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CRACKING THE CULTURE CODE

A Tri-Level Model for Cultivating Inclusion in Organizations

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People are increasingly finding themselves living, learning, and working in a diverse world. Although increased exposure to, tolerance of, if not preference for diversity poses political challenges (Forgas & Lantos, this volume), it also presents important opportunities for cultural innovation. As a key example, organizations are increasingly motivated to diversify their workforce and capital-ize on the potential benefits that diverse teams can have for creative problem solving and innovation (Galinsky et al., 2015; Phillips, Mannix, Neale, Gruen-feld, 2004). One challenge of working in diverse environments is that—even in the absence of explicit intergroup biases or prejudice—deep-rooted and perhaps evolutionarily determined inclinations toward homophily (Cosmides, Tooby, & Kurzban, 2003; McPherson, Smith-Lovin, & Cook, 2001; see also van Vugt, this volume) can lead people to seek out working relationships with similar others and avoid those who are different. These biases are exacerbated when the culture of the organization is defined by and adheres closely to the preferences, interests, and working styles of the majority. For those who have a devalued minority identity in these settings, the result can be a feeling of alienation that can lead them to self-select out of domains where they experience a lack of fit (Schmader & Sedikides, 2018; Woodson, 2015).

In the present chapter, we seek to understand what it means to have an inclusive organizational culture by considering a tri-level model of culture as consisting of: (1) *institutional* policies, (2) the beliefs and attitudes of *individuals*, and how these institutional features and individual beliefs play out in (3) the *interpersonal interactions* between people. We apply these ideas to specifically understand feelings of alienation and exclusion that women experience in male-dominated fields in science, technology, engineering, and math (STEM). Not only do these fields offer highly lucrative and intellectually rewarding careers,

they are also key economic drivers of society. Thus, when there are systemic factors that undermine gender inclusion, women's career autonomy is threatened, the gender wage gap grows larger, and societies fail to maximize their intellectual resources. In engineering, for example, a field that is 80 percent male in North America, women show disproportionately higher rates of attrition (Corbett & Hill, 2015). Low numeric representation per se can deter women from STEM fields (Murphy, Steele, & Gross, 2007). However, some traditionally male-dominated occupations (e.g., law, medicine, life science) have been markedly quicker to desegregate than others (e.g., engineering, computer science; Carli, Alawa, Lee, Zhao, & Kim, 2016), suggesting that the culture of the latter fields may impede women's entry and advancement. Indeed, women who choose to leave engineering and technology careers after clearly having demonstrated both an interest in and talent for the field often attribute their departure to problems of ill-fitting organizational culture (Fouad & Singh, 2011; Margolis & Fisher, 2003). As social psychologists, how can we better understand what it means to have an inclusive culture, and what methods can we use to achieve cultural change (see also Fiedler, this volume)?

Culture and Mutual Constitution

Humans have an evolutionarily adaptive capacity to form, maintain, and affirm cultures (Henrich, 2015). These cultures then shape individuals' sense of identity (Markus & Hamedani, 2007). The prevailing understanding is that cultures are embedded systems that both define and are defined by the identities of the individuals in that society and are formed and reformed through social interactions and relationships (Markus & Kitayama, 2010). Through this process of mutual constitution, shared cultural norms are partly created by the beliefs, attitudes, and preferences of the majority or dominant groups. The stronger the majority, the more likely that the group's beliefs and practices become polarized as similar individuals interact with one another and reinforce each other's shared tendencies (Isenberg, 1986). Once created, these norms for what to believe, what to like, and how to behave become codified in both explicit and implicit ways. These norms then have the power to shape the way in which people perceive and interact with one another. Those interactions, as well as broader cultural beliefs and shared attitudes, then also have the power to change individuals' own attitudes, beliefs, self-views, and behavior.

Although cultural psychologists have typically used these ideas to frame our understanding of people from different societies, subcultures, or regions of the world, these same basic processes are likely to prove useful for understanding the culture of organizations. More practically, we might better isolate the levers for changing organizational culture by importing social-psychological theory of what defines a culture (see also Fiedler, this volume). Here we focus on three distinct but interconnected levels of organizational culture: the institutional,

interpersonal, and individual levels. First, we describe how each level potentially contributes to the experienced culture of an organization. We then use this framework to discuss how different kinds of interventions could change workplace culture. Although organizations (and cultures more generally) ideally promote equity for all regardless of gender, age, ethnicity, and other demographic markers of identity, the reality is that many of these groups still face subtle and not so subtle barriers to their belonging and authenticity (Schmader & Sedikides, 2018). The processes we describe may apply broadly to many contexts and dimensions of identity, however the primary illustration we use involves changing organizational culture in highly male-dominated careers (such as engineering, finance, and technology) to become more gender inclusive.

