

Stereotype Threat in Organizations: Implications for Equity and Performance

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Abstract

Over the past 20 years, a large body of laboratory and field research has shown that, when people perform in settings in which their group is negatively stereotyped, they may experience a phenomenon called stereotype threat that can undermine motivation and trust and cause underperformance. This review describes that research and places it into an organizational context. First, we describe the processes by which stereotype threat can impair outcomes among people in the workplace. Next, we delineate the situational cues in organizational settings that can exacerbate stereotype threat, and explain how and why these cues affect stereotyped individuals. Finally, we discuss relatively simple empirically based strategies that organizations can implement to reduce stereotype threat and create conditions in which employees and applicants from all groups can succeed.

INTRODUCTION

Stereotype threat is a situational phenomenon that arises when people face the prospect of being viewed or evaluated in light of a negative stereotype about a group they belong to (Steele & Aronson 1995). When a woman performs in a technology setting, for instance, she may know that, if she performs poorly, other people could view her performance as confirming a negative stereotype about women and technology. This prospect is psychologically threatening. A significant body of research demonstrates that, under certain boundary conditions—especially when the person believes that his or her ability is being evaluated and when he or she is “identified with” (i.e., cares about) the domain of evaluation (Steele 1997, 2010)—stereotype threat can cause people to perform less well than they are capable of performing (Inzlicht & Schmader 2012, Walton & Spencer 2009).

The situational nature of stereotype threat means that anyone can experience stereotype threat if a group they belong to faces a negative stereotype in the situation at hand. It is not an experience restricted to members of minority or chronically low-status groups. In the workplace, stereotype threat can occur in the context of (a) preemployment assessments of constructs associated with group differences in performance, such as women taking math, science, or technology tests; ethnic minorities taking cognitive ability tests; older workers applying for jobs in innovative, fast-paced organizations (e.g., technology); and White men in math contexts where Asians are stereotyped as superior; (b) performance evaluations for promotion, salary raises, and other decisions, such as when women are considered for senior leadership positions in male-dominated fields; and (c) everyday workplace exchanges, such as when minority-group members share ideas at a team meeting. Because evaluative contexts are ubiquitous in the workplace and because individuals’ livelihoods and often their self-concepts are inextricably affected by being valued and respected in the workplace (Kray & Shirako 2012), the potential for stereotype threat effects in work contexts is great.

Before reviewing evidence about stereotype threat in the workplace and potential remedies for it, we review the basic tenets of stereotype threat theory and key findings in other contexts. Our review focuses on stereotype threat as well as social identity threat more broadly. The former refers to the worry that one could confirm or be seen as confirming a negative stereotype about his or her group (Steele 1997, 2010). The latter refers to broader situational cues that signal that one’s identity may be devalued in a setting (Murphy & Taylor 2012, Purdie-Vaughns et al. 2008, Steele et al. 2002).

What Affects Whether and When Stereotype Threat Will Occur?

In general, stereotype threat occurs when a negative stereotype about a group one belongs to exists in a context or setting and when cues elicit or fail to remove this threat. Basic theory put forth by Steele (1997, 2010) highlights the conditions that create the risk of stereotype threat: (a) A consistent stereotype exists that group members are aware of (e.g., that alleges that women are bad at math), (b) a task one is engaged in is viewed as diagnostic or evaluative of the skill or ability that is negatively stereotyped (e.g., of math ability), (c) the task is difficult (“at the frontier of one’s skills,” p. 108; Steele 2010), and (d) the individual cares about performing well and identifies with the stereotyped group to some extent. These factors, which may vary in degrees of magnitude, help determine whether stereotype threat arises in a given context.

In workplace contexts, these conditions are often, although not always, present, as many work tasks and interactions contain some level of evaluation and individuals in general care about being seen as competent and effective workers (Roberson & Kulik 2007, Ryan & Sackett 2013). Perhaps the one boundary condition that sometimes goes unmet in the workplace is that of task difficulty. If

individuals perform familiar and routine work or are placed in jobs that contain little challenge, stereotype threat may be less likely to affect their performance. However, many jobs in today's workplace not only involve challenging tasks but have demands related to the rapidly changing environment, which makes work less likely to be routine or easy (Roberson & Kulik 2007).

When people enter settings in which a group to which they belong faces a negative stereotype, they tend to be vigilant for cues indicating that others may view them through the lens of a negative stereotype (see Garcia & Cohen 2012). This vigilance does not necessarily translate into stereotype threat. It rather sensitizes people to cues about whether their identity is at risk. If cues effectively take the stereotype off the table, conveying a sense of identity safety, people may not experience threat (Steele & Cohn-Vargas 2013). But as we describe below, many common cues in workplace contexts can signal to people that they could be evaluated negatively or marginalized because of a group they belong to. Exposure to these identity contingency cues makes stereotype threat more likely.

Who Experiences Stereotype Threat?

As noted above, stereotype threat is a general phenomenon; it is not simply a consequence of low social status but rather an experience that can be felt by anyone in a circumstance in which a group the person belongs to faces a negative stereotype. Thus, although past stereotype threat research has focused primarily on women in math, science, and engineering settings and on African American and Hispanic students in academics generally, researchers have also shown that stereotype threat can arise in other contexts. For example, it can undermine memory performance among the elderly (Hess et al. 2003), verbal test performance among people from low social-class backgrounds (Croizet & Claire 1998), the quality of gay men's interactions with preschool-aged children (Bosson et al. 2004), and the performance of White men on a math test said to assess why Asians are so good at math (Aronson et al. 1999). It has even been shown to weaken the golf performance of Whites on a putt-putt task said to assess "natural athletic ability" and that of Blacks on the same task when it was said to assess "sports intelligence" (Stone et al. 1999).

In diverse work settings, then, employees with specific group identities, including racial-ethnic and gender identities as well as other identities (e.g., nationality; language; work status, such as expatriate, temporary work visa, or permanent resident; religion) may experience stereotype threat if a particular identity of theirs is associated with a negative stereotype in that environment. Further exploring how different groups experience stereotype threat in diverse work settings is an important direction for future research.

What Processes Underlie Stereotype Threat?

Summarizing dozens of laboratory experiments conducted by researchers around the world, Schmader & Beilock (2012; see also Schmader et al. 2008) describe a model by which stereotype threat triggers a network of affective and cognitive processes to undermine performance on challenging cognitive and social tasks. The model highlights both the physiological stress that results from stereotype threat and a process by which people closely monitor their task performance. In this process, people experience a cycle—perhaps better termed a cyclone—of negative thoughts, emotions, and appraisal processes (e.g., if I do poorly, will they think people like me can't do this; I'll show them we can do it; am I doing well enough?). To focus on the task at hand, people try to suppress this monitoring process and emotional response. This suppression itself, however, takes up needed working-memory resources and undermines executive functioning, which ultimately weakens performance on challenging tasks.

What Are the Effects of Stereotype Threat?

