ethical behavior | −.44*** | .55*** | .51*** | −.22** | .88*** | .40*** | — | | | |
| 8. Innovation | −.24*** | .55*** | .44*** | −.07 | .87*** | .46*** | .57*** | — | | |
| 9. Trust | −.21** | .71*** | .53*** | .00 | .79*** | .44*** | .67*** | .73*** | — | |
| 10. Commitment | −.30*** | .69*** | .63*** | .01 | .73*** | .45*** | .59*** | .68*** | .77*** | — |
| *M* | 3.03 | 6.07 | 6.25 | 3.13 | 5.39 | 5.20 | 5.76 | 5.09 | 5.22 | 5.20 |
| *SD* | 1.55 | 1.40 | 1.20 | 1.55 | 0.83 | 1.23 | 1.02 | 0.93 | 1.13 | 1.10 |

*Note.* Higher scores on organizational and personal mindset beliefs reflect a more fixed mindset.
*$p < .05$. **$p < .01$. ***$p < .001$.

## Study 3

We designed our field study to investigate whether employees' perceptions of their organization's mindset were associated with their perceptions of the company's cultural norms, and whether those norms, in turn, would predict employees' trust and commitment toward their company (Hypothesis 3). The purpose of this study was to replicate the findings from Study 2 with a more ecologically valid sample and extend it by testing whether supervisors corroborate their employees' self-reports. Based on the results from Study 2 and earlier research showing that people take on behaviors associated with an organization's mindset (Murphy & Dweck, 2010), we hypothesized that if employees take on the cultural values and norms of the organization, supervisors would see these norms embodied in their employees' behavior. By examining supervisors' evaluations of employees, we can confirm that employees are acting in accordance with the company norms—and that this behavior is visible to supervisors. We can also confirm that employees' self-reported trust and commitment to the company is visible by supervisors. Thus, in exploratory analyses at the company level, we hypothesized that supervisors in fixed (vs. growth) mindset companies would evaluate their employees as less collaborative,

**Table 4.** Means and Descriptive Statistics by Condition in Study 2.

| | Growth mindset mission statements | | | Fixed mindset mission statements | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | 95% CI | *M* | *SD* | 95% CI |
| Manipulation check | | | | | | |
| Perceived organizational mindset | 2.79 | 1.45 | [2.51, 3.07] | 3.27 | 1.62 | [2.96, 3.59] |
| Mission statement sincerity | 6.11 | 1.43 | [5.83, 6.39] | 6.03 | 1.37 | [5.77, 6.30] |
| Perceived prestige | 6.15 | 1.23 | [5.91, 6.39] | 6.35 | 1.17 | [6.13, 6.58] |
| Cultural norms (composite) | 5.57 | 0.77 | [5.42, 5.73] | 5.20 | 0.84 | [5.04, 5.36] |
| Collaboration | 5.37 | 1.14 | [5.14, 5.60] | 5.05 | 1.30 | [4.80, 5.30] |
| Innovation | 5.26 | 0.86 | [5.09, 5.43] | 4.93 | 0.98 | [4.74, 5.12] |
| Integrity/ethical behavior | 6.04 | 0.92 | [5.86, 6.22] | 5.48 | 1.03 | [5.28, 5.68] |
| Anticipated employee perceptions | | | | | | |
| Trust | 5.45 | 0.93 | [5.27, 5.64] | 4.98 | 1.26 | [4.74, 5.23] |
| Commitment | 5.32 | 1.00 | [5.12, 5.52] | 5.08 | 1.18 | [4.85, 5.32] |

*Note.* All questionnaire items were on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale. Higher scores on organizational mindset reflect a more fixed mindset. CI = confidence interval.

**Table 5.** Regression Models for Study 2.

| | Condition | Personal mindset | Gender | Age |
|---|---|---|---|---|
| Manipulation check | | | | |
| Perceived organizational mindset | 0.42* (0.20) | 0.42*** (0.06) | 0.43* (0.19) | −0.01 (0.01) |
| Mission statement sincerity | −0.10 (0.20) | −0.02 (0.06) | −0.31 (0.20) | 0.00 (0.01) |
| Perceived prestige | 0.21 (0.16) | 0.07 (0.05) | −0.41* (0.17) | 0.02 (0.01) |
| Cultural norms (composite) | −0.38** (0.11) | −0.08* (0.04) | −0.31* (0.11) | 0.00 (0.00) |
| Collaboration | −0.35* (0.17) | −0.00 (0.06) | −0.21 (0.18) | −0.00 (0.01) |
| Innovation | −0.35** (0.13) | −0.04 (0.04) | −0.23 (0.13) | −0.00 (0.01) |
| Integrity/ethical behavior | −0.55*** (0.13) | −0.13** (0.04) | −0.34* (0.13) | 0.01 (0.01) |
| Anticipated employee perceptions | | | | |
| Trust | −0.49** (0.16) | 0.01 (0.05) | −0.25 (0.16) | 0.00 (0.01) |
| Commitment | −0.24 (0.15) | −0.02 (0.05) | −0.21 (0.16) | 0.01 (0.01) |

*Note.* Unstandardized coefficients are reported for each predictor (SEs are reported in parentheses). Condition was coded as follows: growth mindset mission statement = 0, fixed mindset mission statement = 1. Gender was coded as follows: female = 0, male = 1. Higher scores on organizational and personal mindset beliefs reflect a more fixed mindset.
*$p < .05$. **$p < .01$. ***$p < .001$.

innovative, and ethical and perceive them as less trusting and committed (Hypothesis 4).

