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Personal and organizational mindsets at work

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ABSTRACT

Decades of research have shown that people's mindsets beliefs—their beliefs about the fixedness or malleability of talent, ability, and intelligence—can powerfully influence their motivation, engagement, and performance. This article explores the role of mindsets in organizational contexts. We start by describing the evolution of mindset theory and research and review why mindsets matter for people's workplace outcomes. We discuss some of the most common growth mindset misconceptions—termed "false growth mindset"—that emerged as the fixed and growth mindset became popularized and (mis) applied in educational settings. We review literature on the situations that move people between their fixed and growth mindsets. Finally, we review new research on organizational mindsets and how organizations' mindset culture—communicated through its norms, policies, practices, and leadership messages—influences people's motivation and behavior in the workplace. We outline open theoretical and methodological questions as well as promising future directions for a forward-looking research agenda on mindsets at work. We suggest that extending mindset research—at the personal and organizational levels—to workplace contexts may shed new light on classic organizational behavior questions such as how to create more positive, innovative, and ethical organizational cultures; how to increase employee engagement; and how to reduce group-based disparities and inequalities in organizations.

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> "Our fundamental belief is that our culture transformation and our company transformation and where we are today and where we are headed is absolutely grounded in a deep understanding of a growth mindset."
>
> -Joe Whittinghill, corporate vice president of talent, learning, and insights at Microsoft on mindset's role in Microsoft's cultural and organizational transformation (Shibu & Lebowitz, 2019)

The idea of the fixed and growth mindset has taken the field of Education by storm, compelled by how these different motivational orientations shape people's psychology, motivation, behavior, and performance. More recently, however, these ideas have been making their way into organizational contexts. This article provides a conceptual review and a forward-looking research agenda for how mindsets shape individual and organizational outcomes in the workplace.

In this article, we review research related to organizational mindset at two levels of analysis. The majority of mindset research over the last 20 years conceptualized mindset as the beliefs of *individuals*–their beliefs about the fixedness (or malleability) of intelligence, talent, and ability. This research largely explores how people's personal mindset beliefs (whether they personally endorse more fixed or growth mindset beliefs in a given setting) shape their own motivation, engagement, behavior, and performance. In the realm of organizations, mindset research has explored, for example, how the mindset beliefs of employees shape their responses to challenges and setbacks, how they respond to critical feedback, and the quality of their relationships with others.

A more recent stream of research reconceptualizes mindset at a different level of analysis—at the group, team, or organizational level as a whole. These "organizational mindsets" have been explored as a cultural variable in organizations – expressed through the policies, practices, norms, and leadership messages expressed by powerful individuals within an organization (e.g. Canning et al., 2020; Emerson & Murphy, 2015; Murphy & Dweck, 2010). This stream of research has, to date, largely focused on how organizational mindsets are communicated in organizations and teams; how they influence the behavioral norms in organizations; how they influence employees' organizational trust, commitment,

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and performance; and how organizational mindsets can have disparate impact on individuals who belong to negatively stereotyped and underrepresented groups (e.g., women in business or underrepresented racial/ethnic minorities).

This article will review research on mindsets in organizations at both levels – personal and organizational – to reveal what we know about how mindset influences personal and organizational outcomes and what gaps in our knowledge remain as exciting new frontiers of investigation in this area.

What is mindset?

When we talk about mindset, we are talking about the beliefs people have about the fixedness or malleability of human traits. Decades of research has variously termed these beliefs *implicit theories*, *lay theories*, *lay beliefs*, and more recently, *mindsets* (e.g. Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2008; Heslin, Latham, & VandeWalle, 2005; Murphy & Dweck, 2010*)*. Fixed mindset beliefs refer to the belief that a certain trait – like intelligence, personality, ability, etc. – is relatively static and cannot be changed much; each person naturally has a certain amount of the trait and there's not much people can do to change it. Fixed mindset beliefs are often characterized by the idea that "you either have it or you don't." Growth mindset beliefs refer to the belief that a trait is relatively malleable and can be developed and expanded by learning, effort, persistence through challenges, good strategies, and help seeking. Growth mindset beliefs are often characterized by the idea that by applying the right strategies, one can significantly grow one's abilities; and, if a person shows disappointing performance, they simply haven't mastered that skill *yet*. Throughout this article, we will focus on people's and organizations' mindsets about intelligence, talent, and ability – constructs related to competence – that shape people's motivation, behavior, and performance. Later in the article, we will see that researchers have examined many different kinds of mindset beliefs (e.g. mindsets about personality, willpower, prejudice, etc.); however in this article, we focus primarily on research that examines the antecedents and consequences of more classical mindset beliefs about the fixedness and malleability of ability.

Evolution of mindset theory

At its inception, Dweck and colleagues conceptualized mindset (then referred to as "implicit theories") as an individual difference in how people viewed their basic traits and attributes (Chiu, Hong, & Dweck, 1997; Dweck & Leggett, 1988). On one end of the mindset continuum, these scholars posited that people could view their traits and attributes as relatively fixed (referred to at the time as an "entity theory"); while on the other end, people could view their traits and attributes as relatively malleable (i.e., an "incremental theory"). This early work was primarily focused on understanding how people's mindset beliefs could form a lens or world view through which people perceived themselves and others—and on learning how these beliefs shaped individual differences in coping, challenge-seeking, and resilience (see Dweck & Yeager, 2019 for a review).

While the earliest research on mindsets focused on using people's mindset beliefs to predict their behavior, motivation, and performance, later research sought to understand where people's mindset beliefs come from – that is, how they initially develop – and how their beliefs can be changed. For instance, foundational work by Mueller and Dweck (1998) explored the role of praise in shaping children's mindsets. This work found that children praised for their intelligence on a task were subsequently more likely to describe intelligence as a fixed trait whereas children praised for their effort were more likely to believe that intelligence could be improved. Later research examined whether children's initial mindset beliefs could be changed through educational programs or interventions. The first among these programs taught middle school students about the growth mindset in a series of educational workshops focused on how the brain grows and forms new connections when a person learns new things (Blackwell et al., 2007). More recently, researchers have demonstrated the efficacy of growth mindset interventions in large-scale, randomized controlled trials testing the effects of brief (30−40 minute), online growth mindset programs across a variety of school contexts (e.g., Yeager et al., 2019). This work has shown that such growth mindset programs are effective at shifting students' fixed mindset beliefs and offer a promising means to improve academic motivation and achievement, particularly among lower-achieving students and in supportive academic contexts where instructors also espouse more growth mindset beliefs (Yeager et al., 2020).

In the last decade, research has also shifted beyond mindsets about intelligence and ability to explore many different kinds of mindset beliefs. For example, there is a growing literature on people's beliefs about the fixedness or malleability of willpower (Job, Dweck, & Walton, 2010). There, research reveals that when people believe that their capacity to exert self-control (i.e., willpower) is a limited (vs. unlimited) resource that is depleted after exertion—that is, when they believe that willpower is something that can be "used up"—it negatively affects their ability to self-regulate and reduces their intellectual performance (e.g., Clarkson, Otto, Hirt, & Egan, 2016; Job et al., 2010; Job, Walton, Bernecker, & Dweck, 2015). Researchers have also studied how people's beliefs about the fixedness or malleability of people's personalities or the "kind of person" they are can influence their motivation and behavior (e.g. Dweck, Chiu, & Hong, 1995; Heslin & VandeWalle, 2008; Yeager et al., 2014). Applied to the domain of organizational diversity and inclusion, Rattan and Dweck (2018) found that when people believe that others can change, it increases the likelihood that organizations can recover and repair social relations after expressions of prejudice. Other research has focused on people's beliefs that everyone (vs. just a few people) have the ability to become highly intelligent. These universal (vs. non-universal) beliefs, as they are termed, predict people's support for policies aimed at redressing social inequality (Rattan, Savani et al., 2012). Finally, others have studied people's beliefs about brilliance – whether brilliance (extraordinary, raw/natural intellectual ability) is something that is required for success—and finds that these brilliance beliefs help explain gender and racial disparities in academic and professional settings (Bian, Leslie, & Cimpian, 2017; Leslie, Cimpian, Meyer, & Freeland, 2015).

The challenge of the "false growth mindset"

The ideas of the fixed and growth mindset have exploded in educational settings over the last decade. Yet, a significant issue that the literature faced is that, as the work became widely known and incorporated into teacher training programs and parental guides, the mindset constructs became oversimplified and misunderstood (Dweck, 2015, 2017). What have been the consequences of this oversimplification and what can we learn from these challenges in educational settings to ensure that these ideas are applied with fidelity in the workplace?

One way that the mindset concepts have been misunderstood is that people believe that mindset is a dichotomy—you either have a fixed mindset or you have a growth mindset. Yet, even in early research and theorizing, mindset was conceptualized as existing on a continuum. However, due to the way that many popular writers described the two mindsets and ubiquitous graphics that simplified the construct, like the popular image below (Fig. 1), many people started to (ironically) think about mindset as a fixed, dichotomous trait. Teachers, parents, and others began to talk about mindset as: you either "have" a fixed mindset or you "have" a growth mindset – and it's better, in general, to "have" the growth mindset.

But, of course, we know that people "have" both mindsets (Fig. 2). This is evidenced by many different experiments that make salient the idea that intelligence and ability are fixed or malleable, often through news articles or short videos. These studies show that while people may chronically endorse more fixed or growth mindset beliefs about intelligence and ability, these mindset beliefs can shift, based on exposure to these different ideas – suggesting that fixed and growth mindset beliefs are both relatively accessible and reasonable to people and that exposure to brief materials can shift people between the mindsets. We describe in more detail below the most widely studied situational triggers that move people between their mindsets later; but it is important to correct this false dichotomy as mindset research moves into the domain of organizations.

Why should we correct this false dichotomy? What are the consequences of misperceiving mindset in this way? One consequence of conceptualizing mindset as a dichotomy is that it is more likely to be used to categorize, mark, and potentially exclude individuals. In our work with teachers, it is unfortunately relatively common to hear mindset used as a label in educational settings – where teachers, administrators say: "this kid just has a fixed mindset and there's nothing I can do about it." In our work in organizations, we see that when managers and supervisors endorse this fixed view of the growth mindset—believing that people either have a fixed or growth mindset and there's nothing they can do to change it—they fail to appreciate how their own actions and behaviors, as supervisors, can shift and shape the mindset beliefs of those they supervise.

Conceptualizing mindset as a dichotomy may also tempt organizations to use mindset assessments to screen out potential employees who endorse more fixed mindset beliefs. This kind of approach would likely create workplace cultures where organizations presume themselves to "have" a growth mindset because they select only "growth mindset individuals". However, as we'll see later, people's mindsets can shift based on their local context and interactions with others. This kind of assessment and selection approach presumes that people's mindset beliefs are fixed and unchanging and that whatever one's score at employment testing is, it will predict their motivation and behavior across many different settings and across time at work. Indeed, this approach could ironically create workplace cultures where growth mindset is seen as a fixed attribute and where growth mindset culture is taken as a given, achieved state, rather than a quality that individuals and organizations must work to build and sustain over time. One lesson we must learn from previous research and application in the domain of Education is that we all have the fixed and growth mindset within us and that we can learn how to create and sustain environments that move people more often into the growth mindset at work and in life.

