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They Have a Point: Testing Strategies to Improve Receptivity to Interracial Criticism and Promote Behavioral Change

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Supplementary Materials: Data, Materials, Preregistration [see Index of Supplementary Materials]

Abstract

People tend to be more resistant to criticism of their own group when it is given by outgroup members as opposed to ingroup members because they view the criticism as less constructive and legitimate when delivered by an outsider—a phenomenon known as the intergroup sensitivity effect, or ISE. The present study (N = 827) examines the effectiveness of two rhetorical techniques —balanced criticism (delivering criticism of one's own group in addition to the target group) and buttering up (delivering praise alongside criticism) in reducing the ISE among European Americans, African Americans, and Latino Americans. The impact of criticism on intentions to engage in corrective behavior was also explored. Participants read a fictitious interview excerpt containing criticism of their racial group delivered by a racial ingroup or outgroup member and then rated the critic and their statement on several dimensions. We found buttering up reduces the ISE among European Americans and Latino Americans, but not African Americans, while critiquing one's own racial group alongside the target group is ineffective in reducing the ISE for the three examined groups. Additionally, we found African Americans were more willing to engage in corrective behavior to address criticism directed toward their racial group than their European American or Latino American counterparts. However, contrary to previous research, the group

membership of the critic did not affect participants' willingness to engage in corrective action. These findings contribute to our understanding of interracial dynamics in the United States and illuminate how to facilitate interracial criticism.

Keywords

Highlights

- The intergroup sensitivity effect (ISE) explains why people respond more negatively to outgroup criticism compared to ingroup criticism.
- The ISE can typically be mitigated through "balanced" criticism that addresses the speaker's group, too, and intergroup criticism may help promote behavioral change.
- We find the interracial ISE works differently: "balanced" criticism is ineffective, but "buttering up" the audience with praise works among European, African, and Latinx Americans.
- Additionally, following any criticism, we find African Americans are most likely to demonstrate intentions to change their behaviors.

Constructive criticism grants its recipients an outside perspective and provides an opportunity to improve, but it is often poorly received for a variety of reasons. In the case of inter- and intragroup criticism, this may be caused in part by perceptions of the critic, depending on the critic's group membership. Recipients of criticism are more likely to respond favorably when it is delivered by an ingroup member than an outgroup member (Hornsey et al., 2002). Hornsey and colleagues coined this phenomenon the *intergroup sensitivity effect* (ISE). There are a variety of contexts in which it may be necessary for an individual to criticize a group of which they are not a member, and in which a group may greatly benefit from feedback from an outsider. Regardless, outgroup criticism is less well received because it is perceived as less constructive and less legitimate than criticism delivered by an ingroup member (Hornsey et al., 2004). Previous ISE research has demonstrated that the ISE is robust, emerging in contexts such as different nationalities (Hornsey et al., 2002), religions (Ariyanto et al., 2006), and subcultures in an organizational context (Liang et al., 2021). Most recently, the ISE was replicated among members of different racial groups, and a unique finding was uncovered—European Americans responded more positively to praise delivered by a racial outgroup member than a racial ingroup member (White et al., 2023). Given the current racial tension in the United States, it is important to understand not only why it can be difficult to communicate constructive criticism between racial groups, but also how to effectively promote change and mitigate the ISE.

Reducing the Intergroup Sensitivity Effect

Two separate theories posit why the ISE occurs. First, the ISE may be driven by people's desire to adhere to social conventions and general norms (Sutton et al., 2006). Sutton and colleagues tested this theory by asking British participants to read criticism delivered to Australians by other Australians (ingroup members) or non-Australians (outgroup members). British participants thus served as bystanders to hearing criticism delivered by ingroup and outgroup members. Results replicated and extended classic ISE findings; participants favored the critic and the comment when it was delivered by ingroup members (i.e., Australians) because it was seen as more normative for criticism to be delivered by fellow ingroup members. Behavioral ISE work shows a similar pattern. For example, Thürmer et al. (2022) found that even in a sample of people who did not highly identify as being a meat eater, criticism from fellow meat eaters about reducing meat consumption led to increased interest in seeking information about sustainable behaviors compared to criticism from a vegan. However, this work focuses on perceptions of criticism from a bystander perspective or weakly identified social groups with concrete criticisms (e.g., eating less meat). On the other hand, Thürmer and McCrea (2021) note that general norms appear to affect ingroup members across the spectrum of different levels of identification with their group.

With regards to race, it is common to hear abstract criticism about one's group from both ingroup and outgroup members in the U.S. In 2019, the PEW Research Center (Horowitz et al., 2019) reported that 65% of Americans believe expressing racist views has become more commonplace. Additionally, Black and White Americans respond differently to perceptions on how discrimination impacts Black lives where 45% of White people (compared to 31% of Black people) attribute lack of good role models as an obstacle for Black people. Thus, group identity appears to be an important consideration with the ISE.

The ISE may also be driven by perceived threat to one's group identity. Criticism is better received from ingroup members because their intentions are viewed as more constructive than outgroup member intentions (Hornsey et al., 2004, 2008). On the other hand, criticism from outgroup members threatens a positive group identity. Thürmer and McCrea (2018) and Thürmer et al. (2019, 2022) show that participants choose to punish outgroup critics, even when it may be costly to punish them. For example, Thürmer et al. (2019) showed that rather than spend time finishing their work, ingroup members prioritized counter-arguing with outgroup critics. Thus, efforts to reduce the ISE should attempt to mitigate the negative perceptions of outgroup members.

Hornsey et al. (2008) proposed and tested three techniques for reducing the ISE. For the first technique, referred to as "sweetening" or "buttering up," the speaker delivers praise before delivering criticism. Hornsey and colleagues found that "buttering up" was helpful in reducing *defensiveness* toward both ingroup and outgroup critics, but it did not reduce the ISE because ingroup critics still aroused less defensiveness than outgroup

critics. Although this technique does not reduce the ISE, it does improve reception of criticism delivered by both ingroup and outgroup critics, so it can be considered an effective strategy independent of group membership and warrants further examination. For the second technique, the "balanced" technique, the speaker criticizes their own group alongside the target group. The "balanced" technique was also successful in reducing defensiveness toward outgroup critics. The final technique, "spotlighting," involves contextualizing the criticism by stating that it only applies to part of the target group, rather than generalizing to the entire group. Spotlighting did not affect how the critic, or their message, was received, regardless of group status. Thus, buttering up and balanced criticism, but not spotlighting, may be effective in reducing defensiveness toward an outgroup critic. However, Hornsey et al. (2008) only examined the effect of these techniques on the ISE in the context of nationality. One purpose of the present study is to evaluate whether these techniques are equally effective in reducing the ISE among racial/ethnic groups. Another purpose is to examine whether these same techniques differently affect intentions to engage in corrective behaviors in response to criticism.

