

# Stigma by Prejudice Transfer: Racism Threatens White Women and Sexism Threatens Men of Color



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## Abstract

In the current research, we posited the *stigma-by-prejudice-transfer* effect, which proposes that stigmatized group members (e.g., White women) are threatened by prejudice that is directed at other stigmatized group members (e.g., African Americans) because they believe that prejudice has monolithic qualities. While most stigma researchers assume that there is a direct correspondence between the attitude of prejudiced individuals and the targets (i.e., sexism affects women, racism affects racial minorities), the five studies reported here demonstrate that White women can be threatened by racism (Study 1, 3, 4, and 5) and men of color by sexism (Study 2). Robust to perceptions of liking and the order in which measures were administered, results showed that prejudice transfers between racism and sexism were driven by the presumed social dominance orientation of the prejudiced individual. In addition, important downstream consequences, such as the increased likelihood of anticipated stigma, expectations of unfair treatment, and the attribution of negative feedback to sexism, appeared for stigmatized individuals.

## Keywords

sex differences, racial and ethnic attitudes and relations, prejudice, open data, open materials, preregistered

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It is well established that certain contexts evoke *identity threats*, or concerns that one's social identity is devalued or stigmatized by others (Abrams & Hogg, 1999; Crocker, Major, & Steele, 1998; Major & O'Brien, 2005). When under threat, stigmatized group members experience the pernicious effects of stigma, including cognitive impairments, anxiety, feelings of exclusion, and a general desire to seek less identity-threatening environments (Cheryan, Plaut, Davies, & Steele, 2009; Murphy, Steele, & Gross, 2007; Pinel, 2002; Spencer, Steele, & Quinn, 1999). Yet it is unclear whether women and racial minorities experience the effects of stigmatization when they encounter prejudice that targets a stigmatized attribute they do not possess (an *unshared stigmatized identity*). Thus, the current research raises an important question—does racism invoke concerns about sexism and sexism concerns about racism?

While prejudice researchers have primarily theorized about stigma by focusing on the correspondence between the attitude of perpetrators (e.g., sexists) and their targets

(e.g., women; Swim & Stangor, 1998), we propose *stigma by prejudice transfer*, which predicts that stigmatized group members can be threatened by prejudice targeting other stigmatized groups because they believe that prejudice can have monolithic characteristics (Allport, 1954). Inspired by intraminority approaches (Craig & Richeson, 2016), we report a first test of whether prejudice directed at one stigmatized group (e.g., African Americans) evokes threats for individuals with unshared stigmas (e.g., White women). We propose that White women and racial minorities alike are threatened by both racism and sexism, especially in contexts in which minorities and women encounter similar challenges (e.g., competence evaluations). This prejudice transfer may occur because

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people have a lay understanding of the underlying ideology that bridges different prejudices in individuals, a lay theory that echoes research on prejudiced people themselves.

Research on the characteristics of prejudiced people suggests that prejudice does indeed have monolithic characteristics; people who hold racist beliefs also hold sexist beliefs, and vice versa (e.g., Pratto & Pitpitan, 2008; Pratto, Sidanius, Stallworth, & Malle, 1994). The monolithic aspects of sexism and racism are explained in part by the tendency for prejudiced individuals to show preference for in-group dominance and social inequalities, termed a *social dominance orientation* (Pratto et al., 1994; Sidanius & Pratto, 1999). In fact, social dominance orientation is more strongly linked to sexism and anti-Black attitudes than other prejudiced-related personality traits and ideologies, such as right-wing authoritarianism (Altemeyer, 1981; Whitley, 1999) and the Protestant work ethic (Rosenthal, Levy, & Moyer, 2011). In addition, social dominance orientation specifically underlies competition-based prejudices (Duckitt & Sibley, 2007) and thus has been found to influence competency judgments of subordinate groups in evaluative contexts (Oldmeadow & Fiske, 2007). Therefore, in the present studies, we examined whether the perceived social dominance orientation of prejudiced individuals explains why stigma by prejudice transfer occurs in an evaluative context. We expected that White women, Latino men, and Black men would presume that racists were sexists, and vice versa, because of the evaluators' high levels of social dominance orientation, which would lead minorities to experience identity threats. These stigmatized groups were selected because they face common disadvantages in competence-related evaluations; that is, they are viewed as less intelligent and competent than equally qualified White men (Milkman, Akinola, & Churgh, 2015; Storage, Horne, Cimpian, & Leslie, 2016).

To our knowledge, no research has tested whether (or why) prejudice directed at other stigmatized groups evokes stigma transfer. Related but distinct work on *stigma by association* (Neuberg, Smith, Hoffman, & Russell, 1994) and *associative stigma* (also called *courtesy stigma*; e.g., Mehta & Farina, 1988) has examined whether bystanders, who do not possess a personal stigma, receive negative evaluations from their association with stigmatized group members. The stigma-by-prejudice-transfer effect proposed here differs from associative stigma and stigma by association because it proposes that prejudice aimed at unshared stigmatized identities (e.g., sexism) affects other stigmatized individuals (e.g., Black men) even when there is no pre-existing relationship or physical proximity between the stigmatized groups. Furthermore, this research suggests that perceived social dominance orientation is the key process by which

prejudice creates stigma across unshared stigmatized identities.

To demonstrate the stigma-by-prejudice-transfer effect, we conducted five studies using both anticipated and actual interactions with evaluators, focusing on stigma transfers from sexism and racism in three groups: White women (Studies 1, 3, 4, and 5) and Latino and Black men (Study 2). In addition, we investigated whether stigma transfer also occurred in White men (Studies 1 and 2). We expected a serial pattern of mediation, such that White women were expected to view racists as having higher social dominance orientation than sexists, which would lead to assumptions of sexist beliefs in racist individuals. Assumptions of sexist beliefs, in turn, should evoke gender identity threats. Similarly, men of color were expected to experience racial identity threats in the face of sexism through perceived social dominance orientation and perceived racism.

## Study 1

While we expected both White men and White women to view racists as sexists and vice versa, White women (but not White men) were expected to anticipate poor treatment and gender stigma when encountering racist or sexist evaluators. We did not expect stigma transfer from sexism or racism in White men because their gender and racial identities are not stigmatized. We investigated this and related questions in Study 1.

## Method

**Participants.** A total of 266 White men and White women were recruited from Amazon Mechanical Turk (MTurk) to participate in exchange for \$0.40. After removing participants who failed attention checks and participants who were not from, or currently living in, the United States ( $n = 9$ ), we had a final sample of 257 (59% female, 41% male; age:  $M = 38.87$  years,  $SD = 14.62$ , range = 19–76). The stopping point for data collection was set between 30 and 40 participants per condition, a sample-size range that has been recommended for between-subjects designs without a priori effect sizes (Simmons, Nelson, & Simonsohn, 2011).<sup>1</sup>

**Procedure and measures.** Each participant was randomly assigned to form impressions ostensibly provided by a former participant whose survey responses revealed evidence of sexist attitudes, evidence of racist attitudes, or no evidence of either, which yielded a 2 (participant gender: male, female)  $\times$  3 (condition: sexism, racism, control) between-subjects design. Participants were asked to report the amount of stigma and level of fair treatment they expected from the individual. The use of

profiles purportedly filled out by a former participant has been a feature of prior work (Pinel, 2002; Sawyer, Major, Casad, Townsend, & Mendes, 2012).

Profiles consisted of answers to a set of psychological measures and a demographic form indicating that the former participant was a White, 30-year-old male. Participants in the racism condition received a profile with moderately racist responses to the Modern Racism Scale and the Old Fashioned Racism Scale (McConahay, 1986) but no sexism measures. Participants in the sexism condition received a profile with moderately sexist responses to the Modern Sexism Scale and the Old Fashioned Sexism Scale (Swim, Aikin, Hall, & Hunter, 1995) but no racism measures. Scale titles (e.g., Modern Racism Scale) were not given in any condition. Filler items consisted of responses to personality inventories (e.g., the Big Five Inventory). Participants in the control condition received responses only to the demographic and filler personality measures. Pilot testing confirmed that prejudice levels were similar in the racism and sexism conditions, and that both were higher than in the neutral condition.<sup>2</sup>

After studying the profile, participants evaluated the profiled individual on five measures (described in the order in which they are presented). First, participants indicated the target's sexism ( $\alpha = .97$ ) and racism ( $\alpha = .97$ ) using seven items each on a scale from 1 (*very slightly or not at all*) to 5 (*extremely or a lot*). Example items are "How likely is it that this person is sexist?" and "How likely is it that this person is racist?" Next, participants were instructed to complete the 16-item social-dominance-orientation scale (Pratto et al., 1994;  $\alpha = .98$ ) as they thought the person in the profile would have completed it. A sample social-dominance-orientation item is "Some groups of people are simply inferior to other groups," and answers were made on a scale from 1 (*very negative/strongly disagree*) to 7 (*very positive/strongly agree*).

Participants also indicated how concerned they would be that the person in the profile would judge them negatively on the basis of their "gender," "being a man/woman," and their "sex" ( $\alpha = .98$ ) on a scale from 1 (*not at all*) to 7 (*a great deal*). Participants next answered six questions ( $\alpha = .96$ ) regarding the challenges and mistreatment they would expect if they were interviewed by this person (e.g., "Would this person treat you fairly?"). These ratings were made on a scale from 1 (*not at all*) to 7 (*very much*), higher scores corresponding with greater anticipation of unfair treatment. Finally, liking was measured with three items (e.g., "How much would you enjoy interacting with this person?";  $\alpha = .78$ ). These measures were interspersed with filler questions about the profile and the participant (i.e., trait evaluations of the target, mood measures) followed by a demographic questionnaire and debriefing.

Prejudiced individuals are generally viewed as socially undesirable and possessing other negative traits (e.g., Sommers & Norton, 2006), so much so that prejudice against, for example, racists is viewed as acceptable (Crandall, Eshleman, & O'Brien, 2002). Thus, we tested for the stigma-by-prejudice-transfer effect using analyses of covariance (ANCOVAs) controlling for liking.