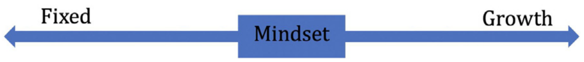

Fig. 2. The Mindset Continuum.

This false dichotomy of mindset beliefs is one of the reasons that people seem to show what Carol Dweck and others have termed the "false growth mindset" (e.g., Dweck, 2015). The false growth mindset is a collection of beliefs and misunderstandings about mindset that are inconsistent with mindset research and literature (Dweck, 2015, 2017). Because people have learned that the growth mindset is better in many settings for people's motivation and performance than the fixed mindset, teachers and others have been hesitant to acknowledge the times when they experience their fixed mindset. For example, over the last 3 summers, researchers Stephanie Fryberg, Mary Murphy, Megan Bang, and Laura Brady created and implemented a teacher training curriculum and institute that helps K-6 grade teachers create growth mindset cultures in their classrooms. One of the first things we encounter at the beginning of the institutes, however, is that most teachers strongly believe that they have a growth mindset (when they don't or when they don't really understand what it is) and they feel that saying that one might have fixed mindset beliefs is tantamount to a slur. The fixed mindset has been so demonized in teacher training programs that many teachers are resistant to acknowledging the fixed mindset in themselves and their teaching practices.

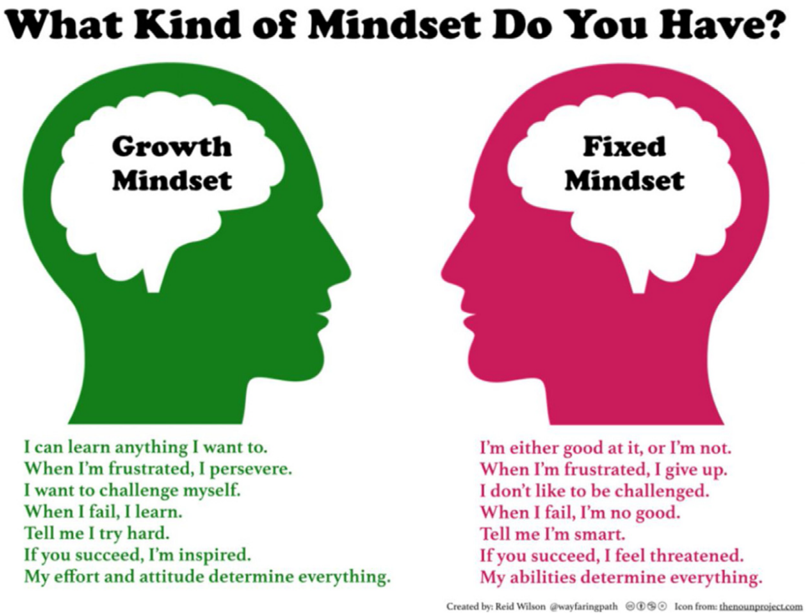
What Kind of Mindset Do You Have?
Growth Mindset
Fixed Mindset
I can learn anything I want to.
When I'm frustrated, I persevere.
I want to challenge myself.
When I fail, I learn.
Tell me I try hard.
If you succeed, I'm inspired.
My effort and attitude determine everything.
I'm either good at it, or I'm not.
When I'm frustrated, I give up.
I don't like to be challenged.
When I fail, I'm no good.
Tell me I'm smart.
If you succeed, I feel threatened.
My abilities determine everything.
Created by: Reid Wilson @wayfaringpath Icon from: thenounproject.com

Fig. 1. The false dichotomy of the fixed and growth mindset (*Growth Vs. Fixed Mindset - Lessons - Tes Teach*, n.d.).

The false mindset dichotomy that prizes the growth mindset over the fixed mindset is likely to have negative consequences in workplace settings as well. For example, if employees learn that the fixed mindset is viewed negatively by managers, they may suppress their fixed mindset beliefs and instead self-present growth mindset beliefs in surveys, assessments, or interactions in order to avoid professional and social repercussions (e.g. Murphy & Dweck, 2010). If employees do not feel comfortable acknowledging the situations in which their fixed mindset beliefs emerge (for example, in evaluative settings or when receiving critical feedback), supervisors are less likely to be able to support their employees adequately or to understand the roots of their goals, motivations, and behavior. Of course, climates in which the fixed mindset has become “forbidden” make it difficult for organizational practitioners and researchers alike to identify areas for improvement and suggest strategies that could spur deeper and more meaningful change than surface-level nods to the growth mindset.

In addition to the false dichotomy, one of the most common misunderstandings that constitutes part of the false growth mindset is that *growth mindset is just about effort*. However, we know that when people struggle, if they simply apply rote effort and do the same thing over and over again in the same way, they are not necessarily more likely to succeed. Instead, a true growth mindset involves trying new strategies and seeking help when one is stuck. Sheer effort alone will not enhance learning and development. Another dimension of false growth mindset is *praising effort when that effort is not really effective*. If a worker does not try hard on a task, for example, and their supervisor nonetheless praises their effort, the supervisor has communicated that they don’t really understand what the job entailed. It is important to praise effort when something has been effortful – and when that effort actually leads to learning. A third dimension of false growth mindset is believing that *people have a growth mindset about everything all of the time.* Research in fact reveals that mindsets about different characteristics (e.g., intellectual ability, personality, sports ability) are not necessarily correlated with each other (Dweck, 2000; Scott & Ghinea, 2013) and the situational nature of mindset suggests that the same person can have fixed or growth mindset beliefs depending on the situation (e.g., Hoyt, Burnette, & Innella, 2012; Kray & Haselhuhn, 2007). Dweck notes that it is important to legitimize the fixed mindset and acknowledge that we all have both sets of beliefs within us. “If we ‘ban’ the fixed mindset, we will surely create false growth mindsets”, Dweck wrote (2015).

Why do people’s personal mindset beliefs matter in organizations?

Decades of research shows that people’s mindsets have important implications for their motivation, behavior, and performance. In educational settings, for instance, people who chronically hold – or are situationally triggered towards – more of a fixed mindset tend to pursue more performance goals, aiming to prove their abilities to themselves and others through their flawless outcomes (Blackwell et al., 2007; Dweck & Leggett, 1988). These individuals tend to endorse more negative beliefs about effort: that effort and ability are negatively correlated, such that working hard means that you do not have strong, natural ability (Blackwell et al., 2007). Related to these negative effort beliefs, we see that when people endorse fixed mindset beliefs, they are more likely to withdraw effort in the face of challenges and setbacks (Nussbaum & Dweck, 2008).

In contrast, people who chronically hold – or are situationally triggered towards – more of a growth mindset tend to pursue more learning goals, aiming to develop and expand their skills and abilities (Blackwell et al., 2007; Dweck & Leggett, 1988). These individuals tend to have a positive view of effort and may become frustrated in the face of easy tasks that do not challenge them to learn and develop (Blackwell et al., 2007). Finally, when people endorse more growth mindset beliefs, they tend to show greater resilience in the face of challenges and setbacks because they view challenges as opportunities to learn and develop (Nussbaum & Dweck, 2008).

The motivational outcomes that stem from people’s personal mindset beliefs can translate into meaningful differences in persistence and performance. Whereas people’s fixed mindset beliefs are often associated with lower persistence in the face of challenges and worse performance, people’s growth mindset beliefs often predict greater persistence and better performance (Blackwell et al., 2007). When people’s fixed mindset beliefs are challenged directly through targeted programs and scientific materials that communicate how and under what conditions the brain can grow new connections that support learning and skill development, people’s persistence and performance often improves, particularly among lower-achieving individuals (Blackwell et al., 2007; Paunesku et al., 2015; Yeager et al., 2019). Indeed, in one of the largest, nationally representative randomized controlled trials conducted with over 12,000 U.S. high school students, lower-achieving students who participated in a growth mindset training program earned higher grade point averages at the end of the year than did those who participated in a program that did not educate them about the growth mindset (Yeager et al., 2019).

While the bulk of research examines the effects of people’s personal mindset beliefs in school and educational contexts, a growing body of research has focused on adults’ personal mindset beliefs in organizational settings. This work has generally found that growth mindset beliefs (whether more chronically endorsed or situationally triggered) are associated with a number of positive organizational outcomes, which can be broadly classified into four categories: self-appraisals, appraisals of others, motivation and engagement, and performance.

Self-appraisals

A number of studies have linked people’s personal mindset beliefs to their assessments of their own abilities. People who more chronically espouse – or are situationally triggered towards – more of a fixed mindset often hold more positive beliefs about their own abilities compared to those who endorse more fixed mindset beliefs. For example, in a series of studies, Crystal Hoyt and colleagues examined the relationship between people’s personal mindset beliefs and their level of confidence in their leadership abilities (Hoyt et al., 2012). After exposure to a successful leadership role model, people with more chronic growth mindset beliefs subsequently reported greater confidence in their leadership abilities relative to those with more chronic fixed mindset beliefs (Hoyt et al., 2012; Study 1). When mindsets were situationally triggered by exposing people to materials that communicated that leadership ability is either fixed (fixed mindset condition) or malleable (growth mindset condition), people who read about the malleability of leadership ability reported greater confidence in their own leadership abilities than did those who read that leadership ability is fixed (Hoyt et al., 2012; Study 2).

People’s personal mindset beliefs may be particularly activated and predictive of their ability assessments when they face situations and events that threaten or challenge their self-views and interests. For example, in a study that examined entrepreneurial self-efficacy among small business owners (Pollack, Burnette, & Hoyt, 2012), business owners who more chronically endorsed growth mindset beliefs reported greater self-efficacy in their entrepreneurial abilities relative to those with more chronic fixed mindset beliefs – but these relationships emerged only when the owners' businesses were experiencing economic difficulties. This suggests peoples' personal mindset beliefs may play a larger role in their outcomes when they are contending with self-threats and organizational struggles.

What problems arise in organizational settings from fixed mindset self-appraisals? When employees have more chronic fixed mindset beliefs, they may have a fixed view about their own abilities. That is, people's fixed mindset beliefs tell them what they are good at and what they'll never be good at. These self-appraisals can present a challenge for managers who need employees to develop new skills, take on stretch assignments, or otherwise step out of their comfort zone. By identifying and attending to employees' mindset beliefs about themselves and their abilities, managers can have a better understanding of the deeper beliefs, goals, and motivational issues at play and can approach these individuals with greater compassion and empathy when asking them to take on new challenges. Managers can explicitly address these misguided self-appraisals by assuring employees that they (the manager) believe in the employee's ability to develop and grow—and by providing the resources, strategies, and supports that will enable them to do so.