Promoting Behavioral Change Intentions

Constructive criticism is important because it motivates change, but behavior change and intentions to change behavior have been less studied in ISE research to date. Outsiders seem to be especially good at challenging people to improve. Rabinovich et al. (2012) show that when outgroup members explain positive ingroup behaviors with external attributions (e.g., students are incentivized to recycle), this threatens the ingroup's image and motivates members to perform better on praise-related tasks. Although Rabinovich et al. (2012) frame this feedback as praise, it can be construed as criticism because ingroup members perceive this message as threatening. In another study, Rabinovich and Morton (2015) found that outgroup critics were more effective than ingroup critics in changing participants' intentions to engage in pro-environmental actions, especially when they attributed the target group's failings to internal qualities (i.e., norms and values). This attribution triggers group image concerns among people who identify with the criticized group, mediating the effect of the criticism's content on group members' intentions to engage in corrective behaviors (for a review, see Rabinovich & Morton, 2010, 2015). While it is certainly true that intentions do not always correspond with actual behavior (see Sheeran & Webb, 2016), these results suggest that although outgroup critics may be poorly received in terms of attitudinal responses, they may be *more* effective than ingroup members in encouraging people to change their behavior. We aim to replicate these findings among racial/ethnic groups and explore whether criticism delivery techniques affect these results.

The Intergroup Sensitivity Effect Among Racial Groups

The present study aims to marry three diverging lines of ISE research: Hornsey et al.'s (2008) examination of techniques to reduce the ISE, Rabinovich and Morton's (2015) research about motivations to engage in corrective behaviors, and our own prior investigation of the ISE among racial groups in the U.S. White et al. (2023) had participants read an interview script where either a racial ingroup or outgroup speaker criticized or praised the participant's racial ingroup. Participants then rated the speaker's comment on positivity, legitimacy, and constructiveness. We found that European Americans responded more positively to praise from a racial outgroup member, but the effect was not observed among African American or Latino American participants (White et al., 2023). This response discrepancy may be because majority and minority members view intergroup contact through different lenses where White people may fear being perceived as prejudiced toward minority members so in an attempt to hide their attitudes, they adjust their behavior to align with social norms in ambiguous situations (for a review, see Dovidio & Gaertner, 2000; Dovidio et al., 2016; Nail et al., 2003). However, White et al. (2023) only found evidence that motivation to respond without prejudice moderated White participants' responses to praise, but not to criticism, from minority members. For the present study, we extended White et al.'s (2023) work by assessing the effectiveness of "buttering up" and "balanced" criticism (Hornsey et al., 2008) in reducing the ISE among three racial/ethnic groups: African Americans, European Americans, and Latino Americans. We also extended White et al.'s (2023) work by measuring attitudinal responses and behavioral intentions of participants after they received criticism aimed at their racial group from either a member of their own race delivering regular criticism (Ingroup), a member of a different race delivering regular criticism (Outgroup-Control), a member of a different race using the "balanced" technique (Outgroup-Balanced), or a member of a different race using the "buttering up" technique (Outgroup-Buttered).

We reasoned that because European Americans responded favorably to outgroup praise, the buttering up technique would effectively reduce the ISE among them, but it would be less effective among African American and Latino American participants. For the present study, we formulated two primary hypotheses related to participants' attitudinal responses, including detailed predictions about how participants of different racial backgrounds would respond to different types of criticism.

Attitudinal Response Hypotheses:

1. We will find a significant effect of speaker condition (Ingroup, Outgroup-Control, Outgroup-Balanced, or Outgroup-Buttered) on attitudinal responses.
   a. Participants from all racial/ethnic groups will respond more negatively to criticism delivered by a racial outgroup speaker than a racial ingroup speaker (original ISE; Ingroup vs. Outgroup-Control).

b. Participants will respond more positively to balanced criticism delivered by a racial outgroup speaker than (regular) criticism delivered by a racial outgroup speaker, effectively eliminating the ISE (Outgroup-Control vs. Outgroup-Balanced).

c. Based on how European Americans responded to praise in our previous work (more positive reactions to praise from an outgroup member), European American participants will respond more positively to criticism prefaced by praise delivered by a racial outgroup speaker than (regular) criticism delivered by a racial outgroup speaker (i.e., diminished or n.s. ISE, demonstrating that the buttered technique will be effective in reducing the ISE among European American participants).

d. African American and Latino American participants will respond similarly to criticism prefaced by praise delivered by a racial outgroup speaker as (regular) criticism delivered by a racial outgroup speaker (i.e., demonstrating that the buttered technique will not be effective in reducing the ISE among African American and Latino American participants).

2. The effect of speaker condition on attitudinal responses will be significantly mediated by the perceived legitimacy and constructiveness of the speaker's comments. Specifically, when comparing Ingroup and Outgroup-Control conditions for all participants, we predicted that criticism delivered by an Outgroup-Control speaker would be perceived as less legitimate and less constructive than criticism delivered by an Ingroup speaker, and lower legitimacy and constructiveness perceptions would predict more negative attitudinal responses. We did not expect the buttered technique to reduce the ISE among African American and Latino American participants. When comparing Ingroup and Outgroup-Buttered conditions for African American and Latino participants, we predicted that criticism delivered by an Outgroup-Buttered speaker would be perceived as less legitimate and less constructive than the criticism delivered by an ingroup speaker, and lower legitimacy and constructiveness perceptions would predict more negative attitudinal responses.

Previous research indicates that outgroup criticism appears to have more impact on intention to change behavior than ingroup criticism because it triggers group image concerns among people who identify with the criticized group (Rabinovich & Morton, 2015). Overall, we expected our results to mirror these previous findings. We formulated four hypotheses related to participants' behavioral intentions. We did not make any specific predictions for behavioral intentions when comparing Ingroup, Outgroup-Balanced, and Outgroup-Buttered conditions, thus, our analyses from these comparisons were exploratory.