The Institutional Level: Organizational Policies and Practices

The culture of an organization is signaled by its policies, procedures, and expressions of organizational identity (Schein, 2004). Just as individuals leave clues to their own personality in the digital and physical spaces they inhabit (Gosling, Ko, Mannarelli, & Morris, 2002), organizations also broadcast aspects of their culture in their websites, promotional materials, and physical layout of their workspaces. Many organizations aim to present an image of inclusion by using images of diverse people (Pippert, Essenburg, & Matchett, 2013; Swan, 2010), or even by explicitly and prominently displaying a diversity mission statement, already a common corporate practice by the mid-1990s (Kelly & Dobbin, 1998).

These efforts on the part of organizations to advertise an inclusive ideology are then used by perceivers to make assumptions about the culture of an organization (Brady, Kaiser, Major, & Kirby, 2015; Kaiser et al., 2013; Purdie-Vaughns, Steele, Davies, Ditlmann, & Crosby, 2008). In fact, diversity statements can create the impression of an egalitarian workplace culture so effectively that perceivers come to doubt that biases can still exist in those environments and penalize targets who report instances of discrimination when they do occur (Kaiser et al., 2013). Such institutional cues to inclusion not only shape the perceptions of outside observers, but also signal fit (or lack thereof) for those who would typically be underrepresented. Members of devalued groups habitually attend to cues related to *social identity contingencies*, namely, the judgments, stereotypes, opportunities, constraints, and treatments tied to one's social identity in a given setting (Purdie-Vaughns et al., 2008). Research increasingly finds in educational settings, for example, that physical reminders of a "typical student," institutional practices that preference only one way of learning, or syllabus statements referencing an entity orientation to success, can all be cues that trigger a reduced sense of belonging or authenticity for students from underrepresented groups (Cheryan, Plaut, Davies, & Steele, 2009; Stephens, Hamedani, & Townsend, 2019; Fuesting et al., 2019; Schmader & Sedikides, 2018).

In organizational settings, companies ideally institute diversity policies and practices, not only to signal an inclusive culture, but in a sincere effort to attract and retain diverse talent. Analysis of these practices at hundreds of organizations over time suggests that some of these strategies (when not merely "window dressing," see Kaiser et al., 2013) are indeed effective for boosting diversity in leadership positions (Kalev, Dobbin, & Kelly, 2006). Most notably, evidence-based best practices include engaging in active recruitment of diverse candidates; making hiring and promotion committees accountable for their record of diverse selections; and appointing equity, diversity, and inclusion officers to manage these efforts. These types of institutional initiatives, on average, boost the representation of women and minorities into management positions (Kalev et al., 2006). In addition, these and other inclusion-oriented policies may signal that the culture of the organization (or at least its leadership) values inclusion. For example, even when women or minorities are underrepresented in an organization, simply knowing that the organization has a stated interest in promoting diversity can make that company seem like a more desirable place to work for members of underrepresented groups (Purdie-Vaughns et al., 2008; Hall, Schmader, Aday, Inness, & Croft, 2018).

The Individual Level: Implicit and Explicit Beliefs, Biases, and Self-Views

Cultures are broad networks of norms, beliefs, and attitudes that guide the behavior of individuals. Thus, the emergence of organizational culture involves the dynamic interplay of top-down influences, such as the formal mission or policies set by leadership, and bottom-up attitudes, beliefs, and actions of individual employees. Although it is tempting to parse the variance between institutional and individual biases (Jussim, Careem, Honeycutt, & Stevens, this volume), because policies and practices are established and maintained by individuals within a culture, the two are likely to be inextricably linked. Through a cycle of mutual constitution, the actions of individuals help to create, perpetuate, and change the culture as a function of their own preferences, biases, self-views, and life experiences. From this logic, organizations that have a broader representation of women or minorities are likely to also have (at least on average) more favorable attitudes toward diversity policies and cultural practices that favor their own group. Indeed, members of marginalized groups attend closely to numeric representation as a cue to an environment's inclusiveness (Murphy et al., 2007; Purdie-Vaughns et al., 2008). Although different disadvantaged groups will not necessarily band together automatically to support all forms of diversity and inclusion, they are more likely to support broad-based policies of inclusion when reminded of their shared disadvantage with other marginalized groups (Cortland et al., 2017). Moreover, given the power of leaders to set influential norms (Cheng, Tracy, Foulsham, Kingstone, &

Henrich, 2013), the benefits of diverse representation for an inclusive workplace
culture will most strongly be realized when the diversity of representation
occurs in positions of leadership throughout the organization rather than within
lower-status roles within the organizational hierarchy (Bartol & Zhang, 2007).