Appraisals of others

People's personal mindset beliefs can influence not only people's appraisals of their own skills and abilities, but also their appraisals of others. This is particularly important in the workplace when managers evaluate the skills and abilities of their direct reports. Employees might be growing and developing, but if managers do not recognize and support this, employees are unlikely to realize their full potential. For example, in one classic and informative study, managers evaluated an employee's improved performance after witnessing the employee's initially poor performance (Heslin et al., 2005). Would managers rate the employee positively (because they improved)? Or negatively (because they started off rather poorly)? Managers' more chronically-held mindset beliefs predicted their evaluations of the employee. Managers who chronically endorsed more fixed mindset beliefs anchored on to the employee's initial poor performance, rating their subsequent performance fairly negatively, whereas managers who chronically endorse more growth mindset beliefs focused on the employee's improvement and rated the employee's subsequent performance more positively. Thus, managers who were chronically higher on the growth mindset continuum were more likely to perceive and credit improvement in the employee's performance. In an impressive longitudinal field study of managers and employees, Heslin and colleagues found that managers who were triggered toward the growth mindset by a program that focused on how intelligence and personal attributes can change and grow were more likely to recognize improvements in their employees' performance six weeks later (Heslin et al., 2005; Study 4). These studies suggest that people's personal mindset beliefs – whether more chronically held or when situationally triggered – shapes people's perceptions of others' abilities and their evaluations of others in the workplace.

Workplace engagement

People's personal mindset beliefs also influence their motivation and engagement at work. In particular, people's personal mindsets shape the extent to which they are willing to devote time and energy to work tasks and assignments and invest in their relationships at work (Keating & Heslin, 2015). Previous research has shown that workers who chronically endorse more growth mindset beliefs tend to be more engaged in the workplace than do those who chronically endorse more fixed mindset beliefs (see Keating & Heslin, 2015 for a review). These mindset beliefs can be about talent and ability; but they can also be about other important skills that predict success in the workplace. For example, people who chronically endorse more growth mindset beliefs about their networking ability (i.e., that their networking skills can grow and improve) report more positive attitudes about networking and are more likely to attend networking events than people who chronically endorse more fixed mindset beliefs about their networking ability (i.e., that their skills cannot improve; Kuwabara, Zou, Aven, Hildebrand, & Iyengar, 2020). Other research has linked growth mindsets to career interest and task persistence among undergraduate students in an entrepreneurship class (Burnette et al., 2019). Specifically, students who completed a series of modules focusing on how entrepreneurial abilities can grow reported greater entrepreneurial self-efficacy, which in turn predicted greater interest in entrepreneurship and greater persistence on their main course project. Among managers, those who chronically endorse more growth mindset beliefs are more likely to engage in employee coaching and mentoring, relative to those who chronically endorse more fixed mindset beliefs (Heslin, Vandewalle, & Latham, 2006; Studies 1 & 2). Moreover, in a longitudinal field study, managers who held more fixed mindset beliefs were randomly assigned to a growth mindset program that emphasized how intelligence can grow. This program led managers to increase the quantity and quality of employee coaching behaviors, as rated by independent coders (Heslin et al., 2006; Study 3).

Performance

Finally, there is some evidence that people's personal mindset beliefs influence their effectiveness and performance at work. Indeed, in a series of studies, Kray and Haselhuhn (2007) found that people's more chronic mindset beliefs about their negotiation abilities (i.e., whether negotiation skills are fixed and unchangeable or whether they are malleable and expandable), predicted their negotiation performance. People who chronically endorsed more growth mindset beliefs about their negotiation abilities actually performed better in a negotiation – coming to a more preferable arrangement in an employment negotiation – than did those who chronically endorsed more fixed mindset beliefs (Kray & Haselhuhn, 2007; Studies 2 & 4). When people were situationally triggered towards the growth mindset, they also outperformed those who were situationally triggered towards the fixed mindset (Kray & Haselhuhn, 2007; Study 3).

Taken together, this body of research on adults' personal mindset beliefs in organizations – whether more chronically endorsed, or whether situationally triggered – is important and convincing, but the literature is certainly not as well-developed as research among students in educational settings. Nevertheless, the existing literature suggests that people's personal mindset beliefs are a powerful determinant of several important personal and organizational outcomes, including people's self-appraisals, their appraisals of others, their motivation and engagement at work, and their effectiveness and performance. There is a lot of room, however, for future research to examine other potential consequences of people's personal mindset beliefs in the workplace that stem from classic mindset theory (Blackwell et al., 2007; Dweck & Leggett, 1988), including how people's mindset beliefs predict their job and career satisfaction, their developmental willingness, the extent to which organizations experience problems with disengagement and employee turnover, as well as other important personal and organizational behaviors and outcomes.

What can organizations do to build employees' mindsets?

Because people have access to both the fixed and growth mindset, it is clear that certain situations and contexts can move people between the two mindsets. Many studies use experimental methods to randomly assign adults to learn about the malleability of intelligence and ability – and find that this knowledge shifts people toward the growth mindset, shaping their motivation and performance (e.g., Dweck & Leggett, 1988). Other evidence for the malleability of people's mindset beliefs comes from research in educational settings. In these studies, direct-to-student interventions teach students about the malleability of intelligence and find that this shifts students toward the growth mindset and has lasting effects on their persistence and performance in school (e.g., Aronson, Fried, & Good, 2002; Blackwell et al., 2007; Paunesku et al., 2015; Yeager et al., 2019).

Thus, instead of conceptualizing mindset as something static about people – that people have a fixed mindset ***or*** they have a growth mindset – we should conceptualize the fixed and growth mindset as a set of beliefs that we all have. As described above, mindset beliefs exist on a continuum (Fig. 2). Indeed, this is the way that mindset was originally conceptualized (Dweck, 2000) and the way that most mindset research has been conducted: measuring people's mindset beliefs on continuous scales. People can of course chronically endorse more fixed or growth mindset beliefs about intelligence and ability as a general matter (likely due, in part, to their familial or educational socialization; Gunderson et al., 2013; Haimovitz & Dweck, 2016, 2017), but given the large body of experimental work that demonstrates that people can move towards the fixed or growth mindset, it is also clear that our mindset beliefs can be triggered by situations, messages, and information in our local environment. Understanding our personal mindset triggers – and the triggers of those we lead, manage, and work with – is critical for successful communication and interaction in organizations because it helps us understand our own motivation and behavior, and that of others, at a much deeper level and helps us create settings that move us toward the growth mindset more of the time at work.

Mindset triggers

There are at least four situations that call forward people's fixed or growth mindset in the workplace (Fig. 3). The notion of mindset triggers was first described by Susan Mackie, an organizational consultant in Australia, in conversation with Carol Dweck (2016). What we offer here is a conceptual organization of the research literature that identifies the four most common workplace situations where people's mindset beliefs become salient and shape their motivation, behavior, and performance. We ground these situational triggers in the research literature and provide relatable examples so that both lay individuals and researchers can identify the triggers that are most relevant to them and that spark their interest. Our academic research and work in companies suggests that most people identify with at least one or more of these mindset triggers in their workplace (Fig. 3).

Evaluative situations

When people anticipate evaluation in the workplace, their mindset beliefs can become salient and shape their goals and behavior. For example, when an employee is preparing an important report or presentation; when a manager anticipates their 360-review results; or when a CEO is preparing an all-hands speech to unveil new company-wide policies—they each anticipate being evaluated by others. What will other people say and think about their ideas?

For some individuals, evaluative situations like these move people into their fixed mindset. They wonder "How should I prepare to put myself in the best light?" As they prepare their report, presentation, or speech, people triggered into the fixed mindset adopt performance goals—they focus on showcasing their intelligence, brilliance and competence (e.g., Blackwell et al., 2007; Dweck & Leggett, 1988). To this aim, they source material and put together presentations in ways that feature their brilliance. They often will avoid discussing the challenges and setbacks that they have faced for fear that these struggles may make them look weak or diminish their reputation. And they often don't leave much time or space for questions or feedback because questions and feedback are risky. After all, if listeners are given the opportunity to ask questions or provide feedback, they might question one's assumptions or conclusions, identify holes in one's logic, or otherwise make one look bad. Thus, individuals who are triggered into the fixed mindset by evaluative situations often structure their work to meet their goals of demonstrating their intelligence and competence—they want to be sure they look smart, rather than learn from others.

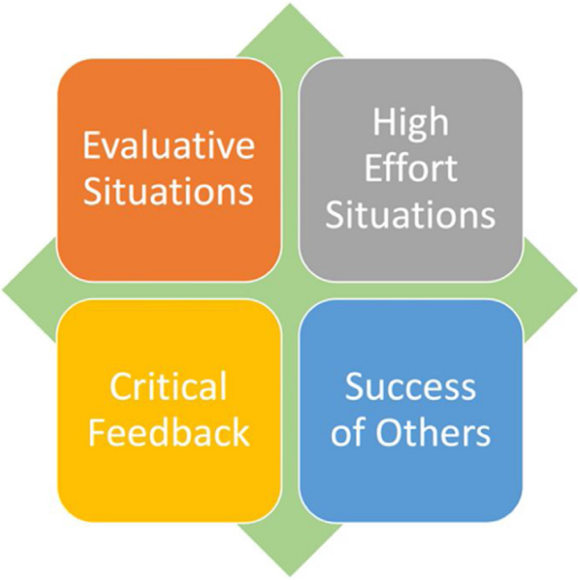

Fig. 3. Four Mindset Triggers: Evaluative situations, high effort situations, critical feedback, and the success of others.

For other people and in different organizational contexts, evaluative situations move people toward their growth mindset. These people wonder "How can I use this opportunity to learn and better my ideas?" As they prepare their work, people who are triggered into the growth mindset adopt learning goals—they focus on ways to structure their work so that they can seek feedback and learn from others; their primary goal is to improve the ideas, products, or services they are creating (Nussbaum & Dweck, 2008). To this aim, they might source different material for their presentation or report. Of course, they might feature the successes to date, but they also might describe some of the challenges and struggles they faced along the way—as well as the challenges they are currently contending with to source input, feedback, and strategies to overcome them. As they prepare, they are likely to leave plenty of time for questions and comments because they know that the feedback process could enhance the project. They are also likely to create a more psychologically safe environment when delivering their work product—where people are willing to speak up and candidly share their thoughts (e.g., Edmondson, 2018) – because they know that people must feel comfortable critiquing and sharing ideas if they are really going to understand where the product's weaknesses lie and source ideas for how to address them. Thus, individuals who are triggered into the growth mindset by evaluative situations often structure their work to meet their goals of learning, developing, and improving rather than focusing on looking smart to others.

High-effort situations

A second common mindset trigger is high-effort situations. High-effort situations are often novel situations where the amount of effort required to do something well is substantial—demanding lots of dedication, attention, and energy. We see these kinds of situations in the workplace when contributors are asked to shift to a new team or when managers move to a new division. In these contexts, people must learn an entirely new approach, strategy, or field quickly. The amount of effort required to master a new workflow, product, service, or division is great and will require people to put in more time and energy than they typically have had to exert in the areas they have already mastered at work. These high-effort situations can trigger people into their fixed or growth mindset.

Some people can be triggered by high-effort situations into their fixed mindset. Many times, this is because people endorse the lay belief that effort and ability are negatively correlated (Blackwell et al., 2007). That is, if one has to try hard and exert a lot of effort when doing something, it must mean that they lack strong natural ability. These effort-ability beliefs can make effortful situations particularly challenging for people because they keep people from pursuing new, demanding tasks and roles for fear that they might reveal a lack of ability.