The primary consequence of stereotype threat investigated in the literature is underperformance on diverse challenging tasks, including on tests adapted from standardized tests (e.g., GRE, GMAT, and SAT), intelligence tests, subject-specific tests (e.g., engineering tests), memory tests, emotional-sensitivity tests, and physical (e.g., athletic) tasks (for reviews, see Steele 2010, Steele et al. 2002). More than 400 studies have found that stereotype threat can cause people to underperform relative to their ability; correspondingly, cues that remove stereotype threat can cause members of stereotyped groups to perform better, often significantly so (e.g., Spencer et al. 1999, Steele & Aronson 1995). How large is the stereotype threat effect? Four meta-analyses suggest that, on average, it is moderate in size. First, in the context of examining other questions within portions of the literature, two meta-analyses estimated the stereotype threat effect as approximately one-half of a standard deviation ($g = 0.45$ and 0.64 with 28 and 39 studies; Walton & Cohen 2003 and Walton & Spencer 2009, respectively). A larger meta-analysis (116 studies) found an effect size of $d = 0.26$ (Nguyen & Ryan 2008). (Hedge's g and Cohen's d are different effect-size indicators, but they are highly correlated.) A fourth meta-analysis of 259 experiments again found a one-half-standard-deviation effect ($g = 0.54$) (V.J. Taylor & G.M. Walton, unpublished manuscript). This effect is relatively robust across the wide range of populations and contexts represented in the literature; however, the relative effect of stereotype threat as compared to other factors will vary in different settings. Regardless of its specific magnitude, this range of effect-size estimates suggests that stereotype threat can have a significant impact in the lives and outcomes of individuals and the organizations in which they work.

In addition to task performance, stereotype threat can affect other outcomes of importance in organizational contexts. When people attempt to learn in stereotype threat circumstances, they tend to learn less effectively and efficiently (Grand 2012, Rydell et al. 2010, Taylor & Walton 2011). Other behaviors affected by stereotype threat include how people seek out and respond to feedback (Cohen et al. 1999, Roberson et al. 2003), negotiate (e.g., Kray et al. 2001), and interact with others (Goff et al. 2008, Richeson & Shelton 2012).

In the original theoretical description of stereotype threat, Steele (1997) hypothesized that, in addition to task underperformance, repeated exposure to stereotype threat can lead to disidentification and disengagement over time (for related evidence, see Woodcock et al. 2012). In the workplace, this could include outcomes such as job dissatisfaction, a lack of organizational commitment, absenteeism, less engagement in organizational citizenship behaviors, counterproductive behavior, and turnover.

What Is the Evidence for Stereotype Threat Effects in the Workplace?

Although research on the effects of stereotype threat on performance are well established in the laboratory and in educational contexts (Massey & Fischer 2005, Nguyen & Ryan 2008, Walton & Spencer 2009), they have been investigated to a lesser extent in employment-testing contexts (see Sackett & Ryan 2012 for a review). Given the sizeable body of research on group differences in employment testing (Hough et al. 2001), the role of stereotype threat as a contributing factor to such differences has been a subject of considerable speculation but relatively little direct empirical investigation in actual hiring contexts (see Chung et al. 2010; Kirnan et al. 2009 for exceptions). Interestingly, stereotype threat has also been relatively unexplored in actual employee performance evaluation contexts, although evidence of ethnic-group differences in performance ratings provides a rationale for investigating stereotype threat as a possible contributor (see Roberson et al. 2007 for a review on bias in performance appraisal). As we describe below, there is a considerable

body of evidence regarding cues in the workplace that signal identity threat, so, despite a lack of direct evidence testing the contribution of stereotype threat to underperformance in job contexts, the likelihood of such effects is high.

Antecedents of Threat in the Workplace: Identity Contingency Cues

Stereotype threat and social identity threat heighten vigilance to situational cues in the local environment as members of stereotyped groups seek information about whether their group is valued and accepted there (Garcia & Cohen 2012, Murphy & Taylor 2012, Murphy et al. 2007, Steele et al. 2002) (see **Table 1**). Some situational cues—like the numeric underrepresentation of a negatively stereotyped group—evoke identity threat by suggesting that one’s group membership may be a source of stigma or marginalization. Environments that contain cues like these are considered identity threatening (Cohen & Garcia 2008, Murphy et al. 2007). Notably, such cues can cause threat even in settings in which people are generally nonprejudiced and well intentioned (Murphy & Walton 2013), as cues can have negative meanings even when such meanings are not intended. Other cues, by contrast, signal identity safety by suggesting that group membership is not a barrier to inclusion or success. These identity safety cues suggest to individuals that their social group is welcomed and respected and not a barrier to advancement (Davies et al. 2005, Singh et al. 2013, Steele & Cohn-Vargas 2013). In the organizational literature, positive climates for diversity or inclusive workplace climates (Herdman & McMillan-Capehart 2010, McKay et al. 2007) would be considered identity safe. In these settings, people who face negative stereotypes may be able to relax their psychological and physiological vigilance and perform without the impediment of identity threat (Cohen & Garcia 2008, Murphy et al. 2007).

Research and theory on identity contingency cues draw directly on a basic lesson of social psychology: the importance of subjective construal. As Ross & Nisbett (1991, p. 12) write, “The impact of any ‘objective’ stimulus situation depends upon the personal and subjective meaning that the actor attaches to that situation. To predict the behavior of a given person successfully, we must be able to appreciate the actor’s construal of the situation—that is, the manner in which the person understands the situation as a whole.” As with all social-information processing and all objects of judgment, identity contingency cues gain meaning in part from the perspective from which they are viewed. For members of stereotyped groups, this perspective includes the risk of devaluation in a setting as a consequence of a widely known stereotype. Women know that in math contexts people could judge their gender group negatively should they perform poorly; as a result, evaluative math tasks can be threatening for women. Men do not face this risk, so they do not experience the same threat (Spencer et al. 1999). When an African American person receives critical feedback on his work, he faces the possibility that this feedback could result from bias or reflect a stereotypical judgment; a White person does not face this possibility, so the event, even if negative, does not have the same identity-threatening meaning for him (Cohen et al. 1999). Because the meaning of cues depends on the vantage point of perceivers, cues that seem insignificant to a majority-group person can nonetheless have strong meanings and large effects if they tap into the concerns of people who face the possibility of group-based devaluation (e.g., Cheryan et al. 2009, Walton & Cohen 2007). Consider a recent reflection from Michelle Obama about her experience entering college:

When I first arrived at school as a first-generation college student, I didn’t know anyone on campus except my brother. I didn’t know how to pick the right classes or find the right buildings. I didn’t even bring the right size sheets for my dorm room bed. I didn’t realize those beds were so long. So I was a little overwhelmed and a little isolated. (Obama & Obama 2014)

Table 1 Identity contingency cues

Identity-threatening situational cue	Psychological concern engendered by the cue	Outcomes examined	Ways to mitigate threat
Numeric underrepresentation	Will I represent my group well? Will I be able to disprove negative stereotypes?	Motivation, executive functioning, physiological responding, belonging, performance	Cultivate critical mass throughout the organization's ranks; provide same-group mentors and sponsors.
Interpersonal cues, including incivility and negative nonverbal behavior and treatment	Am I respected and valued in this organization?	Motivation, belonging, performance	Develop clear and consistent policies and consequences of this behavior.
Critical feedback	Is the supervisor biased and applying stereotypes to me?	Motivation, belonging, performance	Explicitly convey that critical feedback reflects the organization's high standards coupled with a statement expressing confidence that, with revision, the employee can meet this standard.
Color-blind diversity statements and policies	Does the organization value me and my group's cultural background and respect ways we may be different?	Belonging, performance	Value diversity; use all-inclusive multicultural statements and policies.
Fixed-ability beliefs and messages	Does the organization believe I (and my group) have (has) what it takes to be successful?	Motivation, belonging, performance	Encourage growth-mindset beliefs and messages.
Ambient cues, including stereotypical objects and depictions in the physical environment	Do I (and my group) belong here? Am I (are we) valued by the organization?	Motivation, belonging, performance	Incorporate diverse, inclusive images and nonstereotypical objects in the physical environment.
Ambiguous hiring and promotion practices and procedures	Will this company discriminate against me? Will my group membership impede my progress in the organization?	Interest, motivation, belonging	Provide clear, unambiguous guidelines for hiring and promotion.
Selection tests	Are these tests fair to me and my group?	Motivation, performance	Place identity questions (e.g., race, gender) at the end of the test; represent such tests in ways that assure test takers that their performance will not be viewed as evidence for a negative group stereotype; conduct item-sensitivity analysis and remove problematic items.