Increased diversity of representation can contribute to a more inclusive
workplace culture but is neither necessary nor sufficient for creating a culture of
inclusion. Understanding why involves acknowledging that cultures dwell in
the minds of individuals at both implicit and explicit levels (Markus & Kitayama,
2010; see also Forgas & Lantos; and Wohl & Stefaniak, this volume). At an
implicit level, people learn automatically activated associations to social catego-
ries based on some combination of group members' actual representation in dif-
ferent roles and one's own salient experiences with them (Asgari, Dasgupta, &
Cote, 2010; Asgari, Dasgupta, & Stout, 2012). For example, although implicit
measures such as the Implicit Association Test are not without critique (Jussim
et al., this volume), the implicit association of "science" (vs. "arts") with "male"
(vs. "female") is sensibly correlated with cross-national variability in gender gaps
in both math performance (Nosek et al., 2009) and science representation
(Miller, Eagly, & Linn, 2015).

Furthermore, in line with other dual-process views of attitudes and beliefs
(Petty & Briñol, this volume), these implicit associations can diverge strongly
from people's explicitly reported beliefs and attitudes toward the same groups
(Nosek, 2005). Even women with successful careers in engineering exhibit a
significant tendency to associate their concept of "engineering" (vs. "family")
more with "male" than with "female" (Block, Hall, Schmader, Inness, & Croft,
2018). But these implicit associations do not only reflect the realities of women's
underrepresentation in engineering (and overrepresentation in managing family
life), they can also be internalized to shape women's own views of themselves.
For example, the automatic tendency to associate science and engineering more
with male than female correlate with women's lower ratings of self-confidence,
self-efficacy, and organizational commitment in science, math, and engineering
(Block et al., 2018; Stout, Dasgupta, Hunsinger, McManus, 2011; Nosek,
Banaji, & Greenwald, 2002).

That implicit stereotypes and attitudes can be internalized by members of
underrepresented groups to shape their own beliefs about gender and themselves
means that simply boosting representation will not guarantee an increasingly
inclusive organizational culture. For example, in studies that have documented
gender biases in evaluative or hiring contexts, these biases have been exhibited
both by women and men (Madera, Hebl, Dial, Martin, & Valian, 2018; Moss-
Racusin, Dovidio, Brescoll, Graham, & Handlesman, 2012), and as a function
of enacting the assumed biases held by other sexist leaders (Vial, Dovidio, &
Brescoll, 2019). Notably, however, individuals act within a broader cultural
context. Simply associating Science and Men at an implicit level, does not auto-
matically lead to expressions of bias or discriminatory actions toward women in

science (Crandall & Eshleman, 2003; Devine, 1989; Fazio, 1990). Rather, the surrounding cultural context can either license these implicit biases to shape behavior and decision-making, or cue perceivers to suppress or counteract them (Forbes, Cox, Schmader, & Ryan, 2012; Murphy, Kroeper, & Ozier, 2018; Murphy & Walton, 2013).

Recent research demonstrates this dual process accounts for how implicit and explicit beliefs interact to predict women's outcomes in STEM (Régner, Thinus-Blanc, Netter, Schmader, & Huguet, 2019). In a unique field study, members of 39 different evaluation committees took part in a study of gender bias in their real-life selections for women and men into elite scientific research positions. Approximately half the committee members completed measures of their implicit science = male stereotypes and their explicit beliefs about the reasons for gender disparities in science. Over the course of the year-long study, committees' tendency to promote women into elite research positions did not simply correlate with the implicit science = male associations of their members. Rather, their implicit associations (averaged across committee members) only translated into adverse impact for women in the competition if, at an explicit level, committee members (on average) did not believe that external barriers such as discrimination partly explain women's underrepresentation in science. In other words, the committees who rejected the notion that bias is a problem were the ones who showed a relationship between their implicit biases and behavior. Among those committees who believed that women face barriers to their advancement, the strength of their implicit associations was unrelated to their decision-making. Notably, these effects emerged independently of the rep-resentation of women on selection committees.