Others can be triggered into their growth mindset by high-effort situations. These individuals often endorse the lay belief that the only way to improve and get ahead is to challenge themselves and put forward lots of effort when pursuing their goals. These individuals believe that effort and ability are positively correlated. That is, they believe that when one puts forward a lot of effort, they grow their abilities. People who are triggered into the growth mindset by high effort situations seek out demanding, effortful tasks and roles because they feel that these tasks and roles will develop their skills and abilities. In fact, people who are triggered into the growth mindset by high effort situations can often feel dissatisfied or bored by situations that do not require a lot of effort – because they feel that easy, effortless situations do not afford the chance to develop or grow.

Critical feedback

A third mindset trigger is critical feedback. Different from when people are in preparation mode and anticipate the *possibility* of positive or negative evaluation from others, critical feedback situations are those in which people actually *receive* critical feedback. Critical feedback can make many people defensive (e.g, Belding, Naufel, & Fujita, 2015; Nussbaum & Dweck, 2008; Trope & Neter, 1994) but research shows that defensive and dismissive responses often occur because critiques trigger people toward fixed mindset beliefs (Nussbaum & Dweck, 2008). Yet, we also see that some people respond to critical feedback with an eagerness and resolve to learn from critiques and to use them to improve. Thus, as with evaluative situations and high-effort situations, critical feedback is a situational trigger that can move people into their fixed or growth mindset.

For some, critical feedback triggers people into their fixed mindset. If this is someone's fixed mindset trigger, it is often because they interpret the critiques as being about them – rather than about their work or behavior. Through the lens of the fixed mindset, critical feedback can be experienced as pronouncement on whether one is good or bad at a task, or even whether one is a good or bad person. The fixed mindset says that people either have innate natural ability or they lack it – and there's not much they can do to change their abilities. If this is so, then critical feedback is particularly threatening because it impugns one's abilities with no recourse for improvement.

For others, critical feedback triggers them into their growth mindset. These individuals relish and seek out critical feedback because they perceive it as an opportunity to learn and grow. Rather than serving as an indictment about one's fixed level of ability, critical feedback is seen as a way to assess where more effort or different strategies or approaches would be useful to advance and improve their outcomes. Through the lens of the growth mindset, critical feedback provides essential information about where weaknesses in one's work or approach may lie – weaknesses that are important to identify in order to strengthen and bolster the work. People who are triggered into the growth mindset by critical feedback often feel annoyed or frustrated when supervisors, peers, or work partners shy away from providing it – or when feedback is not specific and actionable. Vague feedback is especially frustrating because, while it is often provided by well-meaning colleagues who wish to preserve one's feelings or self-esteem, it stymies one's ability to learn, grow, and improve.

The success of others

The last mindset trigger is the success of others. These situations are ones where a colleague or peer achieves some level of success – such as receiving a raise, bonus, or promotion – or is otherwise held up and awarded. These situations often set off comparative processes in which people compare themselves to those that are lauded. In these moments of comparison, people can be triggered into their fixed or growth mindset.

When people are triggered by the success of others into their fixed mindset, they view others' successes as indictments on their own abilities. They see someone being praised and think to themselves, "I'll never be able to accomplish what they've done" or, "I'll never be seen as a star here." These zero-sum beliefs—that the success of others undermines one's own prospects—can undermine effort and persistence at work. If I can never be as good as Sally, why should I try? We see people withdrawing effort and disengaging from work tasks when they are triggered into the fixed mindset by the success of others (Blackwell et al., 2007; Dweck & Leggett, 1988; Rhodewalt, 1994).

Other people are triggered into their growth mindset by the success of others. These individuals are inspired by others' successes and they see these exemplars as illuminating possible paths and strategies to achieve their own success. Rather than feeling defeated or disengaging, we see people who are triggered into their growth mindset by the success of others seeking out those who have been praised or awarded and asking them how they achieved their success in hopes of learning strategies that they might authentically embody to pursue their own goals. Thus, the success of others signals to people that success is possible and inspires them to learn and adopt new strategies to increase the chances that they too can be successful.

Why triggers matter

Understanding one's own mindset triggers can provide a helpful lens through which to view one's motivation, engagement, and behavior. Most people can identify at least one or two of these triggers in various situations they've encountered in the workplace. By recognizing and labeling these triggers for ourselves we can more often catch when we are triggered into the fixed mindset at work and create situations where we are triggered more often into the growth mindset.

It is also important to identify and understand the mindset triggers of those we work with, supervise, and manage. If I know that my direct report, David, is triggered into his fixed mindset by critical feedback, I will provide that feedback in a different way –

perhaps by assuring him that I believe in his skills and abilities and that I am providing this feedback to help him develop even further. By lessening the threat posed by these mindset triggers and shaping the ways in which we interact with each other, we can create workplace environments that shift everyone more often toward the growth mindset where productive engagement becomes the norm at work.

While people can be triggered into their fixed and growth mindsets at work, beliefs about the malleability of intelligence and ability can also come to shape a group's, team's or even an entire organization's behavior and outcomes. Understanding how mindset beliefs operate at the individual and organizational level is important for creating growth mindset cultures in the workplace.

Organizational mindsets

Although most research has examined mindset at the individual level, research has increasingly shifted to examining mindset at the organizational level. Organizational mindsets are communicated via the policies, practices, and procedures of an organization and by powerful people (e.g., leaders, managers) in an organization. These messages signal how a group, organization, or team thinks about the nature of people's talent and ability (Murphy & Dweck, 2010). As with personal mindsets, organizational mindsets operate on a continuum and organizations and groups can endorse more of a fixed mindset, more of a growth mindset, or lie somewhere in between. Moreover, as with personal mindset beliefs, organizational mindsets are malleable. Organizations that endorse more fixed mindset beliefs communicate that people's talent and abilities are relatively fixed and unchangeable; people either "have it" or they don't and there is little they can do to change this. In contrast, organizations that endorse more growth mindset beliefs communicate that people's abilities can be developed with time, effort, and good strategies.

Organizational mindsets can manifest at multiple levels of organizational hierarchies, including among teams, divisions, managers, executives in the C-suite, as well as through the organization's policies and practices more broadly. For instance, a single organization may have an overarching mindset (for example, as communicated by its company mission statement or by its institution-wide evaluation and promotion procedures) and at the same time, there can be microcultures within the same organization that vary in their organizational mindset. One team in marketing might endorse strong growth mindset beliefs; but another team in accounting might endorse more fixed mindset beliefs.

To illustrate how organizations can embody the fixed and growth mindset, consider a few well-known companies. First consider Theranos, the now infamous blood testing company known for its unparalleled fundraising success and promise that belied years of fraud, which eventually led to its shutdown. According to investigative journalist John Carreyrou, who broke the story of comprehensive fraud in 2015, Elizabeth Holmes, Theranos's CEO, viewed herself through the lens of the fixed mindset (Carreyrou, 2018). She saw herself as a natural genius – as "the next Steve Jobs." She cultivated an image of brilliance and natural talent that convinced many powerful investors and government officials to support her venture. Indeed, Holmes and her COO, Ramesh "Sunny" Balwani, were so obsessed with showing that they had what it took to create a breakthrough technology that they engaged in massive deception about their product's effectiveness. Together, they worked to silence anyone who criticized or expressed misgivings about the product or her company.

Fixed mindset organizations, like Theranos, focus on the importance of raw, natural talent above qualities like effort, persistence, and learning from mistakes. Companies who embody the fixed mindset often demonstrate their mindset beliefs by spending considerable time, resources, and effort identifying, recruiting, and rewarding those they believe to be the most gifted and talented. Because they recruit those who they believe to be "stars" in their fields, fixed mindset organizations are unlikely to put much effort into the growth and development of their employees—and do not tolerate mistakes or setbacks. As in the Theranos example, we will later see that fixed mindset organizations often suffer from problematic norms of fierce interpersonal competition (e.g., employees trying to best each other to reap the rewards of the organization) which often result in unscrupulous and unethical behaviors including hiding and hoarding information, cutting corners, and cheating – the very behaviors that took Theranos, Holmes, and Balwani down.

In contrast to Theranos, consider Barre3, an international fitness company founded by Sadie Lincoln that started as a single fitness studio in 2008. Early in her career as CEO of Barre 3, Lincoln sent out a company-wide survey and received harsh criticism of her leadership. Faced with this criticism, Lincoln could have been triggered into her fixed mindset. She could have hidden the information or, perhaps, given up her role as CEO. Instead, she moved toward her growth mindset. Lincoln decided to share the data with the entire company and she created a plan to grow and improve. She modeled the mindset culture that she wanted to enact by regularly meeting with her team to get their feedback on whether and how she was improving as a leader. Ultimately, through this process, she and her team created a growth mindset culture—"a culture where everybody's allowed to fail and to fall from grace. To own it and then pull ourselves back up" (DiTrolio, 2019). Today, Barre3 encompasses 140 studios and an online streaming service that reaches nearly 100 countries. In the words of Lincoln, "now we are growing and learning together more than we have in our past 11 years" (DiTrolio, 2019).

Growth mindset organizations like Barre 3 tend to value and reward traits such as dedication, improvement, and learning from mistakes. Whereas fixed mindset organizations focus on finding and rewarding employees with natural abilities, growth mindset organizations focus on improving and developing the abilities of their employees—including their leaders. And, as we'll see later, employees value this emphasis on their growth and development; studies show that employees express greater trust and commitment to companies that espouse more growth (vs. fixed) mindset beliefs and practices (e.g., Canning et al., 2020; Murphy & Dweck, 2010).

Organizational mindset: core beliefs and behavioral norms

Organizational mindsets can powerfully affect the broader cultures of organizations (Canning et al., 2020). Indeed, drawing on Schein's "core beliefs" model of organizational cultures (Schein, 2010), recent research has theorized that organizational mindsets comprise a core organizational belief (Canning et al., 2020). Core beliefs are implicit assumptions that guide people's perceptions and behaviors in organizations and, in so doing, shape the organization's cultural norms—that is, the standards for behaviors and interactions that occur within organizations (O'reilly & Chatman, 1996; Sørensen, 2002).

For instance, when fixed mindset beliefs constitute one of the core beliefs of an organization, it suggests to people within the organization that "some people have it and some don't," and that those perceived to "have it" are likely to be more valued and rewarded there. In these organizations, employees are likely to behave in ways that demonstrate their talents and abilities – proving and performing in order to be judged as "the best" in their team or organization more generally (Murphy & Dweck, 2010).