Behavioral Intention Response Hypotheses:

1. We will find a significant effect of speaker condition on behavioral intentions, such that when comparing Ingroup and Outgroup-Control conditions, participants from all racial groups will indicate greater willingness to engage in corrective behaviors following criticism delivered by a racial outgroup speaker than a racial ingroup speaker.
2. The effect of speaker condition (Ingroup vs. Outgroup-Control) on behavioral intentions will be significantly mediated by group image concerns, such that reading criticism from an outgroup-control speaker (versus an ingroup speaker) will increase group image concerns, which will then predict greater willingness to engage in corrective behaviors.
3. The effect of speaker condition (Ingroup vs. Outgroup-Control) will be moderated by participants' level of ingroup identification, such that high identifiers will indicate greater willingness to engage in corrective behaviors following criticism delivered by a racial outgroup speaker than a racial ingroup speaker, but the effect of speaker condition on behavioral intentions will be greatly diminished or non-significant for low identifiers.
4. The moderation effect of participants' level of ingroup identification will be mediated by group image concerns. Specifically, high identifiers who read criticism from an Outgroup-Control speaker (versus an Ingroup speaker) will increase group image concerns, and greater group image concerns will in turn predict greater willingness to engage in corrective behaviors. Low identifiers who read criticism from an Outgroup-Control speaker (versus an Ingroup speaker) will show no change in group image concerns, resulting in little to no difference in willingness to engage in corrective behaviors.

Method

The study was preregistered on Open Science Framework (see White, 2018) and received full ethical approval from the primary author's Institutional Review Board.

Participants

A total of 1290 participants took part in this study. Participants included undergraduate students enrolled in psychology courses at two universities in Georgia and one in far west Texas. Participants signed up for the study via SONA and were provided with a link to the survey on Qualtrics. Participants were compensated with partial course credit.

Our planned analyses include bootstrap mediation and mediated moderation analyses. For the mediation analyses, we obtained effect sizes from two previous studies in which we conducted the same analyses. Effect sizes for the α pathway in these analyses

ranged from 0.57 to 1.03 and effect sizes for the β pathway ranged from 0.58 to 0.76. Fritz and MacKinnon (2007) designate regression coefficients of 0.59 or greater as a large effect size, and the majority of the coefficients for both pathways surpassed this threshold. Fritz and MacKinnon recommend a sample of 53 when one pathway is medium and the other is large, but out of an abundance of caution we opted to collect data from 70 participants per condition. We had not previously conducted the moderated mediation analyses planned for this study, so we examined the regression coefficients from similar research conducted by Rabinovich and Morton (2010, Study 3). This yielded effect sizes of 0.55 and 0.51. According to Morgan-Lopez and MacKinnon (2006), the estimated sample size for a mediated moderation analysis with these pathway coefficients is 100. In our planned analyses, the IV would have two conditions, thus the estimated sample size for our analyses would be 50 per condition. We therefore went with the higher estimate of 70 per condition.

The specific data exclusion criteria for this study included participants under the age of 18 ($n = 6$), participants who failed the manipulation check ($n = 64$), participants who failed the suspicion probe ($n = 33$), participants who failed the attention checks ($n = 35$), participants for whom 30–40% of the data were missing ($n = 67$), participants who completed the survey more than once, keeping the first completion only ($n = 23$), participants who completed the survey in less than five[1] minutes ($n = 137$), participants with clearly repetitive responses ($n = 14$), and participants with a social desirability score of 2.5 standard deviations above the mean or higher ($n = 113$). This left 875 participants. Participants ranged in age from 18 to 63 years, with a mean age of 20.56 years. Regarding gender, 630 participants (71.9%) identified as female, 233 (26.6%) identified as male, 5 (0.6%) self-reported gender identity as "other (please specify)," and 3 participants (0.3%) identified as transgender. Four hundred and one participants (45.8%) reported European American ethnicity, 250 (28.5%) identified as Latino American, 176 (20.1%) identified as African American, and 48 (5.4%) identified as either Asian American, Native Hawaiian, American Indian, or another ethnicity. Analyses were run only on participants that identified as European American, Latino American, or African American, thus the final sample consisted of 827 participants. Table 1 displays the number of these participants in each of the study's conditions.

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1) On the preregistration form, this criterion was ten minutes but was later revised to five minutes to prevent significant data loss.

Table 1

Number of Participants in Each Condition

African American		European American		Latino American	
Condition	**_n_**	**Condition**	**_n_**	**Condition**	**_n_**
Ingroup	57	Ingroup	174	Ingroup	60
Outgroup – Control	40	Outgroup – Control	77	Outgroup – Control	62
Outgroup – Balanced	35	Outgroup – Balanced	73	Outgroup – Balanced	62
Outgroup - Buttered	44	Outgroup - Buttered	77	Outgroup - Buttered	66

Materials

Interview Scripts

Responses to the race/ethnicity portion of the demographics survey (presented immediately after the informed consent) funneled participants to materials corresponding to their self-identified racial/ethnic group: African American (AA), European American (EA), or Latino American (LA). Those who did not identify as AA, EA, or LA were randomly assigned to materials from one of the former racial groups. The study was presented to participants as an excerpt from an interview about race relations that was completed in the lab the year prior. However, the interview was a script adapted from Hornsey et al. (2008). A picture, name, and age assigned to the interviewee were presented first, followed by a paragraph of biographical information (held constant across conditions). Critical commentary directed at the participant's self-identified racial group concluded the script (see Supplementary Materials file: 'Supplemental Materials_Scripts.docx').

Speaker Manipulation

The racial group membership of the speaker (i.e., the interviewee) was manipulated in three ways. The interview excerpts were accompanied by a picture of the interviewee (three different male faces for each racial group, pretested to be equivalent in terms of age, attractiveness, and personality assessments) and name (Marquis, Micah, or Malik for AA images; Logan, Dustin, or Garrett for EA images; Carlos, Diego, or Javier for LA images). These names were pilot tested and matched for racial group association, valence (positivity-negativity), and familiarity. The interviewee age (27) did not vary by speaker type. Additionally, inclusive pronouns (e.g., us, we) were used in the Ingroup scripts and exclusive pronouns (e.g., them, they) were used in the Outgroup scripts.

Criticism Manipulation

Each participant was exposed to criticism against their own racial ingroup. The speaker who delivered the criticism belonged to either the participant's racial ingroup or a racial outgroup. There were four speaker conditions to which participants could be randomly

assigned: Ingroup condition (ingroup speaker criticizes the participant's racial group), Outgroup-Control condition (outgroup speaker criticizes the participant's racial group), Outgroup-Balanced condition (outgroup speaker criticizes their own racial group as well as the participant's racial group), and Outgroup-Buttered condition (outgroup speaker praises the participant's racial group before criticizing the participant's racial group). For each outgroup condition, participants were randomly assigned to one of two possible outgroup options. For example, African American participants assigned to an outgroup condition would encounter a speaker that was either European American or Latino American.