These findings imply that, just as individuals can successfully regulate their own implicit stereotypes and attitudes when motivated to do so (Cunningham et al., 2004), groups may also dynamically regulate the biases of their members. In fact, the social presence of others who share these same associations but deny their importance might even meta-cognitively validate relying on these implicit stereotypes when making decisions (Petty & Briñol, this volume). In contrast, in the presence of shared explicit norms for inclusion, implicit associations might cease to have much impact on behavior or, in some cases, even lead to efforts to boost the representation of minority candidates. This is likely why studies of hiring biases among egalitarian-minded academic scientists sometimes find a bias in hiring female over male candidates when applicants are similarly highly quali-fied (Williams & Ceci, 2015). It is important to note, however, that meta-analyses suggest that when candidates' qualifications are more ambiguous, biases in hiring are more likely to favor members of the advantaged group (Koch, D'Mello, & Sackett, 2015).

The Interpersonal Level: Daily Interactions Between People

Most attention given to organizational culture—both in academic literature and public discourse—focuses on what institutions themselves can do either to change their culture by enacting new policies, communicating inclusive values from leadership, or educating individual employees through diversity training. An organizational focus certainly makes sense in light of evidence that organizational culture is signaled, in part, from the overt and covert messaging, policies, and practices that are created and maintained at the level of the institution. Likewise, an individual focus is appealing to private industry because of the increased liability posed by the discriminatory conduct of bad actors. However, adopting a social-psychological understanding of culture entails recognizing that culture is also communicated through the *interactions* of individuals with each other within a cultural-defined setting (Mead, 1934; see also Kovera, this volume, for a similar argument as it relates to biases in the legal system). People's emotional well-being and general satisfaction with life are heavily impacted by their daily interactions with co-workers (Lim, Cortina, & Magley, 2008). When people leave an organization or even a career path due to concerns with the culture, these day-to-day interactions are likely to be where cultural mismatches are most strongly felt.

Some of the interpersonal experiences that signal a lack of inclusion are overt instances of hostility, harassment, or feeling that others are undermining one's work (Berdahl, Cooper, Glick, Livingston, & Williams, 2018). For example, relative to men, women are more likely to experience acts of aggression (Baron & Neuman, 1996), bullying (Rayner & Hoel, 1997), incivility (Andersson & Pearson, 1999), emotional abuse (Keashly, Harvey, & Hunter, 1997), sexism (Cortina, 2008), and sexual harassment (Berdahl & Raver, 2011). Even in the absence of explicitly negative interactions, however, a less-than-inclusive workplace culture can manifest in subtler ways. For example, after interacting with male peers who hold implicitly sexist associations with women, female engineering students perform more poorly on a test of their engineering skills (Logel et al., 2009). Women experiencing these subtle but negative effects of bias on their performance were oblivious to how their male partners' dominant and flirtatious behavior undermined their performance.

In addition to the effects of subtle sexism, women in male-dominated workplaces sometimes feel isolated from informal networks where they could otherwise build relationships and learn about new opportunities (Bartol & Zhang, 2007; Forret & Dougherty, 2004). Organizational literature "strongly suggests that women do not have equal access to social capital because they are often excluded from the social networks most important for power acquisition and career success" (Wang, 2009, p. 33). Women seek connections both with socially similar co-workers (women) and high-status co-workers (typically men), but a dilemma arises in men's reciprocation of these choices: "If network

contacts are chosen according to similarity and/or status considerations, [women] are less desirable network choices for men on both counts" (Ibarra, 1992, p. 440). Moreover, in male-dominated workplaces, even some women report avoiding other women (Derks, Van Laar, & Ellemers, 2016) and denigrating female-focused networking events. For example, a large-scale series of focus groups analyzing women's underrepresentation in engineering observed:

> For years [these female engineers] had avoided women's networking events because they were "packed with lawyers and HR types," not people in the "business of the business." If one of these female engineers walked into a room filled with women, she promptly walked back out. As one explained, "By definition nothing important is going on in this room: In this company men hold the power." These women seemed to have learned to avoid and look down on other women.
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> *The Athena Factor; Hewlett et al., 2008; p. 11*