These goals and behaviors in turn influence the social and behavioral norms in the organization. For instance, pressure to showcase their smarts may lead employees to compete with one another rather than collaborate, to avoid taking on innovative or risky tasks (because they might fail), or even to engage in unethical behaviors such as cutting corners or hiding mistakes – all because they are pressured to show that they have the natural talent and ability that the (fixed mindset) organization prizes. These social and behavioral norms create and contribute to more negative company cultures. Indeed, in one recent study, the mission statements of Fortune 500 companies were coded for fixed or growth mindset language and then matched with Glassdoor culture data (Canning et al., 2020). Companies that included more fixed mindset language in their mission statements had more negative company cultures as reported by employees of those companies, than did companies that included more growth mindset language in their mission statements. Follow-up studies revealed that, relative to growth mindset organizational cultures, fixed mindset organizational cultures were characterized by more negative behavioral norms. Employees in more fixed mindset organizations reported less collaboration, less innovation, and more unethical behavior as normative in the company environment – norms that previous research suggest are critical for the success or failure of organizations (Chatman, Caldwell, O'Reilly, & Doerr, 2014; Hartnell, Ou, & Kinicki, 2011). Taken together, these findings suggest that organizational mindsets may set the foundation for the broad cultural norms and practices within organizations.

Organizational mindset's culture cycle

Organizational mindsets may be particularly important for organizational culture because these core beliefs can drive the behavior of people and those they interact with in a self-reinforcing cycle. Specifically, organizational mindsets can trigger what other scholars have described as a "culture cycle" (Markus & Conner, 2013; Markus & Kitayama, 1991) in which organizational mindsets (through their messages, policies, and practices) shape people's perceptions of the organization's mindset beliefs; which affects people's personal beliefs and behavior; which in turn shape the practices and policies of the organization (e.g., Murphy & Dweck, 2010; see Fig. 4).

In organizations that espouse more of a fixed mindset for instance, people often choose to self-present their "smarts" (over other traits like motivation, dedication, and persistence) when they are initially applying to the organization – in order to get their foot in the door (Murphy & Dweck, 2010). At first, they might simply be giving the company what they perceive it wants – the traits and abilities that are signaled by the organization's mindset – in order to be hired. Once hired, however, people often feel pressure to continue to demonstrate the organization's fixed or growth mindset traits to earn positive evaluations and rewards such as bonuses, recognition, and promotions. Although it is possible that these behaviors may initially constitute strategic self-presentation, research suggests that by embodying these beliefs, people come to internalize the fixed or growth mindset values of the organization and, later, use it to reward others (Murphy & Dweck, 2010). As people progress through the ranks of the organization, perhaps taking on responsibilities for hiring or training new employees, they demonstrate the organization's mindset beliefs and values by selecting and rewarding others who display those same traits and beliefs. That is, people favor "matches" to the organization's core mindset beliefs, essentially reifying the organization's mindset. Indeed, research shows that after being hired and accepted by a fixed (vs. growth) mindset organization, people were more likely to later choose to hire another candidate who displayed their "smarts" during a job interview over a candidate who displayed their dedication and motivation (Murphy & Dweck, 2010).

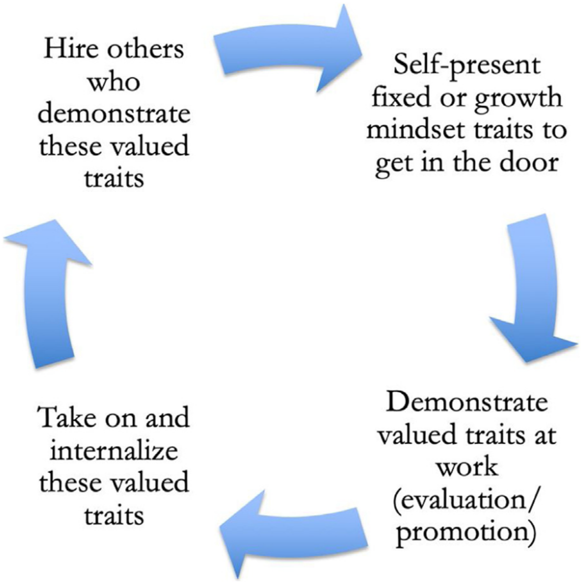
Hire others who demonstrate these valued traits
Self-present fixed or growth mindset traits to get in the door
Demonstrate valued traits at work (evaluation/ promotion)
Take on and internalize these valued traits

Fig. 4. Organizational Mindset Creates and Reifies Cultural Values and Behavior (Murphy & Dweck, 2010).

The culture cycle works similarly when an organization endorses more growth mindset beliefs. People initially self-present more growth mindset traits – such as their motivation, dedication, and a history of overcoming obstacles – to gain initial access to the organization; once accepted, people display these valued traits to reap the rewards of the organization (Murphy & Dweck, 2010). Over time, people come to internalize these growth mindset beliefs and behaviors and come to see them as even more important to the organization's culture, which results in choosing and hiring others who display growth mindset beliefs and behaviors as these individuals are perceived as constituting a cultural match to the organization (Murphy & Dweck, 2010).

Organizational mindsets shape people's psychological experiences, motivation, and performance

How do organizational mindsets and the culture cycles they create shape the experiences and outcomes of individuals in organizations? Recent research suggests that organizational mindsets can influence peoples' broad psychological experiences in organizations, which can in turn influence their performance, persistence, and engagement. For example, in workplace settings, employees tend to distrust and show weaker commitment to fixed mindset organizations relative to growth mindset organizations (Canning et al., 2020). In college and university settings, students who perceive that their professor endorses fixed mindset beliefs experience more psychological vulnerability in class. That is, when students perceive their professor to endorse more fixed mindset beliefs, those students experience a lower sense of belonging, greater evaluative concerns, greater feelings of being an imposter in that professor's class, and greater negative affect (Muenks et al., 2020). Importantly, these experiences of psychological vulnerability undermine students' motivation, engagement, and performance in their classes (Muenks et al., 2020). In particular, students who perceived that their professor endorsed more fixed mindset beliefs reported more psychological vulnerability, which in turn predicted greater dropout intentions, lower class attendance, lower interest and engagement, and lower course grades (Muenks et al., 2020; see Fig. 5)

Fixed organizational mindsets create a context of stereotype threat

Fixed organizational mindsets are particularly problematic because they tend to have disparate impact for members of groups that are negatively stereotyped along the dimensions of intelligence and ability (Canning, Muenks, Green, & Murphy, 2019; Emerson & Murphy, 2014, 2015). If fixed mindset policies and messages communicate the idea that "some have strong natural ability while others do not"—who are the haves and the have-nots? Long-held cultural stereotypes about talent and ability fill in these inferential gaps, impugning those who belong to groups that are negatively stereotyped along these dimensions of competence and ability (e.g., racial-ethnic minorities, women in business settings, women in STEM, etc.).

For instance, if powerful people in a tech company communicate the idea that ability and intelligence is "fixed" – some people have it and some don't – our cultural stereotypes tell us who is more likely to have that fixed ability. Indeed, managers, executives, and investors are likely to use their prototypes for success and consciously or unconsciously match individuals to that prototype. Given what success looks like in many tech companies, that prototype is likely to be of a certain age (young), gender (male), race (White), class (middle to upper class), and academic background (elite). Thus, it is not surprising that people perceive that fixed mindset companies are more likely to value and promote White (and sometimes Asian) men – who are positively stereotyped to have natural abilities in STEM – more so than women, Black, Latinx, and Native individuals (e.g., Emerson & Murphy, 2015; LaCosse, Murphy, Garcia, & Zirkel, 2020). Indeed fixed organizational mindsets can cause individuals from negatively stereotyped groups to wonder whether they will be valued, respected, and treated fairly by fixed mindset organizations – creating a context of stereotype threat where people who belong to negatively stereotyped groups wonder and worry about whether they will be judged through the lens of those cultural stereotypes (e.g., Spencer, Logel, & Davies, 2016; Steele, 2011; Steele, Spencer, & Aronson, 2002). These stereotyping and evaluative concerns may lead people from underrepresented groups to avoid fixed mindset organizations if given a choice. And, when they find themselves within a fixed mindset organization, these individuals may trust the organization less, disengage from it, perform below their potential (due to the stereotyping and evaluative concerns), and perhaps even leave the organization altogether (e.g., Canning et al., 2019; Emerson & Murphy, 2015; LaCosse et al., 2020).

How would we know that fixed (vs. growth) mindset organizations create contexts of stereotype threat for people from underrepresented and structurally disadvantaged groups? We should expect to see similar effects of stereotype threat as we do in the literature – that is, we should see lower trust, motivation, and performance – among individuals from negatively stereotyped groups (e.g. Spencer, Steele, & Quinn, 1999, 2016; Steele, 2011; Steele et al., 2002; Steele & Aronson, 1995), but more so in the context of *fixed mindset organizations* and less so in the context of *growth mindset organizations*.

A growing body of research provides evidence for these stereotype threat processes. For example, one series of studies found that women who were exposed to a business consulting organization that espoused fixed mindset beliefs about people's leadership abilities reported less trust and comfort and more concerns about being negatively stereotyped by people within the organization compared to women exposed to a growth mindset organization and compared to men exposed to either organization (Emerson & Murphy, 2015). Moreover, women were more disengaged when preparing for an interview with the fixed (vs. growth) mindset organization. Mediational analyses revealed that women's expectations about being stereotyped by the fixed mindset organization increased their mistrust of it and this helped explain why women disengaged more when preparing to interact with a representative from the fixed mindset organization (Emerson & Murphy, 2015). That is, if people expect the organization to view them through the lens of negative group-based stereotypes, they aren't confident that they will get a fair shot during the interview process, so why spend time preparing for a process perceived as rife with bias?

In the domain of educational organizations, and consistent with the stereotype threat underperformance hypothesis, more recent research found that the achievement gaps between underrepresented racial minority (URM) students and non-URM students was nearly twice as large in STEM courses taught by professors who self-reported more fixed mindset beliefs relative to courses taught by professors who self-reported more growth mindset beliefs (Canning et al., 2019).

Taken together this research suggests that fixed mindsets – especially when communicated by powerful individuals in an organization, such as supervisors, executives, and faculty in classrooms– can engender and exacerbate group-based inequalities, and may ultimately limit the organization's ability to attract, recruit, and retain members of underrepresented groups.

How can organizations create growth mindset cultures?

What can organizations do to create and sustain growth mindset cultures? Much more research is needed on this point. However, an important first step in this process is to measure and identify the ways that organizational leaders (e.g., team leaders, managers, C-suite executives) and organizational practices and policies signal fixed and growth mindset beliefs – and to help these

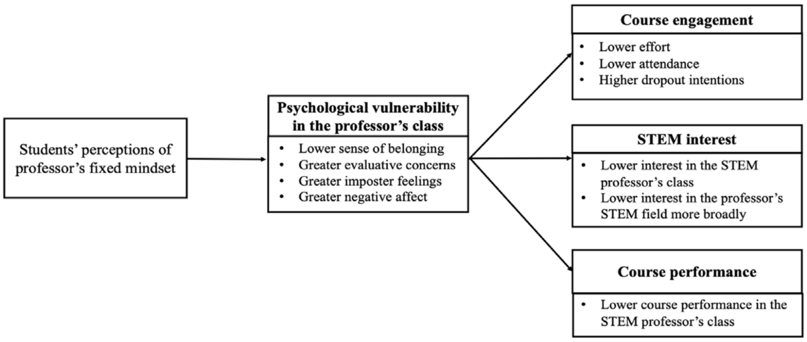
Students' perceptions of professor's fixed mindset
Psychological vulnerability in the professor's class
Lower sense of belonging
Greater evaluative concerns
Greater imposter feelings
Greater negative affect
Course engagement
Lower effort
Lower attendance
Higher dropout intentions
STEM interest
Lower interest in the STEM professor's class
Lower interest in the professor's STEM field more broadly
Course performance
Lower course performance in the STEM professor's class

Fig. 5. Students' perceptions of their professors' mindsets influence their experiences of psychological vulnerability, engagement, interest, and performance in the professor's course (Muenks et al., 2020).

leaders understand their personal mindset triggers and the triggers of their teams. Which situations trigger the fixed mindset among these individuals? Which trigger the growth mindset among them? Helping leaders create contexts that nudge themselves and the people they work with towards the growth mindset will shape the organization's mindset as a whole because their beliefs and behaviors – and the policies and practices they create – have an outsize impact on workers' perceptions of the organization's mindset.