## Method

*Participants.* We partnered with a large renowned U.S.-based management consulting firm to recruit a random sample of employees ($N = 538$; 41.6% female) and their supervisors ($N = 208$; 30.7% female; average focal subordinates = 2.21, $SD = 1.94$) from seven Fortune 1000 companies. We calibrated the sample size within each organization to the size of that organization (i.e., we recruited larger samples from companies that had more employees and smaller samples from companies that had less employees) and targeted samples ranged from 30 to 127 employees ($M = 76.89$, $SD = 32.60$) and six to 66 supervisors ($M = 29.71$, $SD = 20.01$). Response rates were high in each company and ranged from 77% to 100% ($M = 87.14$, $SD = 7.84$) for employees and 43% to 95% for supervisors ($M = 72.29$, $SD = 15.66$). According to a power analysis conducted in G*Power 3.1 (Faul et al., 2007), the current sample size of 538 employees has 0.99 power to detect an effect size of $f^2 = 0.05$, and 0.98 power to detect an effect size of $f^2 = 0.03$ in a linear regression analysis with nine predictors.[3] Both of these effect sizes are considered small-to-medium (Kotrlik & Williams, 2003). Ninety-eight employees could not be matched with a supervisor and were therefore excluded from supervisor analyses (exclusion rates ranged from 4% to 63% within each company; $M = 22.78$, $SD = 20.87$). The companies spanned several different industries, two in energy, two in health care, two in retail/service, and one in technology.

**Table 6.** Fixed Effects Estimates for Variables in Study 3.

| | Organizational mindset | Employee's personal mindset | Employee gender |
|---|---|---|---|
| Cultural norms (composite) | −0.36 (0.03)*** | 0.02 (0.04) | −0.02 (0.08) |
| Collaboration | −0.16 (0.05)*** | 0.06 (0.06) | −0.05 (0.13) |
| Innovation | −0.36 (0.03)*** | 0.05 (0.04) | 0.03 (0.10) |
| Integrity/ethical behavior | −0.39 (0.03)*** | −0.02 (0.04) | −0.06 (0.09) |
| Employee perceptions | | | |
| Trust | −0.43 (0.04)*** | 0.10 (0.05)* | 0.04 (0.11) |
| Commitment | −0.37 (0.03)*** | 0.06 (0.04) | −0.11 (0.09) |

| | Average organizational mindset | Employee's personal mindset | Employee gender | Supervisor gender |
|---|---|---|---|---|
| Supervisor evaluations of employee | | | | |
| Collaboration | −0.74 (0.13)** | −0.01 (0.04) | 0.01 (0.10) | −0.08 (0.11) |
| Integrity/ethical behavior | −0.58 (0.12)** | −0.01 (0.03) | 0.05 (0.08) | −0.17 (0.08)* |
| Innovation | −0.71 (0.13)** | 0.06 (0.04) | −0.00 (0.10) | −0.15 (0.11) |
| Trust | −0.71 (0.12)** | 0.00 (0.04) | 0.10 (0.09) | −0.31 (0.09)** |
| Commitment | −0.71 (0.10)*** | 0.03 (0.03) | 0.03 (0.08) | −0.13 (0.08) |
| Leadership potential | −0.65 (0.22)* | 0.03 (0.03) | −0.04 (0.08) | −0.12 (0.09) |

*Note.* Higher scores on organizational and personal mindset reflect a more fixed mindset. Employee and supervisor gender were coded as follows: male = 1, female = 0.
*$p < .05$. **$p < .01$. ***$p < .001$.

*Measures.* Employees were guaranteed confidentiality and were asked about their perceptions of their company's organizational mindset (two items; $\alpha = .88$) and their perceptions of the company's cultural norms—that is, the extent to which certain behaviors were normative and valued within the company, including collaboration (one item), innovation (seven items; $\alpha = .89$), and integrity/ethical behavior (six items; $\alpha = .85$). As in Study 2, we combined the three cultural norm subscales into a composite measure of cultural norms ($\alpha = .91$) and report results from the composite measure as well as each individual subscale.

Finally, employees reported how much they trusted (four items; $\alpha = .86$) and were committed to their company (four items; $\alpha = .87$). All measures of organizational mindset, personal mindset, culture norms, and feelings of trust and commitment toward the company were measured as in Study 2 with minor adaptations to make them relevant to the employee's context (e.g., "employees feel" was changed to "I feel").