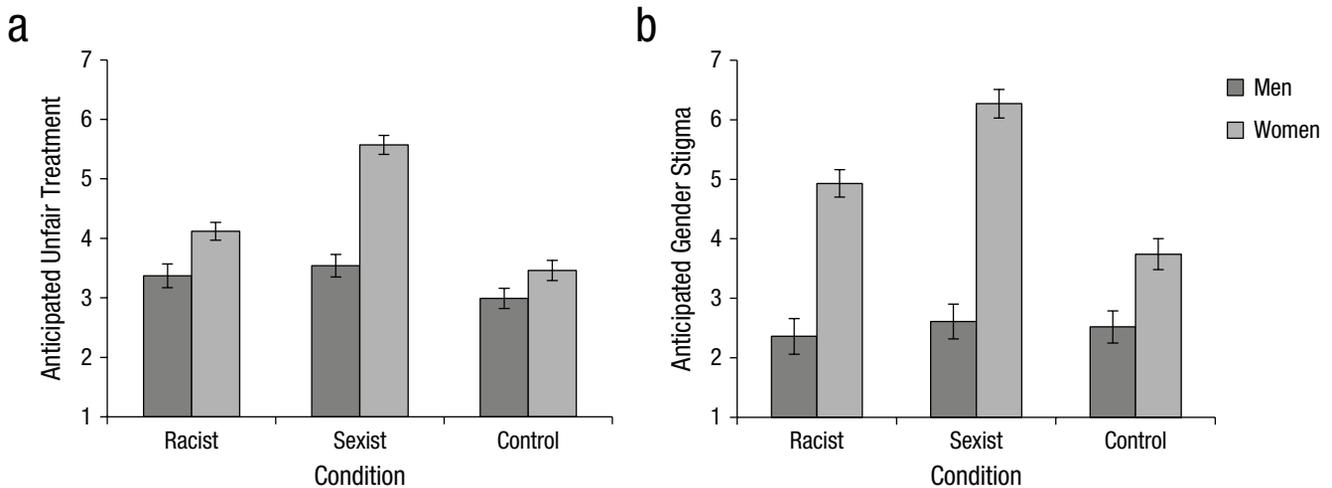
## Results

**Measures.** Preliminary  $2 \times 3$  analyses of variance (ANOVAs) revealed that liking of the profiled individual varied significantly by condition,  $F(2, 251) = 10.43$ ,  $p < .001$ ,  $\eta_p^2 = .08$ , with participants in the sexism condition ( $M = 2.08$ ,  $SE = 0.10$ ) and racism condition ( $M = 2.06$ ,  $SE = 0.10$ ) viewing the individual less favorably than participants in the control condition ( $M = 2.61$ ,  $SE = 0.10$ )—sexism versus control:  $t(168) = 3.74$ ,  $p < .001$ , 95% confidence interval (CI) for the mean difference =  $[-0.88, -0.22]$ ; racism versus control:  $t(171) = 3.88$ ,  $p < .001$ , 95% CI for the mean difference =  $[-0.92, -0.27]$ . No main effects of participant gender or condition-by-participant-gender interactions were found for liking,  $F_s < 1.28$ ,  $p_s > .250$ ,  $\eta_p^2_s \leq .01$ .

Because liking varied by condition, we conducted  $2$  (participant gender: male, female)  $\times 3$  (condition: sexism, racism, control) between-subjects ANCOVAs on all outcomes, with liking as a covariate to demonstrate that the stigma-by-prejudice-transfer effect could not be accounted for by a liking penalty to profiled individuals.<sup>3</sup> To control for family-wise error, we used Bonferroni tests to determine simple effects on covariate-adjusted means.<sup>4</sup>

An ANCOVA on social dominance orientation revealed a significant main effect of condition,  $F(2, 250) = 35.62$ ,  $p < .001$ ,  $\eta_p^2 = .22$ , consistent with our hypotheses. Participants viewed the racist profile ( $M = 5.31$ ,  $SE = 0.15$ ) as higher in social dominance orientation than the control profile ( $M = 3.60$ ,  $SE = 0.15$ ),  $t(170) = 8.07$ ,  $p < .001$ , 95% CI for the mean difference =  $[1.20, 2.22]$ , and the sexist profile ( $M = 4.92$ ,  $SE = 0.15$ ) as higher in social dominance orientation than the control profile,  $t(167) = 6.24$ ,  $p < .001$ , 95% CI for the mean difference =  $[0.82, 1.82]$ , but no significant difference was found between the racism and sexism conditions,  $t(170) = 1.84$ ,  $p = .19$ , 95% CI for the mean difference =  $[-0.11, 0.88]$ . Moreover, neither the main effect of gender nor its interaction with condition were significant,  $F_s < 1.30$ ,  $p > .250$ .

An ANCOVA on perceived racism of the profiled individual revealed a significant main effect of gender; women ( $M = 3.12$ ,  $SE = 0.07$ ) reported greater overall perceptions of racism than men ( $M = 2.90$ ,  $SE = 0.08$ ),  $F(1, 250) = 4.21$ ,  $p = .041$ ,  $\eta_p^2 = .02$ . Notably, the predicted main effect of condition was significant,  $F(2, 250) = 113.98$ ,  $p < .001$ ,  $\eta_p^2 = .48$ ; the sexist profile ( $M = 2.83$ ,  $SE =$



**Fig. 1.** Mean ratings from Study 1: anticipated (a) unfair treatment and (b) gender stigma as a function of profile condition and participant group. Error bars show standard errors.

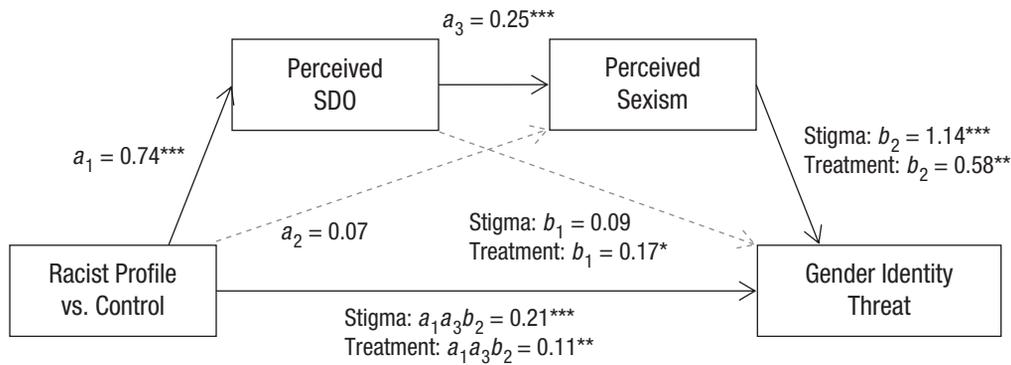
0.10) was viewed as significantly more racist than the control profile ( $M = 2.08$ ,  $SE = 0.10$ ),  $t(167) = 5.30$ ,  $p < .001$ , 95% CI for the mean difference = [0.42, 1.08]. Racist profiles ( $M = 4.12$ ,  $SE = 0.10$ ) were viewed as the most racist of all the three conditions—racist profile compared with control profile:  $t(170) = 14.13$ ,  $p < .001$ , 95% CI for the mean difference = [1.72, 2.38]; racist profile compared with sexist profile:  $t(171) = 9.12$ ,  $p < .001$ , 95% CI for the mean difference = [-1.61, -0.96]. The interaction between condition and gender was not significant,  $F(2, 250) = 0.07$ ,  $p > .250$ .

The ANCOVA on perceived sexism of the profiled individual also revealed a significant main effect of gender; overall, women ( $M = 3.18$ ,  $SE = 0.07$ ) detected greater sexism than men ( $M = 2.94$ ,  $SE = 0.09$ ),  $F(1, 250) = 4.86$ ,  $p = .03$ ,  $\eta_p^2 = .02$ . The predicted main effect of condition,  $F(2, 250) = 100.19$ ,  $p < .001$ ,  $\eta_p^2 = .45$ , was qualified by a significant interaction with gender,  $F(2, 250) = 3.17$ ,  $p = .044$ ,  $\eta_p^2 = .03$ . Both men,  $F(1, 102) = 39.33$ ,  $p < .001$ ,  $\eta_p^2 = .44$ , and women,  $F(1, 147) = 71.92$ ,  $p < .001$ ,  $\eta_p^2 = .50$ , viewed the sexist profile (men:  $M = 3.77$ ,  $SE = 0.16$ ; women:  $M = 4.36$ ,  $SE = 0.12$ ) as significantly higher in sexism than the control profile (men:  $M = 1.87$ ,  $SE = 0.15$ ; women:  $M = 2.34$ ,  $SE = 0.13$ )—men:  $t(74) = 8.68$ ,  $p < .001$ , 95% CI for the mean difference = [1.38, 2.43]; women:  $t(92) = 11.42$ ,  $p < .001$ , 95% CI for the mean difference = [1.38, 2.43]. Both men and women also viewed the racist profile (men:  $M = 3.04$ ,  $SE = 0.17$ ; women:  $M = 2.96$ ,  $SE = 0.11$ ) as significantly higher in sexism than the control profile—men:  $t(70) = 5.15$ ,  $p < .001$ , 95% CI for the mean difference = [0.63, 1.71]; women:  $t(98) = 3.65$ ,  $p < .001$ , 95% CI for the mean difference = [0.19, 1.05]. Driving the interaction was the fact that women were significantly more likely than men to perceive sexism in the sexism condition,  $t(83) = 2.95$ ,  $p = .020$ , 95% CI for the mean difference = [0.09,

1.00], and control condition,  $t(82) = 2.37$ ,  $p = .015$ , 95% CI for the mean difference = [0.07, 0.64], but not in the racism condition,  $t(86) = 0.40$ ,  $p > .250$ , 95% CI for the mean difference = [-0.26, 0.53].

An ANCOVA on anticipated gender stigma revealed significant main effects of gender,  $F(1, 250) = 132.76$ ,  $p < .001$ ,  $\eta_p^2 = .35$ , and condition,  $F(2, 250) = 12.02$ ,  $p < .001$ ,  $\eta_p^2 = .09$ , which were qualified by the expected gender-by-condition interaction,  $F(2, 250) = 10.81$ ,  $p < .001$ ,  $\eta_p^2 = .08$ . The amount of gender stigma anticipated by men did not vary by condition (racism:  $M = 2.35$ ,  $SE = 0.32$ ; sexism:  $M = 2.63$ ,  $SE = 0.31$ ; control:  $M = 2.38$ ,  $SE = 0.28$ ),  $F(2, 102) = 0.25$ ,  $p > .250$ ,  $\eta_p^2 = .01$ , whereas it did for women,  $F(2, 147) = 25.59$ ,  $p < .001$ ,  $\eta_p^2 = .26$ . Critical to the stigma-by-prejudice-transfer effect, results showed that women in the racism condition ( $M = 4.91$ ,  $SE = 0.21$ ) reported greater anticipated gender stigma than women in the control condition ( $M = 3.90$ ,  $SE = 0.25$ ),  $t(98) = 2.52$ ,  $p = .009$ , 95% CI for the mean difference = [0.20, 1.82], and they reported the highest level of gender stigma in the sexism condition ( $M = 6.27$ ,  $SE = 0.22$ )—sexism versus control:  $t(92) = 7.12$ ,  $p < .001$ , 95% CI for the mean difference = [1.55, 3.18]; sexism versus racism:  $t(106) = 4.47$ ,  $p < .001$ , 95% CI for the mean difference = [0.63, 2.09] (see Fig. 1b).

Analyses of anticipated unfair treatment revealed significant main effects of gender,  $F(1, 250) = 59.26$ ,  $p < .001$ ,  $\eta_p^2 = .19$ , and condition,  $F(2, 250) = 29.22$ ,  $p < .001$ ,  $\eta_p^2 = .19$ , which were qualified by the predicted gender-by-condition interaction,  $F(2, 250) = 11.54$ ,  $p < .001$ ,  $\eta_p^2 = .09$ . Unexpectedly, men's expectations of unfair treatment varied as a function of condition,  $F(2, 102) = 3.29$ ,  $p = .04$ ,  $\eta_p^2 = .06$ ; men expected to be treated more unfairly by the individual depicted in the sexist profile ( $M = 3.51$ ,  $SE = 0.18$ ) compared with the individual in the control profile ( $M = 2.89$ ,



**Fig. 2.** Results of the mediation analyses in Study 1: effect of condition on perceived gender identity threat, as mediated by perceived social dominance orientation (SDO) and perceived sexism. Separate models were run for gender identity threat as measured by expected treatment and anticipated gender stigma. Liking was included in both models as a covariate, and only White female participants were included. Unstandardized coefficients are shown. Asterisks indicate significant paths (\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ).