It is striking that three decades later, after enormous personal success, the First Lady still remembers the feeling of isolation she experienced when she found that her sheets did not fit her college dorm room bed. Would misfitting sheets have carried the same meaning to a continuing-

generation, majority group student? Presumably not. When people enter settings that feel foreign, places where they might be judged or treated negatively or where they might not belong, they can be highly attentive to even subtle cues relevant to these concerns. A primary goal of research on stereotype and social identity threat is to map the subjective construals that common events in school and work contexts hold for members of stereotyped groups. Understanding these construals informs ways to structure environments so as to mitigate people's experience of threat and improve outcomes.

When people feel threatened in a setting, a host of problematic psychological and performance outcomes follow: They may conclude that they do not belong or fit there (e.g., Cheryan et al. 2009, Walton & Cohen 2007) or feel less trust and motivation and greater anxiety (e.g., Bosson et al. 2004, Emerson & Murphy 2015, Johns et al. 2008), and their executive functioning—critical for optimal performance—can be impaired (e.g., Beilock et al. 2007, Johns et al. 2008, Schmader & Johns 2003). In the workplace, experiences of identity threat produce gender and racial disparities in job and career aspirations (e.g., Cheryan et al. 2009, Correll 2004, Davies et al. 2005, Greenhaus et al. 1990, Niemann & Dovidio 1998). Employees who report greater levels of identity threat are perceived by supervisors as poor performers and as less suitable for promotion; they also show higher levels of turnover and absenteeism (Avery et al. 2007, Browne 1999, Greenhaus et al. 1990, Ilgen & Youtz 1986, James 2000, Kanter 1979, Landau 1995).

Given the importance of these outcomes, it is essential to understand how cues give rise to identity threat in workplace settings.

THREATENING CUES IN WORKPLACE SETTINGS

This section reviews the kinds of situational cues that can trigger identity threat. These include cues in the physical environment, such as numeric underrepresentation; interpersonal cues, such as incivility and critical feedback; and organizational policies and practices that signal the value the organization places on diversity, such as in diversity messages, and how the organization views intelligence and effort, such as in recruitment materials and hiring and promotion practices. The vast majority of this research is experimental; it randomly exposes a group of students to either one cue or another and assesses the causal effects.

As noted above, many identity contingency cues can be subtle—they need not overtly impugn the competence of stereotyped-group members or reflect bias or animus. Suppose a White supervisor provides substantive critical feedback to a Black employee with the best of intentions—say, to help the employee improve and become eligible for a promotion. Yet to the employee, unvarnished criticism could seem threatening—it could seem an indication that the supervisor views him or her as incapable of improvement. If, as a consequence, the employee responds poorly to the feedback, this may surprise and disappoint the supervisor. In some cases, the very subtlety and ambiguity of potentially threatening cues can make them especially taxing for people from stereotyped groups. Because subtle cues are harder to decipher than overt expressions of animus or bias, they require more cognitive labor to make sense of and can thus be more cognitively disruptive for recipients (Salvatore & Shelton 2007).

Cues in the Physical Environment

Both numerical underrepresentation and ambient cues in the physical environment signal to stereotyped individuals whether their identity is valued by an organization. Here, we describe research that demonstrates the effects of these cues on people's experiences of identity threat, motivation, physiology, and performance.

Underrepresentation. A primary trigger of identity threat is when stereotyped-group members lack critical mass in a setting. Critical mass refers to “the point at which there are enough minorities in a setting, like a school or workplace, that individual minorities no longer feel uncomfortable there because they are minorities” (Steele 2010, p. 135; see also Avery 2003, Cohen & Swim 1995, Duguid 2011, Ely 1995, Inzlicht & Ben-Zeev 2000, Kanter 1979, Niemann & Dovidio 1998, Roberson et al. 2003, Sekaquaptewa & Thompson 2002, Stoker et al. 2012). Underrepresentation can cause a host of negative psychological, motivational, and physiological outcomes. In one study, science, technology, engineering, and math (STEM) college students watched one of two videos for a summer science conference (Murphy et al. 2007). In one video, the gender representation of conference attendees reflected the ratio typically found in STEM disciplines—approximately three men to every woman. In the other video, gender representation was balanced (1:1). The results of the study revealed that women’s outcomes were significantly influenced by the representation, whereas men’s were not. In response to the gender-unbalanced video, women reported feeling as though they would belong less at the conference, expressed less interest in attending the conference, and showed a physiological stress response characterized by increased cardiovascular reactivity (Murphy et al. 2007). Other studies have further illuminated the harmful effects of performing in settings in which one’s group is underrepresented. These include higher blood pressure, anxiety, and depression (e.g., Blascovich et al. 2001, Jackson et al. 1995, Murphy et al. 2007, Osborne 2006). Underrepresentation also leads stereotyped-group members to discount critical feedback (Roberson et al. 2003), to expect to perform worse (Stangor et al. 1998), and to actually perform worse (e.g., Inzlicht & Ben-Zeev 2000). Finally, it undermines people’s trust and commitment to their organizations (Purdie-Vaughns et al. 2008).

One of the main problems with underrepresentation in organizations—both at peer and supervisor levels—is that it creates ambiguity that risks negative interpretation and construal. Why are there few employees like me here? Why are there few supervisors from my group? Does this mean that people like me cannot advance? Another problem stemming from underrepresentation is that it places undue, disproportionate pressure on individuals to disprove stereotypes and positively “represent” their group (Saenz & Lord 1989, Sekaquaptewa & Thompson 2003). Although individuals may try to cope with identity threat by behaving counter-stereotypically, research reveals that perceivers often attribute both stereotype-consistent and -inconsistent behaviors to factors that ultimately confirm and maintain group-based stereotypes (Sekaquaptewa et al. 2003). For example, a human resources officer may believe that a Black woman scored high on a cognitive ability test because she took a test-prep course, not because she is competent. Such patterns of attributions make stereotypes sticky. By contrast, nonstereotyped individuals are more often given the benefit of the doubt; their behavior is attributed to them as individuals (Sekaquaptewa et al. 2003).

Ambient cues. Another set of cues that can engender identity threat involves the physical makeup of the local environment. Walls lined with photos of senior executives that exclude women and people of color may cause members of underrepresented groups to doubt their prospects in the organization. Even more subtle ambient cues can evoke identity threat when they seem to confirm stereotypes about the setting and the kinds of people who succeed in it. Several studies found that when undergraduates completed questionnaires in a computer science room containing objects associated with a masculine, geeky stereotype of the field (e.g., Star Trek posters, video games, comics), women’s interest in computer science was lower than men’s. However, when these objects were replaced with neutral objects (e.g., nature posters, art, general interest books), women’s interest matched men’s (Cheryan et al. 2009). Women also expressed less interest in working at a technology company that projected a stereotypical physical environment, preferring a company

without stereotypical objects. Why do such physical cues have a large effect on women's professional motivations? Further studies showed that stereotypical objects signal to women that technology companies value men and masculinity—so women inferred that they would not fit in. Related research examined gender cues in job advertisements. This research found that online job advertisements for male-dominated areas used more words associated with male stereotypes (e.g., leader, dominant); in turn, the use of such words led people to view men as predominant in these work settings. This undermined women's anticipated sense of belonging and motivation to pursue these opportunities (Gaucher et al. 2011).