To assess the extent to which employees' behaviors were consistent with the company's cultural norms, supervisors were asked to rate the extent to which a particular subordinate (whose name was piped into the survey) was collaborative (one item; "[X] is supportive and cooperative in working together with others"); displayed innovation (five items; for example, "[X] encourages innovation—welcomes creativity," $\alpha = .84$); acted with integrity (two items; for example, "[X] shows a high level of integrity when dealing with others," $\alpha = .91$); and demonstrated leadership potential (five items; for example, "overall effectiveness as a leader," $\alpha = .95$; see *Supplemental Materials* for an analysis of this variable). Supervisors' also indicated their perceptions of the employee's feelings of organizational trust (two items; for example, "[X] demonstrates a high level of trust and openness with others," $\alpha = .72$) and commitment (five items; for example, "[X] is willing to put in effort beyond what is normally expected," $\alpha = .93$).

*Control variables.* Employees self-reported gender and their own personal mindset beliefs (two items; $\alpha = .75$) were used as covariates in all analyses (supervisor self-reported gender was added as an additional covariate in the company-level analyses) to examine the influence of organizational mindset above and beyond gender differences and employees' personal mindset beliefs. Significance did not differ when covariates were removed from the models. See *Supplemental Materials* for covariate analyses, a confirmatory factor analysis of the primary measures, and full scales and reliabilities.

*Employee-level analyses.* We first examined the data at the individual (employee) level. Using hierarchical linear modeling to account for employees nested within companies (Raudenbush & Bryk, 2002), we examined employees' perceptions of their organization's mindset as a predictor of their perceptions of the cultural norms within their organization (see Table 6 for estimates of fixed effects). This model tested the extent to which employees who perceived their company as endorsing more of a fixed (vs. growth) mindset also evaluated the organization's cultural norms as including less collaboration, innovation, and integrity/ethical

**Table 7.** Zero-Order Correlations and Descriptive Statistics for Study 3.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Organizational mindset | — | | | | | | | | | | | | | |
| 2. Personal mindset | .38*** | — | | | | | | | | | | | | |
| 3. Organizational culture (composite) | −.50*** | −.14** | — | | | | | | | | | | | |
| 4. Collaboration | −.18*** | −.03 | .52*** | — | | | | | | | | | | |
| 5. Integrity/ethical behavior | −.51*** | −.20*** | .88*** | .41*** | — | | | | | | | | | |
| 6. Innovation | −.43*** | −.07 | .92*** | .40*** | .65*** | — | | | | | | | | |
| 7. Employee trust | −.47*** | −.07 | .87*** | .45*** | .81*** | .76*** | — | | | | | | | |
| 8. Employee commitment | −.46*** | −.10* | .69*** | .38*** | .65*** | .60*** | .72*** | −- | | | | | | |
| 9. Collaboration evaluation | −.14** | −0.04 | .27*** | .13** | .26*** | .24*** | .25** | .25*** | — | | | | | |
| 10. Innovation evaluation | −.07 | .05 | .17*** | .13** | .20*** | .11* | .19** | .24*** | .44*** | — | | | | |
| 11. Integrity evaluation | −.12** | −.02 | .20*** | .15** | .24** | .12* | .21** | .21*** | .57*** | .54*** | —-- | | | |
| 12. Trust evaluation | −.12* | .01 | .24*** | .11* | .24*** | .20*** | .23** | .25*** | .66*** | .63*** | .71*** | — | | |
| 13. Commitment evaluation | −.10* | .00 | .22*** | .11* | .26*** | .16** | .26** | .28*** | .55*** | .76*** | .73*** | .73*** | — | |
| 14. Leadership potential evaluation | −.12* | −.03 | .28*** | .18*** | .31*** | .19*** | .30** | .31*** | .48*** | .72*** | .60*** | .57*** | .71*** | — |
| *M* | 2.83 | 2.35 | 4.82 | 4.88 | 5.10 | 4.58 | 5.05 | 5.76 | 5.94 | 5.72 | 6.27 | 5.80 | 5.96 | 3.79 |
| *SD* | 1.45 | 1.16 | 1.03 | 1.38 | 1.16 | 1.18 | 1.28 | 1.20 | 1.02 | 0.95 | 0.87 | 0.92 | 0.83 | 0.80 |

*Note.* Higher scores on organizational and personal mindset reflect a more fixed mindset.
*$p < .05$. **$p < .01$. ***$p < .001$.

behavior. Details regarding the analytic models are in *Supplemental Materials*. Descriptive statistics and zero-order correlations are reported in Table 7.

## Results

*Organizational mindsets predict cultural norms.* Consistent with Hypothesis 2 and replicating Study 2, individuals' perceptions of their organization's fixed mindset were inversely associated with their perceptions of the cultural norms of their organization overall (collaboration, innovation, and integrity norms composite), $t(453) = 12.36$, $p < .001$, $B = -.36$. Examining the cultural norms individually, we found that employees who perceived their company to endorse more of a fixed mindset reported that their company was characterized by less collaboration, $t(443) = 3.53$, $p < .001$, $B = -.16$; less innovation and intellectual risk-taking, $t(453) = 10.41$, $p < .001$, $B = -.36$; and less ethical behavior among employees, $t(453) = 12.15$, $p < .001$, $B = -.39$, compared with those who perceived their company to endorse more of a growth mindset.

