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## "A Threat on the Ground": The Consequences of Witnessing Stereotype-Confirming Ingroup Members in Interracial Interactions

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## Abstract

**Objectives:** Three studies explored interpersonal consequences of engaging in interracial interactions after witnessing racial ingroup members' stereotypical behavior.

**Methods:** Study 1 used experience-sampling methodology to assess ethnic minority students' ( $n = 119$ ) intergroup anxiety, meta-stereotypes, and anticipatory behaviors following one of three types of interpersonal interactions including: 1) a White person and a racial ingroup member who had behaved stereotypically, 2) a White person and a non-stereotypical ingroup member, or 3) neither. Studies 2 ( $n = 273$ ) and 3 ( $n = 379$ ) experimentally examined whether witnessing an ingroup member's stereotypically-negative behavior in interracial interactions, compared to stereotypically-positive (Study 2) or non-stereotypically-negative behavior (Study 3) differentially affected anxiety, meta-stereotypes, and anticipatory behaviors in interracial versus intraracial interactions among Black Americans.

**Results:** In Study 1, minorities reported greater anxiety, meta-stereotypes and motivation to disprove stereotypes, but less interest in future interracial contact, following interracial interactions involving stereotype-confirming ingroup members compared to other interactions. In Studies 2 and 3, adverse interaction consequences were most severe when ingroup behavior was both negative *and* stereotypical compared to neutral, stereotypically-positive, and non-stereotypically-negative ingroup behavior. Additionally, meta-stereotypes (and to a lesser degree anxiety) mediated individuals' motivation to disprove stereotypes and desire future interactions with White witnesses following stereotypically-negative ingroup behavior in interracial (versus intraracial) interactions.

**Conclusions:** This research highlights the emotional, meta-perceptual, and motivational outcomes following ingroup members' stereotypical behavior in intergroup contexts that extend

beyond dyadic encounters.

*Key words:* stereotype-confirming behavior; interracial interactions; intraracial interactions; intergroup processes

**“A Threat on the Ground”: The Consequences of Witnessing Stereotype-Confirming  
Ingroup Members in Interracial Interactions**

What is it like to engage in an interracial interaction when a racial ingroup member confirms negative group stereotypes? Consider the experience of a Black woman interacting with a White acquaintance, as they witness another Black woman speak loudly and aggressively at work. Or consider the experience of a Latino healthcare worker interacting with a White acquaintance, as they see a Spanish-speaking Latino patient fail to present the required documentation. In such interracial interactions, the loud and aggressive behavior of the Black woman reinforces stereotypes of Blacks as hostile, while the Latino patient’s spoken language coupled with their lack of documentation, reinforces stereotypes of Latinos as “illegal” immigrants. Interracial interactions are often a source of anxiety, apprehension, and even mistrust for minority and majority group members alike (Richeson & Shelton, 2007). These interactions can be laden with concerns about what an outgroup member may think about them or about their group, particularly when such interactions occur in stereotype-relevant domains (Vorauer, 2006). However, concerns are often reduced in intraracial interactions, since an ingroup member likely provides a sense of solidarity and alleviates worries about being judged negatively and stereotypically (Frey & Tropp, 2006; Wout, Murphy, & Steele, 2010). The majority of work on people’s emotional responses and meta-perceptual concerns in interpersonal interactions has been dyadic, focusing primarily on the two people in the interaction. Less work, however, considers another potentially impactful aspect of such interactions: other people in, or surrounding those in the dyadic interaction, as described in the opening examples. The behavior of these bystanders, particularly when such behavior is negative and confirms group stereotypes, may have consequences for those in the interracial (or intraracial) interaction.

The current work considers the emotional, meta-perceptual, and motivational consequences of witnessing ingroup members' stereotypical behavior during interracial and intraracial interactions. Moreover, we explore whether interactions that include stereotypical ingroup members lead to seemingly divergent motivational responses. Individuals might be simultaneously motivated to disprove negative group stereotypes and want to disengage from interacting with those who witnessed the stereotypical behavior, particularly in interracial interactions. Engaging in interactions where people *risk* confirming negative group stereotypes themselves is threatening, as the threat is said to be "in the air" (Steele, 1997). Sometimes, however, the threat of confirming group stereotypes is "on the ground." That is, an ingroup member's behavior explicitly confirms negative group stereotypes, and one has to wrestle with how this impacts the self during the interaction. These processes may reduce people's willingness to engage in cross-race interactions, which can be detrimental given the well-documented benefits of intergroup contact for reducing prejudice (Pettigrew & Tropp, 2013).

### **Responses to Stereotypical Ingroup Members**

Research in the social identity and stereotype threat tradition has demonstrated that stereotypical ingroup members have adverse consequences for the self and for intragroup relations. In particular, work on the "Black sheep effect" shows that people will denigrate and distance themselves from ingroup members who exhibit deviant behavior (e.g., Marques & Yzerbyt, 1988). Eidelman and Biernat (2003) argue that devaluing a deviant ingroup member is not simply a means of group protection, but a means of reducing the likelihood that one will be viewed similarly.

Likewise, negative intrapersonal and intragroup outcomes ensue if an ingroup member's comments merely suggest that one's own behavior might confirm group stereotypes. Cohen and

Garcia (2005) conducted a series of studies where minorities and women overheard an ingroup member express difficulty on a verbal/math task (threat condition) or not (no threat condition) before completing the task themselves. In the threat condition, the ingroup member's comment likely communicated *uncertainty* as to whether he/she underperformed, thereby putting the threat of the participant being viewed similarly "in the air"—an experience termed "collective threat." Accordingly, participants in the threat condition reported lower state self-esteem, underperformed, and distanced themselves from the ingroup member whose comments suggested incompetence.

Relatedly, negative group-based emotions have been found to occur in response to ingroup members' wrongdoing and/or stereotypical behavior, and these emotions often correlate with various anticipatory behaviors (Johns, Schmader, & Lickel, 2005; Schmader & Lickel, 2006a; Schmader, Block & Lickel, 2015). For example, Schmader and Lickel (2006a) showed that Hispanics, compared to Whites, felt greater anger and shame after recalling instances where members of their ethnic group behaved stereotypically. Moreover, shame predicted the desire to distance oneself from stereotypical ingroup members and from one's group identity, as well as the desire to repair the group's image.

### **Meta-stereotypes in interracial and intraracial interactions**

Though not directly tested in previous research, vicarious emotional responses are theorized to stem from people being keenly aware that the stereotypical behaviors of ingroup members are often generalized to them (Vorauer, 2006). Such meta-perceptual concerns, or meta-stereotypes, have been documented in Whites' interactions with minorities (Vorauer, Hunter, Main, & Roy, 2000; Vorauer, Main, & O'Connell, 1998), and disrupt cross-race interactions (Vorauer et al., 1998). However, little work has explored negative meta-perceptions

and meta-stereotypes in minority populations. Nonetheless, negative stereotypes, particularly those of racial minorities, are well known by group members often defined by such stereotypes (Devine, 1989; Pinel, 1999; Sigelman & Tuch, 1997).

In a seminal study of Black meta-stereotypes, Sigelman & Tuch (1997) analyzed questions about Black meta-stereotypes from a national *CNN/Times* survey of African Americans. Results showed that approximately two thirds of Blacks felt that Whites believed and endorsed racial stereotypes about Blacks and that negative stereotypes (as opposed to positive or neutral) were most pervasive and harmful. More recent work has shown that anticipating an interaction with a White peer who had only White friends led Blacks to believe they would be viewed more negatively (i.e., increased negative meta-perceptions), and thereby increased the belief that they would be treated poorly during the interaction (Wout et al., 2010). Thus, negative meta-perceptions and meta-stereotypes of racial minorities operate similarly to those of Whites, and affect minorities' outcomes in intergroup contexts.