If organizations wish to attract and retain members of stereotyped groups, they should attend to their physical environments and the subtle messages they send about who belongs, is valued, and can succeed.

Interpersonal Cues

Many studies have found that stereotyped individuals are particularly attuned to the verbal and nonverbal behavior of dominant-group members because these behaviors communicate how stereotyped individuals are perceived (e.g., Dovidio et al. 2006, Hebl et al. 2002, Murphy et al. 2013). In modern society, the expression of prejudice has largely shifted from negative explicit attitudes—such as endorsements of racial inferiority and de jure segregation—to negative implicit attitudes and associations with stereotyped groups. These implicit attitudes predict relevant preferences and behaviors, such as the preference to associate with in-group members more than with out-group members (Dovidio & Gaertner 2004, Dovidio et al. 2002). Importantly, these different types of attitudes are reflected in people's verbal and nonverbal behaviors. For instance, explicit attitudes—the kinds of attitudes people self-report on questionnaires—are reflected in verbal behavior. Thus, people's explicit, largely egalitarian attitudes predict what people *say* to members of stereotyped groups. But their implicit attitudes and associations, which are often negative, tend to predict how they *behave* toward members of stereotyped groups (Dovidio et al. 2002, Hebl et al. 2002, McConnell & Leibold 2001). Thus, from the perspective of stereotyped individuals, modern prejudice is often communicated by a mismatch between positive verbal behavior (“You did great!”) and negative nonverbal behavior (e.g., sitting far away in the workplace cafeteria; leering at women). In the workplace, stereotyped individuals often attend to interpersonal behavior—people's verbal and nonverbal behaviors—to determine whether they will be valued and respected.

Subtle harassment and sexist treatment. Overt harassment and sexist treatment are clear signals that an environment is rife with prejudice and stereotyping—an unequivocal trigger of stereotype threat. Research over several decades has shown that when these interpersonal behaviors are present in the workplace, members of stereotyped groups suffer (e.g., Mueller et al. 2001, Schneider et al. 1997). This is the case for many stereotyped groups, including women, racial and ethnic minorities, and gay individuals (e.g., Bruce 2013, Kabat-Farr & Cortina 2014, Karsten 2006, Raeburn 2004, Schneider et al. 1997). However, harassment and sexist treatment in the workplace is not always blatant—expressed by catcalls, lewd jokes, or offensive posters in a cubical (e.g., Leskinen & Cortina 2014). It can also be expressed by more subtle nonverbal behavior, which simply conveys to recipients that they are not fully respected as work partners. In a series of studies, Logel and colleagues (2009b) found that male engineering students who scored high on a subtle measure of sexism made no overtly sexist, demeaning, or stereotypical verbal statements during a conversation with a female peer about engineering. However, their nonverbal behavior exhibited dominance and sexual interest. They sat closer to the woman than less sexist

men did, displayed a more open body posture (shoulders back, knees apart), and gazed more at her body. Women exposed to these behaviors performed worse on a subsequent engineering test than did women who interacted with nonsexist men. This was despite the fact that women liked the subtly sexist man more. He paid them more attention, after all, and this attention was not overtly hostile. However, his behavior put women in a role that undermined their task performance.

Logel and colleagues' (2009b) research was experimental and conducted in a laboratory. However, field studies show that interpersonal interactions can be threatening for women in professional environments, too. One experience-sampling study with STEM faculty members found that talking with male colleagues about research predicted greater work engagement among men; for women, by contrast, shoptalk with men predicted disengagement (Holleran et al. 2011).

Critical feedback. Workplaces thrive when people feel comfortable giving and receiving specific, critical feedback about how to improve. Indeed, substantive critical feedback is one of the most valuable resources for growth and improvement. However, the receipt of critical feedback is often marked by defensiveness and a loss of motivation. How can supervisors and mentors provide feedback in a way that sustains recipients' motivation? This problem, known as "the mentor's dilemma" (Cohen et al. 1999, Cohen & Steele 2002), is especially acute when people from majority groups give critical feedback to people from negatively stereotyped groups (e.g., men to women, Whites to people of color). Majority-group members generally want to avoid appearing prejudiced; as a consequence, they may withhold criticism from stereotyped individuals (Harber 1998). Stereotyped individuals are vigilant for potential instances of bias and may thus discount both positive and negative feedback when their group membership is known and could thus bias any feedback they receive (Crocker et al. 1991). Indeed, African American professionals are more likely to discount feedback in contexts in which they report experiencing stereotype threat (Roberson et al. 2003), and they may not seek out such feedback either, concerned that it may be taken as a sign of low ability or insecurity (Roberson et al. 2003, Williams et al. 1999). The mentor's dilemma thus doubly disadvantages members of lower status groups: It denies them access to potentially valuable critical feedback, and it creates an attributional context that leads them to discount feedback they receive.

Organizational Policies and Practices

An organization communicates its views about diversity through its policies, practices, and characterization of the skills and abilities required to do well and advance in the organization. An organization's diversity philosophy as well as the mindset about ability it conveys can signal to members of negatively stereotyped groups whether they are included and respected and thus influence people's experience of identity threat or safety.

Diversity philosophies. One way that organizations signal their support of racial and ethnic minorities in the workplace is through diversity philosophies included in company materials—on websites, in recruiting brochures, and in mission statements (e.g., Avery et al. 2007). Two diversity philosophies are among the most studied by social scientists: the color-blind philosophy and the multicultural philosophy (e.g., Ely & Thomas 2001).

A colorblind philosophy is the dominant philosophy in American workplaces, rooted in egalitarian norms and the protestant work ethic. It maintains that hard work and merit should be the primary metric of success at work and that differences in social status or group membership (e.g., race, gender, class, and sexuality differences) should not affect people's success or failure (Plaut et al. 2009). The goal of the color-blind philosophy is to unite people in an organization

regardless of their social group membership; it is therefore characterized by messages that emphasize commonalities and similarities between employees (Ely & Thomas 2001). Despite these well-meaning goals, research suggests that Black and Latino individuals often experience color-blind messages as exclusionary attempts to conceal important group differences (Bonilla-Silva 2006, Markus et al. 2000, Ryan et al. 2007), especially when such messages seem insincere (e.g., if promulgated by an organization that is not diverse; Avery et al. 2013, Purdie-Vaughns et al. 2008). Thus, color-blind messages can reduce trust and task engagement and undermine cognitive performance among stereotyped individuals (Holoien & Shelton 2012, Plaut et al. 2009).

A multicultural philosophy, by contrast, explicitly acknowledges that people from different social groups bring with them social and cultural differences and, further, represents these differences as a source of value and strength (Ely & Thomas 2001, Homan et al. 2007, Wolsko et al. 2000). Racial and ethnic minorities generally perceive multicultural philosophies more favorably because they welcome group differences (e.g., Bonilla-Silva 2006, Markus et al. 2000, Ryan et al. 2007). Yet, when organizations endorse this approach, majority-group members can feel excluded if they see their group left out of celebrations and events that value diversity (Brief et al. 2005, Kalev et al. 2006, Mannix & Neale 2006, Thomas 2008).