Due either to perceivers' prejudices and stereotypes or to targets' own stigma consciousness, interactions between members of diverse groups can be plagued by feelings of *social identity threat*, namely, concerns about negative evaluation based on one's group membership (Steele, Spencer, & Aronson, 2002; Vorauer, 2006). For women working in male-dominated STEM environments, feelings of social identity threat can arise when women sense a lack of complete acceptance and respect from male colleagues (Hall, Schmader, & Croft, 2015; Hall, Schmader, Aday, & Croft, 2019). These findings come from a series of daily-diary studies examining how day-to-day interactions in STEM workplaces cue women's experience of identity threat. Notably, across three distinct samples, the effect of these daily interactions on women's experience of social identity threat was unique to women's conversations with male colleagues about work-related topics and not rooted in how men and women relate to or perceive each other in general (Hall et al., 2019). Men did not report similar levels of identity threat if they feel a lack of respect during conversations with women or other men. And these effects, which reflect within-person variability due to specific conversations, cannot be explained by individual differences in women's stigma consciousness. Rather, something subtle seems to be happening in some of the women's conversations with men in STEM settings that makes their gender salient.

These concerns about identity threat seem to carry important consequences: On those days when women report less acceptance from male colleagues, they also report a greater experience of psychological burnout, an effect statistically mediated through feelings of social identity threat (Hall et al., 2019). These effects parallel but extend earlier findings that used a more objective measure of workplace conversations with a smaller sample of scientists (Holleran, Whitehead, Schmader, & Mehl, 2011). In that study, an electronically activated

recorder (EAR) was used to sample workplace conversations between male and female academic researchers as they went about their normal work week. Among men, those who spent more time talking about research with male colleagues reported feeling more engaged in their work—an intuitive finding. Among women, however, those who spent more time talking about research with male colleagues reported feeling less engaged in their work.

Of course, one could argue that the interpersonal factors affecting women's daily workplace experiences have little to do with the culture of an organization and more to do with idiosyncratic bad encounters with a few biased co-workers. Although such explicitly negative interactions do occur, our evidence suggests that they do not drive these effects (Hall et al., 2019). Rather the rules of engagement for workplace interactions are, at least in part, shaped by the cultural norms signaled by the organization (Hall et al., 2018). Organizations adopting inclusive workplace policies may create a stronger norm for respectful and inclusive interactions among diverse individuals. Indeed, our own research indicates that women working in engineering report feeling less daily social identity threat to the extent that their organization has more gender-inclusive policies in place. Critically, this relationship is mediated by women's reports of experiencing more accepting and respectful daily interactions with their male colleagues in organizations with more gender-inclusive policies (Hall et al., 2018). In sum, cultural norms may be signaled at the institutional level and represented in the minds of individuals, but they are often experienced by diverse people as the manner in which people interact with one another.

Cultivating an Inclusive Culture

Organizational culture not only forms but also evolves through the dynamic interplay of institutional, individual, and interpersonal factors. The simple understanding that culture exists at these three levels can help provide a playbook for how best to change the culture of an organization. It also implies that different types of change might be better targeted at different levels, and that change at one level can variously catalyze change or encounter inertia at another level. Although our focus in this chapter has been on norms for inclusion, these same three interrelated levels can also be applied to understand the power of social norms in other contexts. For example, aggressive behavior among children can be reduced by interventions directed at classroom policies, interpersonal interactions, or individual impulse control (Krahé, this volume), and problems of adolescence are best tackled by multilevel interventions (Crano & Ruybal, this volume).

At the institutional level. As already mentioned, organizational science suggests that certain institutional policies are effective for increasing the representation of diverse leaders in an organization. Although these policies might have tangible benefits for some individuals, they might only result in meaningful

cultural change if most people in the organization are aware of and support these policies. Our own research suggests that women and men who perceive that others' attitudes toward gender-inclusive institutional policies have improved over time come to feel a greater sense of value fit with the organization, which in turn predicts an increase in women's organizational commitment (Hall et al., 2019). This research suggests that merely enacting policy changes toward inclusion will prove insufficient unless organizations educate their employees about the value of those policies.