$SE = 0.17$ ),  $t(73) = 2.50$ ,  $p = .044$ , 95% CI for the mean difference = [0.01, 1.23]. For men, no significant differences were found between the racism condition ( $M = 3.32$ ,  $SE = 0.19$ ) and the sexism condition,  $t(63) = 0.72$ ,  $p > .250$ , 95% CI for the mean difference = [-0.45, 0.83], nor the racism condition and control condition,  $t(70) = 1.68$ ,  $p > .250$ , 95% CI for the mean difference = [-0.18, 1.06]. Consistent with hypotheses, results showed that women's expectations of mistreatment depended on condition,  $F(2, 147) = 40.60$ ,  $p < .001$ ,  $\eta_p^2 = .36$ . Women in the racism condition expected significantly worse treatment ( $M = 4.14$ ,  $SE = 0.15$ ) than women in the control condition ( $M = 3.55$ ,  $SE = 0.18$ ),  $t(92) = 2.52$ ,  $p = .048$ , 95% CI for the mean difference = [0.004, 1.170], but they expected the worst treatment in the sexism condition ( $M = 5.59$ ,  $SE = 0.16$ ). Women expected significantly worse treatment in the sexism condition than in the control condition,  $t(92) = 8.48$ ,  $p < .001$ , 95% CI for the mean difference = [1.45, 2.63], and in the racism condition,  $t(98) = 6.63$ ,  $p < .001$ , 95% CI for the mean difference = [0.93, 1.98] (see Fig. 1a).

**Mediation analyses.** To test the hypothesis that prejudice transfers occurred for White women in the racism condition through perceived social dominance orientation, which in turn provoked perceived sexism with downstream consequences for expected treatment and anticipated gender stigma (see Fig. 2), we used the PROCESS macro (Preacher & Hayes, 2008) to test for serial mediation. Liking was included as a covariate and condition was effects-coded (racism vs. control  $\rightarrow$  perceived social dominance orientation  $\rightarrow$  perceived sexism  $\rightarrow$  gender identity threat) in order to compute 95% bias-corrected CIs based on a 10,000-sample bias-corrected bootstrapped inferred asymmetrical distribution of the mediated effect (Preacher & Hayes, 2008).

The bias-corrected bootstrap estimate of the indirect effect of the racist profile (compared with the control

profile) on gender stigma and unfair treatment through perceived social dominance orientation and perceived sexism was significant (stigma:  $b = 0.21$ ,  $SE = 0.08$ , treatment:  $b = 0.11$ ,  $SE = 0.05$ ) as the 95% CIs did not contain zero (stigma: [0.09, 0.41], treatment: [0.04, 0.23]). Moreover, the direct effect of the racism condition on identity threats became nonsignificant (stigma:  $b = 0.07$ ,  $SE = 0.17$ ,  $p > .250$ , treatment:  $b = -0.01$ ,  $SE = 0.12$ ,  $p > .250$ ) when we accounted for the effect of the mediators.

## Discussion

White women showed stigma by prejudice transfer: Racists were presumed to be sexists because they had higher perceived social dominance orientation, which in turn evoked concerns about gender stigmatization and anticipation of unfair treatment. Moreover, the stigma-by-prejudice-transfer effect was not simply a by-product of aversive responses to the profiled individual. This study also demonstrated that White women were most likely to anticipate gender stigma from sexist individuals, which suggests that they calibrate their judgments in a logical manner. This is consistent with theories of affordance management (e.g., Gibson, 1979; Neuberg, Kenrick, & Schaller, 2011), which suggest that people consider the myriad of action possibilities. In this case, those possibilities arose from the characteristics of the profiled individual. Indeed, individuals are highly sensitive to the likelihood of threat to the self or one's group from the social context, and they affectively respond accordingly (Cottrell & Neuberg, 2005). White men did show concerns about mistreatment from sexist individuals, but it is unclear whether this was because the mistreatment scale was generically worded to assess overall unfair treatment from an unlikeable person and did not directly refer to their gender identity. In all of the following studies, the wording of the unfair-treatment measure was adjusted to be identity specific.

## Study 2

In Study 2, we sought evidence of stigma by prejudice transfer in men of color to demonstrate that sexism evokes a racial identity threat for men of color (and not White men).

## Method

Study 2 followed the same procedures as in Study 1 but included only the control profile and the sexist profile. The pool of available Latino and Black men was expected to be limited, so we focused solely on these conditions because they were most likely to yield the key stigma-by-prejudice-transfer effect. A total of 139 participants were recruited from MTurk to complete the study in return for \$1.00; however, 18 participants were removed because they failed attention checks or were not from, or currently living in, the United States. The final sample of 121 participants consisted of 57 men of color (28 African American and 29 Latino/Hispanic) and 64 White men (age:  $M = 34.12$  years,  $SD = 10.32$ , range = 18–67).

Participants completed the Study 1 measures in the following order: perceived social dominance orientation ( $\alpha = .97$ ), perceived sexism ( $\alpha = .95$ ), perceived racism ( $\alpha = .91$ ), and a modified three-item measure of liking ( $\alpha = .97$ ), followed by measures of race stigma ( $\alpha = .96$ ) and race-specific treatment expectations ( $\alpha = .97$ ; e.g., “Would this person not treat you with respect because of your race?”) to better target identity-specific threats.

## Results

**Measures.** An initial ANOVA revealed that liking of the profiled individual varied significantly by condition,  $F(1, 117) = 17.19$ ,  $p < .001$ ,  $\eta_p^2 = .13$ , 95% CI for the mean difference =  $[-1.54, -0.55]$ , with sexist individuals ( $M = 2.64$ ,  $SE = 0.18$ ) viewed less favorably than control individuals ( $M = 3.68$ ,  $SE = 0.18$ ). No main effects of participant race or race-by-condition interactions were found for liking,  $F_s < 0.37$ ,  $p_s > .250$ ,  $\eta_p^2_s \leq .003$ .

Preliminary 2 (minority participant race: Latino, Black)  $\times$  2 (condition: sexism, control) ANCOVAs revealed no significant main effects of having a Latino versus a Black ethnicity ( $p_s \geq .20$ ) nor any interactions between condition and participant's race ( $p_s \geq .19$ ). Moreover, the main effects of condition replicated those reported below when examined separately for Latino and Black men. Thus, we collapsed across minority race to preserve statistical power. The remaining ANCOVAs were thus run with race (White, men of color) and condition (sexism, control) as factors.

Participants perceived the sexist profile to be higher in social dominance orientation ( $M = 4.92$ ,  $SE = 0.13$ ) than the control profile ( $M = 3.69$ ,  $SE = 0.14$ ),  $F(1, 116) = 39.42$ ,  $p < .001$ , 95% CI for the mean difference =  $[0.83, 1.61]$ ,

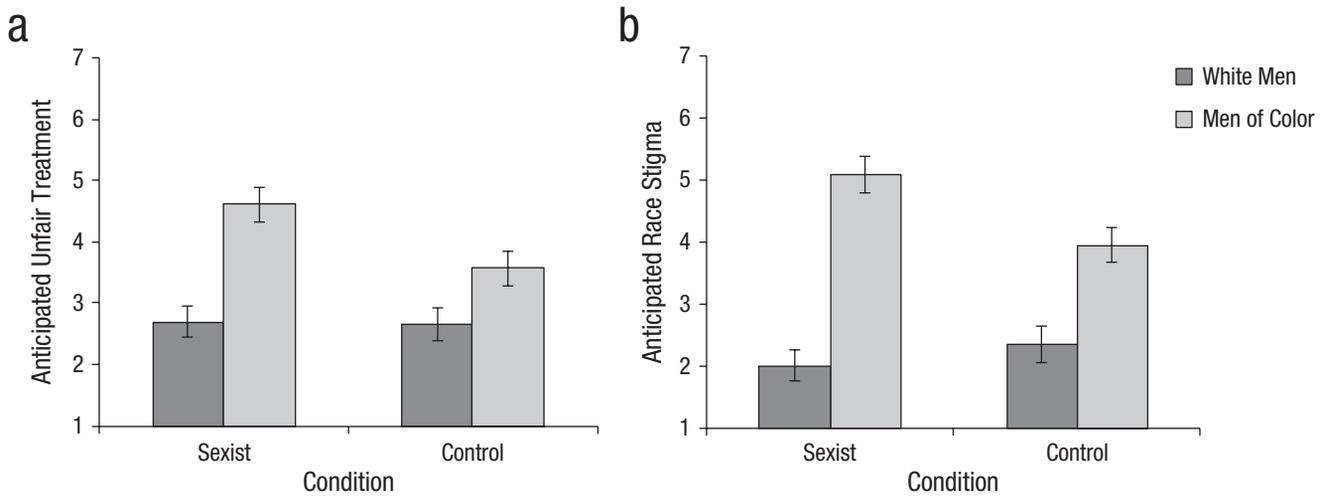
$\eta_p^2 = .25$ . Neither the main effect of race,  $F(1, 116) = 2.40$ ,  $p = .124$ ,  $\eta_p^2 = .02$ , nor the condition-by-participant-race interaction was significant,  $F(1, 116) = 3.09$ ,  $p = .081$ ,  $\eta_p^2 = .03$ . Given the marginal  $p$  value of the interaction, we examined effects separately by race and confirmed that both White and minority men viewed the sexist individual as higher in social dominance orientation than the control individual—White men:  $t(62) = 5.93$ ,  $p < .001$ , 95% CI for the mean difference =  $[1.01, 2.09]$ ; minority men:  $t(55) = 3.40$ ,  $p = .002$ , 95% CI for the mean difference =  $[0.33, 1.46]$ .

Supporting the stigma-by-prejudice-transfer hypothesis, an ANCOVA on perceived racism showed that participants perceived the sexist profile to be more racist ( $M = 2.96$ ,  $SE = 0.10$ ) than the control profile ( $M = 2.44$ ,  $SE = 0.11$ ),  $F(1, 116) = 11.75$ ,  $p = .001$ , 95% CI for the mean difference =  $[0.22, 0.83]$ ,  $\eta_p^2 = .09$ . Neither the main effect of participant race,  $F(1, 116) = 1.01$ ,  $p > .250$ ,  $\eta_p^2 = .009$ , nor the condition-by-participant-race interaction was significant,  $F(1, 116) = 0.01$ ,  $p > .250$ ,  $\eta_p^2 = .00$ .