Accordingly, one important contribution of the current research is examining whether meta-stereotypes contribute to minorities' responses to ingroup members' stereotypical behavior in interracial as well as intraracial interactions. Though no previous work speaks directly to this issue, there is a small body of work suggesting that others' presence in interracial encounters could have adverse consequences for the self. Notably, Vorauer (2003) investigated White Canadians' concerns about appearing prejudiced when they thought that they would be observed by an Aboriginal Canadian. Whites videotaped their answers to various questions, including some that could elicit prejudiced responses, either in the presence of other Whites (group condition) or not (alone condition). For high-prejudiced Whites, the presence of ingroup members (vs. being alone) was protective because they thought the Aboriginal observer would

view them as less prejudiced (i.e., reduced meta-perceptual concerns). Contrastingly, low-prejudiced Whites thought the Aboriginal observer would view them as more prejudiced in the group (vs. alone) condition (i.e., heightened meta-perceptual concerns). Therefore, ingroup bystanders can differentially affect meta-perceptions of those anticipating an interracial interaction. Though it is unclear from this study whether Whites' or their fellow ingroup members' behavior was stereotypically-negative (i.e., prejudiced), this work highlights the uncertainty surrounding ingroup members' presence in an interracial encounter and suggests that there can be negative consequences for the self (i.e., stronger meta-perceptual concerns) when the threat of being seen unfavorably is "in the air." Furthermore, it remains unclear how participants would have reacted if the threat of being negatively stereotyped by an outgroup member was "on the ground" due to explicit stereotype-confirming acts from fellow ingroup members and the extent to which intraracial interactions might mitigate negative outcomes.

Addressing these gaps, the current research explores whether increased meta-stereotypes resulting from ingroup members' stereotype-confirming behavior differentially influence interpersonal motivations in interracial compared to intraracial interactions. Why might responses be different or weaker in intraracial interactions? From a social identity theory perspective, individuals belonging to a social group often feel a sense of shared destiny because of their collective history and common experiences, and likewise, tend to exaggerate differences between groups and similarities among group members (Tajfel & Turner, 1986). Nonetheless, ingroup members are also more sensitive to the variability within their group compared to within outgroups (Mullen & Hu, 1989), and likely allow ingroup (vs. outgroup) members more degrees of freedom in their behavior. Taken together, ingroup members are likely to assume some level of shared understanding and less likely to assume that an ingroup (vs. outgroup) member will



assimilate them with negative group stereotypes (Frey & Tropp, 2006). Witnessing an ingroup member behave stereotypically during an intraracial (vs. interracial) interaction may therefore carry less harmful consequences.

Additionally, we test other conditions that may determine the severity of negative consequences in interracial interactions that extend beyond the dyad. Namely, we examine whether an ingroup member's *stereotypically-negative* behavior, any stereotypical behavior (i.e., stereotypically-positive), or any negative behavior (i.e., non-stereotypically-negative), relative to their non-stereotypical behavior, will be more harmful during interracial versus intraracial interactions. Though interracial interactions tend to increase intergroup anxiety and evaluative concerns (Frey & Tropp, 2006; Shelton, Richeson, & Vorauer, 2006), we suggest that witnessing an ingroup member's negative behavior that is *also* stereotypical in such interactions might be particularly consequential because the behavior is integral to, and will likely exacerbate, the already-activated meta-stereotypes (cf. Jones, 2009; Steele, 1997). Moreover, these heightened meta-stereotypes and anxiety should impact interpersonal motivations. For example, when meta-stereotypes are high, ingroup members may try to disconfirm negative stereotypes by highlighting positive traits (Klein & Azzi, 2001). Furthermore, during threatening interracial interactions, as negative meta-perceptions increase, minorities' desire to befriend a White interaction partner decreases (Wout, Murphy, & Barnett, 2014). Taken together, previous research suggests that meta-stereotypes may not only increase one's motivation to disprove negative stereotypes, but also heighten one's desire to distance oneself from their interaction partner. Thus, following an ingroup members' stereotypically-negative behavior in particular, increased meta-stereotypes coupled with the anxiety that often arises in interracial interactions,

may lead people to engage in seemingly divergent compensatory strategies to manage the encounter (Shelton et al., 2006).

### **Current Research**

Extending and integrating previous research, the present work broadens our understanding of how dyadic interracial interactions might be influenced by other people—in particular, the stereotype-confirming behavior of a racial ingroup member. Thus, we predict that witnessing ingroup members' stereotypical behavior during an interracial interaction will increase intergroup anxiety, meta-stereotypes, and motivation to disprove negative stereotypes, but decrease desire to interact with the outgroup member who witnessed the event (Study 1). We also predict boundary conditions of this effect, examining whether witnessing an ingroup member's stereotypically-negative behavior in interracial interactions, in particular, produces more negative outcomes than non-stereotypically-neutral (Studies 1 – 3), stereotypically-positive (Study 2) or non-stereotypically-negative behavior (Study 3). Intergroup anxiety has been shown to increase in cross-race interactions (Stephan & Stephan, 1985). Likewise, we expect anxiety to increase after witnessing the stereotypically-negative behavior of ingroup members in interracial contexts, and operate in concert with increased meta-stereotypes. Thus, across studies, we test the possibility that anxiety and meta-stereotypes mediate the relationship between ingroup members' stereotype-confirming behavior and the resulting motivational consequences in interracial interactions (Study 1) versus intraracial interactions (Studies 2 and 3). Finally, though we did not expect effects to differ by gender, we tested this possibility because negative group stereotypes are not only racialized but also are often gendered (Goff, Thomas, & Jackson, 2008; Stevens-Watkins, Perry, Pullen, Jewell, & Oser, 2014).

#### **Study 1: Daily experiences of stereotype-confirming behavior in interracial interactions**

We examined how ethnic minorities respond in daily interracial interactions when they witness an ingroup member behaving stereotypically. Every day for three weeks, ethnic minorities recalled whether they had interacted with a White person and a stereotypical ingroup member, a White person and a non-stereotypical ingroup member, or neither. They then indicated how anxious the situation made them feel, and reported their meta-stereotypes and motivational responses. Though we expected interracial interactions with ingroup members who behave stereotypically to be less common than other types of interactions, we expected these situations to be quite impactful for how minorities navigate interactions with Whites. Indeed, interracial encounters that occur less often (e.g., Whites interactions with minorities) can be highly impactful and anxiety-provoking because people lack the coping skills to manage the psychological and physiological outcomes following such novel interactions (Blascovich, Mendes, Lickel, & Kowai-Bell, 2008; Trawalter, Adams, Chase-Lansdale, & Richeson, 2012; Trawalter, Richeson, & Shelton, 2009). Thus, we hypothesized that though infrequent, observing ingroup stereotype-confirming behavior (vs. not) during interracial interactions would increase intergroup anxiety and meta-stereotypes, thereby heightening motivation to disprove negative group stereotypes, while decreasing interest in future contact with the White witness.

## **Method**

### **Participants**

Ethnic minorities participated in a twenty-one day diary study, including two additional sessions to collect pre/post-diary measures ( $N = 129$ ).<sup>1</sup> Ten participants did not complete measures pertinent to our research and were excluded from analyses, leaving 119 participants

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<sup>1</sup> Data from this study have been published, but neither the measures nor results overlap with the current research. Furthermore, for all studies, informed consent was obtained for each participant and each was conducted in compliance with the IRB.

( $M_{\text{age}} = 20.06$ ,  $SD = 1.55$ ). The final sample included 35 Blacks (23 women, 8 men, 4 unknown), 22 Hispanics/Latinos (11 women, 8 men, 3 unknown), 43 Asian Americans (30 women, 9 men, 4 unknown), 13 multiracial (8 women, 3 men, 2 unknown; Supplement provides multiracial ethnicities), 3 specifying other (3 women), and 3 not indicating a race. Participants were compensated \$50.

### **Procedure**

Participants were recruited via email for participation in a study about social experiences and identity on two predominately White college campuses in the northeastern US ( $n_{\text{school}\#1} = 114$  and  $n_{\text{school}\#2} = 15$ ). Participants attended an orientation session to complete pre-diary study measures. At the end of each day over 21 consecutive days, participants received an email to complete the daily questionnaires online and a reminder email by 10 PM, as needed.

Each day participants indicated their daily interaction type, described the interaction, and indicated their affect, meta-stereotypes, motivation to disprove stereotypes, and interest in future contact. At the end of 21 days, participants completed the post-diary session, received compensation, and were debriefed. Data were collected in two waves a few weeks apart across campuses to gather an adequate sample size ( $n_{\text{wave}\#1} = 85$ ;  $n_{\text{wave}\#2} = 44$ ). The pattern of results was no different in a model with wave, school, and gender included as controls, and the controls did not have a significant effect on the outcomes; thus, these control variables were removed from the final models.