Most recently, a new diversity philosophy has been gaining attention. Termed all-inclusive multiculturalism (AIM), this philosophy explicitly stresses that diversity includes everyone—majority and minority groups alike (Plaut et al. 2011, Stevens et al. 2008). Organizations signal this message by including both majority and minority groups in images of company diversity and by inviting cross-group dialogue that acknowledges and respects the perspectives of both groups (Stevens et al. 2008). So far, research on AIM suggests that it reduces identity threat among minority- and majority-group members and that majority-group members feel more included in organizations that endorse this approach, relative to those that endorse the multicultural philosophy (Plaut et al. 2011).

Organizational mindsets about ability. Another identity-threatening message that organizations may communicate to employees is the idea that ability and talent is fixed—you either have it or you don't—and, moreover, that ability is held by only a select few (Murphy & Dweck 2010). This fixed organizational mindset can become part of an organization's culture in which some groups or divisions are thought to "have it," whereas others do not. Fixed mindset companies emphasize high performance over growth and learning, and employees feel they must constantly prove their ability and worth. Alternatively, companies can endorse a mindset that emphasizes personal growth and development through effort and hard work. This growth organizational mindset suggests that all employees are capable of succeeding if they apply themselves, seek ways to improve and develop, and receive appropriate training and support. Organizational mindsets can be communicated through mission statements that profess companies' values (e.g., *smarts, intelligence, and innate talent* versus *growth, development, and motivation*) and through evaluation and promotion metrics that assess and reward talent and performance over development and improvement. A prototypical example of a fixed organizational mindset is that of Enron. Enron was, according to McLean & Elkind (2003, p. 36), a company that prized "sheer brainpower" above all else, where the task of sorting out intellectual "stars" from the "merely superbright" was the top priority when making hires and promotions. It was an environment in which one of the most powerful executives was described as being "so sure that he was the smartest guy in the room that anyone who disagreed with him was summarily dismissed as *just not bright enough* to 'get it'" (p. 33).

Organizational mindsets are also conveyed by design elements of performance management and compensation systems that convey to employees how behaviors and results are valued. For example, forced-distribution performance evaluation systems clearly convey that not all can

succeed (i.e., some people are rated in the bottom 10%) and often set up an environment in which people feel the need to continually prove their worth (Blume et al. 2009, Schleicher et al. 2009). Similarly, performance management systems that are not well connected to employee development processes may convey a fixed mindset (Frear & Paustian-Underdahl 2011). Indeed, simulation research has shown that “rank and yank” systems such as forced distribution can be associated with disproportionate numbers of minority-group members receiving lower evaluations under certain conditions (Giumetti et al. 2014).

Although organizational mindsets do not explicitly reference social group differences, the exclusionary message of the fixed mindset can trigger identity threat for people who belong to groups whose ability is impugned by negative stereotypes. When only “some” people are thought to have the smarts and talent to succeed in a professional setting, people who belong to negatively stereotyped groups may well worry that others will view them as lacking. For example, in several studies, Emerson & Murphy (2015) found that women showed worse outcomes in business settings that endorsed a fixed rather than a growth organizational mindset. They reported less trust and commitment to the organization, were more likely to worry that they would be negatively stereotyped by company management, and, when attempting a performance task, disengaged more and performed worse (Emerson & Murphy 2014; M.C. Murphy, J.A. Garcia & S. Zirkel, unpublished manuscript). Similar performance effects have been found for Black and Latino individuals when they expect to be evaluated by a fixed versus growth mindset organization (K.T.U. Emerson & M.C. Murphy, unpublished manuscript).

Hiring, promotion, and referral policies. Lastly, some hiring, promotion, and referral policies and procedures can foster stereotype and social identity threat in the workplace. For example, subjective and unstructured evaluations are often used to assess employee performance (e.g., Bommer et al. 1995, Ford et al. 1986). Members of stereotyped groups might worry that such assessments will be tainted by subtle and implicit biases or that they could be overlooked for promotion because they do not fit the prototypical image of a leader or supervisor, especially if their group is underrepresented in management positions (e.g., Eagly & Karau 2002). These concerns are warranted, as research shows that subjective, unstructured evaluations are indeed more vulnerable to bias and often disadvantage stigmatized individuals (Arvey & Faley 1988, Huffcutt & Roth 1998, Madera & Hebl 2013).

Notably, “objective” criteria also raise problems. Simply treating a test as a valid indicator of merit can cause test takers who face a negative stereotype in that context to view the test as unfair for their group and to underperform (Autin et al. 2014). Indeed, simply representing cognitive performance and intelligence (IQ) tests as evaluative, as is typical, evokes stereotype threat, causing members of stereotyped groups to underperform (Steele & Aronson 1995; see also Brown & Day 2006). As we discuss below, evidence suggests that, as a result, such tests show a systematic predictive bias: They underestimate the ability and potential of people from negatively stereotyped groups to succeed in contexts in which stereotype threat has been reduced (Walton & Spencer 2009).

As a result, some organizations may wish to subject people from stereotyped groups to a lower threshold score on important tests. However, such policies may themselves seem to confirm a negative stereotype and can thus evoke identity threat (Autin et al. 2014; see also Brown et al. 2000; see Turner & Pratkanis 1994 for a review). However, the consideration of group identity may not be threatening when this consideration challenges the stereotype. Autin and colleagues (2014) showed that when women believed that gender would be taken into account in the interpretation of test scores to mitigate bias in the measurement of merit—the bias actually observed (Walton & Spencer 2009)—women performed significantly better. This message, however, tended to undermine men’s outcomes.

Lastly, employee referral policies can exacerbate gender and racial gaps in hiring by drawing from current employees' friendship and social networks, which tend to be relatively homogenous (DiTomaso 2012, McDonald 2011). Many organizations heavily rely on referrals to identify potential employees (Breugh 2013, Breugh et al. 2003, Ioannides & Loury 2004, Marsden & Gorman 2001, Topa 2011). However, in practice, these recommendations are largely for same-gender and same-race/ethnicity candidates (e.g., 63.5% and 71.5%, respectively, in one large US corporation; Brown et al. 2012) and thus reproduce the demographics of the current employee pool while limiting access to underrepresented groups (Bielby 2008, Kasinitz & Rosenberg 1996, Moss & Tilly 2001). From the perspective of underrepresented groups, referral policies may suggest that organizations are uninterested in recruiting a diverse workforce, preferring to maintain a status quo that disadvantages their group.

WAYS TO REDUCE STEREOTYPE AND SOCIAL IDENTITY THREAT IN ORGANIZATIONAL CONTEXTS

High levels of stereotype and social identity threat can undermine people's performance and thus an organization's success. Organizations may aim to reduce threat to ensure that all members can perform their jobs well and learn and grow unhampered by threat. In addition, organizations may wish to ensure that selection and promotion decisions are not biased by stereotype threat but identify and advance the most promising candidates. This section reviews strategies to address these goals.

In general, to reduce threat, organizations can pursue one or both of two complementary strategies: They can either change cues present in the environment, removing and replacing cues that reliably signal threat, or they can change how people interpret or construe such cues—that is, the meaning they draw from them. The first strategy is often preferable but is not always possible; for instance, a nondiverse organization may not be able to quickly become diverse. However, at least in education contexts, even brief interventions that encourage people to construe important aspects of the environment in nonthreatening ways can cause large and lasting improvements in performance and achievement (for reviews, see Garcia & Cohen 2012, Walton et al. 2013, Yeager & Walton 2011). For instance, the social-belonging intervention—a 30–60-min exercise to encourage students to view adversities in school as normal and temporary—raised African American college students' GPAs over the next three years, halving the achievement gap (Walton & Cohen 2011), and, in another trial, eliminated the gender gap in grades in engineering over an academic year (Walton et al. 2014). How are such effects possible? In general, a change in how people construe a setting can become self-reinforcing—people who see threat in a setting may avoid others or interact with others in ways that do not build better relationships; people who feel comfortable may be better positioned to learn and grow. Thus, brief interventions that target people's conceptions of an environment, when implemented effectively and at an appropriate time, can set in motion cycles that improve outcomes long into the future. Such interventions have generally not yet been carried out in work contexts. However, the results from education contexts suggest that significant gains may be possible.