An ANCOVA on anticipated racial stigma revealed a significant main effect of participant race,  $F(1, 116) = 73.09$ ,  $p < .001$ ,  $\eta_p^2 = .39$ , which was qualified by the predicted participant-race-by-condition interaction,  $F(1, 116) = 7.24$ ,  $p = .008$ ,  $\eta_p^2 = .06$ . White men experienced no significant differences in anticipated racial stigma in either the sexism condition ( $M = 2.07$ ,  $SE = 0.26$ ) or the control condition ( $M = 2.23$ ,  $SE = 0.26$ ),  $F(1, 61) = 0.18$ ,  $p > .250$ , 95% CI for the mean difference =  $[-0.92, 0.60]$ ,  $\eta_p^2 = .003$ , but as expected, men of color anticipated greater racial stigma from the sexist individual ( $M = 5.02$ ,  $SE = 0.30$ ) compared with the control individual ( $M = 4.09$ ,  $SE = 0.31$ ),  $F(1, 54) = 4.38$ ,  $p = .041$ , 95% CI for the mean difference =  $[0.04, 1.82]$ ,  $\eta_p^2 = .08$  (see Fig. 3b).

An ANCOVA on unfair treatment revealed a marginally significant main effect of condition,  $F(1, 116) = 3.69$ ,  $p = .057$ ,  $\eta_p^2 = .03$ , and a significant effect of participant race,  $F(1, 116) = 28.93$ ,  $p < .001$ ,  $\eta_p^2 = .20$ , which was qualified by a marginally significant interaction between participant race and condition,  $F(1, 116) = 3.57$ ,  $p = .062$ ,  $\eta_p^2 = .03$ . Simple-effects analyses revealed that White men experienced no differences in anticipated unfair treatment in either the sexism condition ( $M = 2.74$ ,  $SE = 0.29$ ) or the control condition ( $M = 2.54$ ,  $SE = 0.30$ ),  $F(1, 61) = 0.20$ ,  $p > .250$ , 95% CI for the mean difference =  $[-0.67, 1.06]$ ,  $\eta_p^2 = .003$ , but as expected, men of color anticipated greater race-based unfair treatment from the sexist individual ( $M = 4.55$ ,  $SE = 0.22$ ) than the control individual ( $M = 3.70$ ,  $SE = 0.23$ ),  $F(1, 54) = 6.73$ ,  $p = .012$ , 95% CI for the mean difference =  $[0.19, 1.52]$ ,  $\eta_p^2 = .11$  (see Fig. 3a).

**Mediation analyses.** We also ran a mediation analysis on the effect of condition on anticipated racial stigma and unfair treatment, as mediated by perceived social dominance orientation and perceived racism, controlling for liking (see Fig. 4). Only men of color were included



**Fig. 3.** Mean ratings from Study 2: anticipated (a) unfair treatment and (b) race stigma as a function of profile condition and participant group. Error bars show standard errors.

in the analyses. Consistent with the stigma-by-prejudice-transfer hypothesis (see Fig. 4), results showed that the bias-corrected bootstrap estimate of the indirect effect of the sexist profile (compared with the control profile) was significant for both racial stigma ( $b = 0.17$ ,  $SE = 0.10$ ) and unfair treatment ( $b = 0.12$ ,  $SE = 0.07$ ), as the bias-corrected 95% CIs did not contain zero (racial stigma: [0.04, 0.52], unfair treatment: [0.02, 0.28]). Moreover, the direct effect of the sexism condition on identity threats became nonsignificant for both racial stigma ( $b = 0.17$ ,  $SE = 0.20$ ,  $p > .250$ ) and unfair treatment ( $b = 0.23$ ,  $SE = 0.16$ ,  $p = .150$ ) when we accounted for the effect of the mediators.

**Discussion**

Consistent with predictions, results showed that there was an effect of stigma by prejudice transfer from sexist

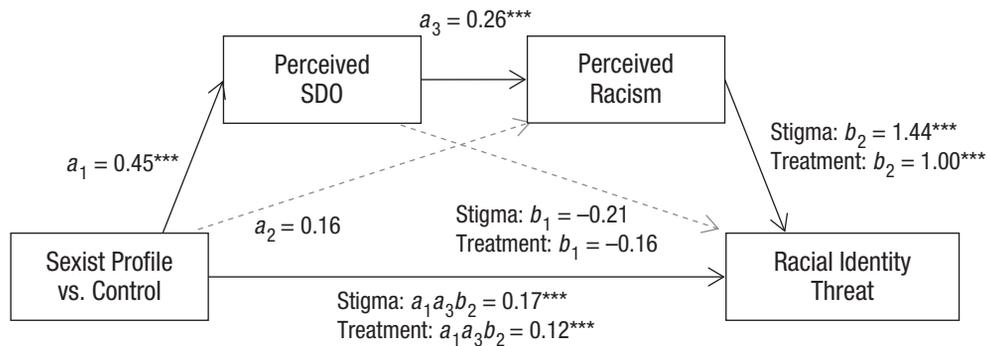
individuals on Latino and Black men, whereas there was no such effect for White men.

**Study 3**

Studies 1 and 2 relied on hypothetical scenarios. In Study 3, White women and White men engaged in what they were led to believe was an online chat-room interaction with their evaluator.

**Method**

**Participants.** A total of 303 participants completed the study via MTurk in exchange for \$0.55. An additional 10 participants were removed because they failed attention checks or were not from, or currently living in, the United States. Thirty-nine of the 303 participants (12.9%) were removed for later reporting that they were uncertain



**Fig. 4.** Results of the mediation analyses in Study 2: effect of condition on perceived racial identity threat, as mediated by perceived social dominance orientation (SDO) and perceived racism. Separate models were run for racial identity threat as measured by expected treatment and anticipated gender stigma, and only Black and Latino participants were included. Liking was included in both models as a covariate. Unstandardized coefficients are shown. Asterisks indicate significant paths ( $***p < .001$ ).

whether they were interacting with a real person, which left a final sample of 262 (145 women, 117 men) with a mean age of 35.86 years ( $SD = 10.63$ ). The reported results were also consistent with hypotheses when we included the suspicious participants.

**Procedure and measures.** Participants were informed that they would be paired with another MTurk worker and engage in an online mock interview after completing a set of questionnaires. Participants were then asked to share their profile with the other participant, which included disclosing their gender to their partner. After sharing their profile, participants received their partner's profile information, which varied by condition following procedures from Study 1. After reviewing this information, participants completed the mechanism measures (see below) as well as filler items (with the assurance that their partner would not see their responses to any of these questions). Participants then learned that they had been randomly assigned the role of interviewee in an upcoming mock interview wherein they would be asked to answer various questions from a list provided to the other participant (who, unbeknownst to the participant, was a simulated interviewer with preprogrammed dialogue). At this point, participants learned that if the ratings they received from the interviewer placed them in the top 10%, they would be invited back for a highly compensated MTurk study.

To make the simulated contact seem realistic, we conducted the interaction in an online environment designed to appear like a chat room. Participants were given a chance to respond to three questions (e.g., "What would make you an ideal job candidate?"), and after the third question, they received an ambiguous message from the interviewer stating, "Give a little more. I think you can do better than that." Once participants responded to this last prompt, they were informed that the time for the evaluation had ended and were asked filler questions about the chat technology, followed by the key stigma measures. Subsequently, they received feedback, ostensibly from the interviewer, in which they were informed that on the basis of these ratings, they were not currently in the top 10% of presenters.

Participants completed the Study 1 measures in the following order: perceived social dominance orientation ( $\alpha = .95$ ), perceived sexism ( $\alpha = .96$ ), perceived racism ( $\alpha = .96$ ), liking ( $\alpha = .79$ ), and gender stigma ( $\alpha = .99$ ), followed by gender-specific treatment expectations ( $\alpha = .96$ ). A novel measure of sexism attributions was included in Study 3: After receiving the negative feedback, participants were asked to indicate how much they believed five factors influenced the interviewer's feedback. These items were "your responses," "your abilities," "luck," "your

sex," and "your gender." These items were based on prior attribution work (see O'Brien, Kinias, & Major, 2008). Responses were given on a scale from 1 (*not at all*) to 7 (*very much*), and the two gender items were positively correlated ( $r = .94, p < .001$ ).

## Results

**Measures.** Preliminary 2 (participant gender: male, female)  $\times$  3 (profile condition: sexism, racism, control) ANOVAs revealed that liking of the evaluator varied significantly by condition,  $F(2, 256) = 5.42, p = .005, \eta_p^2 = .04$ , with sexist evaluators ( $M = 3.97, SE = 0.18$ ) viewed less favorably than control evaluators ( $M = 4.85, SE = 0.19$ ), 95% CI for the mean difference =  $[-1.51, -0.23]$ ,  $t(183) = 3.36, p = .003$ . Racist evaluators ( $M = 4.39, SE = 0.18$ ) were not less well-liked than either the sexist evaluators,  $t(183) = 1.65, p = .216$ , 95% CI for the mean difference =  $[-0.15, 1.06]$ , or control evaluators,  $t(170) = 0.02, p = .250$ , 95% CI for the mean difference =  $[-1.08, 0.18]$ . No significant effects of participant gender or interactions of condition with gender were found,  $F_s < 2.88, p_s > .09, \eta_p^2_s \leq .01$ .

An ANCOVA on perceived social dominance orientation revealed a significant main effect of condition,  $F(2, 255) = 65.57, p < .001, \eta_p^2 = .34$ ; compared with the neutral interviewer ( $M = 3.33, SE = 0.13$ ), the sexist interviewer ( $M = 4.95, SE = 0.12$ ),  $t(167) = 9.17, p < .001$ , 95% CI for the mean difference =  $[1.19, 2.04]$ , and the racist interviewer ( $M = 5.19, SE = 0.12$ ),  $t(169) = 10.49, p < .001$ , 95% CI for the mean difference =  $[1.44, 2.27]$ , were perceived as significantly higher in social dominance orientation, and no significant difference in social dominance orientation was found between the sexist and racist interviewers,  $p > .250$ , 95% CI for the mean difference =  $[-0.64, 0.16]$ . No main effect of participant gender or interaction between condition and gender was found,  $F_s < 0.93, p_s > .250$ .

An ANCOVA on perceived racism revealed a significant main effect of gender; women ( $M = 3.21, SE = 0.08$ ) reported greater perceived racism than men ( $M = 2.95, SE = 0.08$ ),  $F(1, 255) = 5.29, p = .024$ , 95% CI for the mean difference =  $[0.04, 0.48]$ ,  $\eta_p^2 = .02$ . Notably, the predicted main effect of condition was significant,  $F(2, 255) = 145.65, p < .001, \eta_p^2 = .53$ ; the sexist interviewer ( $M = 3.17, SE = 0.10$ ) was viewed as significantly more racist than the control interviewer ( $M = 1.84, SE = 0.10$ ),  $t(167) = 9.44, p < .001$ , 95% CI for the mean difference =  $[0.99, 1.68]$ . Racist interviewers ( $M = 4.28, SE = 0.09$ ) were viewed as the most racist of all the three conditions—racism versus control:  $t(169) = 18.15, p < .001$ , 95% CI for the mean difference =  $[2.05, 2.73]$ ; racism versus sexism:  $t(182) = 8.26, p < .001$ , 95% CI for the mean difference =  $[0.73, 1.34]$ . The

interaction between condition and gender was not significant,  $F(2, 255) = 1.28, p > .250, \eta_p^2 = .01$ .

