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FlashReport

Ironic effects of explicit gender prejudice on women's test performance

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ABSTRACT

As prejudice becomes more subtle in its manifestations, members of stigmatized groups must often contend with the ambiguity of not knowing whether others are biased against them. In this study, we tested whether explicitly communicated gender prejudice would facilitate women's performance on a difficult task compared to contexts where such discrimination might be possible but is not explicitly communicated. The findings revealed that the task performance of women who are chronically concerned about gender discrimination suffered when a male interviewer's gender attitudes were ambiguous, relative to when his attitudes were either explicitly chauvinistic or explicitly egalitarian. As expected, the performance of women low in discrimination concerns was not affected by the experimental manipulation. The findings are discussed in light of growing evidence for the ironic effects of prejudice for the targets of stigma.

Despite progress in laws and social prohibitions against overt discrimination, targets of stigma must still contend with subtler forms of discrimination that have gone "underground," and often face situations in which it is unclear whether others' actions towards them reflect prejudice. When passed over for a job or receiving a low grade, for example, members of stigmatized groups can experience *attributional ambiguity*: the state of not knowing whether a given outcome is the result of another's prejudice or of one's personal attributes (Crocker, Voelkl, Testa, & Major, 1991; Mendes, Major, McCoy, & Blascovich, 2008). There is evidence that even in the absence of negative outcomes per se, the mere specter of potential discrimination can disrupt task performance and achievement (Aronson & Inzlicht, 2004; Mendoza-Denton, Purdie, Downey, Davis, & Pietrzak, 2002; Steele, 1997). Several interrelated mechanisms have been proposed to account for these effects, including HPA axis activation (Page-Gould, Mendoza-Denton, & Tropp, in press; Schmader, Johns, & Forbes, 2008), performance monitoring (Beilock, Jellison, Rydell, McConnell, & Carr, 2006), and increased cognitive demands (Croizet et al., 2004; Schmader & Johns, 2003). Thus, ambiguity with respect to others' prejudice can lead to monitoring processes that adversely affect task performance.

Recent literature suggests that ambiguous prejudice cues may be even more disruptive for targets than explicitly communicated prejudice. For example, Shelton, Richeson, Salvatore, and Trawalter (2005) found that African American participants preferred to interact with more racially biased White partners than with less biased partners. Dovidio (2001) found that Black–White dyads in which the White partner was low on explicit prejudice but high on implicit prejudice took longer to complete a problem-solving task (albeit non-significantly) than dyads in which the White partner was high on both explicit and implicit prejudice. Dovidio suggests that the mixed messages from high implicit/low explicit prejudice participants interfered with performance. When the White partner was high on both implicit and explicit prejudice, Black participants may at least have known what to expect. Consistent with this idea, Black participants found high implicit/high explicit prejudice partners more trustworthy than high implicit/low explicit prejudice partners.

Nevertheless, these studies did not directly assess the test performance of stigmatized targets in explicit versus ambiguous prejudice conditions, which would provide a needed bridge to the literatures on attributional ambiguity and stigma-related threat. We attempt to do so here by manipulating whether women completed a difficult analogies task, purportedly as a test of fitness for graduate study, after viewing an office that either provided explicit cues that their upcoming male evaluator was chauvinistic or did not provide explicit cues as to his gender attitudes. As a point of comparison, we also included a condition in which the office provided explicit cues that the evaluator held progressive, egalitarian views of women. Recognizing that individual differences exist in the degree to which people are likely to be concerned about being the targets of discrimination (Mendoza-Denton et al., 2002), we additionally assessed participants' *sensitivity to gender-based rejection* (RS-gender; London, Downey, Rattan, & Tyson, 2008)—the tendency to anxiously expect rejection on the basis of one's gender. Prior work has shown that individuals high on status-based rejection sensitivity, as a result of their race (Chan & Mendoza-Denton, in press; Mendoza-Denton et al., 2002), their

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sexual orientation (Pachankis, Goldfried, & Ramrattan, 2008), or their gender (London et al., 2008), become particularly vigilant for discrimination cues in contexts where such discrimination is both applicable and possible.