We have also found it useful to educate leaders about research on the fixed and growth organizational mindset and how these organizational mindsets shape people's motivation, behavior, and performance. It is particularly important for leaders to understand the role they play in shaping the organization's mindset through what they say and do and through the policies, practices, and procedures that they put in place at their organization. Leaders have found it useful to survey employees to understand the extent to which they perceive the organization (or their team, division, or supervisor) to endorse more fixed or growth mindset beliefs. In our experience, employees are often quite aware of value-implementation gaps when it comes to organizational culture. Thus, asking employees what the organization purports to value and what it actually values and rewards can reveal places where the expressed mindset beliefs are inconsistent with the social, behavioral, or evaluative norms and values on the ground. Finally, employees can often identify specific practices, policies, and procedures that signal more of a fixed or growth mindset within the company. We have found it useful to work with organizations to conduct what we call a "cues audit" in which employees within the organization take time to consider the policies, practices, and procedures that they regularly encounter and voice the ways in which these organizational functions communicate a fixed or growth mindset. These groups then brainstorm ways the organization may shift these organizational functions to support more of a growth mindset culture within the company. Much more research is needed to understand the range of situational cues that signal fixed or growth mindset beliefs within organizations – and many cues are likely to be context specific – however, research has documented at least three cues that signal an organization's mindset to both outside observers and employees within companies.

One cue that signals an organization's mindset is its values or mission statements (e.g., Canning et al., 2020; Emerson & Murphy, 2015). Explicit messages about an organization's views about talent and ability and its learning (or performance) goals are often found in these guiding principles and documents. For example, organizations that explicitly describe themselves as single-mindedly focused on performance; that wish to recruit only the best, most talented people are likely to be perceived as endorsing more of a fixed mindset (Canning et al., 2020; Emerson & Murphy, 2015). In contrast, organizations that describe themselves as focused on growth and development; and that seek to recruit and retain motivated, passionate employees by providing opportunities that will help and inspire them to reach their full potential are likely to be perceived as endorsing more of a growth mindset. Company websites (Emerson & Murphy, 2015) and messages from organizational leaders (Murphy & Dweck, 2010) also signal an organization's mindset. Thus, leaders can begin to evaluate their organization's mindset by evaluating their mission statements, websites, and leadership communications and reflecting on the mindset beliefs that underlie these core organizational documents – and how those beliefs are shaping behavior within the organization in intended and, perhaps, unintended ways.

Although the existing research literature has primarily focused on mission statements, websites, and leader communications, we suspect that many different organizational functions communicate an organization's mindset. For example, because organizational mindset is tied to certain behavioral and social norms on the ground (Canning et al., 2020), these norms are a good place to look to discern an organization's mindset. For instance, managers may signal their mindset through the ways they interact with contributors or vendors. In educational settings, faculty are perceived as more fixed-minded when they tell struggling students that not everyone can be good at a certain skill or task (like math), even if the professor intends the statement to be supportive or reassuring to students. Instead, those who normalize struggle and communicate its value to the learning process communicate more of a growth mindset (Rattan, Good, & Dweck, 2012). In some organizations, teams have embodied the growth mindset by beginning meetings with a round of "roses and thorns" – in which the team celebrates its recent successes and shares its current struggles or challenges that the group then rallies to support. Normalizing challenges and providing regular opportunities to openly discuss them and to seek help from others are signs that a team embodies the growth mindset because it signals that the team believes that its members' skills and abilities can be developed and that challenges can be overcome through support and collaboration.

Organizational mindset likely shapes and is communicated through policies, practices, and procedures that span organizational functions – including organizations' recruiting and hiring processes, training and onboarding processes, evaluation and promotion processes, and more (see Fig. 6). During recruitment and hiring processes, for instance, organizations may signal their fixed or growth mindset beliefs in the kinds of qualifications and desired characteristics they describe in their job advertisements and in the interview procedures and questions that are posed to candidates. Organizations also signal more fixed mindset beliefs about ability and talent when they primarily recruit from elite schools and environments and when they require cognitive or aptitude tests and heavily weigh these results in their selection decisions (to the absence of other criteria such as willingness to develop and distance traveled).

In onboarding and training processes, fixed mindset organizations are not likely to offer much formal training and developmental guidance for employees; instead assuming that talented employees will figure out how to succeed on their own. In contrast, growth mindset organizations offer ample opportunities for training and guidance across the career lifespan and they expect employees to continually develop and strengthen their skills and abilities. We worry, for example, that some common approaches to workforce development such as "strengths-based approaches" (e.g., Buckingham, Clifton, & others, 2001; Clifton & Harter, 2003), in which employees are encouraged to discover their strengths and weaknesses and then devote the bulk of their time, energy, and resources toward their strengths (while avoiding their weaknesses) may unwittingly communicate a fixed mindset about people's talents and abilities. A more growth-oriented approach would encourage people to go deeper and really master existing strengths while at the same time finding ways to address and

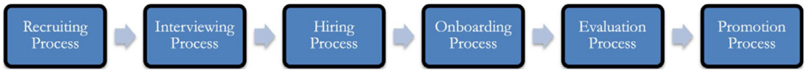

Fig. 6. Organizational processes that may communicate fixed and growth organizational mindsets through their policies, practices, and procedures.

develop their weaknesses by taking on projects and assignments that require them to experiment with different strategies and develop new strengths. This growth mindset approach communicates the idea that one's strengths are not static and unchanging, but instead evolving and changing as people put time, energy, and attention to cultivate them.

Feedback is another way that organizations signal their mindset and thus, evaluation and promotion processes are likely to be rife with cues to an organization's mindset. In educational settings, praising children for their intelligence and the outcomes they achieve can shift students towards the fixed mindset, whereas praising students' process and learning strategies can shift them towards the growth mindset (Gunderson et al., 2013; Mueller & Dweck, 1998; Pomerantz & Kempner, 2013). Drawing from this work, companies are likely to communicate a fixed mindset when they evaluate and reward employees based solely on their outcomes – did they achieve their goals (or not). In contrast, companies are likely to signal more of a growth mindset when their evaluation and reward structures take into consideration the extent to which employees seek out and acquire new skills, take on stretch assignments, overcome challenges and obstacles, seek critical feedback, and continually push themselves to learn and grow. Even the way that performance evaluations are framed may communicate an organization's mindset. Framing evaluations as "performance assessments" designed to diagnose employees' strengths and weaknesses may communicate more of a fixed mindset, whereas framing evaluations as "progress reports" designed to identify areas for development and improvement may communicate more of a growth mindset. Finally, organizational mindset could play a significant role in an organization's investment and development strategy. Satya Nadella, CEO of Microsoft, declared Microsoft the first growth mindset company when took the helm and prioritized the turnaround of the company's culture (Shibu & Lebowitz, 2019), and the principles of the growth mindset shaped his investment strategy as well. Knowing that there were several directions the organization could take, Nadella decided to take a growth mindset approach by investing in several promising areas—including artificial intelligence and cloud computing—understanding that not all of investments would likely pan out, but that the organization would benefit from learning from both the successes and the failures (Nadella, Shaw, Nichols, & Gates, 2017).

Although some studies have begun to explore these possibilities, more research is needed to examine the ways in which organizational mindset shapes, and is communicated through, a broad range of organizational functions. Doing so will help identify the ways that organizations may be unintentionally communicating a fixed mindset and yield insights into how organizations can create and sustain growth mindset cultures.

Agenda for future research on mindsets in organizations

There is much more to learn about the role of mindsets in shaping organizational behavior. In the following sections, we outline what we think are the most promising future directions for research on individual and organizational mindsets in the workplace.

Conceptualizing and measuring mindset in organizations

One of the challenges facing researchers and practitioners is how to measure and assess mindset in organizations. Dweck's scales (1999) assessing people's personal mindset beliefs have been empirically validated and widely used in educational settings and have been useful in organizational settings as well. However, as the construct of growth mindset has become popularized in educational settings, teachers and administrators have learned what the "right" answers are to these questions. While many teachers endorse growth mindset beliefs on these scales and say that they use growth mindset to inform their teaching practices, when interviewed or observed there is often a disconnect between their espoused beliefs and their practices (Buttrick, 2019). As the mindset concept becomes more popular in organizational settings, it will be important to remain vigilant for similar self-presentation concerns and behaviors. Anticipating this, future research could create and validate more behavioral measures that assess how people respond in various situations (e.g., evaluative situations, high-effort situations, etc.). These types of measures may be more fruitful in not only illuminating people's mindsets but also how their mindset beliefs shape their motivation and behavior.

When it comes to measuring an organization's, division's, or team's mindset, there are several viable approaches that merit further investigation. For example, researchers and organizations can measure the mindset beliefs of supervisors, leaders, and other powerful people in the organization to examine how the mindsets of these powerful individuals influence the ways they lead and interact with employees in the organization and the policies and practices that they create and implement. When assessing the mindset of teams or divisions in an organization, it is possible to aggregate individuals' mindset beliefs into a composite or construct structural equation models that allows individuals' mindset beliefs within groups to be examined together and used to predict the groups' outcomes. Another way to examine mindset in groups may be to differentially weight each team member's mindset by their status in the organizational hierarchy (e.g., whether they are a manager, supervisor, contributor, etc.) as the mindset beliefs of powerful individuals have been theorized to be more influential in shaping the group's organizational mindset compared to the mindsets of individual contributors (e.g. Murphy & Dweck, 2010; Emerson & Murphy, 2015; Canning et al., 2020). Each of these ways of examining mindset could be suited to different research questions—examining mindset in the aggregate when examining the mindset of teams in a relatively flat organization vs. examining a team's mindset in organizations where there are clear team leaders who have more power to control the team's resources or outcomes. However, each of the methods relies on self-reported mindset, and as we reviewed above, self-report measures of mindset can be limited. Our research suggests that people's perceptions of the mindset beliefs of powerful people within organizations (e.g., leaders, supervisors; teachers or professors in classrooms) can be more predictive of people's psychological experiences, motivation, and performance in a setting than are the self-reported beliefs or behaviors of those powerful individuals (e.g., Muenks et al., 2020). Put another way, employees' *perceptions* of their supervisor's, team's, and organization's mindsets are likely to be better predictors of their experiences, motivation, and performance than are self-report measures from powerful individuals within the organization.