Criticism

The interview excerpt contained responses to two questions: tell us a little about yourself (response the same for all conditions) and what do you think of AA/EA/LA people? The latter question contained criticism directed toward the participant's racial/ethnic group. Each critical response contained three criticisms, thus there were three criticisms of AAs (e.g., they spank their children more than others), three criticisms of EAs (e.g., they have a serious problem with drug abuse), and three criticisms of LAs (e.g., they tend to have high levels of criminal activity). These criticisms were previously pilot tested for positivity/negativity and perceived legitimacy (White et al., 2023). For the Ingroup and Outgroup-Control conditions, the criticisms were delivered alone. For the Outgroup-Buttered condition, three positive comments were included before criticisms were delivered (selected from previous pilot testing). For the Outgroup-Balanced condition, three criticisms of the speaker's own racial group were included after criticisms were delivered.

Manipulation Check

The manipulation check was a five-question quiz over the content of the interview excerpt, including questions about the interviewee's biographical information, race, and the criticisms they directed against the participant's racial/ethnic ingroup. Two of these questions were considered "critical"—the race of the interviewee and the specific criticisms the interviewee stated—while the other questions were considered "noncritical." A participant could pass the manipulation check in one of two ways—1) correctly identify the interviewee's race, correctly identify both criticisms, and correctly answer at least one of the noncritical questions, or 2) correctly identify the interviewee's race, correctly identify at least one of the criticisms, and correctly answer all three of the noncritical questions.

Comment and Speaker Ratings

Participants rated the comments directed against their racial ingroup on positivity, fairness, legitimacy, constructiveness, agreement, and negativity, as well as the interviewee

on personality. All items used a Likert-type response scale with options ranging from 1 (not at all) to 7 (very much). The presentation order of these scales was randomized for each participant.

Positivity and fairness were both assessed with a single item that asked participants to rate the extent to which they find the interviewee's comments positive and fair, respectively (e.g., *Overall, to what extent do you think the speaker's comments regarding race were positive/fair?*). Legitimacy was assessed with three items (e.g., *The speaker's comments regarding race were well-informed*). Perceived comment constructiveness was assessed with three items (e.g., *To what extent do you think the speaker's answers regarding race were intended to be constructive?*). Agreement was assessed with three items and asked participants to rate the extent of agreement with the comments, belief in the validity of the comments, and belief in the truth of the comments (e.g., *To what extent do you agree with the speaker's comments regarding race?*). Perceived comment negativity was assessed with eight items including the extent to which the comments were arrogant, hypocritical, threatening, disappointing, irritating, offensive, insulting, and judgmental. Participants rated the personality of the interviewee for eight traits (intelligence, trustworthiness, friendliness, open-mindedness, likeability, respectability, interestingness, niceness). No baseline personality ratings were collected, although personality data were collected in pilot testing for the pictures and ratings did not differ across picture racial groups.

Group Image Scale

Participants completed a Group Image Concerns Scale, adapted from Rabinovich and Morton (2010), indicating the extent to which their racial group needed to be perceived as good and respected. Participants answered four items (e.g., *It is important that [group] maintain a positive group image in America*) measured on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Items were tailored to reflect the dominant racial identification of the participants. Higher scores on this scale indicated greater group image concerns.

Behavioral Intentions Scale

Participants completed a four-item scale examining their willingness to engage in corrective behaviors. This scale was different based on the participant's own racial/ethnic ingroup and contained behaviors that complemented the criticisms from the excerpt. For example, a criticism of European Americans was that drug abuse is a serious problem in their community, so the corresponding corrective behavior was volunteering with a prescription drug abuse prevention organization. The items were measured on a 5-point Likert-type scale ranging from 1 (not at all) to 5 (very). Higher scores on this scale indicated a greater willingness to engage in corrective behaviors.

Race/Ethnicity Identification Scale

Using a three-item scale from Hornsey et al. (2005), participants indicated the extent to which they identified with their racial/ethnic group. Responses to items (e.g., *I personally identify with my racial group*) were made on a scale from 1 (not at all) to 7 (very much). Higher scores on this scale indicated greater racial/ethnic group identification.

Social Desirability Scale

Using the Marlowe-Crowne Social Desirability scale (Crowne & Marlowe, 1960), participants answered 12 items (e.g., *I'm always willing to admit it when I make a mistake*). Each item was on an Agree/Disagree response scale. Higher scores on this scale indicated a greater tendency towards social desirability.

Procedure

After giving consent and completing a brief demographic questionnaire in which they reported their gender identity, age, and dominant racial identity, participants were randomly assigned to one of four interview speaker conditions and instructed to read the script. They then completed the manipulation check quiz and provided their comment/speaker ratings (randomized for each participant). Next, they completed the adapted Group Image Concerns Scale, Behavioral Intentions Scale, Racial Identity Scale, and Social Desirability Scale. After completing the suspicion check, participants were directed to a debriefing page.

Results

To simplify analyses, we conducted an exploratory factor analysis on all comment and speaker rating items (positivity, fairness, legitimacy, constructiveness, agreement, negativity, personality)[2]. The eigenvalues and scree plot suggested a three-factor solution: the personality items and positivity item as well as one legitimacy item and one constructiveness item loaded onto factor 1 (eigenvalue = 13.57, variance = 50.25%); the negativity items loaded onto factor 2 (eigenvalue = 2.61, variance = 9.66); and all other items

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2) The use of an EFA to reduce the number of dependent variables in the present study was not specified in the preregistration, although all other analyses were followed as specified in the preregistration. This approach was adopted based on an anonymous reviewer's feedback on a separate paper (White et al., 2023), which was delivered after we had submitted the preregistration for the current study. In the multiple studies reported in this paper, three factors consistently emerged—positive perceptions of comments (positivity, fairness, legitimacy, constructiveness, agreement), negative perceptions of comments (negativity), and personality perceptions of the speaker (personality). These factors were largely replicated in the present study. In addition to simplifying analyses and interpretations, this approach has the added benefit of reducing family-wise error. For these reasons, and consistency with our past work, we opted to use the same approach in the current study.

loaded onto factor 3 (eigenvalue = 1.74, variance = 6.44%). Three composite dependent variables were formed using these factors: average personality perceptions of the speaker (personality items; α = .95); average negative perceptions of comments (negativity items; α = .93); and average positive perceptions of comments (positivity, fairness, legitimacy items, constructiveness items, agreement items; α = .91). Because a mediation analysis was performed, the 'positive perceptions of comments' were also separated into the following: positivity, fairness, and agreement items (α = .91); and legitimacy and constructiveness items (α = .80). Despite some items (the positivity item, one legitimacy item, and one constructiveness item) loading onto the 'personality' factor of the EFA, the conceptual basis of these items is closer to 'positive perceptions of comments' and therefore they were placed in that composite variable. The Cronbach's alpha for the 'positive perceptions of comments' is high (α = .91), supporting this decision.

