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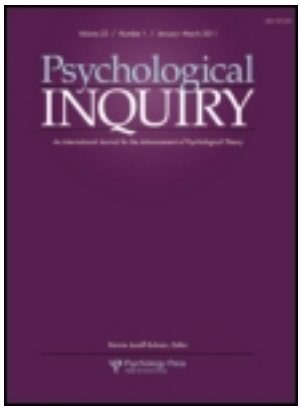

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Interactions With Men and Whites Matter Too

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COMMENTARIES

Interactions With Men and Whites Matter Too

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The underrepresentation of ethnic minorities in academic and professional settings, especially in leadership positions, and of women in science, technology, engineering, and mathematics (STEM) fields remains a persistent problem in the United States and many other countries (Census Bureau, 2003; Hill, Corbett, & St. Rose, 2010). Nilanjana Dasgupta (this issue) presents a new theoretical frame, the stereotype inoculation model, that emphasizes the protective effects of exposure to ingroup experts and peers. This exposure, Dasgupta argues, can increase minorities' and women's sense of belonging in academic settings where their group is negatively stereotyped or underrepresented, protect their self-concept (e.g., self-confidence), and support their engagement with and performance in these settings. In addition to these benefits, by assuring minorities and women that their group identity is not a barrier to success in the field, exposure to ingroup experts and peers may reduce their perceived need to disidentify from their ethnic or gender group to succeed in the field (see Cohen & Garcia, 2005; Pronin, Steele, & Ross, 2004). It may also provide negatively stereotyped individuals protection in openly hostile environments, allowing minorities and women to base their self-concept and motivation on ingroup members who succeed despite negative stereotypes rather than requiring them to rely on supports from the broader environment.

Despite these benefits, we argue that there are limits on the benefits of exposure to ingroup experts and peers. Moreover, we suggest, a model that focuses exclusively on ingroup members neglects important interactions and relationships between minority- and majority-group members. In academic and professional settings where ethnic minorities or women are numerically underrepresented, members of these groups will necessarily have most of their interactions with majority-group members, such as with Whites or with men. Further, because of their numerical majority and often high status, majority-group members may play a predominant role in defining for minority-group members whether their group identity is a barrier to success in the field or not. They may serve as symbolic social gatekeepers, defining who belongs in the field and who does not. Dasgupta reviews evidence that exposure to successful ingroup members benefits minority-group members more than exposure to successful majority-group members. But the nature of interactions and relationships with majority-group members may nonetheless have an important effect on ethnic minorities' and women's sense of belonging and success in academic and professional settings.

In this commentary, we discuss limits of within-group contact for improving minority-group members' outcomes in mainstream settings and discuss the importance of interactions and relationships with majority-group members. In so doing, we suggest that a broader model that incorporated relationships with both ingroup members and majority-group members could provide a more comprehensive understanding of the social processes that shape negatively stereotyped students' success in mainstream settings and of strategies to change these dynamics to foster their success.

Limits on the Benefits of Exposure to Successful Ingroup Members

We see four primary limits to the benefits of exposure to successful ingroup members. First is the "bunker problem": Exposure to ingroup experts and peers may create a sense of belonging in an enclave within an otherwise threatening domain, such as within the Women in Engineering Club, but not necessarily create a sense of belonging in the field as a whole. The stereotype inoculation model proposes that exposure to successful ingroup members "enhances disadvantaged individuals' sense of belonging" (p. 23) in the domain and thus increases their motivation and engagement. Dasgupta (this issue) reviews evidence that a sense of belonging in academic fields is an important determinant of disadvantaged group members' motivation

and success (e.g., Cheryan, Plaut, Davies, & Steele, 2009; Logel et al., 2009; Murphy, Steele, & Gross, 2007; Walton & Cohen, 2007). But we are skeptical that exposure to successful ingroup members is a reliable route to this broad sense of belonging. Indeed in settings where one's group is grossly underrepresented, minority-group members may have a limited capacity to define who belongs in the field.

Through what mechanism would exposure to ingroup experts and peers increase a sense of belonging in the field as a whole? Perhaps this exposure changes people's representation of the domain; for instance, as Dasgupta suggests, working on engineering problems in female-majority groups may lead women to see engineering as less male-centric. But this mechanism is fragile and context dependent. If engineering is in fact dominated by men, this representation risks being undermined by daily experience. This problem is especially acute for ethnic minorities, who may typically face more severe underrepresentation than women, and for both women and ethnic minorities, successful ingroup members become increasingly scarce higher on academic and professional ladders. At high levels, there are simply few female and ethnic minority peers and role models. To some extent, an exclusive focus on the ingroup thus leaves ethnic minorities and women in a Catch-22: They depend on exposure to ingroup members to gain a psychological foothold in threatening fields, but this exposure is just what is lacking. How can people's sense of belonging be increased in settings where their group is grossly underrepresented? As we discuss later, an important possibility involves the nature of interactions and relationships with majority-group members.

