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What is This?
Implicit and explicit emotional reactions to witnessing prejudice

Toni Schmader,1 Alyssa Croft,1 Marchelle Scarnier,2 Brian Lickel3 and Wendy Berry Mendes4

Abstract

The present study examined how individual differences in motivation to respond without prejudice predict self-reported negative affect and physiological responses to the prejudicial acts of others. One hundred and one White participants were paired with a Black “partner” and together they watched two White men on film having either a pro- or antidiversity discussion. The higher participants were on internal motivation to respond without prejudice, the greater their self-reported negative affect and the more they exhibited distress-related physiological responses during the antidiversity discussion. In contrast, during the prodiversity discussion participants lower in internal motivation to respond without prejudice showed greater physiological distress, but did not self-report more negative affect. These results suggest that only those who have internalized egalitarian goals exhibit the negative emotional responses likely to promote opposition to expressions of intergroup bias; those who lack these goals might instead react against efforts to promote diversity.

Keywords
prejudice, diversity attitudes, psychophysiological threat, intergroup emotion

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To what degree do expressions of prejudice garner a negative emotional response from others not targeted by that bias? Existing evidence points in conflicting directions. On the one hand, research on group-based emotion indicates that people have strong negative reactions to group members who engage in harmful or discrediting acts toward outgroup members (e.g., Doosje, Branscombe, Spears & Manstead, 1998; Johns, Schmader, & Lickel, 2005; Lickel, Schmader, Curtis, Scarnier, & Ames, 2005). However, Kawakami, Dunn, Kamali, and Dovidio (2009) recently found that although individuals anticipated having a negative response to someone who espouses racial biases, when put in just that situation, they did not report strong negative emotions and they passed up the opportunity to ostracize the racist individual. At first glance, this research seems to suggest that people have little immediate emotional response to racial prejudice when it unfolds in front of them.

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However, such a general conclusion may be premature. First, aspects of a person’s beliefs might moderate his or her emotional reactions to observations of prejudice. Those who see value in being egalitarian themselves might have a more negative reaction to the prejudice of others; conversely, those who reject the goal of being nonprejudiced might actually take offense at policies and practices that promote diversity and egalitarianism. Second, explicit self-reported emotional experience is only one way to assess emotion. Since people might not always have insight into or be willing to report their true feelings, implicit measures of physiological reactivity can offer other cues to emotional responding. To expand our understanding of people’s reactions to racial bias, we conducted a study in which White participants in the presence of a Black confederate observed two Whites sharing positive or negative attitudes about the role of diversity on campus. We examined whether and to what degree internal and external motivations to respond without prejudice moderated people’s self-reported and physiological responses not only to seemingly prejudicial antidiversity statements, but also to the expression of prodiversity attitudes.

The role of perceiver motivation in reactions to prejudice

Existing research on emotional responses to prejudice has focused on how people react to their own biases either when confronted by a target of prejudice or another member of their ingroup (Czopp & Monteith, 2003; Devine, Monteith, Zuwerink, & Elliot, 1991). Growing from this tradition of examining how people monitor and self-regulate their own behavior in intergroup contexts, Plant and Devine (1998) documented two broad sources of motivation: an internal motivation to respond without prejudice (IMS) that stems from privately held ideals of oneself as a fair-minded person and an external motivation (EMS) stemming from perceived public pressure to adopt nonbiased attitudes and behavior. Both motivations can predict negative emotional responses and efforts to correct one’s own racial biases (Amodio, Kubota, Harmon-Jones, & Devine, 2006; Plant & Devine, 1998, 2009), but no research has examined how these motivations predict emotional reactions to the biases of others.

At first blush, the motivation to control our own behavior might seem irrelevant to how we react to what other people do. However, Butz and Plant (2009) suggest that these motivations reveal the degree to which egalitarian values have been internalized (variation in IMS), in contrast to the degree to which social norms of egalitarianism compel nonbiased behavior (variation in EMS). Given this distinction, it is not surprising that being internally motivated to respond without prejudice is highly correlated with having nonprejudiced attitudes (Plant & Devine, 1989, 2009) and, moreover, IMS and attitudes are sometimes combined into a unitary index of prejudice (Cunningham et al., 2004). Those who internalize the goal to be nonprejudiced are also likely to pride themselves on having nonbiased attitudes. Given the tendency to form impressions of others based on one’s own attitudes, values, and goals (Smith & Zárate, 1992), we hypothesize that those high in IMS will evaluate not just their own behavior, but also the behavior of others against these deeply held values and attitudes.