### **Daily Measures**

See Supplement for all measures.

***Interaction type.*** Each day, participants were asked to indicate having had one of three types of interactions that was most vivid. They included an 1) interracial interaction with a White

person and a stereotype-confirming ingroup member, 2) general interracial interaction with a White person and a (non-stereotypical) ingroup member, or 3) other interaction. Other interactions could have been intraracial interactions, intraminority interactions, and interactions with White individuals when no other minority or racial ingroup member was present (see Supplement for details). Interaction type was included as a factor and specific contrasts were made in all analyses except when noted.

***Intergroup anxiety.*** Participants indicated how they felt interacting with the [White] person/s in the interaction from 1 (*not at all*) to 7 (*extremely*) (Stephan & Stephan, 1985). Sample items included certain (reversed), awkward, and self-conscious ( $\alpha$ 's = .82-.92).

***Meta-stereotypes.*** One item assessed the extent to which participants felt that they would be viewed stereotypically by the [White] person/s in the interaction from 1 (*strongly disagree*) to 7 (*strongly agree*).

***Motivation to disprove stereotypes.*** Three items assessed participants' motivation to disprove negative group stereotypes during the interaction. Following stereotype-confirming interracial interactions, items referenced the target stereotypic ingroup member, whereas following general interracial and other interactions, items referenced a general stereotypic ingroup member. Sample items include, "I was motivated to behave differently than [the/a] stereotypical member of my racial/ethnic group" and "I felt pressure to represent my racial/ethnic group positively" assessed from 1 (*not at all*) to 7 (*very much*),  $\alpha$ 's = .76-.91 (cf. Jones, 2009; Schmader & Lickel, 2006a).

***Future contact.*** Assessing intergroup processes, when responding to a stereotype-confirming or general interracial interaction, participants indicated how much they would like to interact with the "White person/s [who witnessed a member of your racial group behave

stereotypically] in the future” assessed from 1 (*not at all*) to 7 (*very much*). Future contact with an interaction partner following other interactions was not included in the analyses because responses in this condition do not necessarily refer to a racial outgroup member and are thus not directly comparable (See Supplement for additional analyses).

### Results

The 21 daily measurements are nested within participants, and thus are non-independent. Further, because we were interested in how interracial interaction experiences affected participants each day (not change over time), we treated days as repeated measures. There was a significant decline in fit when forcing constant error variances for all 21 time points (with daily intergroup anxiety as the outcome),  $\Delta c^2(20) = 33.85, p = .027$ , so we used a first-order autoregressive error structure that allows for heterogeneous error variances, thereby accounting for more highly correlated errors for measurements closer in time. The autoregressive error correlation was significant for each measure (see Supplement for relevant statistics).

Across the 21 days, 85 (3.8%) of the interactions were stereotype-confirming interracial interactions, 726 (32.4%) were general interracial interactions, and 1432 (63.8%) were other interactions (see Supplement for relevant statistics). Table I presents correlations between daily measures as a function of interaction type.

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[Table I]

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### Intergroup anxiety

Participants reported significantly more intergroup anxiety following stereotype-confirming interracial interactions compared to general interracial interactions,  $b = -0.70, SE =$

0.10,  $CI = [-0.89, -0.51]$ , and other interactions,  $b = -0.65$ ,  $SE = 0.10$ ,  $CI = [-0.84, -0.46]$ . The latter two interactions were not different,  $b = 0.05$ ,  $SE = 0.04$ ,  $CI = [-0.03, 0.13]$ . Note that the regression weights represent the mean difference between conditions unless otherwise noted.

### **Meta-stereotypes**

Participants thought they were more likely to be viewed stereotypically during stereotype-confirming interracial interactions compared to general interracial interactions,  $b = -1.08$ ,  $SE = 0.14$ ,  $CI = [-1.34, -0.81]$  and other interactions,  $b = -0.99$ ,  $SE = 0.14$ ,  $CI = [-1.26, -0.72]$ . The latter two interactions were not different,  $b = 0.08$ ,  $SE = 0.06$ ,  $CI = [-0.04, 0.20]$ .

### **Motivation to disprove stereotypes**

Participants reported greater motivation to disprove group stereotypes during stereotype-confirming interracial interactions than general interracial interactions,  $b = -0.81$ ,  $SE = 0.11$ ,  $CI = [-1.01, -0.60]$ , and other interactions,  $b = -0.80$ ,  $SE = 0.11$ ,  $CI = [-1.01, -0.60]$ . The latter two interactions were not different,  $b = 0.003$ ,  $SE = 0.05$ ,  $CI = [-0.09, 0.10]$ .

**Mediation analysis.** We examined if intergroup anxiety and meta-stereotypes mediated the relationship between interaction type (effects coded) and motivation to disprove stereotypes. Since our main comparison was between stereotype-confirming interracial interactions (1) and general interracial interactions (-1), we limited our mediation analyses to these conditions. Because effects coding was used, the regression weights in these mediation analyses represent one-half the mean difference between groups. We found partial mediation: the effect of interaction type on motivation to disprove stereotypes was reduced (but still significant) when controlling for intergroup anxiety and meta-stereotypes,  $b = 0.12$ ,  $SE = 0.05$ ,  $CI = [0.03, 0.21]$ . Using the Monte Carlo Method for Assessing Mediation (MCMAM, Selig & Preacher, 2008), though the direct effect remained significant, we found statistically significant indirect effects of

interaction type on motivation to disprove stereotypes through intergroup anxiety (*indirect* = 0.14, *CI* = [0.10, 0.18]) and meta-stereotypes (*indirect* = 0.21, *CI* = [0.14, 0.28]). See Figure 1.

### **Future contact**

As predicted, participants reported significantly less desire for future interaction with the White person in stereotype-confirming compared to general interracial interactions,  $b = -0.24$ ,  $SE = 0.08$ ,  $CI = [-0.39, -0.09]$ . (Recall the *other interaction* condition was excluded from this analysis. See Supplement for analyses including this condition).

**Mediation analysis.** We examined if intergroup anxiety and meta-stereotypes mediated the relationship between interaction type and interest in future contact with the White person in the interaction. There was no longer a statistically significant negative effect of interaction type on future contact interest when controlling for meta-stereotypes and intergroup anxiety, but a statistically significant *positive* effect,  $b = 0.18$ ,  $SE = 0.07$ ,  $CI = [0.05, 0.31]$ . Using MCMAM, the indirect effect of interaction type on future contact interest, mediated through meta-stereotypes, was statistically significant, *indirect* = -0.06,  $CI = [-0.09, -0.04]$ , as was the indirect effect through intergroup anxiety, *indirect* = -.39,  $CI = [-0.51, -0.28]$ . See Figure 1.

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[Figure 1]  
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### **Discussion**

Study 1 found that during stereotype-confirming interracial interactions, compared to general interracial or other interactions, minorities reported greater intergroup anxiety and meta-stereotypes. Furthermore, increased meta-stereotypes and intergroup anxiety during stereotype-confirming interracial interactions were related to minorities' increased motivation to disprove



stereotypes. In such contexts, feeling as if one would be viewed stereotypically and intergroup anxiety also explained minorities' decreased interest in future contact with the White witness—indeed, when holding meta-stereotypes and intergroup anxiety constant, stereotype-confirming interracial interactions were associated with greater desire for future contact. At first glance this direct effect may seem counterintuitive, but once meta-stereotypes and intergroup anxiety have been accounted for, people may desire future interactions more after stereotype-confirming interracial interactions as a means to disprove the negative stereotype. Thus, though stereotype-confirming interracial interactions occurred less often than the other types of interpersonal interactions they were impactful, guiding people's meta-perceptual concerns and anxiety, which in turn influenced their motivational and interpersonal responses.