*Cultural norms mediate employees' trust and commitment.* We examined whether individuals' perceptions of the organization's mindset related to their evaluations of the company's cultural norms and whether these cultural norms, in turn, inspired greater organizational trust and commitment among employees. Consistent with our findings in Study 2, we found significant indirect effects of organizational mindset via cultural norms on both organizational trust, $z = -11.37$, $p < .001$, and organizational commitment, $z = -9.90$, $p < .001$ (Figure 2; see *Supplemental Materials* for more details). Thus, employees' perceptions of their organization's mindset influenced the cultural norms prevalent within their company, and these norms, in turn, predicted employees' organizational trust and commitment.

*Exploratory analyses of organizational mindset at the company level.* If organizational mindset beliefs pervade an entire organization, then employees in fixed and growth mindset organizations should behave differently and supervisors in these different companies should observe these differences in their employees' behavior. We predicted that supervisors in more fixed (vs. growth) mindset companies would rate their employees as less collaborative, innovative, and ethical and perceive less organizational trust and commitment among them (Hypothesis 4).

In the following analyses, we used the company-level average of the individual employees' organizational mindset as the focal predictor of supervisor evaluations ($M = 2.89$, $SD = 0.44$). Conceptually, this allowed us to examine whether supervisors in more fixed versus more growth mindset organizations observed different, culturally consistent behaviors among their employees. Although there are multiple observations within companies, given the relatively small number of Fortune 1000 companies in the dataset ($N = 7$),

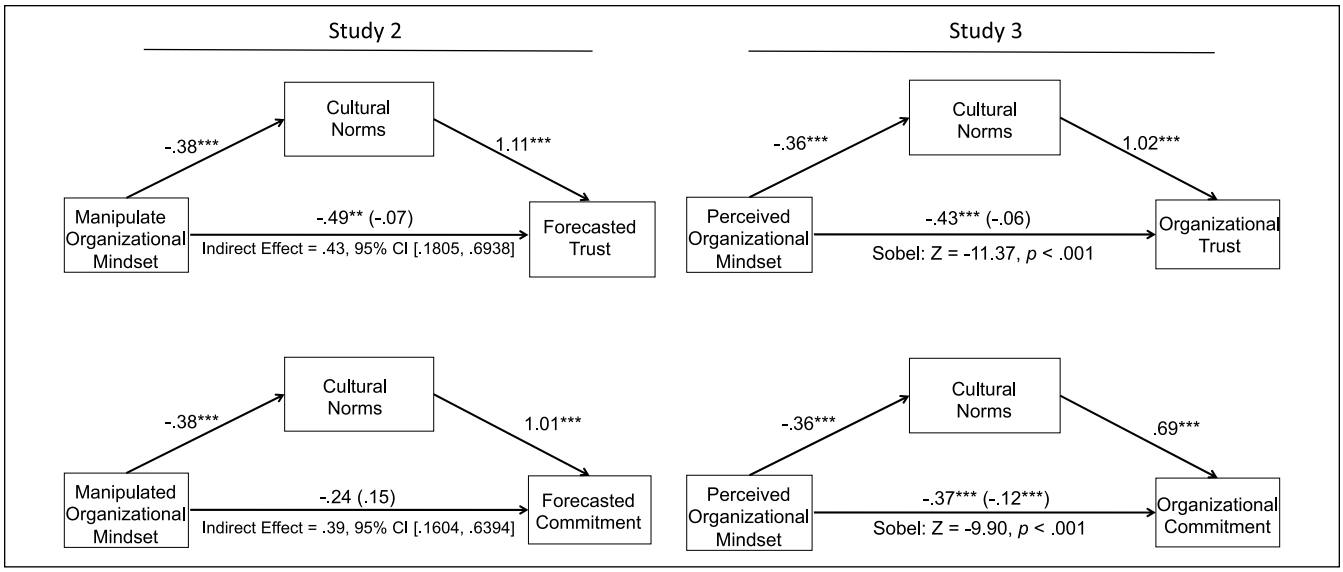


**Figure 2.** The indirect effects of organizational mindset on organizational trust and commitment, as mediated by cultural norms in Study 2 and Study 3.

*Note.* Values represent unstandardized coefficients. Coefficients inside parentheses represent the path controlling for the mediator. CI = confidence interval.

$^{**}p < .01$. $^{***}p < .001$.

these results are preliminary and should be interpreted with caution. In this model, we controlled for supervisor gender, employee gender, and employees' own personal mindset beliefs, though again effects remain significant without these covariates. See Table S1 in the *Supplemental Material* for analyses regarding company-level perceptions of organizational mindset, employees' evaluations of cultural norms, and employees' experiences of trust and commitment.

*Supervisors' perceptions of employees' behavior.* Results revealed that supervisors perceived their employees to embody the hypothesized cultural norms of fixed and growth mindset companies. Supervisors who worked in companies that espoused more of a fixed mindset reported that their employees were less collaborative, $t(5) = 5.73$, $p = .002$, $B = -.74$, less innovative, $t(5) = 5.51$, $p = .003$, $B = -.71$, and less ethically behaved, $t(5) = 4.63$, $p = .006$, $B = -.60$, compared with supervisors who worked in more growth mindset companies. Supervisors in more fixed mindset companies also perceived lower levels of organizational trust, $t(5) = 5.82$, $p = .002$, $B = -.71$, and commitment among their employees, $t(5) = 7.01$, $p < .001$, $B = -.71$, than did supervisors in more growth mindset companies.