An ANCOVA on perceived sexism revealed a significant main effect of gender; women ( $M = 3.18, SE = 0.07$ ) detected greater sexism than men overall ( $M = 2.94, SE = 0.09$ ),  $F(1, 255) = 6.10, p = .014$ , 95% CI for the mean difference = [0.06, 0.50],  $\eta_p^2 = .02$ . Notably, there was the predicted main effect of condition,  $F(2, 255) = 118.58, p < .001, \eta_p^2 = .48$ ; compared with the control interviewer ( $M = 1.78, SE = 0.10$ ), the racist interviewer ( $M = 3.30, SE = 0.09$ ),  $t(169) = 11.31, p < .001$ , 95% CI for the mean difference = [1.18, 1.86], and sexist interviewer ( $M = 3.93, SE = 0.10$ ),  $t(167) = 15.26, p < .001$ , 95% CI for the mean difference = [1.81, 2.50], were both viewed as significantly more sexist, though the sexist interviewer evoked the greatest perceived sexism—sexism versus racism:  $t(182) = 4.69, p < .001$ , 95% CI for the mean difference = [0.31, 0.96]. Because the interaction of gender and condition approached statistical significance,  $F(2, 255) = 2.42, p = .090, \eta_p^2 = .02$ , we confirmed that both men,  $F(1, 113) = 41.68, p < .001, \eta_p^2 = .43$ , and women,  $F(1, 141) = 83.31, p < .001, \eta_p^2 = .54$ , showed a significant effect of condition and the transfer effect, viewing the sexist interviewer (men:  $M = 3.61, SE = 0.15$ ; women:  $M = 4.25, SE = 0.13$ ) as significantly higher in sexism than the control interviewer (men:  $M = 1.72, SE = 0.16$ ; women:  $M = 1.83, SE = 0.14$ )—men:  $t(71) = 8.62, p < .001$ , 95% CI for the mean difference = [1.36, 2.41]; women:  $t(94) = 12.64, p < .001$ , 95% CI for the mean difference = [1.96, 2.88]. Additionally, both men and women viewed the racist interviewer (men:  $M = 3.20, SE = 0.14$ ; women:  $M = 3.39, SE = 0.13$ ) as significantly higher in sexism than the control interviewer—men:  $t(76) = 6.97, p < .001$ , 95% CI for the mean difference = [0.97, 1.99]; women:  $t(87) = 8.16, p < .001$ , 95% CI for the mean difference = [1.11, 2.01].

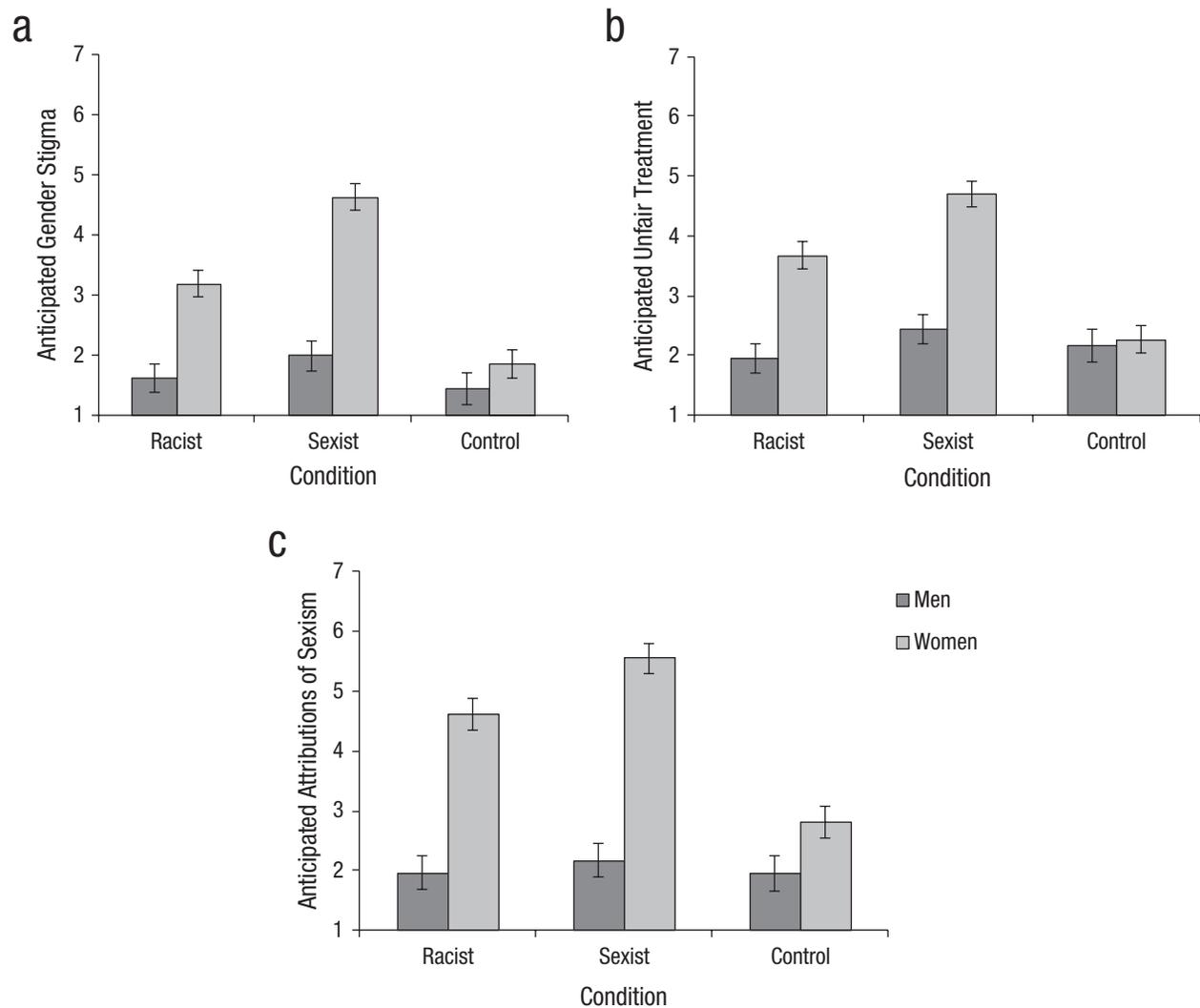
An ANCOVA on anticipated gender stigma revealed significant main effects of gender,  $F(1, 255) = 62.10, p < .001, \eta_p^2 = .20$ , and condition,  $F(2, 255) = 22.54, p < .001, \eta_p^2 = .15$ , which were qualified by a significant gender-by-condition interaction,  $F(2, 255) = 10.42, p < .001, \eta_p^2 = .08$ . As predicted, men's gender stigma did not vary by condition (racism:  $M = 1.60, SE = 0.18$ ; sexism:  $M = 2.02, SE = 0.20$ ; control:  $M = 1.35, SE = 0.21$ ),  $F(2, 113) = 2.83, p = .063, \eta_p^2 = .05$ , while women's anticipation of gender stigma did,  $F(2, 141) = 24.44, p < .001, \eta_p^2 = .26$ . Exemplifying the stigma by prejudice transfer, results showed that women in the racism condition ( $M = 3.20, SE = 0.25$ ) reported greater anticipated gender stigma relative to women in the control condition ( $M = 1.95, SE = 0.27$ ),  $t(76) = 3.40, p = .003$ , 95% CI for the mean difference = [0.35, 2.14], though they did report the highest level of anticipated gender stigma in the sexism condition ( $M = 4.55, SE = 0.25$ )—sexism versus control:  $t(71) = 7.07, p < .001$ , 95% CI for the mean difference = [1.70, 3.50]; sexism

versus racism:  $t(81) = 3.82, p = .001$ , 95% CI for the mean difference = [0.50, 2.21] (Fig. 5a).

An ANCOVA on unfair treatment revealed significant main effects of gender,  $F(1, 255) = 47.80, p < .001, \eta_p^2 = .16$ , and condition,  $F(2, 255) = 14.78, p < .001, \eta_p^2 = .10$ , which were qualified by the predicted gender-by-condition interaction,  $F(2, 255) = 10.33, p < .001, \eta_p^2 = .08$ . As predicted, men's expectations of unfair treatment did not vary by condition,  $F(2, 141) = 1.61, p = .210, \eta_p^2 = .03$ , but women's expectations of mistreatment depended on the condition,  $F(2, 141) = 20.93, p < .001, \eta_p^2 = .23$ . Critical to stigma by prejudice transfer, results showed that White women expected significantly worse treatment because of their gender in the racism condition ( $M = 3.68, SE = 0.23$ ) than in the control condition ( $M = 2.37, SE = 0.25$ ),  $t(76) = 3.85, p = .001$ , 95% CI for the mean difference = [0.47, 2.14], but they expected the most challenges in the sexism condition ( $M = 4.61, SE = 0.16$ )—sexism versus control:  $t(71) = 7.54, p < .001$ , 95% CI for the mean difference = [1.41, 3.09]; sexism versus racism:  $t(81) = 3.31, p = .015$ , 95% CI for the mean difference = [0.14, 1.74] (Fig. 5b).

An ANCOVA on attributions of sexism revealed significant main effects of participant gender,  $F(1, 255) = 102.16, p < .001, \eta_p^2 = .29$ , and condition,  $F(2, 255) = 13.27, p < .001, \eta_p^2 = .09$ , but these effects were qualified by a significant participant-gender-by-condition interaction,  $F(1, 255) = 10.33, p < .001, \eta_p^2 = .08$ . Men's sexism attributions did not vary by condition,  $F(2, 113) = 0.37, p > .250$ ; however, there was a significant effect of condition on sexism attributions in women,  $F(2, 141) = 20.05, p < .001, \eta_p^2 = .22$ . Women were more likely to attribute their poor evaluation to their gender when the interviewer was sexist ( $M = 5.47, SE = 0.28$ ) or racist ( $M = 4.59, SE = 0.28$ ) than when the interviewer was neutral ( $M = 2.83, SE = 0.31$ )—sexism versus neutral:  $t(71) = 6.31, p < .001$ , 95% CI for the mean difference = [1.62, 3.66]; racism versus neutral:  $t(76) = 4.21, p < .001$ , 95% CI for the mean difference = [0.75, 2.76]. The difference between the racism and sexism conditions was not significant,  $t(81) = 1.80, p = .09$ , 95% CI for the mean difference = [-0.09, 1.84] (Fig. 5c).

**Mediation analyses.** We ran a mediation analysis investigating the effect of condition on gender stigma, unfair treatment, and attributions of sexism, as mediated by perceived social dominance orientation and perceived sexism after controlling for liking; only White women were included in the models (see Fig. 6). Supporting the stigma-by-prejudice-transfer theory, the bias-corrected bootstrap estimates of the indirect effects were significant for gender stigma ( $b = 0.23, SE = 0.09$ ), unfair treatment ( $b = 0.24, SE = 0.10$ ), and attributions of sexism ( $b = 0.29, SE = 0.13$ ) because the 95% CIs did not contain zero (stigma: [0.21, 0.48], treatment: [0.09, 0.52], attribution:



**Fig. 5.** Mean ratings from Study 3: anticipated (a) gender stigma, (b) unfair treatment, and (c) attributions of sexism as a function of profile condition and participant group. Error bars show standard errors.