Using experience sampling methodology, this study provides initial evidence in support of our hypotheses among Blacks, Latinos, and Asians in interactions with Whites in real world contexts. Moreover, it provides a conceptual replication of Schmader and colleagues (2006a), yet extends previous work by highlighting the influence of meta-stereotypes and intergroup anxiety in contributing to motivational and interpersonal outcomes in interpersonal interactions that include stereotypical ingroup members. However, there were several limitations. First, the data were correlational and, furthermore, do not clarify whether witnessing ingroup members' stereotypical behavior in same-race interactions might yield similar outcomes. Second, the measures were not directly comparable across interactions—the items referred either to the minority or White person in the interaction, which was used as a first attempt to tap into processes across these different types of interactions. While the items were similar across conditions in that participants were focused on the person/s with whom they were interacting, participants were asked to consider the encounter with their ingroup member and the White

witness simultaneously during stereotype-confirming interracial interactions. Though we were interested in assessing responses holistically, it remains unclear exactly who participants were responding to in the interaction, thereby limiting generalizability. Finally, Study 1 does not clarify whether any type of stereotypical behavior (i.e., positive versus negative) or any negative behavior (i.e., non-stereotypical-negative) by ingroup members might yield similar outcomes. We address these issues in the next two experiments.

### **Study 2: Distinguishing negative and positive stereotype-confirming behaviors**

In Study 2, we tested whether Blacks would respond differently after imagining themselves in a novel interracial versus intraracial interaction when an ingroup member's behavior was either stereotypically-negative, stereotypically-positive, or non-stereotypically-neutral. Our primary goal was to distinguish the effects of witnessing stereotypically-negative vs. stereotypically-positive ingroup behaviors in intergroup contexts. Although different in valence, both positive and negative group stereotypes represent fixed, oversimplified generalizations about an entire social group. Positive stereotypes can be costly and constraining, particularly when individuals feel they are expected to live up to those stereotypes (Cheryan & Bodenhausen, 2000; Czopp, Kay, & Cheryan, 2015). Furthermore, although hearing an interaction partner endorse positive stereotypes (vs. hearing no stereotype) was found to increase negative emotional responses in interracial interactions (Siy & Cheryan, 2015), positive stereotypes also have been found to reduce threat and boost performance relative to negative stereotypes (e.g., Brannon, Markus, & Taylor, 2015; Stone, Lynch, Sjomeling, & Darley, 1999). Moreover, because racial minorities' primary interaction goal during interracial interactions is to be respected by their partner (Bergsieker, Shelton, & Richeson, 2010), to the extent that witnessing stereotypically-positive ingroup behavior does not impede upon this goal, it should be *less*

harmful than witnessing stereotypically-negative behavior in intergroup contexts. Taken together, though both positive and negative stereotypes are constraining, Black Americans' meta-stereotypes and anxiety are likely to be higher in interracial (vs. intraracial) interactions following stereotypically-negative (criminal), than stereotypically-positive (athletic) or non-stereotypically-neutral (dropping coins), ingroup behavior.

In sum, we predict that ingroup members' stereotypically-negative behavior, compared to non-stereotypically-neutral and stereotypically-positive behavior will heighten anxiety and meta-stereotypes, both of which should increase motivation to disprove stereotypes, but decrease comfort in interracial interactions. Contrastingly, because people generally do not expect negative stereotyping by ingroup members (Frey & Tropp, 2006), we anticipate a dampening of such outcomes following ingroup stereotypical behavior in intraracial interactions.

## Methods

### Design and Participants

The study used a 3 (behavior-type: stereotypically-negative, non-stereotypically-neutral, stereotypically-positive)  $\times$  2 (partner-race: interracial, intraracial)  $\times$  2 (participant gender: female, male) between-subjects factorial design.<sup>2</sup> To reduce reactance, we used a subtle race manipulation (i.e., single mention of partner's race) and thus expected higher than usual attrition due to failure to pass a manipulation check. Though there was no previous work to directly inform effect size, we assumed small to moderate effects and used G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007) to calculate sample size a priori. We therefore aimed for at least 250 participants for at least 80% power, and oversampled in anticipation of attrition. Self-identified

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<sup>2</sup> Although "non-stereotypically-neutral" indicates that the behavior-type was rated as both non-stereotypical of Blacks, and neither positive nor negative in valence (see Supplement for details), when referring to this condition throughout the paper we use the label "neutral" for simplicity.

Black participants were recruited and compensated for participation through Qualtrics Panels online recruitment services ( $N = 342$ ). Sixty-nine participants incorrectly recalled their interaction partner's race and were excluded from analyses, leaving 273 participants (143 women; 130 men;  $M_{\text{age}} = 42.84$ ,  $SD = 15.35$ ).

## Procedure

Participants read a scenario depicting an interaction between two people observing a third person. All characters were gender-matched to participants. They imagined themselves as the main character, Amanda/Anthony, training for a part time job. During a break, Amanda/Anthony walk with a previously unacquainted White or Black coworker (partner-race condition) to get food. At a convenience store, they notice a Black woman/man behaving in one of three ways (behavior-type condition): stealing merchandise and being chased by a security guard (stereotypically-negative), accidentally dropping coins while paying for his/her items (neutral), or singing a jazz song (stereotypically-positive). Shortly thereafter, the coworkers returned to work to continue the training together.<sup>3</sup> See Supplement for vignettes and pilot results for behavior selection.

Next, participants recounted details of the scenario and completed the dependent measures, including anxiety, meta-stereotypes, and anticipated behaviors. Finally, participants completed manipulation checks and were debriefed.

## Dependent Measures

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<sup>3</sup> A separate sample of participants ( $N = 22$ ) rated the scenarios in a pilot test. Criminality (stereotypically-negative) and singing (stereotypically-positive) were rated as highly and equally stereotypical, though significantly different in valence. Both also were rated significantly more stereotypical than dropping coins (neutral), and also more negative and more positive, respectively. Finally, though criminality was rated as most extreme, controlling for extremity did not alter the reported findings; thus, extremity does not fully account for the observed effects. See Supplement for corresponding statistics.

Unless otherwise noted, items were assessed from 1 (*strongly disagree*) to 7 (*strongly agree*). See Supplement for additional details regarding the measures.

**Anxiety.** Participants indicated how anxious they would feel in the interaction in 6-items, including worried, tense, frightened, self-conscious, awkward, and defensive ( $\alpha = .88$ ; Spielberger, Gorsuch, & Lushene, 1970; Stephan & Stephan, 1985).

**Meta-stereotypes.** Participants indicated the extent to which they thought that their coworker would view them as having stereotypically Black characteristics (e.g., criminal, intelligent (*reversed*), athletic, 8-items) on a scale from 1 (*extremely unlikely*) to 9 (*extremely likely*). Additionally, one item assessed the extent to which participants believed that members of their coworker's racial group (i.e., referring to Whites in the interracial condition or Blacks in the intraracial condition) would view the target's behavior as generally stereotypical of African Americans/Blacks on a scale from 1 (*not at all stereotypical*) to 7 (*very stereotypical*). These nine items were each standardized and averaged to form a scale ( $\alpha = .77$ ).

**Motivation to disprove stereotypes.** Participants completed eight items assessing their motivation to disprove group stereotypes in the interaction ( $\alpha = .85$ ). Sample items included, "I would be motivated to represent my racial/ethnic group positively" and "I would feel pressure to show my coworker that I am not like the member of my racial/ethnic group that we observed".

**Future interactions.** Six items assessed participant's anticipated comfort in future interactions with their coworker ( $\alpha = .85$ ). Sample items included, "I think that I would be able to get along with this co-worker" and "I would want to interact with this co-worker again".

## Results

Across measures we expected a behavior-type  $\times$  partner-race (two-way) interaction on our dependent measures, and then focused on three contrasts to test apriori hypotheses. Specifically,

we compared ingroup members' stereotypically-negative behavior in an interracial interaction to: (C1) stereotypically-negative behavior in an *intraracial interaction*, (C2) *neutral behavior* in an interracial interaction, and (C3) *stereotypically-positive behavior* in an interracial interaction. Next, we expected anxiety and meta-stereotypes to mediate the relationship between behavior-type and motivational outcomes, but expected these patterns to be stronger in interracial than intraracial interactions. Finally, though we did not expect gender to moderate the overall pattern of results, we nonetheless explored this possibility.

### **Anxiety**

The main effect of behavior-type on anxiety,  $F(2, 261) = 48.57, p < .001, \eta^2_p = .27$ , was qualified by the expected behavior-type  $\times$  partner-race interaction,  $F(2, 261) = 3.27, p = .04, \eta^2_p = .02$ .<sup>4</sup> The remaining main effects, and two- and three-way interactions were non-significant.