Further, the evidence that exposure to successful ingroup members reliably facilitates a broad sense of belonging in a field is not fully convincing. For instance, interventions to foster a sense of belonging among members of minority groups, which Dasgupta (this issue) reviews (e.g., Walton & Cohen, 2007, 2011), do not do so primarily by exposing students to ingroup role models. Instead, these interventions convey to students that struggles and difficulties they experience are common to all students in the transition to a new school and are thus not diagnostic of a lack of belonging on the student's part or the part of their social group. Perhaps the most important aspect of these interventions involves exposing students to majority-group members who share their worries and difficulties in the transition to a new school. In contrast to this message, students who have positive contact only with ingroup members may infer that struggles or difficulties they experience are specific to them or their group and are not shared more broadly. Ironically, this could undermine a sense of belonging in the field in general. Consistent with this view, a recent study found that an adapted version of the belonging intervention raised the grades of women in male-dominated engineering majors and, simultaneously, increased women's friendships with male engineers but had no effect on their friendships with other female engineers (Walton, Logel, Peach, Spencer, & Zanna, unpublished).

Finally, illustrating this "bunker problem," it is not clear that a high sense of belonging students experience in an enclave in which their group is well represented transfers to other settings. For instance, although girls and women may feel a greater sense of belonging and self-confidence in same-sex math and science classrooms (Brutsaert & van Houtte, 2002; Kim, 2002), as Dasgupta (this issue) acknowledges, the evidence is mixed that students who then move into coed settings are "inoculated" and thus fare better (see p. 238). In contrast, research finds that previous exposure to the majority group can support students' adjustment to settings in which their group is underrepresented. For instance, Black students with greater exposure to Whites in high school are less likely to drop out from predominantly White colleges (Graham, Baker, & Wapner, 1985).

A second limit on the effects of ingroup experts and peers involves basic attributional processes. Dasgupta argues that exposure to successful ingroup members inspires ethnic minorities and women, allowing them to see success in negatively stereotyped domains as plausible and giving them confidence to pursue these domains. But people may readily attribute the accomplishments of exceptionally successful ingroup experts and peers to their exceptional characteristics. If a woman has succeeded at a high level in engineering when other women have not, her success may seem to reflect to her personal or idiosyncratic characteristics (see Weiner & Kukla, 1970), blunting her effectiveness as a role model (Lockwood & Kunda, 1997). Moreover, as Dasgupta (this issue) acknowledges, when the ingroup role model is dissimilar from younger students, the effect may even reverse (p. 236). For instance, if a female engineer's idiosyncratic characteristics include masculine interests and no plans to get married, her success may seem proof to younger women that "women like me" do not belong in the field (cf. Cheryan, Siy, Vichayapai, Kim, & Drury, 2011).

A third limitation of relying exclusively on contact with ingroup experts and peers is that it may reify a sense of "us" versus "them" that increases intergroup tension (Dovidio, Gaertner, & Saguy, 2009). For instance, emphasizing the difference between individuals' own group and other groups can make people less helpful and trusting toward outgroup members (Dovidio et al., 1997; Voci, 2006). Organizational policies to provide disadvantaged individuals ingroup exposure and contact—for example, through "all-girls robotic teams" (p. 242)—may, even if they benefit minority-group members, reinforce a sense of "us"

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versus "them" that raises intergroup tension (see Plaut, Garnett, Buffardi, & Sanchez-Burks, 2011).

Fourth, an exclusive focus on ingroup contact may increase the salience of the stereotyped identity and ironically trigger stereotype threat (Steele, Spencer, & Aronson, 2002). It is not hard to imagine how being assigned to a Black engineering club could lead Black students to worry that others might see them as a Black student only, not as an individual with unique strengths and preferences. Notably, one remedy for stereotype threat involves thinking about characteristics that are shared between different social groups (Rosenthal & Crisp, 2006). An exclusive focus on ingroup contact may forestall the perception of cross-group similarities.

To be clear, our argument is not that exposure to ingroup experts and peers is necessarily or even usually detrimental; Dasgupta clearly describes its many benefits. But, we suggest, such contact may be limited in its effectiveness and, in some cases, produce unanticipated negative consequences. Extending the current model to include positive *inter*group contact can provide a more comprehensive perspective as well as additional tools to combat inequality.

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The Importance of Interactions with Majority-Group Members

Dasgupta reviews evidence that short-term exposure and long-term personal contact with female but not male mathematicians and engineers improve women's attitudes toward STEM fields and self-efficacy. However, we suggest, even if mere exposure to majority-group members has less effect, the *nature* of this contact can have important consequences. For example, in the case of stereotype threat, women and ethnic minorities may worry that majority-group members will perceive them through the lens of a negative stereotype (Steele et al., 2002). How a man treats a woman in a STEM context, for instance, may determine whether this concern rises to the fore or is put to rest. More broadly, as members of the dominant group, majority-group members may serve as social gatekeepers, defining through their attitudes and behaviors who belongs in the field and who does not. In this section, we review laboratory and field evidence illustrating how interactions with majority-group members shape minority-group members' sense of belonging, motivation, and success in domains where their group is negatively stereotyped.