### Discussion

In this study we replicated and extended the findings from Study 2 by investigating adults and supervisors in their working contexts. This field study brings external validity to the organizational mindset literature (Emerson & Murphy, 2015; Murphy & Dweck, 2010) that had previously examined these processes among convenience samples of college students who lack such experience in corporate settings. Employees who assessed their company as endorsing more fixed mindset beliefs experienced their company culture as less collaborative, innovative, and ethical, which in turn predicted their trust and commitment. Psychologically, employees were less committed when they believed their company endorsed a fixed mindset. Employees who believed that they worked for a fixed mindset company placed less trust in their company to treat them fairly and expressed a greater desire to leave the company for other opportunities, compared with employees who believed they work for an organization that endorsed a growth mindset. In exploratory analyses, we found that employees' lower commitment and trust of the organization was observed by their supervisors. Thus, it is not just that employees self-report less trust and commitment in fixed (vs. growth) mindset companies, but also supervisors in these companies may recognize these differences among their employees as well.

## General Discussion

We developed a theory of the relationship between organizational mindset, organizational culture, and employee trust and commitment. Across three studies, our research demonstrates that organizational mindset relates to the culture of a company—and specifically, the cultural norms of collaboration, innovation, and integrity/ethical behavior. These norms, in turn, predict employees' organizational trust and commitment.

This is the first evidence that organizational growth mindsets as communicated through company mission statements predict global measures of positive company culture (Study 1). Moreover, these organizational mindsets are perceived by the lay public from the company materials of Fortune 500 organizations (Study 2) and by employees within Fortune 1000 organizations (Study 3). The more people viewed an organization as endorsing a fixed (vs. growth) mindset—both when the organization's mindset was experimentally manipulated and when it occurred in the field—the more they evaluated the company's culture to include less collaboration and teamwork, less innovation and intellectual risk-taking, and more unethical behavior. These cultural norms predicted both forecasts and actual employee experiences of lower organizational trust and commitment. Moreover, in an exploratory analysis, the cultural and behavioral reports of Fortune 1000 employees were corroborated by their supervisors. Supervisors in more fixed (vs. growth) mindset companies reported that the employees they supervised behaved in ways that were less collaborative, innovative, and ethical. Supervisors also perceived less trust and commitment among employees in more fixed (vs. growth) mindset companies. Thus, these studies suggest that the mindset a company communicates and embodies plays a role in both employees and supervisors' actual experiences in the company.

These studies establish organizational mindset as a core belief (Schein, 2010) of organizations that may be fundamental to the way people think and behave in organizational settings. Organizational mindsets focus on the perception of the mindset beliefs of those within an organization as a whole, enabling people to gage whether the company believes that people can learn and improve their abilities—or not, and therefore it may not be surprising that it influences the norms, behaviors, and psychological experiences of individuals within organizations—factors that can be vital to a company's growth and success.

To understand how organizational cultures are established, it is imperative to identify the core beliefs that give rise to cultural norms. The finding that organizational mindset beliefs predict the cultural norms of organizations provides a framework for understanding employees' experiences and behavior and suggests a novel lever for intervention—shaping these core mindset beliefs. Although this is undoubtedly a challenging long-term endeavor, decades of research suggest that people's personal mindset beliefs are malleable and sensitive to situational cues in the environment (Dweck, 2017) and it is likely that organizational mindset beliefs are similarly malleable (Emerson & Murphy, 2015; Murphy & Dweck, 2010) though shifts from one to the other would likely require changes to organizational policies, practices, and leader-driven behavior. Leaders in organizations are particularly influential in shaping and reinforcing employees' views about what the organization values (Berson et al., 2008; Fu, Tsui, Liu, & Li, 2010), so growth mindset messages from powerful leaders in an organization may be an efficient and effective way to communicate an organization's core beliefs (Schein, 2010).

These studies provide convergent and robust evidence for the influence of organizational mindset across multiple assessment methods, which establishes our claim that organizational mindset operates as a core belief in organizations. Although the findings are consistent among expert coders of organizational mindset, lay people's perceptions of company materials, and employees' perceptions and experiences in their company, the effect sizes vary across these different perspectives. Not surprisingly, employees embedded in their organization show the largest effect, as these employees have the most experience to draw from when perceiving their organization's mindset. Those who are outside the organization, such as expert coders and the lay public, draw their perceptions solely from publicly available company materials (mission statements) and show consistent, but smaller effect sizes.

Taken together, this research makes three contributions. First, we examine how people develop their perceptions of a collective's mindset. Second, we advance research showing the relevance of mindset perceptions in actual organizational settings, in which people are identified by their status in the hierarchy and evaluated by their fit with the culture (as called for in Murphy & Dweck, 2010). And finally, perhaps our most novel contribution is to show that core organizational mindset beliefs—the underlying assumptions that people make about how others in an organization conceptualize ability and talent—systematically relate to the cultural norms present within an organization, advancing our understanding of the microfoundations of organizational culture (e.g., Chatman et al., 2014; Schein, 2010).