The first planned contrast following the behavior-type  $\times$  partner-race interaction revealed that, as expected, those in the (C1) stereotypically-negative behavior condition expressed greater anxiety during the interracial ( $M = 4.07, SD = 1.09$ ) compared to intraracial interaction ( $M = 3.52, SD = 1.19$ ),  $F(1, 267) = 4.25, p = .040, d = .48$ . Also as hypothesized, participants expressed greater anxiety during an interracial interaction following an ingroup member's stereotypically-negative, than (C2) neutral behavior ( $M = 2.41, SD = 1.32$ ),  $F(1, 267) = 38.86, p < .001, d = 1.36$ , and (C3) stereotypically-positive behavior ( $M = 1.82, SD = 1.24$ ),  $F(1, 267) = 72.30, p < .001, d = 1.91$ .

### **Meta-stereotypes**

A main effect of partner-race on meta-stereotypes,  $F(1, 261) = 9.86, p = .002, \eta^2_p = .04$ , was qualified by the predicted behavior-type  $\times$  partner-race interaction,  $F(2, 261) = 3.04, p = .05$ ,

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<sup>4</sup> In Supplement, see simple effects analyses that follow this and all subsequent significant behavior-type  $\times$  partner-race interactions, which also provide a basis for the contrast analyses reported.

$\eta^2_p = .02$ . The main effects of partner-race and gender were marginal,  $ps = .08$ , and all remaining two- and three-way interactions were non-significant. Following the behavior-type  $\times$  partner-race interaction, participants in the (C1) stereotypically-negative condition thought they would be seen more stereotypically during the interracial ( $M = 0.31$ ,  $SD = 0.67$ ) than intraracial interaction ( $M = -0.13$ ,  $SD = 0.47$ ),  $F(1, 267) = 13.28$ ,  $p < .001$ ,  $d = .78$ . Furthermore, participants expressed greater meta-stereotypes during the interracial interaction in the stereotypically-negative condition than (C2) neutral condition ( $M = -.09$ ,  $SD = 0.64$ ),  $F(1, 267) = 10.82$ ,  $p = .001$ ,  $d = .62$ . Finally, participants reported marginally more meta-stereotypes in the (C3) stereotypically-negative compared to the stereotypically-positive condition during the interracial interaction ( $M = 0.09$ ,  $SD = 0.61$ ),  $F(1, 267) = 3.41$ ,  $p = .066$ ,  $d = .35$ .

### **Motivation to disprove stereotypes**

For motivation to disprove stereotypes, there were two main effects: behavior-type  $F(2, 261) = 9.92$ ,  $p < .001$ ,  $\eta^2_p = .07$ , and partner-race,  $F(1, 261) = 4.59$ ,  $p = .033$ ,  $\eta^2_p = .02$ . These main effects were qualified by an unexpected partner-race  $\times$  gender interaction,  $F(2, 261) = 4.14$ ,  $p = .043$ ,  $\eta^2_p = .02$ , as well as the predicted behavior-type  $\times$  partner-race interaction,  $F(2, 261) = 3.85$ ,  $p = .023$ ,  $\eta^2_p = .03$ . The final main effect, and two-way and three-way interactions were non-significant.

There were no apriori hypotheses for the gender  $\times$  partner-race interaction; thus, simple effects analyses were conducted post-hoc. Women expressed greater motivation with a Black coworker ( $M = 3.95$ ,  $SD = 1.27$ ) than White coworker ( $M = 3.22$ ,  $SD = 1.39$ ),  $F(1, 141) = 10.83$ ,  $p = .001$ ,  $\eta^2_p = .07$ , while this simple effect was non-significant for men.

Next, we examined planned contrasts following the hypothesized behavior-type  $\times$  partner-race interaction. Motivation to disprove stereotypes did not differ in the (C1)

stereotypically-negative condition in interracial versus intraracial interactions,  $F(1, 267) = 0.37$ ,  $p = .55$ . However, participants expressed greater motivation in the interracial interaction following ingroup members' stereotypically-negative behavior, compared to (C2) neutral behavior,  $F(1, 267) = 8.90$ ,  $p = .003$ ,  $d = .67$ , and (C3) stereotypically-positive behavior,  $F(1, 267) = 24.59$ ,  $p < .001$ ,  $d = 1.16$ . See Table II for means and standard deviations by condition.

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[Table II]

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**Moderated mediation analyses.** We examined whether anxiety and meta-stereotypes mediated the relationship between behavior-type and motivation to disprove stereotypes in interracial versus intraracial interactions, using Model 7 of PROCESS in SPSS with 10,000 bias-corrected bootstrap resamples (Hayes, 2013). Since gender did not moderate the behavior-type  $\times$  partner-race interaction, analyses collapsed across gender. Two analyses focused on interracial vs. intraracial interactions when an ingroup member exhibited stereotypically-negative behavior (0) compared to (C2) neutral behavior (1), and also compared to (C3) stereotypically-positive behavior (1). Across analyses, holding behavior-type constant, higher anxiety and meta-stereotypes were related to greater motivation to disprove stereotypes. See Table III for unstandardized OLS regression coefficients with confidence intervals.

***Stereotypically-negative vs. neutral ingroup behavior (C2).*** Providing evidence of mediation across contexts, the conditional indirect effects of behavior-type on motivation through anxiety were significant in both interaction contexts (interracial: *indirect* = -0.73, *SE* = 0.17, *CI* = [-1.14, -0.44]; intraracial: *indirect* = -0.44, *SE* = 0.15, *CI* = [-0.79, -0.19]). The conditional indirect effects of behavior-type on motivation through meta-stereotypes was



significant in interracial interactions only, suggesting mediation in this context ( $indirect = -0.14$ ,  $SE = 0.08$ ,  $CI = [-0.36, -0.02]$ ). Providing evidence of moderated mediation, the indirect effect of each mediator was significantly larger in magnitude in interracial (vs. intraracial) interactions (anxiety  $\Delta indirect = 0.29$ ,  $SE = 0.17$ ,  $CI = [.002, 0.66]$ ); meta-stereotypes  $\Delta indirect = 0.15$ ,  $SE = 0.09$ ,  $CI = [0.02, 0.40]$ ).

***Stereotypically-negative vs. stereotypically-positive ingroup behavior (C3).*** The conditional indirect effects of behavior-type on motivation were significant in both interaction contexts for anxiety (but not meta-stereotypes) (interracial:  $indirect = -0.81$ ,  $SE = 0.26$ ,  $CI = [-1.35, -0.37]$ ; intraracial:  $indirect = -0.46$ ,  $SE = 0.16$ ,  $CI = [-0.84, -0.22]$ ). Suggesting moderated mediation, the indirect effect of anxiety was significantly larger in magnitude in interracial (v. intraracial) interactions ( $\Delta indirect = 0.34$ ,  $SE = 0.17$ ,  $CI = [0.07, 0.75]$ ).

### **Future interactions**

There was only an unexpected behavior-type  $\times$  gender interaction for future interactions,  $F(2, 261) = 3.40$ ,  $p = .035$ ,  $\eta^2_p = .03$ . Post-hoc simple effects analyses revealed that women anticipated more comfort in future coworker interactions in the stereotypically-negative condition than men,  $F(1, 85) = 5.48$ ,  $p = .022$ ,  $\eta^2_p = .06$ . Further, anticipated comfort differed by behavior-type for women only,  $F(1, 140) = 5.71$ ,  $p = .004$ ,  $\eta^2_p = .08$ , such that, surprisingly, comfort was greater in the stereotypically-negative ( $M = 6.01$ ,  $SD = 0.84$ ) than neutral ( $M = 5.38$ ,  $SD = 0.97$ ) condition. The main effects, expected behavior-type  $\times$  partner-race interaction, and remaining two- and three-way interactions were non-significant.

**Moderated mediation analyses.** Moderated mediation was tested though there was no behavior-type  $\times$  partner-race interaction for future interactions (see Rucker, Preacher, Tormala,

& Petty, 2011). See Table III for unstandardized OLS regression coefficients with confidence intervals.

***Stereotypically-negative vs. neutral ingroup behavior (C2).*** The conditional indirect effect of behavior-type on future interactions through meta-stereotypes (and not anxiety) was significant in interracial interactions only (*indirect* = 0.25, *SE* = 0.10, *CI* = [0.08, 0.49]). Suggesting moderated mediation, the indirect effect of behavior-type on future interactions, with meta-stereotypes as the mediator, was significantly larger in magnitude in interracial (vs. intraracial) interactions ( $\Delta$ *indirect* = -0.27, *SE* = 0.12, *CI* = [-0.56, -0.07]).