In contrast, an external motivation to respond without prejudice does not imply internalization of egalitarian norms, but rather behavior regulation based on perceived or actual external pressure. Not surprisingly, the external motivation to respond without prejudice is only weakly, and often negatively correlated with measures of prejudiced attitudes (Plant & Devine, 1998). In fact, those who regulate their behavior primarily because of perceived social pressure resent having to do so (Plant & Devine, 2001) and hold more negative implicit biases toward stigmatized outgroups (Devine, Plant, Amodio, Harmon-Jones, & Vance, 2002). Instead, EMS independently predicts feeling anxious during interracial interactions and being motivated to avoid such encounters, presumably because of the fear of social sanctions if one’s biases are revealed (Plant, 2004; Richeson & Trawalter, 2008). Thus, even though being highly externally motivated to
respond without prejudice predicts reactions and efforts to regulate one’s own biased behavior (Amodio et al., 2006; Plant & Devine, 1998), we maintain that variation along this external dimension will not be predictive of the extent to which individuals have a visceral negative response or feel that they need to express a negative reaction to the expression of prejudice by others.

To crystallize our hypotheses, consider an analogy. People obey traffic laws partly because they internalize the value of having a set of rules to coordinate driving behavior, and partly because they don’t want to pay the penalties of being caught for violating specific laws. If you see another driver run a red light, your emotional response to this lawbreaker is likely to be a function of the degree to which you have internalized the value of traffic laws as a means of keeping people safe rather than a function of your more self-interested concerns about avoiding penalties when you break the law. By internalizing the value, it essentially expands one’s focus to regulating not only one’s own actions but also evaluating the actions of others. Emotional reactions are important to study as they are likely to instigate any downstream attempts at behavior regulation in a social context.

Measuring an emotional response to prejudice

In the present research the context of interest was the situation of witnessing other Whites expressing either positive or negative attitudes about the role of diversity on a university campus. Universities generally embrace values of diversity, and programs to increase the ethnic diversity of the student body are often publicized. Although liberal students might generally support such initiatives, incidents of backlash have also been documented and in some cases widely publicized (Lewin, 2006). Given the evidence that more modern forms of prejudice reveal themselves as opposition to policies that would benefit members of the minority and the generally liberal climate of most college campuses (Henry, 2008; Sears & Henry, 2005), we assumed that expressing a strong negative attitude toward diversity would be taken as evidence of racial prejudice by our participants. Our goal was to capture both their explicit and implicit emotional responses to the diversity-related attitudes expressed by another White student.

Traditionally, emotional reactions to racial biases of the ingroup have been indexed by self-reported measures of negative emotion or compunction (Devine et al., 1991; Johns et al., 2005; Kawakami et al., 2009; Zuwerink, Devine, Monteith, & Cook, 1996). However, research has shown that physiological responses have advantages over self-reports in some situations. For example, what people say they feel in interracial contexts does not always agree with affective responses they exhibit physiologically (Mendes, Blascovich, Lickel, & Hunter, 2002; Vanman, Saltz, Nathan, & Warren, 2004). In Mendes et al. (2002), White participants paired to work on a cooperative task with a Black partner (vs. a White partner) exhibited a pattern of cardiovascular threat and performed more poorly even though they reported liking their partner more. Such physiological measures seem to operate more implicitly than self-report. They are less subject to conscious control and can occur prior to conscious awareness of a psychological state. For example, people exhibit a rise in skin conductance when making a risky decision before they become consciously aware of the risk they are taking (Bechara, Damasio, & Tranel, 1997). A final advantage relevant to the present research is that physiological responses are collected on-line and thus not vulnerable to retrospective biases. For these reasons, we felt it was important to index a negative emotional response using both self-report and physiological measures of negativity.