[0.10, 0.65]). Moreover, the direct effect of the racism condition on identity threats became nonsignificant (stigma:  $b = -0.12$ ,  $SE = 0.20$ ,  $p > .250$ , treatment:  $b = -0.12$ ,  $SE = 0.21$ ,  $p > .250$ , attribution:  $b = 0.14$ ,  $SE = 0.27$ ,  $p > .250$ ) when the mediators were included.

## Discussion

White women showed the stigma-by-prejudice-transfer effect in Study 3, which replicated the results of Study 1 in an online evaluative context.

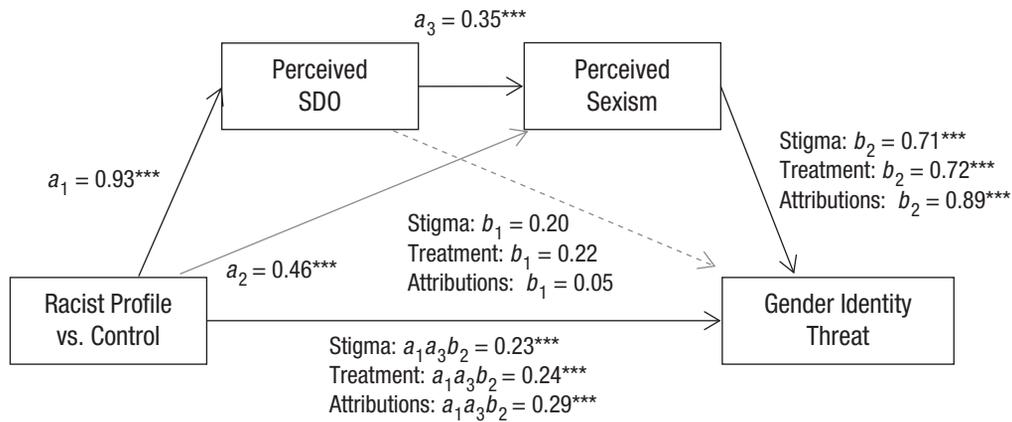
## Study 4

The studies thus far involved MTurk members. In Study 4, we sought to replicate Study 3 in a laboratory setting.

## Method

**Participants.** Ninety-six participants who identified as White women during a mass prescreening survey were recruited for a study on evaluations and social interactions in exchange for course credit. Participants were part of a psychology subject pool at either of two universities in the Northeastern United States. All participants passed the attention checks; however, 10 participants were removed from analyses during the experimental session for not identifying as White or as being from the United States, which left a final sample of 86 participants with a mean age of 19.52 years ( $SD = 4.63$ ).

**Procedure and measures.** When participants arrived to the lab, a White man was waiting in the hallway who



**Fig. 6.** Results of the mediation analyses in Study 3: effect of condition on perceived gender identity threat, as mediated by perceived social dominance orientation (SDO) and perceived sexism. Separate models were run for gender identity threat as measured by expected treatment, anticipated gender stigma, and predicted attributions of sexism. Liking was included in both models as a covariate, and only White female participants were included. Unstandardized coefficients are shown. Asterisks indicate significant paths ( $***p < .001$ ).

was ostensibly another participant but was actually a trained confederate (blind to condition and hypotheses). Following the prior studies, we always assigned the participant to the role of the presenter and the confederate to the role of the evaluator. The confederate was led to another room by the experimenter to ostensibly complete an evaluator questionnaire, and the participant was informed that she would make an impromptu speech during which she was to pretend to be interviewing for an ideal job and that her speech would be assessed by the evaluator, following aspects of the Trier Social Stress Test procedure (Kirschbaum, Pirke, & Hellhammer, 1993). Before completing the speech task, the participant was shown the evaluator's profile using the conditions from Study 1 (racism, sexism, and control) and was asked to form an impression of the evaluator before completing measures of perceived social dominance orientation ( $\alpha = .97$ ), perceived sexism ( $\alpha = .94$ ), perceived racism ( $\alpha = .96$ ), liking ( $\alpha = .79$ ), anticipated gender stigma ( $\alpha = .99$ ), and treatment expectations ( $\alpha = .95$ ; filler items were also included). The liking measure included additional items (e.g., "How much do you think you would like this person?"). Finally, participants performed the speech in front of the evaluator.

## Results

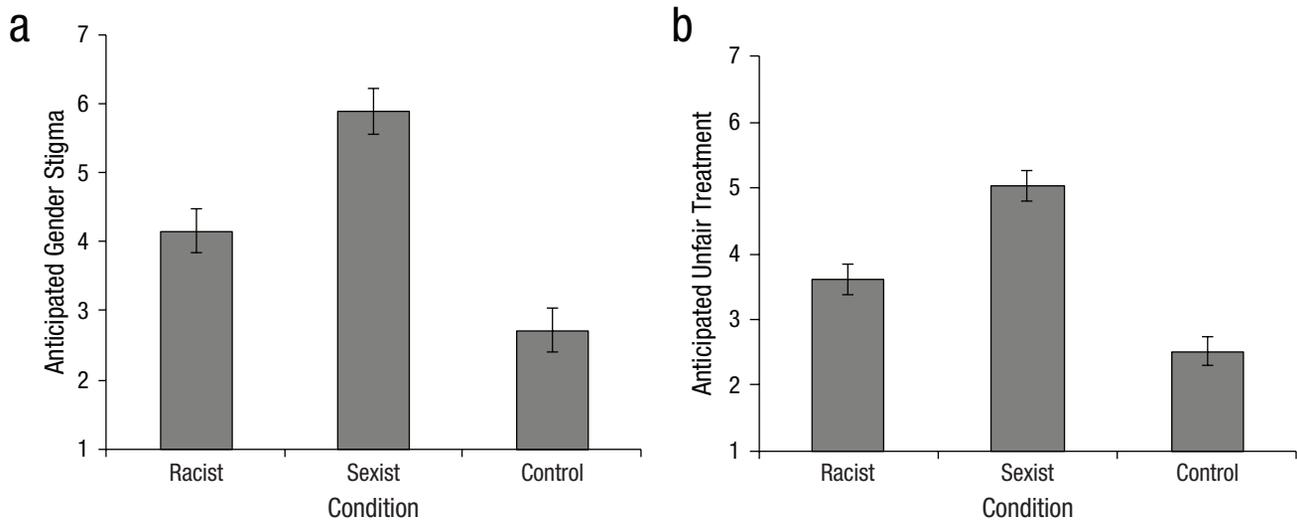
**Measures.** A preliminary three-way ANOVA demonstrated a liking penalty to prejudiced evaluators,  $F(2, 83) = 16.59, p < .001, \eta_p^2 = .29$ , with sexist evaluators ( $M = 2.17, SE = 0.12$ ) and racist evaluators ( $M = 2.10, SE = 0.12$ ) viewed less favorably than control evaluators ( $M = 2.89, SE = 0.10$ )—sexism versus control:  $t(55) = 4.62, p < .001$ , 95% CI for the mean difference = [0.34, 1.11]; racism versus control:  $t(59) = 5.10, p < .001$ , 95% CI for the mean difference = [0.42, 1.16]. No difference was found between the

sexism and racism conditions,  $ps > .250$ , 95% CI for the mean difference = [-0.33, 0.47].

An ANCOVA on perceived social dominance orientation revealed a significant main effect of condition,  $F(2, 82) = 63.18, p < .001, \eta_p^2 = .61$ ; participants perceived the sexist evaluator ( $M = 5.00, SE = 0.17$ ) as significantly higher in social dominance orientation than the neutral evaluator ( $M = 3.06, SE = 0.16$ ),  $t(56) = 8.31, p < .001$ , 95% CI for the mean difference = [1.36, 2.54]. The racist evaluator ( $M = 5.69, SE = 0.16$ ) was viewed as significantly higher in social dominance orientation than the neutral evaluator,  $t(59) = 11.59, p < .001$ , 95% CI for the mean difference = [2.05, 3.22]. Unexpectedly, participants perceived the racist evaluator to be higher in social dominance orientation than the sexist evaluator,  $t(51) = 2.95, p = .008$ , 95% CI for the mean difference = [0.14, 1.24].

An ANCOVA on perceived racism revealed the predicted main effect of condition,  $F(2, 82) = 292.76, p < .001, \eta_p^2 = .88$ ; the sexist evaluator ( $M = 2.16, SE = 0.10$ ) was viewed as significantly more racist than the control evaluator ( $M = 1.48, SE = 0.10$ ),  $t(56) = 4.83, p < .001$ , 95% CI for the mean difference = [0.32, 1.04]. Racist evaluators ( $M = 4.73, SE = 0.10$ ) were viewed as more racist than the control evaluator,  $t(59) = 23.05, p < .001$ , 95% CI for the mean difference = [2.89, 3.61], and the sexist evaluator,  $t(51) = 17.01, p < .001$ , 95% CI for the mean difference = [2.24, 2.90].

An ANCOVA on perceived sexism revealed the predicted main effect of condition,  $F(2, 82) = 50.83, p < .001, \eta_p^2 = .55$ ; the racist evaluator ( $M = 3.04, SE = 0.15$ ) was viewed as significantly more sexist than the control evaluator ( $M = 1.69, SE = 0.15$ ),  $t(59) = 6.39, p < .001$ , 95% CI for the mean difference = [0.80, 1.91]. Sexist evaluators ( $M = 3.99, SE = 0.16$ ) were viewed as more sexist than the control evaluator,  $t(56) = 10.15, p < .001$ , 95% CI for the mean difference = [1.74, 2.86], and the racist evaluator,  $t(51) = 4.20, p < .001$ , 95% CI for the mean difference = [0.42, 1.46].



**Fig. 7.** Mean ratings from Study 4: anticipated (a) gender stigma and (b) unfair treatment as a function of profile condition. Error bars show standard errors.

An ANCOVA on anticipated gender stigma revealed the predicted main effect of condition,  $F(2, 82) = 22.93$ ,  $p < .001$ ,  $\eta_p^2 = .36$ ; the racist evaluator ( $M = 4.15$ ,  $SE = 0.32$ ) evoked significantly greater gender stigma than the control evaluator ( $M = 2.72$ ,  $SE = 0.31$ ),  $t(59) = 3.21$ ,  $p = .009$ , 95% CI for the mean difference = [0.28, 2.58]. Sexist evaluators ( $M = 5.89$ ,  $SE = 0.33$ ) evoked greater gender stigma than the control evaluator,  $t(56) = 7.00$ ,  $p < .001$ , 95% CI for the mean difference = [2.02, 4.32], and the racist evaluator,  $t(51) = 3.79$ ,  $p < .001$ , 95% CI for the mean difference = [0.67, 2.81] (Fig. 7a).