***Stereotypically-negative vs. stereotypically-positive ingroup behavior (C3).*** Analyses comparing stereotypically-negative to stereotypically-positive conditions did not provide evidence of moderated mediation for either mediator on future interactions.

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[Table III]

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## Discussion

In support of hypotheses and consistent with Study 1, Study 2 experimentally demonstrated that Black participants felt greater anxiety, meta-stereotypes, and motivation to disprove stereotypes after witnessing an ingroup member commit stereotypically-negative, compared to neutral behaviors during an interracial interaction. Though witnessing an ingroup members' stereotypically-negative (vs. neutral) behavior was anxiety provoking and increased evaluative concerns for everyone, such responses were most prominent when interacting with a White (vs. Black) coworker. Though there were no differences in anticipated comfort in future interactions, analyses of the conditional indirect effects showed that as meta-stereotypes

increased, anticipated comfort in future interactions decreased—an effect that was stronger in interracial (vs. intraracial) interactions.

Extending these findings, results further demonstrated that the valence of an ingroup member's stereotypical behavior is critical: stereotypically-negative (vs. stereotypically-positive) ingroup behavior increased anxiety and motivation to disprove negative stereotypes (and to a lesser degree meta-stereotypes). Though there was no difference in motivation to disprove stereotypes in the stereotypically-negative condition in interracial versus intraracial interactions, moderated mediation analyses suggest that increased anxiety was more strongly related to increased motivation in interracial interactions. Finally, there were also a few unanticipated findings, such that gender moderated motivation to disprove stereotypes and future interactions in unexpected ways. We explore these patterns again in Study 3.

Taken together, Study 2 replicated Study 1 daily diary effects experimentally and suggests that all stereotypic behavior by ingroup members in interpersonal interactions is not created equal—indeed, such negative downstream consequences are mitigated following stereotypically-positive ingroup behavior, and during intraracial interactions. Nonetheless, it remains unclear whether any type of *negative* behavior—stereotypic or not—might elicit similar responses. We turn to this boundary condition of our effects in Study 3.

### **Study 3: Distinguishing negative-stereotypical and negative-nonstereotypical behaviors**

Is all negative behavior created equal? Or will outcomes differ following ingroup members' stereotypically-negative versus non-stereotypically-negative behavior in interracial interactions? Previous research finds that when ingroup members' behavior is highly negative, negative affect (i.e., shame) increases, particularly for those with high group identification (Johns et al., 2005). Therefore, any negative or ambiguously negative ingroup behavior might cause

adverse consequences in interracial interactions because such behavior would be seen through the lens of racial stereotypes (cf. Duncan, 1976; Steele, 1997). However, other research suggests that witnessing ingroup members' *stereotypically-negative* behavior might be relatively more harmful. For example, research has shown that recalling, imagining, or overhearing an ingroup member behave in a stereotypically-negative manner, in particular, can undermine academic performance and self-esteem, and increase evaluative concerns and self-conscious emotions (Cohen & Garcia, 2005; Schmader & Lickel, 2006a; Vorauer, 2003). Furthermore, when people feel that they will be viewed stereotypically, concerns about how they will be treated based upon their social identity (i.e., racial group membership) likewise increase (Wout et al., 2010). While these two possibilities are plausible, they have yet to be explored in intergroup contexts. However, we expect stereotypically-negative ingroup behavior to more strongly increase evaluative concerns and anxiety, relative to non-stereotypically-negative behavior, and thus heighten negative outcomes in interracial interactions.

Study 3 has two key hypotheses. We expected that participants' anxiety, meta-stereotypes, and motivational outcomes would increase following stereotypically-negative, compared to neutral (replicating Studies 1 and 2) *and* non-stereotypically-negative ingroup behavior in interracial interactions. Additionally, to further test the breadth of this phenomenon across different racial stereotypes, the stereotypical ingroup member's behavior in Study 3 was changed to reference a different constellation of Black stereotypes—loud and angry. Though we expected outcomes to be similar across gender, being “loud and angry” is a particularly prevalent stereotype of Black women (Lewis & Neville, 2015).

## **Methods**

### **Design and Participants**

The study used a 3 (behavior-type: stereotypically-negative, non-stereotypically-neutral, non-stereotypically-negative)  $\times$  2 (partner-race: White, Black)  $\times$  2 (participant gender: female, male) between-subjects factorial design. Following Study 2, we aimed for a minimum of 250 participants for at least 80% power, again oversampling for possible attrition. Black participants participated through Amazon's Mechanical Turk ( $N = 419$ ), and were compensated at the standard rate. Seventy participants failed the memory manipulation checks and were thus excluded from analyses, leaving 349 participants (249 females;  $M_{age} = 35.52$ ,  $SD = 11.50$ ).

### **Procedure and Measures**

Similar to Study 2, participants imagined themselves as the main character in a scenario (Amanda/Anthony), training for a part time job with other employees. (All characters were gender-matched to participants.) During a break, Amanda/Anthony walk with a previously unacquainted White or Black coworker (partner-race condition) to the lounge to get food. Upon returning to the training room, the pair witnesses another new Black female/male employee behaving in one of three ways: cursing angrily on the phone (stereotypically-negative), accidentally dropping coins (neutral), or absentmindedly knocking over materials while texting (non-stereotypically-negative). Participants then learn that they will spend the remainder of the training session working as partners with the coworker who witnessed their ingroup member's behavior. See Supplement for vignettes and pilot results for behavior selection.<sup>5</sup>

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<sup>5</sup> We used results from the same pilot test reported in Study 2 ( $N = 22$ ) to select behaviors for Study 3. Loud/angry (stereotypically-negative) was rated as negative and stereotypical, while negligent behavior (non-stereotypically-negative) was rated as equally negative but significantly less stereotypical than loud/angry. Both were also rated significantly more negative than dropping coins (neutral). Loud/angry was rated as significantly more stereotypical than dropping coins, but negligence and dropping coins were rated as equally low in stereotypicality. Finally, loud/angry and negligent behavior were rated as equally extreme, and both were significantly more extreme than either negative behavior. Controlling for extremity did not alter the reported findings. See Supplement for corresponding statistics.

Next, participants recounted details of the scenario and completed the dependent measures, which were nearly identical to Study 2. See Supplement for details regarding the measures. Finally, participants completed manipulation checks, and were debriefed and compensated.

## Results

Similar to Study 2, following the predicted behavior-type  $\times$  partner-race (two-way) interaction, we focused on three contrasts to examine a priori hypotheses. The contrasts included ingroup members' stereotypically-negative behavior in an interracial interaction compared to: (C1) stereotypically-negative behavior in an *intraracial interaction*, (C2) *neutral behavior* in an interracial interaction, and (C3) *non-stereotypically-negative behavior* in an interracial interaction.<sup>6</sup> Again, anxiety and meta-stereotypes were expected to mediate the relationship between behavior-type and motivational outcomes more strongly in interracial, than intraracial, interactions. Finally, as with Study 2, we explored whether gender would moderate results in the context of the “loud and angry” Black stereotype.

### Anxiety

There was a main effect of behavior-type on anxiety,  $F(2, 337) = 20.43, p < .001, \eta^2_p = .11$ . Tukey's post-hoc analyses revealed that anxiety was significantly higher in the stereotypically-negative condition ( $M = 3.36, SD = 1.28$ ) compared to the neutral condition ( $M = 2.20, SD = 1.15$ ),  $p < .001$ , and the non-stereotypically-negative condition ( $M = 2.84, SD = 1.15$ ),  $p = .004$ . Though these findings followed the expected pattern of results, the remaining main effects, expected behavior-type  $\times$  partner-race, and remaining two- and three-way interactions were non-significant.

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<sup>6</sup> We report the results of a fourth contrast between non-stereotypically-negative vs. neutral conditions in interracial interactions in the Supplement.