Institutional changes can also be informed by more recent social-psychological evidence about identity safety. Organizations can aim to de-bias their workplaces by looking for ways they can signal inclusive organizational values. This process can include websites, office imagery, pronouns, land acknowledgements, accessibility, bathroom facilities, and properly-sized equipment (Chaney & Sanchez, 2018; Murphy & Taylor, 2012). To effect change, these updates must seem sincere, not like hollow or disingenuous gestures (Kaiser et al., 2013). Moreover, we typically look to leaders and those in higher-status positions to define norms and values (Cheng et al., 2013). Thus, leaders and the institutions they represent have the power to create signals of inclusive culture that manifest in the norms of how people interact. When these policy changes and messages are enacted to signal a true organizational value toward inclusion, such cues may instil a stronger sense of fit for those who are traditionally likely to be devalued in that space (Schmader & Sedikides, 2018).

At the individual level. Another common strategy for changing the culture of an organization involves targeting the biases and beliefs in the minds of individuals. Equity, diversity, and inclusion training is not only common practice, but also a burgeoning business, with such programs now offered at over half of mid-sized and large US companies (Dobbin & Kalev, 2016), often emphasizing implicit or "unconscious" bias (Onyeador, 2017). As with many efforts to import ideas generated from academic research into practice (Fiedler, this volume), up until quite recently, there has been little to no evidence demonstrating that these training programs indeed work (Jussim et al., this volume; Paluck, 2006). Indeed, initiatives narrowly targeting individual "wrongdoing" in isolation may backfire: A recent review finds that sexual harassment training programs can in some cases decrease the number of women in management (Dobbin & Kalev, 2019). An additional challenge arises when combatting implicit bias, because implicit associations prove quite resistant to long-term change among adults who have had a lifetime to internalize cultural associations (Lai et al., 2014, 2016). If the goal is to actually change individuals' stereotypes and attitudes, successful interventions may need to target younger age groups who are still forming categories and associations between them (Baron & Banaji, 2006; Gonzalez, Dunlop, & Baron, 2017).

However, if the ultimate aim is to change intrinsically motivated behavior rather than implicit associations, then successful interventions might equip

individuals with strategies to recognize and control their automatically activated responses (Carnes et al., 2015; Devine et al., 2017; Forscher, Mitamura, Dix, Cox, & Devine, 2017; Moss-Racusin et al., 2018). For example, in an extensive program of research, Devine and colleagues have been carrying out "Breaking the Bias Habit" workshops that educate individuals about the nature of automatic and controlled processes in bias, and teach people specific strategies for bias identification and control. A gender-bias version of this intervention carried out with academic scientists not only increased awareness and self-efficacy to control one's biases, but also boosted the proportion of women hired by 18 percentage points (a marginally significant increase) in the two years after the workshop took place (Carnes et al., 2015; Devine et al., 2017). In contrast to this face-to-face training program, the typical format for organizational diversity training is often online—to scale easily across many sites and employee schedules, but individual online training has much more limited success (Chang et al., 2019).

Individually-focused interventions that seek to foster more inclusive cultures rightfully target the deeply ingrained stereotypes and attitudes that can subtly bias behavior and decision-making. However, another valuable approach can be found in mindset interventions aimed at shifting the perspective of those who are disadvantaged or negatively stereotyped (Walton & Brady, this volume). When applied to boost the academic achievement of lower socioeconomic or ethnic minority students, these interventions work by helping students reframe academic difficulties or feelings of isolation as a normal part of transition (Walton & Cohen, 2011), or by encouraging a more growth-oriented mindset (Yeager et al., 2016). For example, in a recent large-scale intervention with nearly 1,000 incoming undergraduate students, a mindset intervention aimed at encouraging a growth orientation to challenges and setbacks led to a 30–40 percent reduction in the achievement gap between students from socially/economically advantaged versus disadvantaged backgrounds (Yeager et al., 2016). These efforts to reappraise negative experiences are also thought to be a beneficial strategy to boost women's sense of inclusion and self-efficacy in STEM (Walton, Logel, Peach, Spencer, & Zanna, 2015). For example, when anxiety is reframed as being potentially beneficial to performance, women and minorities perform better, even in a context where they otherwise might experience stereotype threat (Johns, Inzlicht, & Schmader, 2008; Schmader, Forbes, Zhang, & Mendes, 2009).