We hypothesized that when cues of the evaluator's egalitarianism were clear, this safe context would lead all participants to perform equally well regardless of their standing on RS-gender. However, we expected that when a male evaluator's attitudes were not explicitly communicated, women high in RS-gender would be especially likely to underperform because they would be preoccupied by the possibility of prejudice. Moreover, building on research suggesting "ironic effects" of prejudice, as termed by Shelton and colleagues (2005), we expected that when cues of chauvinism were clear, women high in RS-gender would be, in a sense, released from ambiguity, so their performance should not suffer. We did not expect the context manipulation to significantly affect the performance of women low in RS-gender because they are not as vigilant about gender-based rejection cues in the environment (London et al., 2008).

Method

Participants

Participants were 170 female undergraduates at a large public university who partook in the study for course credit. The findings reported below correspond to those participants for whom we had verbal SAT scores ($n = 145$, $M_{age} = 19.62$, $SD = 1.48$). In the final sample, 63 participants self-identified as Asian, 45 as White, 6 as Latina, 3 as African American, and 27 as other (one participant did not report this information).

Measures

Rejection sensitivity-personal (RS-personal)

The RS-personal Questionnaire (Downey & Feldman, 1996) assesses anxious expectations of personal rejection by significant others (e.g., concerns about whether a romantic partner really loves you). We included an abbreviated nine-item version of the measure to control for discrimination-irrelevant anxious expectations in interpersonal interactions ($M = 10.16$, $SD = 3.36$; $\alpha = .77$).

Verbal SAT

To ensure that any observed effects on performance were independent of students' prior preparation or skill level, we controlled for participants' self-reported verbal SAT scores ($M = 641.24$, $SD = 87.77$).

Post-baccalaureate intentions

We asked participants to rate their likelihood of pursuing post-baccalaureate education (1 = not at all likely, 7 = extremely likely). Participants reported a high likelihood of continuing with graduate work ($M = 6.0$, $SD = 1.21$), suggesting the evaluation task (see Procedure below) was, on average, self-relevant to participants. We controlled for this variable to ensure any observed effects were not due to differences in task relevance.

RS-gender

The RS-gender Questionnaire (London et al., 2008) assesses anxious expectations of gender-based rejection. In one study RS-gender predicted anticipatory nervousness and evaluation anxiety among women whose essays were being graded by a senior male professor specifically when they thought he knew their gender (London et al., 2008, Study 4). The mean score for this sample was 7.32 ($SD = 3.29$, $\alpha = .85$). RS-gender was significantly correlated with RS-personal ($r = .33$, $p = .0001$) as well as SAT verbal scores ($r = -.21$, $p = .008$), but not with post-baccalaureate intentions ($r = .01$, *ns*).

Manipulation of evaluator's attitudes through room décor

Participants were randomly assigned to view one of three offices purportedly belonging to a man by whom they expected to be evaluated (see Procedure below). The *ambiguous office* ($n = 48$) décor included a desk stacked with books and papers, an empty case of Snapple on a table, a University banner, and a certificate from "Volunteers of America, Ivy League Undergraduate Division" awarded to "David Branson." Although there were no cues in the office that explicitly revealed the occupant's attitudes towards women, his gender and his position as an evaluator of participants' aptitude were expected to activate discrimination concerns specifically among women high in RS-gender.

The *chauvinist office* ($n = 51$) contained cues to suggest that the occupant held sexist attitudes toward women. For example, an empty case of "Big Daddy IPA" beer now sat on the table. Magazine pictures of popular female entertainers and of motorcycles, including one with a bikini-clad model, hung on the wall. A poster of Mount Rushmore and a certificate that read "Regional Executive Chair of the Ivy League Division of Future Business Leaders of America" were also on display. Finally, a book on the desk proclaimed, "For every man who has ever thought, 'A job, a wife and kids—there must be something more.' There is!" (Farrell, 1974).