Another way we have investigated organizational mindsets is through analysis of the policies, practices, mission statements, and leadership messages of an organization. There are several viable methods to assess organizational mindset by examining these kinds of cultural artifacts within organizations. We often work with organizations to conduct "cue audits", as mentioned above. During these audits, we work with organizations to assess how the language and messages communicated by various policies or practices (e.g., job ads, interview processes, onboarding processes, evaluation and promotion policies) might be serving as a subtle or unintentional situational cue—signaling to employees that the organization has more of a fixed (or growth) mindset in that area of operation. Asking employees about how certain messages and policies within the organization might signal more of a fixed or growth mindset has helped organizations see their policies and practices in new light—and this process illuminates concrete levers to change the policies and practices that signal more of a fixed mindset.

We have also employed text analysis and machine learning algorithms to investigate how language in company materials (e.g., websites, mission statements) signals a fixed or growth organizational mindset to perceivers. For example, in a series of studies, we used semantic text analysis and independent coders to code the mission statements of the Fortune 500. Each company received a mindset score based on the language in their statements. We found that these mindset scores predicted the company's culture as reported by their employees on GlassDoor; organizations that employed more growth mindset language in their mission statements had more positive company cultures than did those who had more fixed mindset language (Canning et al., 2020, Study 1). Further, taking the most fixed- and most growth-minded mission statements, we showed these statements to adults who would soon be looking for employment. We found that not only could people discern the organization's mindset from these materials, they also expected to have significantly different and more negative social and psychological experiences in the fixed (vs. the growth) mindset companies. They also reported trusting the fixed mindset companies less and anticipated being less committed to them if they joined these companies (Canning et al., 2020, Studies 2–3).

There is much less research that examines the "middle" level of analysis—how personal and organizational mindsets operate in dyads and small groups. To date, very few studies have examined this directly. One notable exception is Laura Kray and Michael Haselhuhn's series of studies that examined how people's personal mindset beliefs about negotiation ability—whether one is a natural-born, gifted negotiator, or whether negotiation is a skill that can be learned—affects the goals that people pursue, the strategies they use, and their performance during negotiations. In a powerful demonstration, Kray and Haselhuhn (2007) manipulated people's mindset beliefs within dyads by exposing different dyads to materials that either communicated that negotiation ability is fixed or malleable. They found that dyads who adopted more of a growth mindset prior to a negotiation task performed better than did those who adopted more of a fixed mindset. Finally, in a real-world application, Kray and Haselhuhn measured MBA students' more chronic mindset beliefs about negotiation and examined how these beliefs influenced students' abilities to negotiate in a challenging integrative bargaining task that often ends in failure. What they found was that the more a dyad endorsed growth mindset beliefs about negotiation, the more they persevered in the face of challenge and developed more integrative solutions. These more growth-minded dyads were more likely to go beyond negotiators' stated positions, expand the pie, and construct deals that addressed the parties' underlying interests. Thus, mindset in dyads seems to be an important predictor of interpersonal negotiation, problem solving, effective strategy development, and performance. Of course, the field could benefit from more research that examines how mindset operates in other dyadic and team-based contexts within organizations.

As technology and research methods progress, we anticipate that there will be more ways to assess both individual and organizational mindset. One note of caution that we feel compelled to sound: while it will likely be tempting for companies to use mindset measures as a selection tool, we strongly discourage this practice. First, this assumes that a single measurement (if using classical scales) is representative of a person's mindset beliefs—and we know that this is not always the case, as discussed above. Companies that use these tools to assess a candidate's mindset are falling into the false growth mindset trap of assuming that some people "have" fixed mindsets, while other people "have" growth mindsets when we know that everyone has both and that different situations variously trigger us into our fixed or growth mindset. Also, by using these scales as a selection tool, organizations must create cut-off scores or dichotomize responses to sort people into high or low fixed or growth mindset "buckets." This would be a wrong-headed approach for the reasons described above—both because it is not congruent with how the construct of mindset is conceptualized, nor is it validated from a statistical and measurement perspective.

Instead, we encourage companies to turn inward to assess how their policies, practices, procedures, and leadership messages are likely to trigger employees into their fixed or growth mindsets. If companies wish to assess the mindset beliefs of their employees it is best to do so as a developmental tool for both the employee and their manager so that the manager knows the situations likely to trigger the employee into their fixed mindset and can help support employees move toward their growth mindset more of the time at work.

Relating organizational mindset to other organizational behavior constructs

There are several constructs and theories in organizational behavior that complement the idea of organizational mindset. In particular, the scholarship of Amy Edmondson and colleagues on *psychological safety* in teams is highly relevant. As defined by Edmondson, psychological safety describes people's perceptions about the consequences of taking interpersonal risks in group settings, such as in the workplace (e.g., Edmondson, 1999, 2018). When dyads, teams, and environments are psychologically safe, people feel comfortable speaking up with ideas, questions, concerns, or mistakes. In extensive research, Edmondson and colleagues have shown that psychological safety enables teams and organizations to learn (e.g., Carmeli, Gilat, & Waldman, 2007; Carmeli & Gittell, 2009; Edmondson, 1999; Tucker, Nembhard, & Edmondson, 2007). For example, in research conducted with hospital intensive care units seeking to implement new practices, researchers found that psychological safety was associated with greater learning orientation (specifically, the desire to "learn how"– not to "learn what") which explained the units' implementation success (Tucker et al., 2007). In another study, Edmondson, Bohmer, and Pisano (2001) showed how cardiac surgeons can create high or low levels of psychological safety with their teams, and this psychological safety allowed more successful implementation of a new technology for minimally invasive cardiac surgery.

Both psychological safety and growth mindset cultures have the potential to promote individual and organizational learning. Psychological safety means that it will feel acceptable to speak up, disagree, raise important questions and critical information without the fear of punishment or reprisal. Growth mindset cultures encourage learning and development as a core value. In growth mindset environments, norms, policies, practices, and leadership directives are put in place to explicitly motivate learning through specific behaviors and processes (e.g., making mistakes; taking on new challenges; seeking help and advice when stuck; persisting after setbacks; valuing distance traveled and obstacles surmounted rather than simply rewarding ultimate outcomes).

In many ways, psychological safety seems a necessary condition for growth mindset cultures to take root, but is it sufficient? If people do not feel comfortable speaking up, asking questions, and raising concerns, then learning will be stymied. However, it is possible that psychological safety may not be sufficient for growth mindset cultures to reach their potential in creating organizations that continually improve, innovate, and develop. Just because people feel comfortable speaking up does not mean that employees, managers, and executives will be motivated to proactively look for ways that they—and the organization—can learn, improve, and develop. Many concerns and critiques may be raised in environments that are psychologically safe, but that does not necessarily mean that those concerns and critiques will be useful for or used by those in power to spur learning and development.

We believe psychological safety sets the foundation that allows people to speak up, but a growth mindset organizational culture (with its incentivizing policies, practices, and norms) may be necessary for people to actively look for ways to improve themselves and their organization. When growth mindset organizations have a climate of psychological safety they will speak up about ways to improve. Indeed, in environments with both a growth mindset culture and psychological safety, people are likely to be more innovative, creative, and more likely to rapidly iterate and learn because the growth mindset values and behaviors motivate people to look for ways to improve (and for problems that block growth and development) and psychological safety means that people will actually speak up about those insights and ideas. In fact, it is difficult to imagine what growth mindset organizations with low psychological safety would be like. We imagine this would be akin to what Carol Dweck (2015) has termed “false growth mindset” because the growth mindset values espoused by the organization would be in conflict with people’s ability to actually speak up and raise concerns that could improve the organization. We are currently examining these ideas empirically. In ongoing research, we are collaborating with Edmondson and her team to empirically examine the links between organizational mindset, personal mindset, and psychological safety in the context of a large, international oil and gas company.

Applying personal mindset research in the workplace

Beyond measurement and construct relation, there is much more to learn about how research on people’s personal mindset beliefs can be applied in workplace contexts to improve outcomes for both individual employees and organizations as a whole. First, it will be important to expand our knowledge of how people’s personal mindset beliefs shape their experiences in organizations. Although previous research has documented the effects of individuals’ mindset beliefs on outcomes such as self and other-appraisals, workplace motivation and engagement, and performance, future research should explore the role of mindsets across a broader set of outcomes. Outcomes such as workplace well-being, commitment, and retention may be particularly important to organizational researchers and leaders. In addressing these questions, researchers should not only examine the correlation between measured mindsets and organizational outcomes, but also establish causal links between these variables by manipulating individuals’ mindset beliefs situationally. For instance, research in educational settings has shown the causal role of growth mindset beliefs on students’ outcomes via rigorous randomized controlled trials in which students are randomly assigned to growth mindset programs or control activities (e.g. Yeager et al., 2019; Paunesku et al., 2015; Blackwell et al., 2007). However, individual-focused mindset interventions have not yet been widely tested in organizational settings. Thus, a promising next step for research on people’s personal mindset beliefs in organizational settings will be to develop, implement, and evaluate large-scale, randomized controlled trials of individual-level growth mindset interventions in workplace contexts, paying particular attention to the effects of such interventions on employees’ overall well-being, commitment, performance, and retention in the organization over time.

In addition to examining the overall effects of people’s personal mindset beliefs on organizational outcomes, it will also be important to examine *when* and *where* individual-focused mindset interventions will be most impactful. More specifically, future research should examine which organizational functions and divisions can best take advantage of and benefit from mindset research. For example, there is a clear connection between mindset research and human resource functions in organizations. An understanding of mindsets may be beneficial to human resource departments in several ways. Companies could perhaps incorporate growth mindset workshops into HR trainings and modules. Building employees’ growth mindsets through these HR programs may allow organizations to increase employees’ well-being, motivation, and engagement, reduce burnout and turnover, and ultimately create more effective organizational cultures. Mindset research may be relevant to a number of other organizational functions as well. For instance, how do leaders determine their organizational strategy? As in the case of Microsoft (Shibu & Lebowitz, 2019), mindsets may help explain what agendas and goals organizations choose to prioritize. Whereas organizational leaders with more of a fixed mindset may prioritize ventures that are less risky and perhaps less innovative, organizational leaders with more of a growth mindset may choose to take on more innovative ventures that yield better outcomes in the long run.

As researchers seek to develop, implement, and evaluate individual-focused growth mindset interventions in workplace settings, it will be important to learn from the example of such interventions in the education domain. Mindset researchers have stressed the importance of specific contextual factors in determining whether or not mindset interventions lead to meaningful changes in motivation and behavior (Reeves et al., 2020; Walton & Yeager, 2020). For instance, in educational settings, it is important that students not only believe that their abilities and intelligence can grow, but also that they have access to institutional supports and resources that actually allow that growth to occur (Walton & Yeager, 2020). Indeed, new research on the effects of a national direct-to-student growth mindset intervention found that students with teachers who endorsed more fixed mindset beliefs changed their beliefs in response to the growth mindset intervention, but their subsequent math grades did not rise. Students with teachers who endorsed more growth mindset beliefs, however, showed effects on both beliefs and higher grades at the end of the year (Yeager et al., in press). Such institutional resources and learning orientations may be more prevalent in educational contexts, where the overarching goal is to help students learn and grow. In contrast, companies often have broader goals beyond supporting their employees’ learning and growth, such as profitability, fundraising, product development, market share, etc. Thus, the institutional supports and resources necessary to make an individual-focused growth mindset intervention credible and to sustain its effects may be less prevalent in many workplace settings. It may be important, then, to combine individual-focused growth mindset interventions with other organizational efforts to expand employee supports, resources, and developmental opportunities and to shape leaders’ mindset beliefs.