We contend that efforts to change or reframe the beliefs and behaviors of individuals in an organization are more likely to succeed when accounting for other levels in this model of organizational culture. For example, mindset interventions effectively counteract the reduced feelings of self-efficacy and inclusion experienced by members of marginalized groups, but will be of only limited value if broader institutional or interpersonal biases still exist as norms. In addition, institutional policy changes will only be effective if they have an effect on

individual decision-making or interpersonal interactions. For example, some of the most effective policies to promote inclusion are organizational accountabil- ity programs that incentivize careful decision-making (Kalev et al., 2006). The policy to track and report clear metrics helps to circumvent perceivers' tenden- cies to sometimes fall back on implicit associations when overwhelmed by complex hiring and promotion decisions (Bohnet, 2016; Bohnet, van Geen, & Bazerman, 2015; Uhlmann & Cohen, 2005). Thus, combining Devine's "Break the Bias Habit" program with an accountability policy would likely achieve better results than either initiative alone.

At the interpersonal level. Finally, as interpersonal contexts often provide the proximal conduit for how people feel included, efforts to change the culture of an organization would do well to target efforts directly at this level as well. In fact, social psychology has a long and largely successful tradition of reducing intergroup biases in applied settings using positive intergroup contact (Sherif & Sherif, 1953; Pettigrew & Tropp, 2006). Guided by Gordon Allport's (1954) recommended recipe for successful contact, interventions in schools, work- places, and conflict settings have sought to orchestrate successful contact between individuals from diverse backgrounds by placing them on a level playing field, working together toward a common goal. Other key ingredients catalyzing effective contact include support from institutional leadership and the potential for real social connections or even friendships between the interacting individuals. These are not necessary, but rather facilitating conditions: Experi- mental efforts to create contact can reduce intergroup biases even with only some of these ingredients in place (Pettigrew & Tropp, 2006, 2008). Although contact experiences are more effective at reducing the negative intergroup atti- tudes held by the majority or higher-status group (Tropp & Pettigrew, 2005), some laboratory evidence suggests that a structured positive contact experience helps minority group members more readily rebuild trust after an intergroup transgression (Bergsieker, 2012).

Although the intergroup contact literature underscores the general effective- ness of contact for changing attitudes, it is notably underutilized in most inter- ventions aimed at creating a more inclusive workplace culture for women in male-dominated workplaces. This omission likely reflects an assumption that lack of contact is not the problem facing interactions between women and men. For example, whereas situations of intergroup conflict often include antipathy toward the other group, men's attitudes toward women tend to be positive to begin with (Krys et al., 2018). Moreover, contact that creates "friendship poten- tial" (as recommended by Pettigrew, 1997), risks merely inviting the opportu- nity for unwanted sexual advances.

However, the manner in which men and women interact in male-dominated workplaces might bear more similarity to other intergroup contexts than has been recognized previously. First, because women can often feel excluded from or overlooked in organizational networks, and organizations often show

substantial gender segregation at different status levels (Ibarra, 1992), the
assumption that close contact already occurs in the work context might not be
true. Second, although people feel warmth toward women in traditional roles
(e.g., housewives), stereotypes and attitudes about successful working women
are notably less warm (Fiske, Cuddy, Glick, & Xu, 2002) and may reflect back-
lash (Rudman & Glick, 2001). Finally, well-publicized efforts to create more
opportunities for women in these fields risk giving the impression that certain
career opportunities and rewards are distributed in a zero-sum fashion between
men and women (Kuchynka, Bosson, Vandello, & Puryear, 2018), setting the
stage for perceptions of realistic intergroup conflict over resources (Dover,
Major, & Kaiser, 2016).

Thus, although intergroup contact has not typically been employed as a
means to change the culture of male-dominated workplaces, interventionists
may find some of these strategies useful. In particular, education about gender
biases could be effectively combined with interpersonal dialogues that elicit
greater perspective-taking and mutual understanding to instil a shared goal of
creating more inclusive workplace cultures by working together. However,
positive intergroup contact and intergroup harmony can also reduce disadvan-
taged individuals' support for institutional changes (Dixon, Levine, Reicher, &
Durheim, 2012; Hasan-Aslih, Pliskin, van Zomeren, Halperin, & Saguy, 2019).
Thus, contact approaches might be successfully paired with institutional reme-
dies to changing culture as well.