The *progressive* office ($n = 46$) contained explicit cues that the occupant held progressive attitudes towards women. For example, a "Race for the Cure" banner suggested that the occupant had participated in or supported an event to raise breast cancer awareness. The certificate now recognized him for being "Vice President in Charge of Volunteer Services" of Phi Tau Coeducational Fraternity, with the logo "Promoting Equality, Acceptance, and Respect for All Men and Women" prominently displayed. In addition, the décor included a small stuffed bunny and pictures of a toddler, suggesting that he had a daughter. Finally, a conference badge for the Society for The Psychological Study of Social Issues hung on the wall.

A separate sample of 23 female undergraduates rated one of the three offices and gave their impressions of its occupant. Embedded among several filler questions was an item asking participants to rate the likelihood that the occupant held stereotypical views of women (1 = not at all likely, 9 = extremely likely). A significant effect of room emerged, $F(2, 20) = 12.48$, $p < .0003$, with the chauvinist room ($M = 6.71$, $SD = 2.50$) significantly higher than both the ambiguous room ($M = 3.67$, $SD = 1.37$; $t(11) = 3.30$, $p < .004$, $d = 1.51$), and the progressive room ($M = 2.70$, $SD = .95$; $t(15) = 4.91$, $p < .0001$, $d = 2.12$). Although the comparison between the ambiguous and progressive office was not statistically significant, the effect size (see Cohen, 1992) was nevertheless large ($t(14) = 1.13$, $p = .272$, $d = .825$). Together, the ordering of the means and the magnitude of the effect sizes suggest the rooms were effective in communicating the occupant's intended attitude.

Procedure

A female research assistant (RA) greeted each participant individually in a hallway outside the room where the study was to be held. Explaining that the goal of the research was to develop personalized graduate school admission criteria, the RA informed the participant that she would take part in an evaluation led by a graduate student. This was meant to explicitly communicate that the participants' own competencies would be under scrutiny. The RA explained that the graduate student had been delayed in traffic but that the participant could wait in his office (care was taken to use the male pronoun "he" throughout). The RA went to get a key

to the office while the participant filled out a consent form. Upon returning, the RA led the participant into the office, handed her a filler questionnaire and left the participant alone while she supposedly returned the key to the main office. The participant had ample time alone in the office to observe her surroundings. When the RA returned, she handed the participant a questionnaire containing questions related to the upcoming evaluation. This questionnaire included a suspicion probe to ensure that the participant believed there would indeed be an evaluation; everyone did.

Given our interest in how anticipatory threat can affect performance, we wanted to avoid any influence of a social interaction itself on participants' test scores. As Steele (1997) points out, this type of threat "can occur even when the person is alone, as for a woman taking an important math test alone in a cubicle but under the threat of confirming a stereotyped limitation of ability (p. 618)." Thus, as the participant completed her questionnaire, the RA pretended she was receiving a call on her cell phone from the evaluator. After hanging up, the RA explained that even though the graduate student would still analyze the participant's responses to the questionnaire, he was not going to arrive in time for the interview. The RA then asked if the participant would complete the questionnaires in the hallway (we did this to prevent the possibility that any differences in performance would result from being distracted by the décor). All participants complied.

Once she was settled back in the hallway, the participant completed the rest of the written "evaluation." It included 12 SAT-style analogies (e.g., perforation: seal:: laceration: skin) of moderate difficulty gathered from various preparatory manuals for standardized tests. Next, the participant filled out a final packet of materials containing the RS-personal and RS-gender questionnaires. These measures were assessed after the manipulation to avoid revealing our interest in gender-based discrimination. Room type did not exert a significant effect on either of the measures (Fs < 1), suggesting the experimental manipulation did not affect these chronic individual differences. Finally, after providing their SAT scores and post-baccalaureate intentions, participants were debriefed, thanked, and excused.

Results

The number of analogies completed correctly was submitted to a GLM analysis that included RS-gender (continuous), room type (3 levels: chauvinist, ambiguous, progressive), and their interaction. The analysis controlled for RS-personal, self-reported verbal SAT scores, and post-baccalaureate intentions. These covariates did not moderate the results reported below.