In this section, we review how organizations can reduce stereotype threat in four key contexts: recruiting, selecting and promoting, socializing and onboarding, and training employees.

Recruiting Employees

To signal to potential employees that they have an identity-safe environment, organizations can replace cues liable to signal threat with cues that allay such concerns. For instance, when possible,

organizations can become diverse and promote their diversity (Murphy et al. 2007); they can ensure that their physical environments and job advertisements signal the inclusion and valuing of people from diverse backgrounds (Cheryan et al. 2009, Gaucher et al. 2011); they can articulate their commitment to diversity and valuing of diverse groups in mission statements, recruiting materials, and elsewhere (Purdie-Vaughns et al. 2008); and they can promulgate and advertise a culture that values growth and improvement, not the identification of who “has it” and who does not (Murphy & Dweck 2010). These steps can lead ethnic minorities and women to anticipate greater belonging in work settings, to trust companies more, to feel less identity threat, and to be more motivated to pursue professional opportunities (Avery et al. 2013). Notably, it is essential that companies back up words with deeds. For instance, African American professionals may express trust in companies that articulate a goal to treat all people in similar ways regardless of background (a color-blind philosophy) but only insofar as the company employs people from diverse backgrounds (Purdie-Vaughns et al. 2008; see also Shih et al. 2013). Similar to companies engaged in practices like greenwashing who mislead consumers about environmental practices, companies that make disingenuous statements about their values and practices regarding diversity are likely viewed with skepticism.

Selecting and Promoting Employees

In addition to creating and representing a positive climate, organizations may attend to specific contexts in which threat is likely to arise and where relatively straightforward steps may improve outcomes. One such context involves selection tests used to hire and promote employees. Tests are generally viewed as evaluative of ability, a powerful cue of stereotype threat. In addition, the salience of people’s group identity in a testing setting can cause threat (Steele & Aronson 1995)

Reducing threat on selection tests. How can organizations reduce stereotype threat on selection tests? In some cases, it may be difficult or inappropriate (e.g., inaccurate) to represent such tests as not evaluative of ability. However, it may be possible to reduce the salience of test takers’ group identity. In this way, recruiting and evaluation contexts differ to some extent. In general, in recruiting employees, organizations may wish to highlight their commitment to and valuing of diversity (Avery & McKay 2006, Purdie-Vaughns et al. 2008). However, if group identity is salient when people take tests, it may risk evoking the worry that group identity could be a basis for negative evaluation or treatment. For instance, when test takers are asked to report their race/ethnicity and gender before a test, this may trigger identity threat and undermine performance. Indeed, research in laboratory (e.g., Steele & Aronson 1995), educational (Danaher & Crandall 2008), and work settings (Kirnan et al. 2009) shows that moving demographic queries to after instead of before a test can improve performance, especially among people who face negative stereotypes in the setting at hand. An important, ongoing question involves the effectiveness of this approach in mitigating stereotype threat when other potent threat-inducing cues are present (e.g., when the test is seen as evaluative); however, insofar as this strategy is often relatively cost free and can be effective even in such contexts, it is advisable. Although more research is needed, the use of Internet assessments may provide a further opportunity to reduce the salience of group identity in testing situations, as individuals can perform in relative privacy.

Research has explored the effectiveness of a variety of additional strategies to help people cope with stereotype threat on evaluative tests. One strategy is to reduce people’s apprehension that their group identity will be a source of negative judgment. For instance, threat is less likely when people take tests among a critical mass of in-group members (Inzlicht & Ben-Zeev 2000), when positive in-group role models are salient (e.g., Marx & Goff 2005, McIntyre et al. 2003), when people are treated by majority-group members as partners in working on challenging

material (L.J. Aguilar, P.B. Carr & G.M. Walton, unpublished manuscript; see also Walton & Carr 2012) rather than in disrespectful ways (Logel et al. 2009b), and when tests are represented in ways that assure test takers that performance will not be viewed as evidence for a negative group stereotype (e.g., Good et al. 2008). Another strategy is to help people manage negative thoughts and feelings that can arise from threat and undermine performance. For instance, performance improves when people learn about stereotype threat and thus that negative thoughts and feelings may be due to threat, not a cue of poor performance (Johns et al. 2005); when people learn that arousal and anxiety can promote not hinder success (Johns et al. 2008; see also Jamieson et al. 2010); when they learn to displace negative thoughts with neutral thoughts (Logel et al. 2009a); and when they reflect on important personal values and other sources of identity unrelated to the threat (Martens et al. 2006; see also Cohen et al. 2009). This past research has been conducted primarily (but not exclusively) in laboratory settings and in education contexts. An important direction for future research involves evaluating the potential of these techniques in field-settings and in organizational contexts.

These approaches complement revisions to test materials themselves. Sensitivity reviews are designed to remove items that are offensive or unfamiliar to people from a particular background (Golubovich et al. 2014). Although a few studies have directly investigated the effects of cues within prototypical items that might trigger identity threat (e.g., the use of gendered names in word problems, Hmurovic et al. 2009; the use of gender-stereotyped activities or gendered occupational references, Grand et al. 2011), there is surprisingly little empirical investigation of how item content might increase the salience of group membership and/or stereotypes about one's group. Further, newer forms of tests (e.g., situational judgment tests employing avatars or videos) often depict diverse individuals in scenarios; however, there is some evidence that the performance of members of stereotyped groups might be affected by the demographic characteristics of those depicted in such test items (Golubovich & Ryan 2012).

Interpreting and using test scores and other indicators of ability and potential: test bias. Even when an organization takes steps to reduce stereotype threat on selection tests, the mere evaluative nature of such tests can cause some threat to remain (Steele & Aronson 1995). More broadly, given the ubiquity of evaluative cues that can cause stereotype threat, typical circumstances in which standardized tests and other indicators of ability are administered may induce stereotype threat. As a consequence, researchers have hypothesized that such indicators may, on average, underestimate the ability of people from negatively stereotyped groups, as compared with people from non-stereotyped groups (Brown & Day 2006). This hypothesis is termed the latent-ability hypothesis because it posits that a portion of stereotyped individuals' ability is latent or hidden on standard assessments (Walton & Spencer 2009). If this is the case, then using such measures in personnel decisions may have detrimental effects on the outcomes (e.g., selection, promotion) of people from stereotyped groups (Walton et al. 2013).

Evidence for this hypothesis comes from meta-analyses of experiments testing exercises to reduce stereotype threat in laboratory and field settings. These analyses show that, when people perform in contexts in which stereotype threat has been experimentally reduced, women in STEM subjects and ethnic minorities, generally, outperform men and nonminorities with identical prior test scores and grades (Walton & Spencer 2009). In typical circumstances, people subject to stereotype threat perform facing a headwind. This headwind prevents them from scoring as well as they are capable—some of their ability is latent. Accordingly, when the headwind is lifted—when stereotype threat is removed—people from stereotyped groups outperform nonstereotyped peers they equaled in the prior, typical context (Walton et al. 2013).