Acting at these three levels to cultivate more inclusive organizational cultures
offers broad benefits that extend beyond the intervention "targets." Research
suggests that efforts to include individuals from a given underrepresented group
can create spillover benefits for other disadvantaged individuals. For example, a
recent randomized control trial of diversity training focused exclusively on
gender biases improved employees' attitudes and behaviors (e.g., mentoring)
toward racial minorities in the workplace (Chang et al., 2019). After a separate
intervention project targeting gender bias in academia, not only women but also
men in participating departments, reported greater comfort when bringing up
family issues, and even receiving more appreciation for their research months
after the training (Carnes et al., 2015). Similarly, environments with less
homophobia also benefit straight men by reducing suspicion about their identity
claims and weakening gender-stereotypic constraints on their behavior (Oakes,
Eibach, & Bergsieker, 2019). Just as all-inclusive multiculturalism garners more
support from Whites than traditional diversity messaging (Jansen, Otten, & van
der Zee, 2015; Stevens, Plaut, & Sanchez-Burks, 2008), highlighting the non-
zero-sum nature of gender inclusion can underscore its value for everyone,
leading to more support and proactive involvement from a broad array of
diverse individuals.

The Need for More Research

This chapter provides a brief overview of what social psychology might uniquely contribute to our understanding of how to change organizational cultures to become more inclusive. We have structured this review around conceptualizing organizational cultures as comprising three interrelated institutional, individual, and interpersonal levels. Using the specific example of women's experiences in male-dominated STEM careers, we reviewed empirical evidence suggesting that cues at each level have the potential to signal either the presence or absence of an inclusive culture. The implication, of course, is that interventions aiming to change the culture of an organization can target any of these levels and may be most successful if they integrate efforts across levels.

The evidence summarized to make these points often comes from studies with clear limitations either on their ability to explain causal processes or to generalize findings to real-world situations. Organizational studies of inclusive workplace policies have the benefit of summarizing actual data from the field, but often omit measures of employees' own attitudes, experiences, and outcomes. Such research helps illustrate how policies and practices can change representation, but leaves important gaps in our knowledge of how they directly change the culture of the organization itself. For example, when an organization adopts new gender-inclusive policies, to what degree do these changes have a causal role in changing the norms by which men and women interact in the workplace?

Social–psychological studies, conversely, often provide controlled experimental tests of contextual or social cues that boost feelings of belonging or reduce intergroup biases, but these mechanisms still need to be tested in organizational settings to examine real–world outcomes (see also Fiedler, this volume). Finally, research efforts are often isolated to just one of these levels, seldom trying to examine the interrelations among these levels within a broader cultural system. For example, does an experimental manipulation designed to educate people about gender bias, combined with intergroup contact to foster respect and mutual understanding, increase employees' support for policy changes that might help to institutionalize an inclusive culture?

Granted, examining all aspects of this model at once, within a field setting, using rigorous experimental methods is an expensive if not an impossible proposition. And yet, understanding how our basic social science of inclusion translates to organizational cultural change requires moves in this direction. Conducting such research requires considerable investment from and/or partnership with the organizations that stand to benefit from this work. These partnerships have the benefit of leveraging financial commitments made by organizations hoping to better understand and implement cultural change. But the relationships between researchers and partnering organizations can also help keep researchers accountable for asking questions that are clearly relevant. This

research presents clear risks and pitfalls: It is costly not only from a budgetary perspective but also in requiring considerable time and effort, which can be difficult to commit when students and junior researchers need a brisk, consistent rate of publications to secure and keep jobs (Cialdini, 2009).

A second risk involves compromising one's objectivity on the questions and the science in the face of organizations or other funders hoping for positive results. In response, researchers need to emphasize the uncertainty of the research process alongside the value (societal and financial) of using evidence-based methods to accurately identify what does and what does not work to change organizational culture. Despite these risks, clear intellectual and societal benefits can arise when we as social scientists begin putting our ideas to the test in the very environments where they stand to make a difference. We encourage researchers and practitioners with an interest in the science of cultural change to work collaboratively toward this goal.

Conclusions

We have proposed that inclusive organizational cultures form and evolve through the dynamic interplay of institutional, individual, and interpersonal factors. Through an integration of theories from social, cultural, and organizational psychology, we have unpacked how, through a process of mutual constitution, inclusive organizational cultures can emerge. An implication of our approach is that an individuals' biases cannot be fully understood without also attending to facts of the cultural context (i.e., outside of the mind) and, similarly, an organization's culture cannot be understood without reference to the biases in the minds of individuals. Thus, interventions are likely to fail when they aim to merely free people from prejudicial representations while not acknowledging the dominant social, material, and structural facts of the context. To fully leverage the power of a diverse workforce, organizations must make efforts to collectively constitute an inclusive culture through individual psychological tendencies, patterns of social relationships, and institutional policies and practices. Taken together, our approach offers a framework promoting inclusion and maximizing human potential in organizational contexts, and in society more broadly.

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