Unlike past studies that have documented cardiovascular patterns of threat within an interracial context (Mendes et al., 2002), ours is a relatively passive situation (where the traditional biopsychosocial model of threat versus challenge does not clearly apply (Blascovich & Mendes, 2010). However, past research has revealed that during passive tasks like watching a frightening movie or observing distressing actions, peripheral
vasoconstriction has been broadly linked to negative affect including situations that elicit aversion, poor coping, distress, and fear (Anderson & Tosheff, 1973; Blascovich & Mendes, 2010; Cushman, Gray, Gaffey, & Mendes, in press; Gregg, James, Matyas, & Thorsteinsson, 1999; Levenson, 1992). Although we must be careful not to directly infer a specific psychological state from a general physiological response, what this past research shares in common is the use of total peripheral resistance (TPR) to index increased vasoconstriction of the arterioles in response to distressing situations. Given that no study has ever linked increased TPR reactivity to a positive psychological state, we assume that increased TPR represents a general negative or distressing affective state.

For both self-reported and physiological responses, we expected internal motivation (but not external motivation) to predict a more negative reaction to hearing antidiversity comments. Because these comments reflect prejudicial views that are at odds with one’s internalized egalitarian goals, those high in IMS should perceive antidiversity statements more negatively at both an explicit (self-reported) and implicit (vasoconstriction) level. But, consistent with past research, we expected discrepancies between self-reported and physiological responses to hearing prodiversity comments. Although such statements are broadly consistent with prevailing norms for intergroup relations, especially in a university setting where the study took place, they are not in line with the internalized goals of those who lack an internal motivation to respond without prejudice. In fact, a correlation of \( r = .79 \) between IMS and scores on the Attitudes Toward Blacks Scale (Plant & Devine, 2003) suggests that those who are low in IMS might also be assumed to have strong negative attitudes toward Blacks. As a result, those who have not internalized the motivation to reduce prejudice (and might be more racially prejudiced themselves) could be distressed by being confronted with the prevailing doctrine of diversity that they see as providing unjustified advantages and opportunities to a racial outgroup. As a result, we expected that those who score relatively low in IMS would exhibit greater physiological distress to prodiversity statements because such positive expressions of promoting multiculturalism are more discrepant with their internal attitudes. At the same time, because prodiversity norms tend to be strong and internal motivation to control prejudice is generally negatively skewed in undergraduate samples, we also anticipated that those who are relatively low in IMS would still report a more negative reaction to anti- than to prodiversity statements, an explicit response that is at odds with their implicit emotional reaction.

Pilot study

We first conducted a pilot study to provide an initial test of our hypothesis that internal rather than external motivation to respond without prejudice predicts self-reported emotional reactions to others’ antidiversity attitudes. We also aimed to test whether the presence of an outgroup member to hear and be victimized by the statements would amplify or moderate the type of effects found. For example, an alternative hypothesis to the one proposed earlier is that an external motivation to respond without prejudice would differentially predict explicitly reported emotional reactions as a function of having an outgroup member present.

Methods

As part of a larger study, 42 White introductory psychology students (21 male, 21 female, excluding three who were suspicious) participated in an ostensible pilot test of diversity workshops being designed for use in college residence halls. All participants completed the Motivations to Respond Without Prejudice Scales during an earlier mass survey session (Plant & Devine, 1998; \( M_{\text{IMS}} = 7.62, SD = 1.53; M_{\text{EMS}} = 4.45, SD = 1.84 \), on a 9-point scale). In each session, a same-sex group of three or four individuals first spent 5 min writing an essay about diversity that one participant was then randomly selected to read aloud. A White confederate was always selected to read
his/her essay, an essay that had been prewritten to include quite negative attitudes about diversity. An adapted version of this essay was used in the primary study and is described in more detail in the methods of that study. Across sessions, we varied whether a Black confederate (again posing as a participant) was present or absent in the group. This confederate was trained to have a neutral expression and make no response during or after the essay was read.

As part of a final-reaction questionnaire, participants rated the extent to which the person expressed positive or negative attitudes about diversity on college campuses on a 1 (very negative) to 9 (very positive) scale. They also rated their emotional reactions to the person’s essay across 17 items designed to assess negative emotions that are theoretically relevant to intergroup prejudice or the observation of harm to others (Johns et al., 2005). The specific emotion items were: nervous, ashamed, hurt, guilty, anxious, offended, depressed, sorry, regret, embarrassed, remorseful, angry, humiliated, sad, disgraced, disappointed, and disgusted. Because initial analyses indicated high consistency across these emotions and similar effects, we created a broad composite of self-reported negative emotion (α = .95).

Results and discussion

Results of a moderated regression analysis on the manipulation check (including IMS, EMS, and presence of Black target; as well as all two-way interactions as predictors) revealed that participants found the person’s attitude to be quite negative (grand mean = 2.00; SD = 1.40, on a 9-point scale), and only IMS predicted this perception, β = −.37, p < .05. Neither EMS nor presence of the Black confederate was a significant predictor and none of the two-way interactions were significant, all ps > .20.