### *Limitations and Future Directions*

Our conclusions are drawn from a sample of the largest companies in the United States in terms of total revenue (i.e., Fortune 500 and 1000) and include a variety of industries, diverse participants, and ecologically valid materials. Thus, we would expect our findings to generalize to other large, economically successful companies, both in the laboratory and in the field. However, we did not sample early-stage companies (e.g., start-ups) where organizational mindsets and norms may just be forming or smaller companies where the interpersonal dynamics may differ from the large companies in our sample. We also did not sample companies based in countries outside the United States, where organizational mindsets and cultural norms might hold different meaning (e.g., more interdependent vs. independent cultures). We have no reason to believe that the results depend on other characteristics of the participants, materials, or context.

An important consideration of employees' perceptions of organizational mindset is the extent to which employees agree with one another about the organization's mindset and cultural norms. Research suggests that consensus among employees and the intensity of cultural norms are important

for understanding employee experiences in organizations and are vital to organizational success (Chatman et al., 2014; O'Reilly et al., 2014). Thus, the effects of organizational mindset might be most pronounced when there is greater consensus of an organization's mindset. Because Study 3 involved only seven organizations, we were not able to examine whether variation in agreement among employees across organizations predicted employee outcomes. However, future research should examine the effects of consensus and intensity of mindset beliefs across multiple organizations, as well as the measurement of different dimensions of mindset beliefs among employees, such as the beliefs about whether some special people (or all people) have the ability and talent to make it to the top (e.g., universal–non-universal dimension, Rattan et al., 2018). Moreover, the effects of organizational mindset might be most pronounced for groups who are stereotyped as having weaker abilities, and future research might examine these processes among stigmatized or underrepresented groups.

Another avenue for future research is how discrepancies between an organization's stated values and its mindset affect employee behavior within an organization. For example, can managers and CEOs in fixed mindset companies produce effective collaboration, greater innovation, and more ethical behavior among employees simply by explicitly endorsing these cultural values? We speculate that when there are discrepancies between an organization's mindset and the stated values of powerful individuals within a company, these stated values may not necessarily produce the desired behaviors. In fact, we would expect that in fixed mindset companies, employees would still try to demonstrate their talent by seeking star status, which would lead to less effective collaborations, even if some managers might explicitly say they value collaboration. In fixed mindset companies, we would still expect employees to take fewer risks to avoid making mistakes and being thought of as lacking ability, even though innovation may be a stated value, and in fixed mindset contexts, employees would still likely engage in unethical behavior, because in these contexts, people do what it takes to demonstrate their talent, even if it involves behaving unethically. Thus, it is possible that inconsistencies between an organization's mindset and the stated values of powerful individuals within companies might be one reason why behavior does not always cohere with an organization's stated values (Elsbach, 2014). This question is ripe for future research because it will reveal whether interventions to organizational mindset, stated values, or both are needed to encourage positive employee behavior regarding collaboration, innovation, and ethical conduct, and ultimately employees' experiences of trust and commitment.

One limitation of the current research is that these studies cannot shed light on the causal direction between an organization's mindset beliefs and its norms. Based on theories of core organizational beliefs (Schein, 2010), it is possible that an organization's mindset can be set early by its founders and board when the company is created—and these beliefs may go on to shape the cultural norms within the organization as policies and procedures are created (Baron & Hannan, 2002). As some sociocultural models of culture have suggested, however, these relationships are likely to be circular and mutually reinforcing (Markus & Kitayama, 1991). In such a culture cycle, organizational mindsets may inform the policies, practices, and behavior of people within an organization, and these policies, practices, and behavior may, in turn, serve as a cue for newcomers' perceptions of the organization's mindset (Markus & Kitayama, 2010). Even during the interview process newcomers receive cues as to an organization's mindset (Murphy & Dweck, 2010), and thus could self-select into organizations that match their values. Future research should examine these reinforcing relationships in a longitudinal study among several organizations.

As a first step in understanding these processes, future research should examine the ways in which these core mindset beliefs are communicated through the policies and practices within an organization. For example, organizational mindset may be transmitted through an organization's hiring criteria, evaluation processes, and promotion policies. They might also be transmitted by the ways that employees and supervisors interact and communicate. Research that identifies the organizational policies and practices that communicate a company's core mindset beliefs could uncover new strategies for creating growth mindset organizations, and potentially enhancing employees' experiences and organizational success.

## Acknowledgments

We thank the team at Senn Delaney, especially Jim Hart and Brian Reger, for their valuable support in conducting this research.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## ORCID iD

Elizabeth A. Canning https://orcid.org/0000-0002-6864-2224

## Supplemental Material

Supplemental material is available online with this article.

## Notes

1. Research also suggests that the norm of transparency has sometimes been related to successful organizational cultures (O'Reilly, Chatman, & Caldwell, 1991). We had no clear hypothesis regarding the relationship between organizational mindset and transparency norms; therefore, our analyses (and

the statistically significant results) regarding this variable were exploratory and are reported in *Supplemental Materials*.