An ANCOVA on unfair treatment revealed the predicted main effect of condition,  $F(2, 82) = 30.46$ ,  $p < .001$ ,  $\eta_p^2 = .43$ ; the racist evaluator ( $M = 3.61$ ,  $SE = 0.22$ ) made women expect significantly less fair evaluations than the control evaluator ( $M = 2.51$ ,  $SE = 0.22$ ),  $t(59) = 3.55$ ,  $p = .004$ , 95% CI for the mean difference = [-0.30, 1.90]. Sexist evaluators ( $M = 5.04$ ,  $SE = 0.23$ ) were viewed as more likely to treat them unfairly than racist evaluators,  $t(51) = 4.50$ ,  $p < .001$ , 95% CI for the mean difference = [0.69, 2.18], and neutral evaluators,  $t(56) = 7.96$ ,  $p < .001$ , 95% CI for the mean difference = [1.78, 3.33] (Fig. 7b).

**Mediation analyses.** We conducted a mediation analysis investigating the effect of condition on gender stigma and unfair treatment, as mediated by perceived social dominance orientation and perceived sexism after controlling for liking. We found that the bias-corrected bootstrap estimate of the indirect effect of the racist profile (compared with the control profile) was significant for both gender stigma ( $b = 0.51$ ,  $SE = 0.23$ ) and unfair treatment ( $b = 0.26$ ,  $SE = 0.13$ ) because the 95% CIs did not contain zero (stigma: [0.15, 1.07], treatment: [0.07,

0.60]). Moreover, the direct effect of the racism condition on women's gender identity threats became nonsignificant (stigma:  $b = -0.21$ ,  $SE = 0.39$ ,  $p > .250$ , treatment:  $b = -0.05$ ,  $SE = 0.25$ ,  $p > .250$ ) when the mediators were included (see Fig. 8).

## Discussion

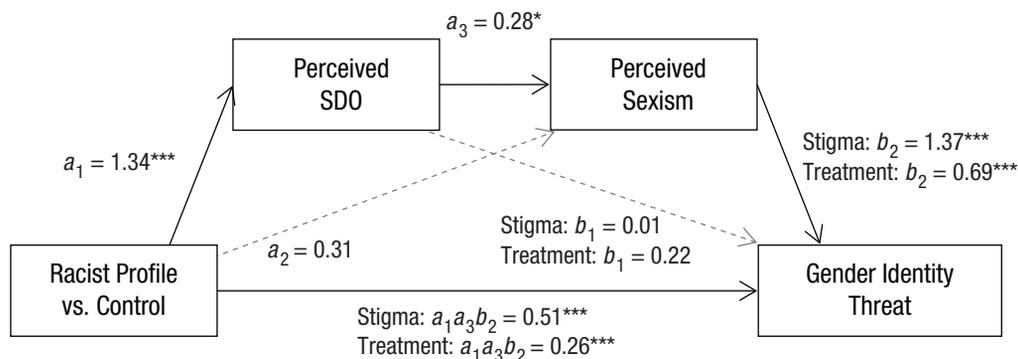
White women in a controlled laboratory setting showed the predicted stigma-by-prejudice-transfer effect.

## Study 5

In the prior studies, the measurement of mediators always preceded the key stigma outcomes. Order effects are well documented in the research literature (Hamilton, Fallot, & Hautaluoma, 1978; Schwarz & Hippler, 1995) and likely occurred in this case because the order made the mediational process salient and relevant to the proceeding questions (Hogarth & Einhorn, 1992). For example, White women first asked to indicate the social dominance orientation and sexism of the racist evaluator may have been more likely to anticipate gender stigma because they were primed to think about the monolithic nature of prejudice. Recent work shows that researchers have underestimated the power of variables such as order in their estimates of the reproducibility of effects (Van Bavel, Mende-Siedlecki, Brady, & Reinero, 2016).

## Method

To address order effects, we used a 2 (profile condition: racism, control)  $\times$  2 (order of measures: stigma measure



**Fig. 8.** Results of the mediation analyses in Study 4: effect of condition on perceived gender identity threat, as mediated by perceived social dominance orientation (SDO) and perceived sexism. Separate models were run for gender identity threat as measured by expected treatment and anticipated gender stigma. Liking was included in both models as a covariate. Unstandardized coefficients are shown. Asterisks indicate significant paths ( $*p < .05$ ,  $***p < .001$ ).

prior to or after perceived social dominance orientation, sexism, and racism) factorial design. Prior to data collection, this study was preregistered at the Open Science Framework. Preregistered hypotheses are available at <https://osf.io/z5jy9/register/564d31db8c5e4a7c9694b2be>, and an a priori stopping point for data collection was set at 200 participants. We hypothesized that White women would anticipate greater stigma and gender-based mistreatment in the racism condition than in the control condition, though we expected this effect to be more pronounced when stigma measures were completed after the measures of social dominance orientation, sexism, and racism (i.e., the hypothesized causal order).

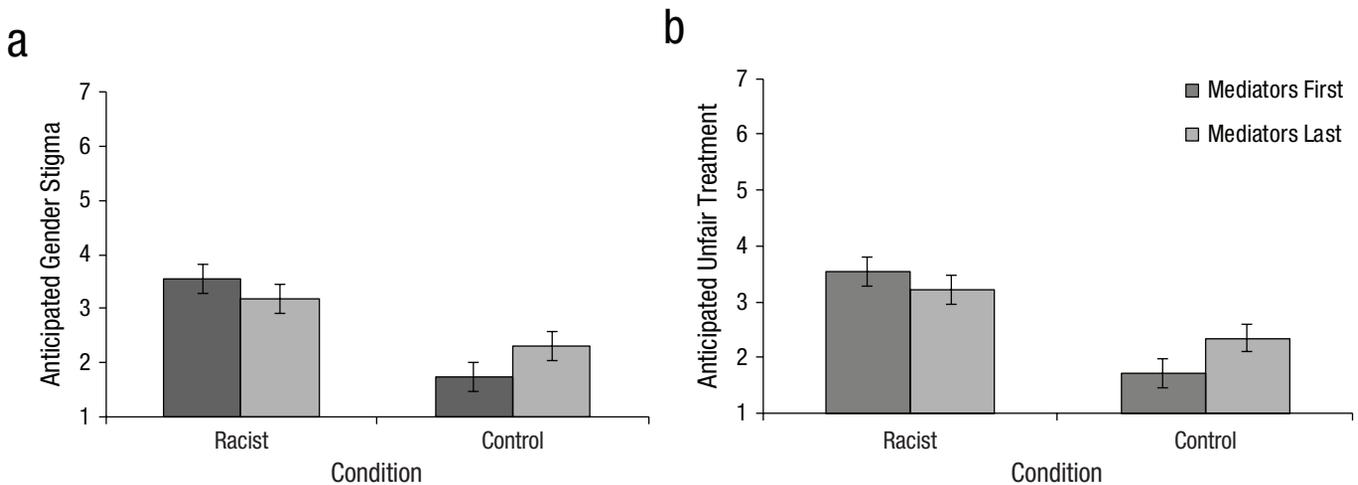
**Participants.** Of those 200 participants who identified as White women during an initial mass prescreening survey and who were scheduled to participate, 196 actually took part in the study. After excluding 1 participant who identified as male during the study, 7 who did not identify as solely White (indicating multiracial identities) during the study, and 11 additional individuals who failed or skipped the attention-check question, we ended up with an analytic sample of 177 White women with a mean age of 18.79 years ( $SD = 1.85$ , range = 18–34).

**Procedure and measures.** Participants were recruited for an experiment described as involving impression formation and communication. The experiment followed many of the procedures of Study 4, except that participants never performed a speech in front of the evaluator, and sessions were run in groups of 2 to 5 participants. These changes were made to facilitate timely data collection by avoiding having to run participants one at a time. When participants arrived to the laboratory, a female experimenter greeted them and indicated that they were still waiting for other participants who would be their

interaction partners. To increase the believability that there were other participants, we had a trained male confederate always arrive 7 min late. He was escorted to another room where participants' interaction partners ostensibly resided. Following the prior studies, we told participants that their partner was randomly assigned to the role of evaluator and that they would have to perform a speech task. Each participant was randomly assigned to one of two profile conditions from Study 4 (racism or control). Next, participants were asked to form an impression of the evaluator based on the profile, and they completed the same measures as in Study 3: perceived social dominance orientation ( $\alpha = .93$ ), perceived sexism ( $\alpha = .91$ ), perceived racism ( $\alpha = .98$ ), liking ( $\alpha = .98$ ), gender stigma ( $\alpha = .97$ ), and treatment expectations ( $\alpha = .98$ ). Participants completed the short version of the social-dominance-orientation scale (Version 7) that contained only eight items (Ho et al., 2015). Critically, measures were presented to each participant in one of two orders: mediators first (perceived social dominance orientation, sexism, and racism administered before anticipated stigma and treatment expectations) and mediators last (anticipated stigma and treatment expectations administered first).

## Results

**Measures.** A preliminary 2 (condition: racism, control)  $\times$  2 (order of measures: mediators first, mediators last) ANOVA on liking revealed a significant main effect of condition,  $F(1, 173) = 46.17$ ,  $p < .001$ ,  $\eta_p^2 = .21$ , which was moderated by the order of the measures,  $F(1, 173) = 4.81$ ,  $p = .03$ ,  $\eta_p^2 = .03$ . The pattern of results showed that the liking penalty to prejudiced evaluators was larger when mediators were measured first,  $F(1, 87) = 41.12$ ,  $p < .001$ ,



**Fig. 9.** Mean ratings from Study 5: anticipated (a) gender stigma and (b) unfair treatment as a function of profile condition and the order in which measures were administered. Error bars show standard errors.

95% CI for the mean difference =  $[-2.11, -1.61]$ ,  $\eta_p^2 = .32$ , rather than last,  $F(1, 86) = 10.40$ ,  $p = .002$ , 95% CI for the mean difference =  $[-1.32, -0.83]$ ,  $\eta_p^2 = .11$ . Notably, the racist evaluator was less well liked when the mediators were measured first (racism:  $M = 2.68$ ,  $SE = 0.18$ , control:  $M = 4.29$ ,  $SE = 0.18$ ) rather than last (racism:  $M = 3.29$ ,  $SE = 0.18$ , control:  $M = 4.12$ ,  $SE = 0.18$ ).

An ANCOVA on perceived social dominance orientation revealed a significant main effect of condition,  $F(1, 172) = 227.82$ ,  $p < .001$ , 95% CI for the mean difference =  $[0.86, 1.15]$ ,  $\eta_p^2 = .57$ ; participants perceived the racist evaluator ( $M = 5.50$ ,  $SE = 0.11$ ) as significantly higher in social dominance orientation than the neutral evaluator ( $M = 3.15$ ,  $SE = 0.10$ ). There was no main effect of order of measures,  $F(1, 172) = 0.09$ ,  $p > .25$ ,  $\eta_p^2 = .001$ , nor interaction of the two factors,  $F(1, 172) = 0.19$ ,  $p > .25$ ,  $\eta_p^2 = .001$ .