The same analysis conducted on self-reported negative emotion also yielded only a main effect of IMS, β = .43, p < .01. Participants with higher internal motivation to control prejudice responded with more self-reported negative emotions than those lower on IMS. EMS had no main or interactive effects on negative emotional reactions, all ps > .20. The presence or absence of a Black confederate also had no effect on amplifying or moderating the effects of IMS or EMS on emotional responses, all ps > .30.

This initial study provides evidence that internal motivation, as a reflection of internalized egalitarian standards, predicts a negative emotional response to antidiversity viewpoints expressed by others. In contrast, variation in the degree to which one is externally motivated to respond without prejudice in their own behavior had no relationship (β = .10, ns) to self-reported reactions to the antidiversity viewpoints expressed by others. This was the case regardless of whether an outgroup member was present to hear and be offended by the remarks that a fellow racial ingroup member had made. Armed with this initial support that IMS and not EMS predicts group-based emotional reactions in this context, we conducted a more formal test of our hypotheses in a study that included a measure of total peripheral resistance to index emotional responding in a more implicit way and also examined reactions to prodiversity statements that are more typically heard in modern discourse on college campuses. Although IMS predicted a more negative emotional response to antidiversity statements in our pilot data, we did not have the ability to test reactions to prodiversity attitudes, which was an added goal in our primary experiment.

Another goal of our primary study was to test whether the emotional response by an outgroup member moderates the reactions of White participants to another White’s prejudiced statements. Although we saw no effect of having a Black confederate present to hear and feel victimized by prejudiced attitudes, we sought to manipulate the response of a Black confederate to explore its possible impact. Given evidence that Whites engage in more social referencing of Blacks’ facial responses during racially relevant interactions (Crosby, Monin, & Richardson, 2008), the emotional responses by Blacks in this context of observed prejudice could either amplify (if the victim responds with anger) or mute participants’ own reactions (if the victim...
 responds with disengagement). To explore this possibility, Black confederates were trained to react to antidiversity statements by displaying nonverbal signs of either anger or disengagement; we did not manipulate emotional reactions in response to the prodiversity statement and confederates merely continued to act in the same (neutral) way.

**Primary study**

**Methods**

**Participants** We tested 101 White participants (51% female) from a private university in the United States in exchange for payment. Seven were excluded from analyses for suspicion that the Black confederate was not a true participant. Participants were randomly assigned to one of these three conditions: listening to a discussion that was prodiversity with a confederate whose response remained neutral (pos), antidiversity with a confederate who responded in a disengaged manner (neg/dse), or antidiversity with a confederate whose response was angry (neg/ang).

**Procedure** Participants were run one at a time by a White experimenter and told that the study concerned synchronization of physiological reactions during conversations between strangers versus friends. All participants believed they were randomly assigned to the “stranger condition” and that another pair of participants—White confederates—had been assigned to the “friend condition.” Participants were connected to sensors to monitor their cardiovascular responses and asked to sit quietly alone during a 5-min baseline of physiological recording. As part of a larger survey, participants completed the Motivation to Respond Without Prejudice Scales (Plant & Devine, 1998). During baseline measures, they did not know the race of any other participants or that the study concerned race relations in any direct way.

Participants were then introduced to their partner, a same-sex Black confederate also equipped with (nonoperating) sensors to ostensibly monitor physiological responses. The experimenter explained that together they would observe the pair of friends (over video) discuss a series of topics and would rate the synchrony of the pair based on nonverbal cues. After observing a neutral discussion of cell phone use, participants observed the manipulation of interest, a 3-min pro- or antidiversity discussion between the two White confederates. The pro- and antidiversity discussions were modeled after the essay we created for the pilot study and were prescribed to be equivalent in length and style, but the statements themselves varied to reflect positive or negative attitudes about diversity. For example, the prodiversity condition included the following excerpts:

I also think education goes up when classes are made up of people from different backgrounds. In a lot of my classes, students from different places often share their thoughts on things we are talking about in class which is pretty cool because it usually sparks some really interesting conversations. I think it’s so important that people get exposed to these different ways of seeing things in college, you know?