Following this, we conducted a series of factorial ANOVAs using condition (Ingroup vs. Outgroup-Control, Outgroup-Balanced, and Outgroup-Buttered) and participant race (African American, European American, or Latino American) as between-subjects factors. The main effect of condition was significant for negative perceptions, $F(3, 815) = 31.42$, $p < .001$, $\eta^2 = .104$, personality perceptions, $F(3, 815) = 23.77$, $p < .001$, $\eta^2 = .080$, and positive perceptions, $F(3, 815) = 46.74$, $p < .001$, $\eta^2 = .147$. For negative perceptions, simple planned contrasts with the Outgroup-Control condition as the reference group revealed that participants in the Outgroup-Control condition perceived criticism as significantly more negative ($M = 3.88$, $SE = .11$) than both participants in the Ingroup condition ($M = 2.97$, $SE = .10$), $p < .001$, $g = 0.56$, and the Outgroup-Buttered condition ($M = 2.67$, $SE = .11$), $p < .001$, $g = 0.81$. In contrast, there was no difference in negative perceptions of the speaker's comments between the Outgroup-Control and Outgroup-Balanced conditions ($M = 3.84$, $SE = .11$), $p = .829$, $g = 0.03$. This suggests that offering balanced criticism did not reduce the ISE for negative perceptions of comments, but offering praise before the criticism did reduce the ISE. The main effect of condition, however, was qualified by a significant interaction with participant race for both personality perceptions, $F(6, 815) = 5.10$, $p < .001$, $\eta^2 = .036$, and positive perceptions of comments, $F(6, 815) = 4.32$, $p < .001$, $\eta^2 = .031$. Planned contrast analyses using the Outgroup-Control condition as the reference group examined the effect of condition within each participant racial group (see Table 2 for means and standard deviations and Table 3 for detailed planned contrast results)[3]. Given the large number of individual tests, we applied the Bonferroni method to control for family-wise error, resulting in a new significance level of .003 for these comparisons.

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3) Homogeneity of variance was violated for simple effect analyses with positive perceptions of comments as the DV for African American and Latino American participants. Hence the difference in degrees of freedom reported for these pairwise comparisons. Hedges g was calculated for pairwise effect size estimates due to the often uneven sample sizes across conditions.

Table 2

Condition Means and Standard Deviations Within Each Participant Racial Group for Positive Perceptions of Comments and Personality Perceptions

Condition	African American		European American		Latino American	
	M	*SD*	*M*	*SD*	*M*	*SD*
Positive Perceptions						
Ingroup	3.88	1.33	4.16	1.16	3.83	1.25
Outgroup-Control	2.40	0.95	3.67	1.24	2.44	0.81
Outgroup-Balanced	2.79	0.90	3.56	1.16	2.60	0.87
Outgroup-Buttered	3.24	1.01	4.36	1.07	3.61	1.00
Personality Perceptions						
Ingroup	4.00	1.29	4.03	1.28	3.86	1.21
Outgroup-Control	2.56	1.10	3.82	1.25	2.99	1.01
Outgroup-Balanced	3.04	1.01	4.08	1.28	3.09	1.11
Outgroup-Buttered	3.42	1.23	4.59	1.17	4.07	1.19

Table 3

Planned Contrast Results Comparing Conditions Within Each Participant Racial Group

Dependent Variable	Comparison	*t*	*p*	*g*
African American				
Positive Perceptions	Outgroup-Control vs. Ingroup	6.58	< .001	1.24
	Outgroup-Control vs. Outgroup-Balanced	-1.54	.126	0.86
	Outgroup-Control vs. Outgroup-Buttered	-3.53	< .001	0.42
Personality Perceptions	Outgroup-Control vs. Ingroup	5.94	< .001	1.18
	Outgroup-Control vs. Outgroup-Balanced	-1.78	.077	0.46
	Outgroup-Control vs. Outgroup-Buttered	3.36	< .001	0.74
European American				
Positive Perceptions	Outgroup-Control vs. Ingroup	3.06	.002	0.41
	Outgroup-Control vs. Outgroup-Balanced	0.61	.540	0.09
	Outgroup-Control vs. Outgroup-Buttered	3.68	< .001	0.60
Personality Perceptions	Outgroup-Control vs. Ingroup	1.25	.212	0.17
	Outgroup-Control vs. Outgroup-Balanced	1.26	.208	0.21
	Outgroup-Control vs. Outgroup-Buttered	-3.83	< .001	0.64
Latino American				
Positive Perceptions	Outgroup-Control vs. Ingroup	7.75	< .001	1.32
	Outgroup-Control vs. Outgroup-Balanced	-0.91	.364	0.19
	Outgroup-Control vs. Outgroup-Buttered	-6.66	< .001	1.28

Dependent Variable	Comparison	t	p	g
Personality Perceptions	Outgroup-Control vs. Ingroup	4.25	< .001	0.78
	Outgroup-Control vs. Outgroup-Balanced	-0.53	.597	0.09
	Outgroup-Control vs. Outgroup-Buttered	-5.40	< .001	0.98

For African American participants, the effect of condition was significant for positive perceptions of comments, $F(3, 172) = 16.20$, $p < .001$, $\eta^2 = .220$. Participants in the Outgroup-Control condition rated the critical comments significantly less positively than participants in the Ingroup condition and participants in the Outgroup-Buttered condition. However, there was no significant difference in positive perceptions of the comments between the Outgroup-Control and Outgroup-Balanced conditions. The same pattern of results was observed for personality perceptions. The effect of condition was significant, $F(3, 172) = 12.68$, $p < .001$, $\eta^2 = .307$, and each of the pairwise comparisons was also significant. Participants in the Outgroup-Control condition rated the speaker's personality significantly less positively than participants in the Ingroup condition and the Outgroup-Buttered condition. There was no significant difference in personality ratings between the Outgroup-Control and Outgroup-Balanced conditions. We should note, however, that the number of African American participants in each condition was short of 70, which was our target number for sufficient statistical power. Thus, these results should be interpreted with some caution.