One illustrative line of research examined how men's nonverbal behavior can affect women's experience of stereotype threat in engineering (Logel et al., 2009). In this research, more sexist male engineers interacted with female colleagues in a more dominant and flirtatious manner. In turn, this boorish behavior induced stereotype threat among women and caused them to perform poorly on an engineering test. Notably, men's behavior was not overtly hostile or even negative; women actually liked the men *more* when he behaved in the sexist manner. But this dominant behavior evoked stereotype threat for women. This research illustrates how even subtle patterns of interaction with majority-group members can trigger threat. Can positive interactions with majority-group members defuse threat?

Research suggests this possibility. In our own research, we have found that even minimal positive, respectful interactions with majority-group members can increase women's motivation and performance in the face of stereotype threat. In one study, female participants and a male confederate were told they would take a difficult and evaluative math test, instructions that elicit stereotype threat. Before taking the test, the male confederate initiated a professional handshake with the woman or he did not. The handshake seemed to enhance women's motivation on the test, leading women to attempt more problems as well as to report feeling more respected by the male peer (Akcinar & Walton, 2011).

Another line of studies found that small cues that create a sense of working together with a man can improve women's math performance (Carr, Walton, & Dweck, 2011). In these studies, men and women again anticipated taking an evaluative math test. After completing a few practice problems, all participants were told they had been randomly assigned to receive a tip on the math problems. Participants then received a friendly tip purportedly either authored by a male peer taking the same test or from a computer tip bank. When authored by the male peer, the tip was meant to create the sense of a positive, collaborative relationship—a feeling of working together—even though in all cases women worked while physically alone on the math test. Manipulation checks found the tip from the male peer created this sense of working together. Moreover, in this condition women performed significantly better on the math test, eliminating a gender difference present in the computer bank condition. Subsequent studies found that this effect was mediated by women's feelings of social connection to the man.

Field research also illustrates the importance of relationships with majority-group members. In one longitudinal study, Mendoza-Denton and Page-Gould (2008) found that the more majority-group friends Black students had in the transition to a predominantly White university, the greater their sense of belonging and the more satisfied they were with the university in the following 1 to 2 years. These effects were strongest among Black students who otherwise experienced the greatest level of race-based threat (i.e., had the highest levels of sensitivity to race-based rejection). An experimental study in which Latino and White

students went through a friendship-building experience in cross-race rather than same-race dyads produced similar effects, increasing Latino's satisfaction with the university.

Conclusion

Dasgupta makes a compelling case for the importance of exposure to ingroup experts and peers if women and ethnic minority students are to thrive in settings in which their group is underrepresented and negatively stereotyped. Complementing her analysis, we have emphasized the benefits of positive intergroup contact. If women and ethnic minority students are to experience a sense of belonging and to succeed in settings that are dominated by other groups, it is important that they both observe members of their own group succeed and that they develop positive relationships with members of the majority group. This analysis suggests multiple potential routes to improving outcomes for women and minorities. These include not only strategies to expose students to ingroup role models and accomplishments but also efforts to develop more positive intergroup relations, such as by supporting students' sense of belonging in diverse environments (Walton & Cohen, 2007, 2011), by fostering cross-group friendships (Mendoza-Denton & Page-Gould, 2008), and by reducing prejudice and stereotyping among members of the majority group (see Logel et al., 2009).

An important aspect of our analysis is that it underscores the close relationship between two fundamental social problems—how to foster positive intergroup relations and how to support the academic success of underrepresented and negatively stereotyped students. Both problems are of long-standing interest to social psychologists. Historically, these problems were considered together. In research building up to the Supreme Court's *Brown vs. Board of Education* decision, social psychologists argued that school desegregation would both improve intergroup relations and enhance educational outcomes for minority students (Cook, 1979). Illustrating this approach, Elliot Aronson's "jigsaw classroom" showed elegantly how an intervention that improved peer relationships in newly desegregated elementary-school classrooms could simultaneously reduce Whites' prejudice and raise minority students' achievement (Aronson & Osherow, 1980). Yet in recent years, in some respects research on intergroup prejudice and on underperformance have gone in different directions. But insofar as it is worries about negative judgments and evaluations that cause threat and underperformance among minority-group students, these problems are intimately connected. Indeed, cross-race dyadic friendships improve not only minority-group students' sense of belonging in predominantly White universities but also intergroup relations and reduce prejudice among majority-group members (Page-Gould, Mendoza-Denton, & Tropp, 2008; Pettigrew & Tropp, 2006; Tropp & Pettigrew, 2005). Perhaps by considering problems of intergroup relations and of underperformance as aspects of the same system we can find new solutions to both problems.

Note

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