### Meta-stereotypes

For meta-stereotypes, the main effects of behavior-type,  $F(2, 337) = 9.86, p < .001, \eta^2_p = .06$ , and partner-race,  $F(1, 337) = 20.30, p < .001, \eta^2_p = .06$ , were qualified by a significant behavior-type  $\times$  partner-race interaction,  $F(2, 337) = 3.55, p = .030, \eta^2_p = .02$ . The final main effect, and two-way and three-way interactions were non-significant. Following the significant behavior-type  $\times$  partner-race interaction, participants in the (C1) stereotypically-negative condition thought they would be seen more stereotypically in the interracial ( $M = 0.60, SD = 0.87$ ) than intraracial interaction ( $M = -0.12, SD = 0.70$ ),  $F(1, 343) = 28.24, p < .001, d = .93$ . Furthermore, participants reported greater meta-stereotypes in an interracial interaction following an ingroup member's stereotypically-negative than (C2) neutral behavior ( $M = -.22, SD = 0.79$ ),  $F(1, 343) = 40.32, p < .001, d = 1.01$ , and (C3) non-stereotypically-negative behavior ( $M = .08, SD = 0.72$ ),  $F(1, 343) = 13.22, p < .001, d = .65$ .

### Motivation to disprove stereotypes

For motivation to disprove stereotypes, a main effect of behavior-type,  $F(2, 337) = 8.57, p < .001, \eta^2_p = .05$ , was qualified by a significant behavior-type  $\times$  partner-race  $\times$  gender 3-way interaction,  $F(2, 337) = 3.57, p = .029, \eta^2_p = .02$ . Simple two-way interactions were estimated for each gender to more directly explore the hypothesized effects. The two-way interaction was non-significant for men,  $F < 1$ .

Among women, analyses revealed main effects of behavior-type,  $F(2, 243) = 10.80, p < .001, \eta^2_p = .08$ , and partner race,  $F(1, 243) = 4.10, p = .044, \eta^2_p = .02$ , qualified by the hypothesized behavior-type  $\times$  partner-race interaction,  $F(2, 243) = 4.16, p = .017, \eta^2_p = .03$ . Women expressed greater motivation to disprove stereotypes (C1) following an ingroup member's stereotypically-negative behavior in an interracial versus intraracial interaction,  $F(1,$

243) = 10.37,  $p = .001$ ,  $\eta^2_p = .04$ ,  $d = .73$ . Additionally, during an interracial interaction, motivation was greater following an ingroup member's stereotypically-negative than (C2) neutral behavior,  $F(1, 243) = 23.42$ ,  $p < .001$ ,  $\eta^2_p = .09$ ,  $d = 1.03$ , but not (C3) non-stereotypically-negative behavior,  $F < 1$ . See Table IV for means and standard deviations by condition.

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[Table IV]

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**Moderated mediation analyses.** We again tested whether anxiety and meta-stereotypes mediated the relationship between behavior-type and motivation to disprove stereotypes in interracial versus intraracial interactions, using Model 7 of PROCESS in SPSS with 10,000 bias-corrected bootstrap resamples (Hayes, 2013). Since gender moderated only one dependent measure, (and the results were in a similar direction, though non-significant, for men for motivation), analyses collapsed across gender. Two analyses focused on interracial vs. intraracial interactions when an ingroup member exhibited stereotypically-negative behavior (0) compared to (C2) neutral behavior (1), and also (C3) non-stereotypically-negative behavior (1). Across analyses, holding behavior-type constant, greater anxiety and meta-stereotypes were related to increased motivation to disprove stereotypes. See Table V for unstandardized OLS regression coefficients with confidence intervals.

***Stereotypically-negative vs. neutral ingroup behavior (C2).*** Providing evidence of mediation across contexts, the conditional indirect effects of behavior-type on motivation through anxiety were significant across interaction contexts (interracial: *indirect* = -0.43,  $SE = 0.13$ ,  $CI = [-0.74, -0.21]$ ; intraracial: *indirect* = -0.51,  $SE = 0.13$ ,  $CI = [-0.81, -0.29]$ ). Similarly,



the conditional indirect effects also provided evidence of mediation across contexts for meta-stereotypes (interracial: *indirect* = -0.23, *SE* = 0.10, *CI* = [-0.46, -0.05]; intraracial: *indirect* = -0.07, *SE* = 0.05, *CI* = [-0.19, -0.004]). Providing evidence of moderated mediation, the indirect effect of meta-stereotypes (and not anxiety) was significantly larger in magnitude in interracial (vs. intraracial) interactions ( $\Delta$ *indirect* = 0.16, *SE* = 0.09, *CI* = [0.03, 0.39]).

***Stereotypically-negative vs. non-stereotypically-negative ingroup behavior (C3).*** The conditional indirect effects of behavior-type on motivation were significant in interracial interactions only for anxiety (*indirect* = -0.28, *SE* = 0.12, *CI* = [-0.56, -0.09]) and meta-stereotypes (*indirect* = -0.13, *SE* = 0.08, *CI* = [-0.34, -0.02]). However, providing evidence of moderated mediation, the indirect effect of meta-stereotypes (and not anxiety) was significantly larger in interracial (vs. intraracial) interactions ( $\Delta$ *indirect* = 0.11, *SE* = 0.08, *CI* = [0.005, 0.33]).

### **Future interactions**

The main effects, two-way, and three-way interactions for participants' comfort in future interactions with their coworker were non-significant,  $F_s < 2.15$ ,  $p_s > .14$ .

**Moderated mediation analyses.** As with Study 2, moderated mediation was tested though there was no behavior-type  $\times$  partner-race interaction for future interactions (see Rucker et al., 2011). See Table V for unstandardized OLS regression coefficients with confidence intervals.

***Stereotypically-negative vs. neutral ingroup behavior (C2).*** Firstly, providing evidence of mediation, the conditional indirect effect of behavior-type on future interactions was significant across interaction contexts for anxiety (interracial: *indirect* = 0.15, *SE* = 0.07, *CI* = [0.03, 0.32]; intraracial: *indirect* = 0.18, *SE* = 0.10, *CI* = [0.02, 0.41]) and meta-stereotypes (interracial: *indirect* = 0.32, *SE* = 0.10, *CI* = [0.15, 0.55]; intraracial: *indirect* = 0.10, *SE* = 0.07,

$CI = [0.005, 0.25]$ ). However, suggesting moderated mediation, the indirect effect of meta-stereotypes (and not anxiety) was significantly larger in magnitude in interracial (vs. intraracial) interactions ( $\Delta_{indirect} = -0.23, SE = 0.09, CI = [-0.45, -0.09]$ ).

***Stereotypically-negative vs. non-stereotypically-negative ingroup behavior (C3).*** The conditional indirect effect of behavior-type on future interactions was significant for meta-stereotypes (but not anxiety) in interracial interactions only ( $indirect = 0.19, SE = 0.08, CI = [0.07, 0.38]$ ). Again providing evidence of moderated mediation, the indirect effect of meta-stereotypes was significantly larger in interracial (vs. intraracial) interactions ( $\Delta_{indirect} = -0.16, SE = 0.08, CI = [-0.35, -0.03]$ ).

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[Table V]

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### **Discussion**

Study 3 was designed to replicate the phenomenon using another prevalent Black stereotype and test a second boundary condition of our effect—whether stereotypically-negative ingroup behavior causes more adverse consequences than non-stereotypically-negative ingroup behavior in interracial interactions. Firstly, replicating Studies 1 and 2, in interracial interactions, participants in the stereotypically-negative compared to neutral condition expressed greater meta-stereotypes and motivation to disprove negative stereotypes (though anxiety differed by behavior, and not racial context). Consistent with mediational processes in previous studies, heightened meta-stereotypes, in particular, lead to increased motivation to disprove negative group stereotypes, but decreased desire for future coworker contact in interracial interactions.

Next, extending this work to test the key hypothesis, meta-stereotypes were greater

following stereotypically-negative compared to non-stereotypically-negative ingroup behavior in interracial interactions. Again providing evidence of moderated mediation, increased meta-stereotypes were related to increased motivation to disprove stereotypes and decreased future coworker contact, and these relationships were significantly stronger in *interracial interactions*. These latter results provide initial support for the hypothesis that stereotypically-negative ingroup behavior is a somewhat stronger predictor of the downstream negative outcomes in interracial (vs. intraracial) interactions.