For European American participants, the effect of condition was significant for both positive perceptions of comments, $F(3, 397) = 9.16$, $p < .001$, $\eta^2 = .065$, and personality perceptions, $F(3, 396) = 5.41$, $p = .001$, $\eta^2 = .039$. For positive perceptions, participants in the Outgroup-Control condition rated the critical comments significantly less positively than participants in the Ingroup condition and the Outgroup-Buttered condition. However, there was no significant difference in positive perception ratings between the Outgroup-Control and Outgroup-Balanced conditions. For personality perceptions, there was no significant difference in personality ratings between the Outgroup-Control and Ingroup conditions or between the Outgroup-Control and Outgroup-Balanced conditions. Personality ratings were, however, significantly more positive in the Outgroup-Buttered condition than the Outgroup-Control condition.

The effect of condition was also significant for both positive perceptions of comments, $F(3, 246) = 31.02$, $p < .001$, $\eta^2 = .274$, and personality perceptions, $F(3, 246) = 14.44$, $p < .001$, $\eta^2 = .150$, among Latino American participants. Participants in the Outgroup-Control condition reported significantly less positive perceptions of the critical comments than participants in the Ingroup, $t(100.4) = 7.28$, $p < .001$, $g = 1.32$, and Outgroup-Buttered conditions. However, there was no significant difference in positive perceptions of comments between the Outgroup-Control and Outgroup-Balanced conditions. Similarly, personality perceptions were significantly less positive in the Outgroup-Control

condition than in the Ingroup and Outgroup-Buttered conditions, but there was no difference in personality perceptions between the Outgroup-Control and Outgroup-Balanced conditions.

Mediation Analyses

We next conducted a series of mediation analyses in PROCESS (Hayes, 2017) using 5000 bootstrap samples to examine whether perceptions of comment legitimacy/constructiveness mediated the significant ISE effects. We entered condition as the IV (outgroup-control versus ingroup and outgroup-control versus outgroup-buttered[4]) and average perceptions of comment legitimacy/constructiveness as the mediator. Negative perceptions of comments, positive perceptions of comments (positivity, fairness, agreement), and personality perceptions served as the DVs (see Table 4). Participants in the Outgroup-Control condition reacted more negatively to criticism of their racial group than participants in the Ingroup condition, and these effects were fully mediated by the perceived legitimacy/constructiveness of the comments. Participants in the Outgroup-Control condition also reacted more negatively to criticism of their racial group than participants in the Outgroup-Buttered condition, but these effects were only partially mediated by the perceived legitimacy/constructiveness of the comments.

Table 4

Direct and Indirect Effects for Legitimacy/Constructiveness Mediation of the Effect of Condition (Outgroup-Control vs. Ingroup and Outgroup-Buttered)

DV	Direct Effect	t	p	95% CI	Indirect Effect	95% Bootstrap CI
Negative Perceptions of Comments						
Outgroup-Control vs. Ingroup	.029	.227	.820	[-.223, .281]	.852	[.668, 1.049]
Outgroup-Control vs. Outgroup-Buttered	-.311	-4.434	< .0001	[-.448, -.173]	-.266	[-.363, -.177]
Positive Perceptions of Comments						
Outgroup-Control vs. Ingroup	.014	.148	.883	[-.167, .194]	-.995	[-1.208, -.789]
Outgroup-Control vs. Outgroup-Buttered	.182	3.793	.0002	[.088, .276]	.326	[.224, .429]
Personality Perceptions						
Outgroup-Control vs. Ingroup	.096	1.034	.301	[-.087, .279]	-.840	[-1.019, -.660]
Outgroup-Control vs. Outgroup-Buttered	.153	3.154	.002	[.058, .248]	.289	[.197, .385]

Behavioral Intentions

We ran one final factorial ANOVA with Condition and Participant Race as between-subject factors and intentions to engage in corrective behaviors as the dependent variable.

4) Mediation analyses were also conducted for the outgroup-control vs. outgroup-balanced comparison, but all direct and indirect pathways were nonsignificant.

There was a significant main effect for participant race, $F(2, 815) = 19.89$, $p < .001$, $\eta_p^2 = .05$. Intentions to engage in corrective behavior was significantly higher among African American participants ($M = 4.25$, $SD = 0.75$) than European American participants ($M = 3.73$, $SD = 0.90$), $p < .001$, or Latino American participants ($M = 3.88$, $SD = 0.94$), $p < .001$. There was no significant difference between European American and Latino American participants, $p = .15$. The main effect for condition, $F(3, 815) = 1.34$, $p = .26$, $\eta_p^2 = .01$, and the interaction between condition and participant race, $F(6, 815) = 1.37$, $p = .23$, $\eta_p^2 = .01$, were not significant. Although the main effect of condition was not significant, we still tested whether the effect of condition was moderated by strength of group identification as well as mediation by group image concerns in PROCESS (Hayes, 2017) using 5000 bootstrap samples. All interaction, direct, and indirect effects, however, were not significant.

There were, however, significant and weak zero-order correlations between group image concerns and positive perceptions of comments ($r = -.15$, $p < .001$), negative perceptions of comments ($r = .18$, $p < .001$), and personality perceptions ($r = -.10$, $p = .004$). Greater group image concerns were thus associated with less positive perceptions of comments, more negative perceptions of comments, and less positive personality evaluations, although the significance of these associations may be partly due to the large sample size.

Discussion

The purpose of the present study was to test the effectiveness of two rhetorical strategies (Hornsey et al., 2008) in reducing the ISE among racial groups: balanced criticism and buttering up. We also examined whether criticism directed toward one's racial group affected intentions to engage in corrective behavior. We predicted that balanced criticism would be more effective than buttering up in reducing or eliminating the ISE for all racial groups, and the buttering up technique would only reduce the ISE for European American participants. Additionally, we predicted that members of all racial groups would be more willing to engage in corrective behavior when presented with criticisms by a racial/ethnic outgroup member than a racial/ethnic ingroup member. These hypotheses were not fully supported. Specifically, we found that providing balanced criticism did not reduce nor eliminate the ISE when groups were defined by race. Instead, the interpretations of the criticisms closely resembled that of the Outgroup-Control condition. The buttering up technique, however, reduced the ISE among all participants.