This analysis yielded a strong main effect of verbal SAT on task performance, $F(1,136) = 113.42$, $p < .0001$. No other main effects were significant. As expected, however, the analysis yielded a significant interaction between RS-gender and room type, $F(2,136) = 3.69$, $p = .028$. As Fig. 1 illustrates, among women high in RS-gender, performance was hampered specifically when they completed the analogies task in the ambiguous room relative to either the chauvinist room, $t(97) = 2.37$, $p = .019$, or the progressive room, $t(92) = 2.42$, $p = .017$. Performance in the chauvinist and the progressive room did not differ significantly, $t(95) = .037$, $p = .97$. As expected, women low in RS-gender, who are not as attuned to gender-based rejection cues, did not differ in their performance as a function of room type (all ts < 1.3, *ns*). Further analyses confirmed that in the ambiguous room, the effect of RS-gender was strong and negative, $F(1,43) = 11.04$, $p = .002$, whereas it was not significant either in the chauvinist room, $F(1,47) = 1.52$, $p = .13$, or progressive one, $F(1,41) = 0$, *ns*.

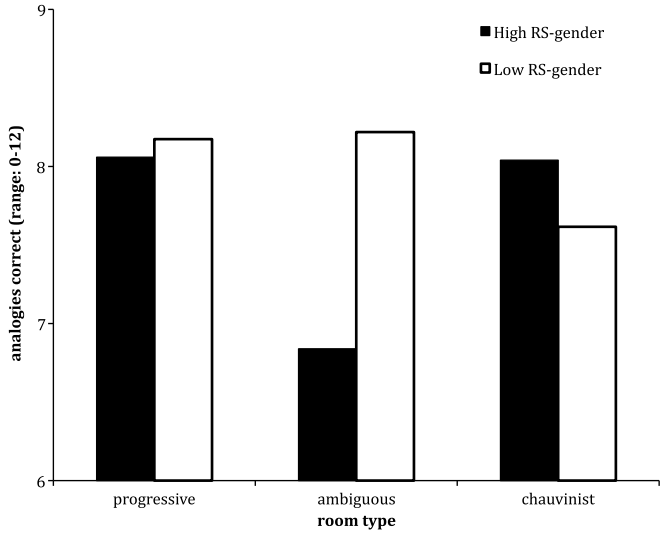

Fig. 1. Performance on analogies task as a function of RS-gender and room type. Values for "high" and "low" RS-gender were estimated at one standard deviation above and below the mean of the standardized RS-gender distribution.

Discussion

A growing body of research suggests that as the expression of prejudice becomes increasingly subtle, ambiguity regarding others' attitudes has deleterious effects on members of stigmatized groups. We tested here whether such ambiguity would interfere with test performance, compared to conditions in which an evaluator's attitudes were explicitly communicated. Despite the difference in the valence of the attitudes implied by the chauvinist and progressive offices, we expected that each would similarly grant our female participants certainty with respect to his views on women, thus liberating them from ambiguity and, in effect, facilitating performance.

Furthermore, we hypothesized and found this effect to be evident only among those women who are concerned about being rejected on the basis of their gender. The performance of participants low in RS-gender did not differ as a function of the experimental manipulation, suggesting these participants were less vigilant about the gender-related prejudice cues that distinguished the rooms.

Although we expected performance to be hindered particularly in the ambiguous condition, it is perhaps surprising that women performed as well in the chauvinist condition as in the progressive condition. However, this finding seems consistent with research showing that attributions to prejudice can confer psychological benefits on the targets of stigma such as protected self-esteem (Major, Kaiser, & McCoy, 2003), and suggests that such protection may extend to the performance domain. It is possible that explicit prejudice may activate physiological responses consistent with challenge rather than threat ("I'll show him;" e.g., Mendes, Blascovich, Lickel, & Hunter, 2002).

Nevertheless, the ironic effects of prejudice may dissipate over time (Page-Gould et al., in press; Shelton et al., 2005). After an initial performance boost, one may begin to see differences in egalitarian versus discriminatory contexts for targets of stigma in terms of comfort, motivation, and domain identification (Major, Spencer, Schmader, Wolfe, & Crocker, 1998; Mendoza-Denton et al., 2002), which might ultimately wipe out or even reverse short-term performance gains.

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