2. There is no clear theoretical prediction for a straightforward relationship between organizational mindset and compensation as we expect that fixed and growth mindset organizations would likely reward different types of behavior (i.e., those congruent with their norms and values). For example, fixed mindset organizations might reward those perceived to be "star" performers with higher compensation/bonuses. However, growth mindset organizations might reward individuals who demonstrate the most growth and development. Performance evaluations and salary data (at the individual level) would be critical to testing this theorized moderation relationship between organizational mindset and compensation. These data were not available at the individual level for this study, so we could not explore this hypothesis in the present research and it remains an interesting question for future work.
3. Given our primary analysis was conducted with hierarchical linear modeling, we included six additional predictors in the power analysis to account for company fixed effects.

## References


Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, *40*, 1297-1333. doi:10.1177/0149206314527128

Baron, J. N., & Hannan, M. T. (2002). Organizational blueprints for success in high-tech start-ups: Lessons from the Stanford project on emerging companies. *California Management Review*, *44*(3), 8-36.

Berson, Y., Oreg, S., & Dvir, T. (2008). CEO values, organizational culture and firm outcomes. *Journal of Organizational Behavior*, *29*, 615-633.

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development*, *78*, 246-263. doi:10.1111/j.1467-8624.2007.00995.x

Burnette, J. L., O'Boyle, E. H., VanEpps, E. M., Pollack, J. M., & Finkel, E. J. (2013). Mind-sets matter: A meta-analytic review of implicit theories and self-regulation. *Psychological Bulletin*, *139*, 655-701. doi:10.1037/a0029531

Cable, D. M., & Judge, T. A. (1996). Person–organization fit, job choice decisions, and organizational entry. *Organizational Behavior and Human Decision Processes*, *67*, 294-311.

Chatman, J., Greer, L., Sherman, E., & Doerr, B. (2019). Blurred lines: How the collectivism norm operates through perceived group diversity to boost or harm group performance in Himalayan mountain climbing. *Organization Science*, *30*, 235-445.

Chatman, J. A., Caldwell, D. F., O'Reilly, C. A., & Doerr, B. (2014). Parsing organizational culture: How the norm for adaptability influences the relationship between culture consensus and financial performance in high-technology firms. *Journal of Organizational Behavior*, *35*, 785-808. doi:10.1002/job.1928

Chatman, J. A., & Jehn, K. A. (1994). Assessing the relationship between industry characteristics and organizational culture: How different can you be? *Academy of Management Journal*, *37*, 522-553.

Chatman, J. A., & O'Reilly, C. A. (2016). Paradigm lost: Reinvigorating the study of organizational culture. *Research in Organizational Behavior*, *36*, 199-224. doi:10.1016/j.riob.2016.11.004

Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology*, *92*, 909-927. doi:10.1037/0021-9010.92.4.909

Denison, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, *6*, 204-223.

Dirks, K. T., & Ferrin, D. L. (2001). The role of trust in organizational settings. *Organization Science*, *12*, 450-467.

Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. New York, NY: Psychology Press.

Dweck, C. S. (2017). From needs to goals and representations: Foundations for a unified theory of motivation, personality, and development. *Psychological Review*, *124*, 689-719. doi:10.1037/rev0000082

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*, 256-273. doi:10.1037/0033-295X.95.2.256

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, *44*, 350-383. doi:10.2307/2666999

Elsbach, K. D. (2014). *Organizational perception management*. New York, NY: Psychology Press.

Emerson, K. T., & Murphy, M. C. (2015). A company I can trust? Organizational lay theories moderate stereotype threat for women. *Personality and Social Psychology Bulletin*, *41*, 295-307.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175-191. doi:10.3758/BF03193146

Fortune 500 Companies. (2017). Who made the list. Retrieved from http://fortune.com/fortune500/

Fu, P. P., Tsui, A. S., Liu, J., & Li, L. (2010). Pursuit of whose happiness? Executive leaders' transformational behaviors and personal values. *Administrative Science Quarterly*, *55*, 222-254. doi:10.2189/asqu.2010.55.2.222

Gelfand, M. J., Harrington, J. R., & Jackson, J. C. (2017). The strength of social norms across human groups. *Perspectives on Psychological Science*, *12*, 800-809. doi:10.1177/1745691617708631

Graham, J. R., Harvey, C. R., Popadak, J. A., & Rajgopal, S. (2017). *Corporate culture: Evidence from the field* (SSRN Scholarly Paper No. ID 2805602). Rochester, NY: Social Science Research Network. Retrieved from https://papers.ssrn.com/abstract=2805602

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, *26*, 463-488. doi:10.1177/014920630002600305

Hartnell, C. A., Ou, A. Y., & Kinicki, A. (2011). Organizational culture and organizational effectiveness: A meta-analytic investigation of the competing values framework's theoretical suppositions. *Journal of Applied Psychology*, *96*, 677-694. doi:10.1037/a0021987

Heslin, P. A., Latham, G. P., & VandeWalle, D. (2005). The effect of implicit person theory on performance appraisals. *Journal*

*of Applied Psychology*, *90*, 842-856. doi:10.1037/0021-9010.90.5.842

Heslin, P. A., & VandeWalle, D. (2011). Performance appraisal procedural justice: The role of a manager's implicit person theory. *Journal of Management*, *37*, 1694-1718. doi:10.1177/0149206309342895

Hong, Y., Chiu, C., Dweck, C. S., Lin, D. M.-S., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology*, *77*, 588-599. doi:10.1037/0022-3514.77.3.588