Notably, although there is a large body of evidence documenting test score differences between groups, there is debate as to the extent to which those differences translate into differences in work performance (i.e., do tests underpredict success on the job for some groups?) (e.g., Aguinis et al. 2010; Berry et al. 2011, 2014; Roth et al. 2014). The empirical literature that informs this debate consists primarily of correlational and simulation studies. However, for the purpose of detecting an effect of stereotype threat on test performance or validity, experimental data that vary the experience of threat are preferable. As Brown & Day (2006, p. 983) write,

The extent to which stereotype threat influences predictive validity will depend on the degree to which stereotype threat differentially influences predictor and criterion scores (see Cullen, Hardison, & Sackett, 2004). Indeed, the possibility that predictor variables such as the SAT and ACT are influenced by stereotype threat to similar degrees as criterion variables such as college GPA (Aronson, Fried, & Good, 2002; Brown et al., 2000; Brown & Lee, 2005) might explain why differential predictive validity for African Americans and Whites is not typically observed with standardized cognitive ability tests.

The Walton & Spencer (2009) meta-analyses draw together the existing experimental evidence and provide sufficient cause for concern that stereotype threat affects both test scores and grades administered in typical (e.g., evaluative) environments. Using such scores as nonbiased indicators of merit and potential may risk judgments that have disproportionately negative effects on the hiring and promotion of women and ethnic minorities.

What should organizations do? These issues are complicated scientifically, legally, and for policy. Here we suggest some options (for more comprehensive reviews, see Emerson & Murphy 2014, Erman & Walton 2015, Walton et al. 2013). For instance, the presence of group-based biases on performance indices may lead some to advocate group-based score corrections (Sackett & Wilk 1994). However, in the United States at least, mechanical race- and gender-based score corrections are prohibited on employment-related tests by Title VII of the Civil Rights Act of 1964 (as amended). Others have suggested using techniques such as banding or treating all those within a certain score range as equivalent in standing, typically determined by the standard error of the difference (Aguinis 2004). However, banding's effectiveness in increasing the number of minorities selected is limited in many contexts (i.e., if not testing or hiring large numbers of individuals) and also may not increase representation if the organization does not also preferentially select minorities from within the band (Sackett & Roth 1991). Nonetheless, there are some simple steps organizations can take. First, when schools and employers make sustained efforts to reduce stereotype threat in their internal settings, they simultaneously (*a*) create positive environments that allow all people to perform well and (*b*) help individuals establish nonbiased performance track records as they seek to compete for subsequent positions. Second, organizations can choose to give less weight to indicators likely to be susceptible to stereotype threat (e.g., using Pareto-optimal methods, DeCorte et al. 2007; or criterion-based methods, Hattrup & Rock 2002) or consider using measures less impugned by negative group stereotypes (e.g., creative and practical skills, Sternberg & Rainbow Proj. Collab. 2006; second-stratum cognitive abilities, Wee et al. 2014; noncognitive skills like self-control or grit, Duckworth & Seligman 2005, Duckworth et al. 2007). Third, schools and employers may “educate selection officers of the bias in performance measures and allow them to weigh this information in making individualized evaluations of candidates” (Walton et al. 2013, p. 27). This approach retains predictive performance measures while taking bias into account. It also raises novel legal questions (see Erman & Walton 2015, Walton et al. 2013).

Socializing and Onboarding Employees

When people enter new academic and professional settings in which their group is underrepresented and may be negatively stereotyped, they often experience high levels of threat and worry about whether other people will include and value them in the setting. This can prevent people from learning and growing in a new organization or role, from developing essential relationships there, and, ultimately, from performing at a high level.

One remedy for underrepresentation is simply to increase the representation of people from stereotyped groups in a given setting. Indeed, organizations and settings with greater diversity have workers who report higher workplace satisfaction and better performance, as members of stereotyped groups report fewer concerns about identity threat (e.g., Allmendinger & Hackman 1995, Niemann & Dovidio 1998). However, as an organization strives to achieve critical mass, it can also reduce the identity threat engendered by underrepresentation by supporting the underrepresented individuals it currently has. For example, organizations that endorse diversity as a value can promote trust, even absent critical mass (Purdie-Vaughns et al. 2008). In addition, helping women and minorities cultivate a broad network of relationships including with peers, mentors, and sponsors as well as with role models can buffer their sense of fit within the organization and help them advance. Positive relationships with majority-group peers and mentors can help minority-group members feel integrated and included within an organization; this can also help normalize struggles and adverse experiences that could otherwise be threatening for minority-group members, and thus help them overcome challenges to succeed (Walton & Cohen 2011, Walton et al. 2014; see also Walton & Carr 2012; L.J. Aguilar, P.B. Carr & G.M. Walton, unpublished manuscript). Same-race mentors and role models can also reduce threat and provide strategies to help mentees move up (Avery et al. 2008, Kirby & Jackson 1999, Marx & Goff 2005, McIntyre et al. 2003). Indeed, senior-level sponsors are often instrumental in advancing the careers of their mentees by advocating for them over a sustained period of time and introducing them to opportunities and individuals who can help them advance (Tapia & Kvasny 2004, Thomas & Kram 1988). This type of support can alleviate feelings of anxiety and isolation and increase career satisfaction (Chao 1997, Crosby 1999, Reskin et al. 1999). Thus, connecting stereotyped and underrepresented individuals with peers, role models, mentors, and sponsors is one way organizations can enhance identity safety, particularly when they lack critical mass.

In addition to these strategies, in education contexts two specific interventions—value-affirmation and social-belonging interventions—have been shown to reduce threat in academic transitions and improve performance among people from negatively stereotyped groups. Because these interventions are typically delivered early in a setting, they can change the trajectory of people's experience over long periods of time (for reviews, see Garcia & Cohen 2012, Yeager & Walton 2011). A small, well-timed push in a more favorable direction can have lasting effects if it puts people on a more productive path.

Value-affirmation interventions. Value-affirmation interventions consist of a short series of exercises that encourage people to reflect on valued aspects of their self-concept. In its most common form, people view a list of values, identify those that are most important to them, and then write for 15–20 min about why those values matter to them and times when such values were especially important. This is thought to help people think about potential threats and stressors in a broader psychological context; when adversities loom less large, people can thus respond more effectively (Sherman & Cohen 2006, Sherman & Hartson 2011). When administered in school settings—for instance, as several in-class writing exercises beginning early in the school year—value-affirmation interventions have been shown to increase core-academic GPAs among African

American and Latino middle students up to three years later while reducing reports of stereotype threat and helping sustain minority students' sense of belonging (Cohen et al. 2009, Sherman et al. 2013). Value-affirmation interventions can also improve women's achievement in STEM subjects in college (Miyake et al. 2010, Walton et al. 2014). There is also evidence that similar exercises can improve performance and retention in work contexts (Cable et al. 2013; see also Wiesenfeld et al. 1999).