What should the content of individual-focused growth mindset interventions in the workplace look like? Most growth mindset interventions in education have focused on global intelligence and ability. In the workplace, however, interventions that focus on specific, relevant skills may be more impactful. Indeed, much of the research on individual mindsets in organizations thus far has focused on specific skills such as networking skills (Kuwabara et al., 2020), negotiation skills (Kray & Haselhuhn, 2007), or entrepreneurial ability (Burnette et al., 2019). Following from this, organizational researchers may find it useful to tailor growth mindset interventions to the skills and abilities that are relevant to a particular workplace context, or even to specific divisions or positions within a workplace context. For instance, for people in positions where communication is important, an intervention that focuses on how one can grow their communication skills may be more effective than an intervention that focuses on growing one's general intelligence.

Applying organizational mindset research in the workplace

There is also much to learn about applying organizational mindset research in the workplace. One particularly promising direction is to develop and empirically evaluate the efficacy of small and larger-scale strategies for shifting an organization's mindset. A large amount of empirical research in the education domain has focused on direct-to-student growth mindset interventions (for a review, see Dweck & Yeager, 2019) to help students adopt a growth mindset in school. However, no published studies have examined how to transform the mindset of a classroom, school, or district as a whole. We believe that there may be at least two critical challenges in developing broadly applicable organizational mindset interventions in the workplace.

The first among these challenges is that it is difficult for any program or intervention to succeed in changing organizational culture without gaining the support and buy-in from leaders and contributors within an organization. Thus, a critical first step in developing organizational mindset interventions is to investigate the factors that persuade and motivate organizations to make meaningful changes to their workplace cultures (Alvesson & Sveningsson, 2015; Poole, Ven, & V. de, 2004).

There are at least three catalysts that might motivate organizations to reflect on and shift their mindset culture. First, we know that organizations are highly attuned to external social pressures and norms (Strand, 1983). For instance, many organizations showed increased interest in programs and strategies to foster diversity and inclusion following the Black Lives Matter movement and the murders of George Floyd, Breonna Taylor, Ahmaud Arbery, and other Black citizens. To the extent that fixed organizational mindsets stifle diversity and inclusion (e.g., Canning et al., 2019; Emerson & Murphy, 2014), researchers and practitioners may find it useful to leverage the interest and needs of organizations to garner support for organizational culture change initiatives—including organizational mindset. Organizational change may also be motivated by the actions and behaviors of individuals within the organization. For instance, organizational leaders and executives may be particularly influential in establishing support for organizational change (Bommer, Rich, & Rubin, 2005). Thus, it may be useful to capitalize on support from high-level individuals within an organization to motivate buy-in throughout the ranks of the organization more broadly. The third factor that may be important in motivating companies to reflect on and shift their mindset culture is social comparison. Specifically, organizations are likely highly motivated to keep pace with other similar organizations, in terms of diversity, innovation, growth, and more. Thus, highlighting discrepancies between particular organizations' mindset cultures and their peers may be another effective strategy for promoting organizational change.

The second major challenge concerns how to implement organizational mindset interventions with fidelity across a variety of organizational contexts. Given the variability of organizations in terms of size, structure, industry, etc., there may not be an effective "out of the box" intervention to transform organizational mindset. Organizational researchers may find it necessary to create new, tailored interventions for each new organizational context. Rather than developing a "one-size fits all" organizational mindset intervention, researchers may find it more useful to develop a set of guidelines and procedures for tailoring organizational mindset interventions to different organizational contexts. For example, as noted above, because organizational mindsets are often communicated to employees through practices, policies, and procedures, a useful first step may be to conduct a mindset cues audit. Organizations could use the results of these audits to identify the most problematic fixed mindset practices and change or eliminate them, while also identifying the most beneficial growth mindset practices and working to adopt or expand them.

These mindset audits may also prove useful in identifying growth mindset microcultures within the broader organization. Even the most fixed mindset companies are likely to have pockets of growth mindset somewhere in the organization (e.g. in a particular division or team). For instance, even if an organization as a whole tends to endorse more of a fixed mindset, one particular team may show strong growth mindset norms and behaviors. Identifying these areas and using them to create internal-facing growth mindset case studies that feature the best growth mindset practices may be useful for inspiring more growth mindset cultures and practices throughout the broader organization. For instance, researchers could conduct focus groups with individuals and leaders who comprise these growth mindset pockets and identify how they successfully signal and embody a growth mindset culture through their actions, norms, and practices. These growth mindset features can then be used as a model for the broader organization. Once such levers for change are identified, it will be important to rigorously test these changes to understand the extent to which they shift people's personal beliefs, their perceptions of the organization's mindset, and their motivation, behavior, and performance.

Interplay between individual and organizational mindsets

A final future direction for mindset research in organizations is to integrate research on individual and organizational mindsets. Although these two traditions of mindset research have remained relatively separate thus far, uniting them will likely illuminate more complete understandings of how mindsets shape organizational outcomes. For instance, examining the interactive effects of personal and organizational mindsets on employees' experiences and outcomes in organizations may be a particularly fruitful area of research. Given previous research showing that people's personal growth mindsets can buffer them from the negative effects of personal threats and challenges (Aronson et al., 2002; Nussbaum & Dweck, 2008), it is possible that holding a growth mindset at the individual level could buffer people from potential threats posed by fixed organizational mindsets. While our research suggests that both fixed and growth mindset individuals are more attracted to growth (vs. fixed) organizations (e.g., Murphy & Dweck, 2010), it will be interesting to explore how individuals whose personal mindset beliefs match or mismatch the organization's mindset fare in the organization. While fluency effects might be expected whereby people experience a greater sense of organizational "fit" and ultimately more positive outcomes (e.g., Fulmer et al., 2010) when people hold the same mindset beliefs as their organization (even if those beliefs are fixed), it is also possible that fixed mindset contexts may be particularly harmful for individuals who personally endorse more fixed mindset beliefs because this puts even more pressure on individuals who believe that ability is fixed quality to perform flawlessly and prove their worth.

Future research should also integrate organizational and individual mindset research by examining how people's individual mindsets are shaped and influenced by the organizational mindsets of their teams and company. We have argued that organizational mindsets might play a particularly important role in organizational culture because organizational mindsets can initiate a culture cycle (e.g., Murphy & Dweck, 2010), in which the organization's mindset beliefs are sustained over time. However to date, only a few studies have examined the processes through which this culture cycle occurs (see Murphy & Dweck, 2010). It is possible that organizational mindsets are sustained through a process of organizational socialization (e.g., Louis, 1980), in which individuals tend to assimilate to the mindset beliefs held by powerful people within the organization over time. This may be particularly true for people who identify strongly with the organization (Hogg & Terry, 2000), who are relatively high on self-monitoring tendencies (Snyder, 1987), or who are relatively uncertain of their mindset beliefs at baseline (Wallace, Murphy, Hernandez, & Fujita, 2020). If individuals do, in fact, take on the mindset beliefs of their organizations, it will also be important to examine the processes through which this socialization process occurs. For instance, some organizations may use formal socialization tactics, such as onboarding programs in which newcomers are explicitly informed about the core beliefs, values, and norms in the organization (Bauer & Erdogan, 2011). The mindset socialization process may also occur through more implicit and informal processes, such as in the day-to-day interactions newcomers have with others in the organization. Following from these possibilities, we suggest that examining whether, when, and why people take on the mindsets of their organizations will be an important task for future research.

Mindsets in times of social upheaval

As we write this article, the world is still contending with the COVID-19 pandemic. The United States is deeply impacted by not only this pandemic, but also by racial and social upheaval as it confronts its socially, culturally, and historically racist institutions and structures that disproportionately affect the health, safety, and wellbeing of Black, Indigenous, and People of Color (BIPOC). Companies around the world are pledging to turn inward and examine their processes to address racial and gender-based disparities within their organizations.

As we examine and interrogate our structures and institutions, organizational mindset should be central to this work. As we reviewed above, fixed organizational mindsets suggest that “some people have it and others do not.” Cultural stereotypes regarding which groups “have” innate, natural ability and talent favor White (and sometimes Asian) men over Black, Latinx, and Indigenous people as well as women. Indeed, fixed mindset organizations are more likely to be what we term “prejudiced places” (Murphy & Walton, 2013; Murphy, Kroeper, & Ozier, 2018). When we think of prejudice, we often think of individuals. According to this “prejudice-in-people” view, the task of equity-focused organizations is to identify and root out the “bad apples”– that is, the prejudiced people. However, *places* can be prejudiced as well. Prejudiced places are contexts with predictable, systematic inequalities in experience and outcomes based on people's social group memberships—advantaging people from some social groups and disadvantaging people from others (Murphy & Walton, 2013; Murphy et al., 2018). In fixed mindset settings, women and people of color expect to be stereotyped as less competent and they experience lower feelings of belonging and inclusion. Thus, they trust fixed mindset organizations less than growth mindset organizations (Emerson & Murphy, 2015; LaCosse et al., 2020). Our “prejudice-in-places” model illuminates sources of inequality that might otherwise be overlooked if we solely focus on the “prejudice-in-people” model that has dominated academic research and organizational approaches. By examining how norms, values, policies, practices, and procedures suggest that some groups have innate ability and talent while others do not, we will identify “hidden” sources of bias that can be changed. When we start crediting people's growth and development—qualities like distance traveled and willingness and motivation to develop—in addition to their skills and abilities, we will discover “hidden” talent. These growth mindset organizations will be more likely to attract and retain talented individuals from underrepresented and structurally disadvantaged backgrounds. Critically examining our *Cultures of Genius* and replacing them with *Cultures of Growth* is one step toward mitigating the disparities and underrepresentation of women and people of color across the ranks in American organizations.

Conclusion

The fixed and growth mindset can play a role in people's personal and organizational outcomes in at least two levels of organizations – at the individual level (i.e., people's personal mindset beliefs) and at the organizational level (i.e., in the policies, practices, procedures, messages, and norms of an organization that signal the organization's mindset). Organizations and those who work in them should attend to both personal and organizational mindsets – knowing that both shape people's motivation, engagement, behavior, and performance at work. Much more research is needed to examine how these personal and organizational mindsets interact; however, what is clear is that these core beliefs within organizations are critically important to shaping people's experiences and performance within companies. By examining our personal mindset triggers and the triggers of those we interact with and by building growth mindset beliefs and behaviors into our policies, practices, and procedures, organizations can develop more motivated and effective workers and leaders as well as more effective company cultures, norms, and interactions that inspire greater trust, commitment, equity, and organizational success.

Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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