There are so many opportunities here to interact with people from different backgrounds and it really gives you a chance to get a different perspective. Plus, when issues of diversity get raised in my classes, you can just tell how it changes the entire dynamic of the discussion. People participate more and sometimes kids who are normally pretty quiet will end up leading the discussion. I guess it just seems like having more diversity makes people feel more open and freer to express themselves.

The antidiversity condition included more negative statements about diversity:

I think the quality of learning goes down when professors have to deal with all these students from such different backgrounds. Like in one class I have, this one Black girl always raises her hand and repeats what the professor just said to make sure she understood
it. Maybe that’s common in her culture, but she slows down the class just to make sure she has it down perfectly.

Plus, when issues of diversity get raised in my classes, you can just tell how it changes the entire dynamic of the discussion. I feel like people, especially in section, kinda know what everyone is thinking but no one wants be the person that goes there and opens that can of worms. People say that diversity will lead students to be more open and people will feel freer to express themselves but that’s not what I have seen here. Diversity might be great for minority students, but the rest of us just end up feeling alienated most of the time.

The other White confederate would then respond with similarly pro- or antidiversity comments. While this conversation was taking place, the Black confederate was trained to react nonverbally in one of the three ways, yoked to the diversity condition. In response to the prodiversity discussion, the Black confederate displayed the same (neutral) reaction they did when they were listening to the cell phone conversation (e.g., neutral posture, visibly attentive to the discussion).

Although the Black confederate in our pilot study was trained to have a neutral reaction, we thought it might have seemed unrealistic to observe a completely neutral reaction in response to these antidiversity comments (an observation made by one of our pilot-study confederates). We reasoned that one of two different types of negative reactions could occur: disengaged or angry. In the Negative + Disengaged condition, the confederate slumped down in the chair, looked away from the video screen, and appeared generally withdrawn from the situation. Thus, she/he communicated displeasure paired with withdrawal. In the Negative + Angry condition, the confederate leaned forward in the chair, appeared alert, and shook her/his head. Here she/he communicated displeasure paired with approach. Although these conditions confound the confederate’s response with the topic of the conversation, this trade-off on experimental precision was meant to maximize the experimental realism for the participant.

Afterward, participants made private ratings of their reactions and completed other tasks not pertinent to the present study. At the completion of the session, participants were debriefed and compensated.

**Measures**

Unless otherwise mentioned, all self-report items were rated on a 1 (strongly disagree) to 9 (strongly agree) Likert scale. Confidentiality was ensured and participants did not believe that their partner or the other participants would ever see their ratings or responses.

**Motivations to respond without prejudice**

Participants’ completed the Motivations to Respond Without Prejudice Scales (Plant & Devine, 1998). As in previous research (Plant & Devine, 1998), participants generally scored higher in IMS ($M = 7.67$, $SD = 1.18$, range = 4.40–9.00) than EMS ($M = 5.11$, $SD = 1.71$, range = 1–9) and the two measures were uncorrelated with one another, $r = .18$, ns.

**Manipulation check**

Participants rated the degree to which “The two individuals had very negative attitudes about the issue they discussed,” and “The two individuals had very positive attitudes about the issue they discussed.” Ratings of the first item were reverse scored and averaged with the second to provide a measure of observed attitudes ($r = .88$, $p < .01$).

**Self-reported negative emotion**

Emotional reactions were measured by the same 17 items used in the pilot study. As in the earlier pilot, initial analyses indicated high consistency across these emotions and similar results across different conceptual groupings. Thus, we created a broad composite of self-reported negative emotion ($\alpha = .96$).

**Physiological responses**

We estimated participants’ changes in total peripheral resistance (TPR) by subtracting TPR during a resting baseline from
TPR responses during the diversity discussion. To estimate TPR, we used electrocardiography (ECG; Biopac, Goleta, CA), impedance cardiography (HIC-2000; Bio-Impedance Technology, Chapel Hill, NC), and continuous blood pressure (Colin 7000; Colin Medical Instruments, San Antonio, TX). All signals were integrated with MP 150 hardware (Biopac, Goleta, CA). Signals were examined off-line and data were scored and a subsample rescored to assure reliability using Mindware software (Mindware Technologies) (see Mendes, 2009, for details).

TPR is calculated with the formula:

$$TPR = \frac{MAP}{CO} \times 80$$

where MAP is the mean arterial blood pressure and CO is cardiac output. This measure provides an estimate of overall constriction versus dilation in the arterioles. Vasoconstriction (tightening of the diameter of blood vessels) is indicated by an increase in TPR from baseline to the observation task, whereas vasodilation (expanding of blood vessels) is indicated by a decrease in TPR.