We also found that criticism seemed equally likely to promote a willingness to engage in corrective behavior regardless of group membership (ingroup vs. outgroup) or the form of criticism (balanced vs. buttered), particularly among African American participants. This best aligns with the hypothesis that the ISE occurs because outgroup criticism presents a threat to group identity (Hornsey et al., 2004, 2008; Thürmer &

McCrea, 2018; Thürmer et al., 2019, 2022). African Americans face a lot of criticism from both ingroup and outgroup members, so their willingness to engage in corrective behaviors may reflect a desire to repair their group's image. This may also explain why buttering up is so effective, including for African Americans. Perhaps the buttering up technique suggests to criticism recipients that the outgroup critic has a more well-rounded perception of the group, and therefore does not pose as much of a threat. Future research should include a measure for perceived threat to the participants' racial group to gain further insight.

Reducing the Intergroup Sensitivity Effect

Results from the present study align with past findings in several ways. First, participants in the Ingroup condition perceived criticism as significantly less negative than participants in the Outgroup-Control condition. This aligns with results from Hornsey et al. (2002), which found that criticism delivered by an ingroup member was perceived less negatively than criticism delivered by an outgroup member. Second, participants in the Outgroup-Control condition rated the personality of the critic more negatively than participants in the Ingroup condition. This aligns with results from Hornsey et al. (2002), which found that ingroup critics are perceived less negatively than outgroup critics. Third, this effect was mediated by the perceived legitimacy and the perceived constructiveness of the critic's comments. This aligns with results from Hornsey et al. (2008), which found that constructiveness mediated the effect of critic group membership on ratings of likability. When comparing the results of the present study to those from past research, it becomes evident that the basic ISE (i.e., individuals responding more positively to criticism from those in their ingroup than their outgroup) replicates across different racial groups, and that the effects of the ISE are mediated by the perceived legitimacy and the perceived constructiveness of the critic's comments. Criticism from outgroup members is interpreted as less constructive and less legitimate than criticism from ingroup members. An outgroup member giving criticism to an ingroup member is likely to be met with suspicion and defensiveness, and the criticism is likely to be interpreted as unfair or untrue. An ingroup member giving the same criticism, however, is likely to be met with less hostility. Therefore, perceptions of the legitimacy and constructiveness of a speaker's criticisms mediate the relationship between group membership and how sensitive one is to the ISE.

Other factors, in addition to the perceptions of constructiveness and the perceptions of legitimacy, might have influenced the process as well. For example, in the Outgroup-Buttered condition, ratings of the critic's personality and ratings of the comments were only partially mediated by the perceived legitimacy and the perceived constructiveness of the critic's comments. This suggests that other factors might also act as mediators in addition to constructiveness and legitimacy. One possible mediator could be hypocrisy. While Hornsey et al. (2008) did not find that hypocrisy mediated the process in their

study dealing with nationality, perhaps when criticism is dealing with something like race, it is interpreted differently. There may be inherent defensiveness when criticism is dealing with race, especially when negative comments are combined with praise. The individual may come across as simply wanting to maintain a false appearance of morality or as unprejudiced. In this instance, a perception of hypocrisy could create a resistance to criticism. Future research should continue examining possible mediators, like hypocrisy, and how they affect the relationship between group membership and the ISE. While some results of the present study aligned with past findings, others did not.

Previous research (Hornsey et al., 2008) indicates balanced criticism can be effective in reducing the ISE. However, balanced criticism did not reduce the ISE within our overall sample or among African American, European American, and Latino American participants. In fact, effect sizes in our study were, on average, less than a third the size of the average effect size from Hornsey et al.'s (2008) study. This result was unexpected because Hornsey et al. (2008) found it to be the most effective rhetorical technique they tested for reducing the ISE in the context of different nationalities. We anticipated this technique, in which the speaker critiques their own group in addition to the target group, would work similarly in a racial context, but that was not the case. Given the U.S.'s history of tense racial relations, the speaker's comments may be interpreted as racial prejudice, especially if the critic only makes negative statements. If the recipient believes the speaker is prejudiced, the speaker saying their racial group has its own problems may not make a difference; the recipient has already written them off as racially prejudiced and, therefore, unlikely to have their best interests at heart (i.e., their motivations are destructive rather than constructive; Hornsey et al., 2004). Another potential explanation for this difference is Hornsey and colleagues used the same criticism for the target group and their own group (failure to address racism in their countries), while criticism our participants received was different for each racial group in our study. It is possible people may be less likely to perceive the speaker as racially prejudiced if they say their group has the same flaws, but it is difficult to find flaws that people believe apply equally to all racial groups, rendering this approach less practical in the context of interracial communication. Although balanced criticism appears to be an effective technique in other contexts, based on our results, we recommend future research on interracial criticism in the United States focus on other methods. One compelling finding from this study relates to another technique: buttering up.

While balanced criticism appears to be ineffective in reducing the ISE among racial groups, the buttering up technique worked better than expected. It was an effective technique across all three racial groups included in the study, with effect sizes consistently a bit larger than those observed in Hornsey et al. (2008). This technique was not effective in reducing the ISE in Hornsey et al. (2008) study because it reduced negativity among participants who received outgroup or ingroup criticism, such that ingroup speakers still

aroused less negativity than outgroup speakers. In other words, the ISE was not reduced or eliminated.

Behavioral Intentions

In the present study, the group identity of the critic did not influence participants' willingness to engage in corrective behavior. This finding contradicts the results of studies that measure behavioral responses as a result of hearing outgroup criticism. Thürmer and McCrea (2018) and Thürmer et al. (2019) show that criticism from outgroup members leads to increased hostile behaviors (e.g., lower bonuses, increased time spent arguing) relative to criticism that comes from ingroup members in an attempt to defend the group's threatened identity. An earlier study by Rabinovich and Morton (2015) also shows similar patterns for behavioral intentions, in which outgroup critics were the most likely to inspire intentions to engage in corrective behavior, especially when attributions of failure were internal. Although we were careful to include a statement of internal attribution based on group values in all interview scripts (see Supplementary Materials file: 'Supplemental Materials_Scripts.docx'), the content of the criticisms may have influenced participants' responses. Several of the present study's criticisms (e.g., availability of unhealthy food in African American communities, high prevalence of criminal activity in African American or Latino communities), have external or systemic roots. If most participants made these external attributions, this could explain why we did not observe the same effect in our study as Rabinovich and Morton (2015). Future research should therefore examine if differences in perceived attribution of criticism (e.g., critic makes an internal attribution, but the criticized individual makes an external attribution) affect intentions to engage in corrective behavior. It would also be valuable to measure actual behavior instead of intentions, given the intention-behavior gap (Sheeran & Webb, 2016).