Social-belonging interventions. Whereas value-affirmation interventions are designed to help people think about themselves in ways that make it easier to contend with threatening experiences, social-belonging interventions give people a positive narrative for understanding a new social context and the struggles that arise there (see Garcia & Cohen 2012, Walton & Cohen 2011, Walton et al. 2014). In this type of intervention, people entering a new setting read stories from people who have transitioned before them. These stories describe how people typically worry about their belonging at first in the new setting but come to feel at home with time as they reach out and build relationships. This message is designed to give people a positive narrative for understanding the inevitable challenges and worries about belonging they encounter in a new setting (e.g., feelings of loneliness, struggle, disrespect, criticism). People who face negative stereotypes may risk seeing such experiences as evidence they do not belong in general (Walton & Cohen 2007); the intervention provides a more hopeful interpretation. After reading these stories, people write about how their personal experiences so far or their anticipated experiences reflect the same process of change. Some of these materials, people are told, will be shared with future people ostensibly to help them in their transition. This "saying-is-believing" exercise helps drive home the key idea, encourages people to connect this idea to their own lives, and forestalls stigmatization—it treats people as benefactors, not beneficiaries. In total, the intervention lasts an hour or less. As noted above, this intervention has raised GPAs among African American first-year college students over three years, halving the achievement gap with European American students (Walton & Cohen 2011). It has also eliminated gender differences in first-year GPA among women enrolled in male-dominated engineering majors and, simultaneously, helped women form more friendships with male peers (Walton et al. 2014). In three more trials, online versions of social-belonging interventions delivered to full cohorts of incoming college students (total $N > 9,500$) increased the percentage of ethnic minority and first-generation students who successfully completed the first year of college full-time enrolled, and raised GPA over the first year among such students, reducing group inequalities by 35–50%. The interventions also helped such students integrate more effectively in college, for instance by joining student groups, developing mentors, and making close friends on campus (D.S. Yeager, G.M. Walton, S.T. Brady, E.N. Akcinar, D. Paunesku, unpublished manuscript). This type of intervention is not unlike some socialization activities (e.g., hearing employee testimonials) designed to help organizational newcomers, which are considered best practices in onboarding programs (Klein & Polin 2012). However, social-belonging interventions are precise in their emphasis on people's beliefs about belonging and on how challenges that arise in transitions can be overcome. An important question for future research involves the effectiveness of this approach in organizational contexts and how best to embed it in organizational entry programs.

Training Employees

People under stereotype threat learn less effectively than they otherwise would (Grand 2012, Rydell et al. 2010, Taylor & Walton 2011); thus mitigating stereotype threat can promote learning in complex environments. For instance, experimental research shows that value-affirmations, which also improve test performance among people under stereotype threat in laboratory settings

(Martens et al. 2006) and achievement in field settings (Cohen et al. 2009), enhance learning in otherwise threatening (e.g., evaluative) contexts (Taylor & Walton 2011).

Growth-mindset interventions. Another strategy that can help people learn more under threat is to convey the malleability of human intelligence (see Dweck 2006). Such messages, called growth-mindset interventions, disabuse people of the misperception that intelligence is fixed and thus something that some people (or some kinds of people) have and others do not. That view can lead people to view mistakes and setbacks as evidence that they cannot succeed. Instead, growth-mindset interventions convey that, with hard work and effective learning strategies, anyone can become smarter. This message can improve learning and achievement (for a review, see Yeager et al. 2013), for instance among adolescents (Blackwell et al. 2007), especially those who are struggling (Paunesku et al. in press) and, in math, girls (Good et al. 2003), and among diverse college students (Aronson et al. 2002). In addition, as noted earlier, promulgating a culture that values growth and learning rather than the identification of who “has it” reduces stereotype threat and improves trust, commitment, and performance among women in business settings (Emerson & Murphy 2015). This work reflects the broader literature on the important role of training transfer and continuous learning climates in enabling individuals to develop and utilize new skills (Tracey et al. 1995).

Wise feedback. As discussed above, supervisors face a dilemma in providing critical feedback to subordinates: How can substantive critical feedback be given in a way that helps recipients learn without undermining motivation? This dilemma is most acute when feedback is provided across group lines, a situation in which criticism can be interpreted as evidence of the application of a negative stereotype.

Several studies have illuminated a strategy, termed wise feedback, to reduce threat in such exchanges (Cohen et al. 1999, Cohen & Steele 2002, Yeager et al. 2013). The goal of this strategy is to disambiguate the meaning of critical feedback for members of stereotyped groups. In wise feedback, the feedback giver explicitly conveys, first, that he or she holds high standards for the task (e.g., the report, product, service) and, second, that he or she believes the recipient can meet that standard. This clarifies why the giver provides critical feedback—to help the recipient reach the higher standard. This strategy is similar to standard advice for providing effective feedback in the organizational literature (London 1997), but it is especially important in the context of stereotype threat. Laboratory and field-experimental research show that wise feedback increases motivation among members of minority groups to improve their work, including among African American college students (Cohen et al. 1999), women in science (Cohen & Steele 2002), and adolescents. In one field experiment, wise feedback notes (“I have high standards but I believe you have the potential to meet them. . . I am providing this critical feedback to help you meet those standards”) appended by researchers to a teacher-graded essay (to keep teachers unaware of students’ condition assignment) increased the percentage of ethnic-minority middle school students who chose to revise a class essay from 17% to 72% (Yeager et al. 2013). In another study, teaching students to view critical feedback in general as emanating from the high standards of the task and teachers’ motivation to help students improve raised semester grades among ethnic-minority high school students (Yeager et al. 2013). Further, the benefits of wise feedback were strongest among students who mistrusted the school more to begin with.

CONCLUSION

An extensive body of research on stereotype threat has accumulated over the past two decades. However, the implications of this research for work contexts have received much less attention than

deserved, especially given the strong desire of many people in organizations to create inclusive workplace climates and just human resource decision-making processes and policies. This lack of attention may be due in part to a lack of understanding of the phenomenon: A recent issue of *Industrial and Organizational Psychology: Perspectives on Science and Practice* contained numerous commentaries focused on clarifying exactly what stereotype threat is and what the theory behind the phenomenon's effects actually proposes (e.g., Czukor & Bayazit 2014, Kalokerinos et al. 2014, Voyles et al. 2014). Our aim in this review has been to provide this clarity and to conduct a comprehensive analysis of how research on stereotype and social identity threat applies to the workplace. We have also provided concrete suggestions as to interventions and changes to practices that may lessen or prevent stereotype threat effects. We are hopeful that this information will spur further research on stereotype and social identity threat in organizational contexts (see below) and, more broadly, the creation of workplace conditions that provide identity safety and support the success of all individuals.

FUTURE ISSUES

1. Assess the relationship between experiences of stereotype threat and disidentification and disengagement outcomes in the workplace (e.g., job dissatisfaction, lack of organizational commitment, absenteeism, counterproductive behaviors, turnover).
2. Assess stereotype threat effects in operational hiring contexts.
3. Evaluate stereotype threat effects in operational performance evaluation contexts.
4. Map how members of stereotyped groups construe local work contexts including ambient cues, promotional materials, and diversity and mission statements; investigate ways to structure environments so as to mitigate experiences of threat.
5. Investigate the usefulness of wise feedback in organizational contexts as a means to overcome the “mentor’s dilemma”—that is, how to define wise feedback, how to train supervisors in giving wise feedback, effects on employee attitudes and performance.
6. Examine how organizational mindsets influence experiences of identity threat and the evaluation of employees.
7. Evaluate the generalizability of social-belonging, value-affirmation, and growth-mindset interventions in educational contexts for workplace contexts.
8. Evaluate whether and how the use of Internet assessments may reduce identity threat.
9. Evaluate strategies to help individuals manage negative thoughts and feelings stemming from threat in operational workplace evaluative contexts.

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Errata

An online log of corrections to *Annual Review of Organizational Psychology and Organizational Behavior* articles may be found at <http://www.annualreviews.org/errata/orgpsych>.