Hoyt, C. L., Burnette, J. L., & Innella, A. N. (2012). I can do that: The impact of implicit theories on leadership role model effectiveness. *Personality and Social Psychology Bulletin*, *38*, 257-268. doi:10.1177/0146167211427922

Huang, M., Li, P., Meschke, F., & Guthrie, J. P. (2015). Family firms, employee satisfaction, and corporate performance. *Journal of Corporate Finance*, *34*, 108-127. doi:10.1016/j.jcorpfin.2015.08.002

Jordan, A. E. (2001). College student cheating: The role of motivation, perceived norms, attitudes, and knowledge of institutional policy. *Ethics & Behavior*, *11*, 233-247. doi:10.1207/S15327019EB1103_3

Kish-Gephart, J. J., Harrison, D. A., & Treviño, L. K. (2010). Bad apples, bad cases, and bad barrels: Meta-analytic evidence about sources of unethical decisions at work. *Journal of Applied Psychology*, *95*(1), 1-31. doi:10.1037/a0017103

Kotrlik, J. W., & Williams, H. A. (2003). The incorporation of effect size in information technology, learning, and performance research. *Information Technology, Learning, and Performance Journal*, *21*, 1-7.

Kotter, J. P., & Heckett, J. L. (1992). *Corporate Culture and Performance* (1st ed., 3rd printing ed.). New York, NY: Free Press.

Kray, L. J., & Haselhuhn, M. P. (2007). Implicit negotiation beliefs and performance: Experimental and longitudinal evidence. *Journal of Personality and Social Psychology*, *93*, 49-64. doi:10.1037/0022-3514.93.1.49

Kray, L. J., & Haselhuhn, M. P. (2012). Male pragmatism in negotiators' ethical reasoning. *Journal of Experimental Social Psychology*, *48*, 1124-1131. doi:10.1016/j.jesp.2012.04.006

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person–job, person–organization, person–group, and person–supervisor fit. *Personnel Psychology*, *58*, 281-342. doi:10.1111/j.1744-6570.2005.00672.x

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224-253. doi:10.1037/0033-295X.98.2.224

Markus, H. R., & Kitayama, S. (2010). Cultures and selves: A cycle of mutual constitution. *Perspectives on Psychological Science*, *5*, 420-430. doi:10.1177/1745691610375557

Molden, D. C., & Dweck, C. S. (2006). Finding "meaning" in psychology: A lay theories approach to self-regulation, social perception, and social development. *American Psychologist*, *61*, 192-203. doi:10.1037/0003-066X.61.3.192

Murphy, M. C., & Dweck, C. S. (2010). A culture of genius: How an organization's lay theory shapes people's cognition, affect, and behavior. *Personality and Social Psychology Bulletin*, *36*, 283-296. doi:10.1177/0146167209347380

Nussbaum, A. D., & Dweck, C. S. (2008). Defensiveness versus remediation: Self-theories and modes of self-esteem maintenance. *Personality and Social Psychology Bulletin*, *34*, 599-612. doi:10.1177/0146167207312960

O'Reilly, C. A., Caldwell, D. F., Chatman, J. A., & Doerr, B. (2014). The promise and problems of organizational culture: CEO personality, culture, and firm performance. *Group & Organization Management*, *39*, 595-625. doi:10.1177/1059601114550713

O'Reilly, C. A., & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, *71*, 492-499.

O'Reilly, C. A., Chatman, J., & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal*, *34*, 487-516.

Pollack, J. M., Burnette, J. L., & Hoyt, C. L. (2012). Self-efficacy in the face of threats to entrepreneurial success: Mind-sets matter. *Basic and Applied Social Psychology*, *34*, 287-294. doi:10.1080/01973533.2012.674452

Purdie-Vaughns, V., Steele, C. M., Davies, P. G., Ditlmann, R., & Crosby, J. R. (2008). Social identity contingencies: How diversity cues signal threat or safety for African Americans in mainstream institutions. *Journal of Personality and Social Psychology*, *94*, 615-630. doi:10.1037/0022-3514.94.4.615

Rattan, A., Savani, K., Komarraju, M., Morrison, M. M., Boggs, C., & Ambady, N. (2018). Meta-lay theories of scientific potential drive underrepresented students' sense of belonging to science, technology, engineering, and mathematics (STEM). *Journal of Personality and Social Psychology*, *115*, 54-75. doi:10.1037/pspi0000130

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods*. Thousand Oaks, CA: SAGE.

Sørensen, J. B. (2002). The strength of corporate culture and the reliability of firm performance. *Administrative Science Quarterly*, *47*, 70-91. doi:10.2307/3094891

Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). San Francisco, CA: Jossey-Bass.

Williams, L. S. (2008). The mission statement: A corporate reporting tool with a past, present, and future. *The Journal of Business Communication*, *45*, 94-119. doi:10.1177/0021943607313989

Zou, X., Tam, K.-P., Morris, M. W., Lee, S., Lau, I. Y.-M., & Chiu, C. (2009). Culture as common sense: Perceived consensus versus personal beliefs as mechanisms of cultural influence. *Journal of Personality and Social Psychology*, *97*, 579-597. doi:10.1037/a0016399