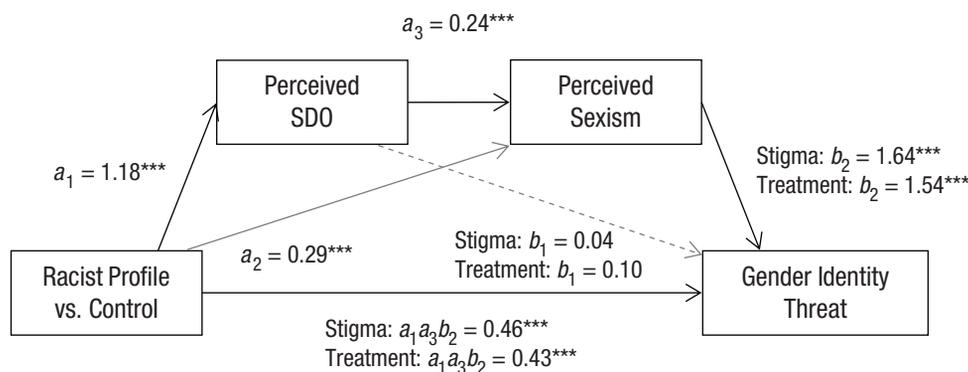
An ANCOVA on perceived sexism revealed a significant main effect of condition,  $F(1, 172) = 86.28$ ,  $p < .001$ , 95% CI for the mean difference =  $[0.93, 1.15]$ ,  $\eta_p^2 = .33$ ; participants perceived the racist evaluator ( $M = 2.85$ ,  $SE = 0.08$ ) as significantly higher in sexism than the neutral evaluator ( $M = 1.70$ ,  $SE = 0.08$ ). There was no main effect of order of measures,  $F(1, 172) = 0.05$ ,  $p > .25$ ,  $\eta_p^2 < .001$ , nor interaction of the two factors,  $F(1, 172) = 1.15$ ,  $p > .25$ ,  $\eta_p^2 = .007$ .

An ANCOVA on anticipated gender stigma revealed a significant main effect of condition,  $F(1, 172) = 21.75$ ,  $p < .001$ , 95% CI for the mean difference =  $[0.79, 1.34]$ ,  $\eta_p^2 = .11$ ; participants anticipated greater gender stigmatization from the racist evaluator ( $M = 3.36$ ,  $SE = 0.20$ ) than the neutral evaluator ( $M = 2.02$ ,  $SE = 0.19$ ). There was no main effect of order of measures,  $F(1, 172) = 0.16$ ,  $p > .25$ ,  $\eta_p^2 = .001$ , and the interaction of the two factors was nonsignificant,  $F(1, 172) = 3.49$ ,  $p = .063$ ,  $\eta_p^2 = .02$  (see Fig. 9a). Because the interaction was marginal, and to be

thorough in the presentation of results, we examined whether the effect of profile condition was significant for both orders of measures. The effect of condition was significant when mediators were presented first,  $F(1, 86) = 14.58$ ,  $p < .001$ , 95% CI for the mean difference =  $[1.53, 2.32]$ ,  $\eta_p^2 = .15$ , as well as when they were presented last,  $F(1, 85) = 6.05$ ,  $p = .016$ , 95% CI for the mean difference =  $[1.02, 1.84]$ ,  $\eta_p^2 = .07$ .

An ANCOVA on unfair treatment revealed a significant main effect of profile condition,  $F(1, 172) = 23.72$ ,  $p < .001$ , 95% CI for the mean difference =  $[1.31, 1.83]$ ,  $\eta_p^2 = .12$ ; participants anticipated greater mistreatment from the racist evaluator ( $M = 3.38$ ,  $SE = 0.19$ ) than the neutral evaluator ( $M = 2.03$ ,  $SE = 0.18$ ). There was no main effect of order,  $F(1, 172) = 0.36$ ,  $p > .25$ ,  $\eta_p^2 = .002$ , or interaction of the two factors,  $F(1, 172) = 3.77$ ,  $p = .054$ ,  $\eta_p^2 = .02$  (see Fig. 9b). Notably, the effect of profile was significant no matter whether mediators were presented first,  $F(1, 86) = 19.30$ ,  $p < .001$ , 95% CI for the mean difference =  $[1.62, 2.34]$ ,  $\eta_p^2 = .18$ , or last,  $F(1, 85) = 5.64$ ,  $p = .02$ , 95% CI for the mean difference =  $[0.97, 1.79]$ ,  $\eta_p^2 = .062$ .

**Mediation analyses.** Because neither order of measures nor the profile-condition-by-order interaction reached statistical significance, we collapsed across order of measures to test the pattern of serial mediation found in Studies 1 to 4. The model investigated the effect of the racist profile (compared with the control profile) on anticipated gender stigma and expected unfair treatment through perceived social dominance orientation and perceived sexism when controlling for liking. The bias-corrected bootstrap estimate of the indirect effect was significant (stigma:  $b = 0.46$ ,  $SE = 0.14$ , treatment:  $b = 0.43$ ,  $SE = 0.13$ ) because the 95% CIs did not contain zero (stigma:  $[0.21, 0.74]$ , treatment:  $[0.20, 0.70]$ ). Because the



**Fig. 10.** Results of the mediation analyses in Study 5: effect of condition on perceived gender identity threat, as mediated by perceived social dominance orientation (SDO) and perceived sexism. Separate models were run for gender identity threat as measured by expected treatment and anticipated gender stigma. Liking was included in both models as a covariate. Unstandardized coefficients are shown. Asterisks indicate significant paths ( $***p < .001$ ).

direct effect of the racism condition on women's gender identity threats remained significant (stigma:  $b = -0.32$ ,  $SE = 0.16$ ,  $p = .05$ , treatment:  $b = -0.34$ ,  $SE = 0.16$ ,  $p = .03$ ) when the mediators were included, the hypothesized serial pattern of mediation found in Study 1 (see Fig. 1) was partially supported (see Fig. 10).

## General Discussion

Across five studies, we demonstrated stigma by prejudice transfer—namely, that prejudice aimed at one stigmatized group can evoke identity threat in members of another, nontargeted stigmatized group. Because people assume that racists are sexists and vice versa, White women anticipated gender stigma when faced with racist evaluators, and men of color anticipated racial stigma from sexist evaluators. Moreover, stigma transfer occurred because people have a lay understanding of the monolithic qualities of prejudice, namely, they perceive racists and sexists as having a greater social dominance orientation than other people.

These results suggest that stigmatized group members may operate in a rational manner to determine the likelihood that evaluators will treat them unfairly. That is, research suggests that it might be accurate to assume that racist evaluators have a higher likelihood of being sexist compared with nonracist evaluators (Kteily, Ho, & Sidanius, 2012). In addition, White women were most likely to see themselves at risk for stigmatization when evaluators held sexist beliefs and then, to a lesser degree, when they held negative out-group attitudes in a context in which they could arguably encounter similar stereotypes and challenges. This suggests that participants were applying appropriately different weight to the ambiguous cue (out-group prejudice) and the blatant cue (in-group prejudice) when determining identity threat.

These findings illustrate the occurrence of stigma even when direct correspondence between the prejudiced attitude and the target is not explicit. This is an important observation because it suggests that seemingly specific prejudiced attitudes can be applied broadly and across identities. The current work suggests that prejudice contexts may have expansive interpersonal and physical health effects for numerous stigmatized groups. Future research should examine whether out-group prejudice results in similar health consequences as does prejudice that directly targets one's stigmatized in-group (e.g., Sawyer et al., 2012). Research suggests that ambiguous cues about prejudice may be more cognitively depleting than obvious, more blatant cues (e.g., Salvatore & Shelton, 2007). Thus, racist remarks (an ambiguously sexist cue) may be more cognitively depleting for White women than sexist remarks (a blatant cue). Notably, stigma by prejudice transfer may be limited to contexts in which it is appropriate to anticipate in-group prejudice from out-group threats (e.g., evaluative contexts), such as when intraminority groups encounter similar obstacles and stereotypes. For example, White women may be less likely to assume that evaluators who fear Black men because of aggression-related stereotypes would similarly hold sexist attitudes, given that women are not stereotyped as aggressive.

The present studies are not without limitations, such as their focus on sexism and racism. The stigma-by-prejudice-transfer effect may depend on the nature of the stigma (e.g., visible vs. invisible), the shared status of the intraminority groups (e.g., overlapping stereotypes), or individual differences (e.g., some individuals may be more likely to assume that prejudices overlap). Moreover, social dominance orientation may not be the sole mechanism underlying stigma by prejudice transfer. Right-wing authoritarianism has been linked to prejudice but it has been more strongly

linked to negative intergroup attitudes that relate to collective security threats (e.g., Duckitt & Sibley, 2007) and thus may operate as a mechanism underlying stigmas (or contexts) associated with security threat. Similarly, the Protestant work ethic has been linked to prejudice against people with stigmas that are perceived to be controllable (e.g., obesity, socioeconomic status; Rosenthal et al., 2011) and thus may account for prejudice transfer between those who share stigmas perceived to be controllable. Moreover, the stigma-by-prejudice-transfer framework may not solely apply to prejudice threat. Chaney, Sanchez, and Remedios (2016) demonstrated that organizations applauded for holding egalitarian policies toward African Americans were presumed by White women to have practices that were more gender equitable. This suggests that the presence of nonprejudice cues may exert an analogous crosscutting influence in contexts wherein stigmatized groups encounter similar challenges (i.e., the workplace).

In summary, the present research breaks new ground by demonstrating the stigma-by-prejudice-transfer effect and examining for the first time how stigmatized group members respond to prejudice cues that target stigmas they do not possess. Therefore, the present studies add to the burgeoning field of intraminority approaches to stigma and provide a new perspective from which to examine the effects of prejudice and the multifarious contexts in which stigma is experienced.

### Action Editor

Bill von Hippel served as action editor for this article.

### Author Contributions

D. T. Sanchez developed the study concept. All authors contributed to the study design and interpretation of the data. D. T. Sanchez, K. E. Chaney, and S. K. Manuel collected the data, and D. T. Sanchez and K. E. Chaney analyzed the data. D. T. Sanchez drafted the manuscript, and K. E. Chaney, S. K. Manuel, L. S. Wilton, and J. D. Remedios provided critical revisions. All authors approved the final version of the manuscript for submission.

### Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

### Supplemental Material

Additional supporting information can be found at <http://journals.sagepub.com/doi/suppl/10.1177/0956797616686218>

### Open Practices



All data and materials have been made publicly available via the Open Science Framework and can be accessed at <https://osf.io/g5fvw/>.

The design and analysis plan for Study 5 was preregistered at <https://osf.io/g5fvw/>. The complete Open Practices Disclosure for this article can be found at <http://journals.sagepub.com/doi/suppl/10.1177/0956797616686218>. This article has received badges for Open Data, Open Materials, and Preregistration. More information about the Open Practices badges can be found at <http://www.psychologicalscience.org/publications/badges>.

### Notes

1. This sample size (30–40 participants per condition) was used as the stopping point for data collection for Studies 1 through 4.
2. See the Supplemental Material available online for complete materials and further analyses for all studies.
3. Liking varied by condition in Studies 2 through 5 as well, so ANCOVAs were run with the same parameters in each of those studies.
4. In all studies, transfer effects were also significant when liking was not included as a covariate.

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