**Results**

**Analytic strategy**

To test our hypotheses, we conducted a series of hierarchical regression analyses in which we predicted self-reported negative emotion or physiological reactivity outcomes in three steps. In Step 1 we entered IMS and EMS as continuous, mean-centered variables and two orthogonal contrast variables to represent condition. One contrast represented the effect of conversation valence in that it compared the prodiversity condition (weighted −2) against the two antidiversity conditions (each weighted 1). The second contrast represented the effect of the confederate’s reaction as it compared the two antidiversity conditions against one another (prodiversity weighted 0, disengagement weighted −1, anger weighted 1).

In Step 2, we included all two-way interactions between IMS, EMS, and the contrast variables, and Step 3 included two variables representing the three-way interaction between IMS, EMS, and condition. Interaction terms that were clearly nonsignificant ($p > .10$) in this overall model were excluded so that final reported results in Table 1 are from models containing all main effects but only significant higher order interactions. Self-reported negative emotions and TPR were not significantly correlated, $r = .15$, ns.

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Note: Conversation contrast (prodiversity compared to two antidiversity conditions); reaction contrast (disengaged compared to angry response within the antidiversity conditions). *$p < .05$; ***$p < .001$.

and Step 3 included two variables representing the three-way interaction between IMS, EMS, and condition. Interaction terms that were clearly nonsignificant ($p > .10$) in this overall model were excluded so that final reported results in Table 1 are from models containing all main effects but only significant higher order interactions. Self-reported negative emotions and TPR were not significantly correlated, $r = .15$, ns.

**Manipulation check**

We first conducted this analysis on participants’ ratings of the discussion, which confirmed the effectiveness of the diversity manipulation, $\Delta R^2 = .75, F(4, 89) = 67.08, p < .001$. Attitudes expressed in the prodiversity discussion were perceived as significantly more positive ($M = 7.87, SD = 1.02$) than those in the two antidiversity conditions ($M_{anger} = 2.44, SD = 1.75; M_{disengaged} = 2.55, SD = 1.65$), conversation contrast $\beta = −.86, p < .001$, which did not differ from one another, response contrast $p > .80$. In addition, marginal main effects of IMS and EMS suggested that those who were internally motivated tended to rate the conversation about diversity more negatively, $\beta = −.11, p = .053$, whereas those who were
externally motivated tended to rate any diversity conversation more positively, $\beta = .09, p = .093$.

The only other effect was a significant interaction between condition and EMS, $\Delta R^2 = .02, F(2, 89) = 3.60, p < .05$. EMS was largely unrelated to participants’ ratings of the discussion in the pro-diversity, $\beta = .08, p > .40$, and neg/dse conditions, $\beta = -.05, p > .50$, but predicted a more positive rating of the antidiversity conversation when the confederate’s response was anger, $\beta = .31, p < .01$. Because this interaction pattern was not predicted and does not replicate on either of our measures of emotional reaction, we are hesitant to draw conclusions about it. It is also important to point out that even among participants high in EMS (based on median split), the two antidiversity conversations were still rated as significantly more negative than the prodiversity conversation, $F(2, 45) = 49.08, p < .001$, suggesting that despite this moderation by EMS, the manipulation had largely the intended effect at both high and low levels of this variable.

**Self-reported emotion**

The analysis of self-reported negative emotion revealed a significant main effect of IMS, $\beta = .28, p = .001$ and a main effect of condition driven by the contrast of pro- to antidiversity, $\beta = .60, p = .001$. Reactions to the antidiversity conversation were unaffected by a confederate responding as disengaged or angry, $\beta = .09, p > .20$. These main effects were qualified by the predicted interaction between IMS and condition, $\Delta R^2 = .05, F(2, 87) = 4.18, p < .05$ (see Figure 1).² The effect of pro-versus antidiversity on self-reported negative emotion was significantly moderated by IMS, $\beta = .17, p = .05$. Simple slopes analyses revealed that in the prodiversity condition, IMS was unrelated to self-reported negative emotions, $\beta = -.09, p > .10$. In both antidiversity conditions, IMS positively predicted a more negative emotional response, just as we had found in the earlier pilot study. This relationship was marginally stronger when the confederate responded with anger, $\beta = .50, p < .001$, rather than with disengagement, $\beta = .20, p > .10$, interaction contrast, $\beta = .16, p < .06$.