Another explanation for why the critic's group identity did not influence participants' intentions to engage in corrective action is because group-based criticism goes against social norms. McCrea et al. (2022), for example, exposed participants to criticism about their group or an outgroup from either an ingroup or outgroup speaker. Participants punished those who criticized outgroup members, regardless of the speaker's group identity. This effect was magnified for participants who read intergroup criticism between two different outgroup members (e.g., a U.S. participant exposed to an Australian person criticizing someone from the UK). Punishing those who criticize others outside of their own social group thus appears to be driven by violations of social norms regarding group-based communication. In the current study, we did not assess the racial ISE in the context of social norms. Future work should investigate whether intergroup criticism about race may be driven by attempts to keep in line with norms.

A unique finding of this study was that the racial identity of the participants influenced their willingness to engage in corrective behavior, with African American participants being more willing to engage in corrective behavior than European or Latino

American participants. Previous research has found that perceived discrimination and oppression produces greater civic engagement and sociopolitical action among African Americans (Deaux et al., 2006; Hope & Jagers, 2014; Littenberg-Tobias & Cohen, 2016). Due to the history of discriminatory race relations in the country and systemic nature of some of the study's criticisms as described above, racial concerns may have been activated among African American participants, which could explain the greater reported intent to engage in corrective behavior. Alternatively, any observed differences between racial groups could be an artifact of using different criticisms and corrective behaviors across racial groups. While this was a natural consequence of wanting to tailor materials to the individual groups, it is an important limitation when interpreting these results.

Limitations and Future Directions

As with any empirical study, these findings should be understood in the context of the study design. To reflect that different racial groups are often the target of disparate critical comments, we opted to tailor the criticism in each condition to the target group. For example, the content of the criticism directed toward African Americans included criminal activity in some of their communities, high frequency of spanking their children, and food available in their communities being unhealthy. In contrast, the content of the criticism directed toward European Americans included unawareness of their privilege in American society, a tendency to say offensive things without realizing it, and a high prevalence of prescription drug abuse in their communities. We felt this method of tailoring the criticism to each target group was the best way to ensure the content was perceived as both authentic and critical (i.e., negative). We also took pains to match criticism conditions according to valence and perceived legitimacy (based on pilot testing performed by White et al., 2023). Still, we cannot be certain that the effects we discovered are attributable to the race of the participants and not the content of the criticism.

We previously noted that outgroup speakers could belong to different racial groups (e.g., the outgroup speaker could be either European American or Latinx American for African American participants). Our sample size was too small to adequately support comparisons as to whether the specific outgroup type might influence results. However, this question was examined by White et al. (2023), and no effects of outgroup type on the ISE were discovered.

The present study may also be considered in conversation with those that have attempted to determine *why* the ISE occurs. Rather than merely following social norms, the racial ISE is similar to other ISEs in that it is likely linked to group identity threats (Hornsey et al., 2004, 2008). It is not uncommon for people to hear criticism about their racial group from both ingroup and outgroup members; therefore, the difference in reaction to racial ingroup and racial outgroup members may be more attributable to concerns about the motivation underlying the criticism. It is heuristically assumed that criticism from ingroup members is motivated by a desire to help the ingroup. Outgroup members,

however, do not receive this benefit of the doubt, and this may be especially true in an interracial context where there is heightened potential to perceive the critic as racially prejudiced. A future study applying Thürmer and McCrea (2018) and Thürmer et al.'s (2019, 2022) methods to investigate the extent to which people prefer to work to better their own group versus argue with outgroup critics may reveal a clearer connection to this theory regarding why the ISE occurs in a racial context.

Conclusion

The present study advances understanding of how criticism delivery techniques affect the ISE and willingness to engage in corrective behavior, especially among racial groups. The research indicates there are strategies to promote receptiveness to interracial criticism and mitigate the ISE. Presenting praise before criticism, for example, mitigates the ISE among all three racial groups. The present study, therefore, also suggests strategies for communicating race-based criticism constructively, with praise being the most well-received delivery method when the critic belongs to a racial outgroup. Finally, the study provides an indication of what factors contribute to behavior change. African Americans appear most willing overall to change behavior. However, more research is needed to clarify whether outgroup criticism is more likely to motivate behavior change for race-based criticism. In conclusion, the present study both advances our understanding of the relationship between the ISE, race, and behavior and suggests methods for ameliorating the negative effects of race-based criticism.

Author Contributions: *Kaelyn Ireland*—Idea, conceptualization | Design planning | Data analysis | Data collection | Writing | Feedback, revisions | Project coordination, administration. *Logan Turner*—Idea, conceptualization | Design planning | Data analysis | Data collection | Writing. *Grace Bowe*—Data analysis | Writing. *Jessica Bray*—Data collection | Writing | Feedback, revisions. *Brooke Cassanova*—Idea, conceptualization | Design planning | Data analysis | Data collection. *CaSaundra White*—Idea, conceptualization | Design planning | Data analysis | Data collection. *Steven Peek*—Data analysis | Writing. *Diana Riser*—Data collection. *Katherine R. G. White*—Idea, conceptualization | Design planning | Validation, reproduction, checking | Data collection | Data management (storage, curation, processing, etc.) | Writing | Feedback, revisions | Visualization (data presentation, figures, etc.) | Supervision, mentoring | Project coordination, administration.

Data Availability: All data collected for this study can be accessed on OSF in a file titled ISE Reduc Study 1_combined data_7.1.19.xlsx (see White, 2018b).

Supplementary Materials

For this article, the following supplementary materials are available:

- The preregistration (see White, 2018a)
- The data set (see White, 2018b)

- This supplementary materials file (see White, 2018b) provides a walk-through of what participants saw when they completed this study. It includes the questionnaire, interview script, and scales used for the study.

Index of Supplementary Materials

White, K.. (2018a). *Intergroup Sensitivity Effect (ISE) reduction* [Preregistration]. OSF Registries. https://doi.org/10.17605/osf.io/gx92h

White, K.. (2018b). *Intergroup Sensitivity Effect (ISE) reduction* [Data, Materials]. OSF. https://doi.org/10.17605/osf.io/hfv4b

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