Diverging from Study 2, there was some evidence that gender moderated the findings. Among women, motivation to disprove stereotypes was greater following stereotypically-negative compared to neutral ingroup behavior in interracial interactions. Though the moderated mediational processes replicated for the entire sample (collapsing across gender) suggesting that this phenomenon is not predicated on gender, these results do suggest stronger effects among women. There are a few reasons why this might be the case. Firstly, the loud and angry stereotype used in the scenario is a stereotype more strongly associated with Black women than Black men (Lewis & Neville, 2015). Secondly, the smaller and non-significant effects for men might point to a lack of power among this subgroup in the sample. Despite these gender differences, Study 3's results corroborate and extend those of Studies 1 and 2. In addition, anxiety was not a significant mediator in Study 3—meta-stereotypes alone predicted motivational and interpersonal responses in interracial versus intraracial interactions. As the current work represents the first attempt to assess emotional and meta-perceptual responses to ingroup behavior simultaneously, we suspect that meta-stereotypes guide both emotional responses (e.g., anxiety) *and* behavior in such situations (cf. Taylor, Yantis, Hart, & Bonam, 2017; Vorauer, 2006; Wout et al., 2010). Thus, emotional responses, such as anxiety, may be

relatively less predictive of behavior, particularly when accounting for the role of meta-stereotypes. However, such speculation is tentative, as more research is needed. Finally, our results provide initial evidence that the negativity of an ingroup member's behavior in and of itself does not engender the most harmful outcomes—*stereotypically-negative* ingroup behavior is particularly likely to produce adverse consequences in interracial (v. intraracial) interactions.

### **General Discussion**

Examining the complex nature of interracial interactions that extend beyond dyadic encounters, the current research investigated people's multifaceted responses to racial ingroup members who behave stereotypically in interracial (vs. intraracial) interactions. Study 1 showed that during daily interactions with Whites that included stereotypical ingroup members, ethnic minorities expressed greater intergroup anxiety, concern that they would be judged stereotypically, and motivation to disprove negative stereotypes. Likewise, they anticipated less comfort in future interactions with the White witness. By comparison, such outcomes were experienced less when interactions with Whites and other racial group members did not include stereotypical ingroup members. Therefore, although engaging in interracial interactions where ingroup members behave stereotypically occurred less often than the other types of interpersonal interactions, they were nonetheless impactful (cf. Hoggard, Byrd, & Sellers, 2012).

We then used experimental methodology to establish important boundary conditions and further examine the mediational processes. We found that witnessing an ingroup member commit a stereotypically-negative act—as opposed to a neutral act (Studies 2 – 3), a stereotypically-positive act (Study 2), or a non-stereotypically-negative act (Study 3)—led to greater anxiety and meta-stereotypes, which in turn resulted in greater motivation to disprove group stereotypes during interracial (vs. intraracial) interactions. Across studies, participants

more strongly anticipated enacting both approach and avoidance behaviors following stereotypically-negative ingroup behaviors in interracial interactions. That is, increased meta-stereotypes (and to a lesser extent anxiety) lead to a greater motivation to compensate for or “fix” their groups’ image by engaging with outgroup witnesses to reduce the likelihood that they would be viewed similarly (approach), while conditional indirect effects showed that increased meta-stereotypes predicted less desire to engage in the interaction with the White witness (avoidance). Finally, intraracial interactions were less harmful: they decreased the sting of stereotype-confirming ingroup members on motivation to disprove stereotypes through reduced meta-stereotypes.

### **Responses to ingroup members’ stereotypical behavior beyond the dyad**

The current findings extend and bridge various lines of research, including work on individuals’ meta-stereotypes in interracial interactions (Vorauer, 2003; 2006) and group-based emotional responses associated with ingroup transgressors (Lickel, Steele, & Schmader, 2011). Our results provide initial evidence that both meta-stereotypes, and anxiety to a lesser degree, dictate approach and avoidance behaviors in interracial interactions that include stereotypical ingroup members. While such responses are seemingly paradoxical, they are consistent with previous research. For example, identity threat has been shown to increase motivation to disprove stereotypes and persistence in a stereotype-relevant task (e.g., among women in mathematical domains; Jones, 2009), but also reduce people’s desire to interact with outgroup members (Goff, Steele, & Davies, 2008; Wout et al., 2014) due to concerns about being viewed stereotypically (e.g., Wout et al., 2010).

Witnessing an ingroup members’ negative stereotype-confirming behavior during an interracial interaction also likely engenders vicarious group-based emotional responses

(Schmader & Lickel, 2006a). Research on group-based emotions suggests that particular emotions increase both approach and avoidance behaviors. For example, feeling guilty about the wrongdoing of others and the stereotypical behaviors of ingroup members is related to a desire to fix the situation (i.e., approach), while shame is most often related to distancing from ingroup transgressors (i.e., avoidance; Schmader & Lickel, 2006a; 2006b). In the current work, interracial contexts where outgroup members observe stereotype-confirming ingroup members increase a particular emotional response, anxiety, thereby heightening the stakes for racial minorities and increasing pressures to disprove negative stereotypes.

Strategically adopting approach and avoidance behaviors following ingroup members' negative stereotypical behaviors in interracial interactions may be rational and self-protective, despite their possible disruption to intergroup relations. While heightened evaluative concerns likely push racial minorities to "take control" of their group's image (i.e., increased motivation to disprove stereotypes), they are also prompted to protect themselves by distancing from Whites who might judge or misunderstand (i.e., less desire for interracial contact).

### **Limitations and Future Directions**

Our work represents the first steps toward understanding how people respond and engage in interracial interactions that include stereotypical ingroup members. Thus, we address limitations and suggest several avenues for future research. First, in Study 1, our measures referred to different aspects of the daily interactions, assessed as a first attempt to tap into affect, meta-stereotypes, and motivation across these different interaction types. We see this as both a strength and a limitation. We successfully assessed these responses from multiple vantage points despite the slightly different phrasings and, importantly, found consistent results in the controlled experimental studies that followed. Though we replicated these effects experimentally, it is

nonetheless important to corroborate findings using consistent measures in real-world contexts. Secondly, though the results suggest that the phenomenon is relatively stable across men and women, further research should probe how specific gendered racial stereotypes impact minorities' outcomes in interracial contexts. Lastly, though we had evidence of mediation for comfort in future interactions, we failed to replicate the hypothesized interaction following ingroup member's stereotypical behavior. We suspect that predicting one's own interpersonal comfort in hypothetical situations with stereotype-confirming ingroup members (Studies 2 and 3) was difficult because scenarios are less salient than real interpersonal interactions (Study 1). Nonetheless, we were encouraged that meta-stereotypes mediated the relationship between an ingroup members' behavior and anticipated comfort in future interactions (via conditional indirect effects). By comparison, predicting one's motivation to disprove negative stereotypes might be more easily assessed because it represents a practical, immediately-useable, and empowering coping strategy that can be employed to reduce the likelihood of being stereotyped following an ingroup member's stereotypically-negative behavior (Taylor et al., 2017; Trawalter et al., 2009).

Taken together, this work suggests a number of future directions. Namely, it will be important to extend our initial investigation of how responses to ingroup members' stereotypically-negative behavior are unique from non-stereotypically-negative behavior. Furthermore, it will be valuable to delineate whether stereotype-confirming ingroup members constitute only a form of "collective threat" (Cohen & Garcia, 2005), or if, under certain conditions, they might instead (or also) constitute a "self-threat" (Shapiro, 2012), that lead to unique responses in interracial interactions. Future work should also explore how this general phenomenon operates during intraminority interactions. That is, it would be interesting to assess

whether similar effects occur in the presence of other ethnic minority group members (for example, the outcomes following the stereotypical behavior of Blacks in the presence of Latinos), or if intraminority interactions are as protective as intraracial interactions. Finally, further research is needed to understand the factors that may *facilitate*, rather than undermine, the quality of interracial interactions, despite the presence of stereotypical ingroup members.

### **Conclusions**

When racial group members behave stereotypically, people take notice. Such stereotypical behaviors sometimes happen in isolation, but often they occur in the presence of individuals from another racial group. Bridging and extending research on processes in interracial interactions, and stereotype and collective threat, we suggest that witnessing ingroup members' stereotype-confirming behaviors in interracial interactions has emotional, meta-perceptual, and motivational consequences. Thus, the current research provides initial insights regarding the nuanced experiences of people during interracial interactions and highlights how the behavior of racial ingroup members, rather than one's own behavior, can create a "threat on the ground" that people must manage.



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