To further explore the significant interaction between IMS and pro-versus antidiversity discussion (collapsed across confederate reaction), we also conducted simple slopes analyses to test the effect of conversation at high (+1 SD from the mean) and low levels (−1 SD from the mean) of IMS. These analyses revealed that self-reported negative emotion was always significantly higher in the anti-compared to pro-diversity condition, but that these effects were stronger among those high in IMS, $\beta = .80, p < .001$, compared to those low in IMS, $\beta = .35, p < .02$.

Finally, consistent with our hypothesis that internalized norms rather than external pressure would predict one’s emotional response, EMS had no main or interactive effects in predicting self-reported emotion, all $p$s > .10. Whites’ negative response to observing prejudice was predicted by their internalized motivations to control prejudice, not by their interest in adhering to external norms of political correctness.

**Physiological reactions**

When the described analysis was repeated using total peripheral resistance reactivity (TPR) as the dependent variable, a somewhat different pattern emerged. As a reminder, increases in TPR (or vasoconstriction) have been linked to threat,
distress, and general negative affect relative to decreases in TPR (or vasodilation). There were no significant main effects for IMS, EMS, or condition, all $p > .20$, but an IMS x Condition interaction was again significant, $\Delta R^2 = .09, F(2, 64) = 3.34, p < .05$ (see Figure 2). The IMS x Conversation contrast (pro- vs. antidiversity) was significant, $\beta = .34, p < .05$. Mirroring the self-report findings, simple slopes analyses revealed that IMS predicted significantly greater TPR reactivity (vasoconstriction) in the antidiversity condition overall, $\beta = .29, p < .03$ ($\beta_{\text{disengaged}} = .20; \beta_{\text{angry}} = .38$). The confederate’s reaction (angry vs. disengaged) to the antidiversity conversation did not moderate the relationship of IMS with TPR, $\beta = .04, p > .20$.

In contrast, the pattern was reversed in the prodiversity condition, $\beta = -.52, p = .07$, such that lower levels of IMS predicted somewhat greater vasoconstriction when listening to a conversation promoting the merits of ethnic diversity on a college campus. Participants lower in IMS ($-1 \, SD$) exhibited significantly greater TPR reactivity in the prodiversity condition than in the antidiversity condition (combining across confederate response), $\beta = -.49, p < .02$, suggesting more distress when observing a prodiversity discussion among those lower in IMS. In contrast, at higher levels of IMS ($+1 \, SD$), the relationship was in the opposite direction (i.e., lower distress in the prodiversity condition), though not significant, $\beta = .22, p > .20$.

Finally, as we saw with self-reported emotions, EMS had no main or interactive effects, all $p > .20$, in predicting TPR reactivity.

**Discussion**

Recent research seems to suggest that Whites do not generally experience negative emotional reactions to observed acts of racial prejudice (Kawakami et al., 2009). The present study sought to expand on this topic by examining other indicators of emotional responding and testing the role of motivation to respond without prejudice in moderating the strength of one’s emotional response. Across both self-report and physiological reactivity, Whites exhibited a stronger negative emotional response to hearing an antidiversity conversation to the degree that they possessed a strong internal motivation to respond without prejudice. This is the first evidence that an internal motivation to respond without prejudice in one’s own behavior predicts emotional reactions to the prejudicial behavior of others, thus demonstrating the utility of this construct not just for self-regulation but for intragroup regulation as well. In considering the implications of the current research, as well as directions for further research, three issues are particularly important.

**Internal versus external motivation to control prejudice**

The current research clearly shows the importance of internal motivation to control prejudice in predicting people’s reactions to the prejudicial actions of others. Those who internalize egalitarian goals are more likely to negatively evaluate and emotionally respond to others who violate those goals. The identification of internal motivation as a moderating variable in these situations of overheard bias might help to reconcile seemingly contradictory findings on when people condone or condemn other’s bigoted remarks.
In contrast to the moderating effects of internalizing nonprejudiced values, having an external motivation to control prejudice did not moderate people’s emotional reactions. Although sensitivity external social pressure regarding bias regulation has been shown to predict reactions to one’s own biases (Amodio et al., 2006; Plant & Devine, 2009), the current study found that external motivation did not predict people’s emotional responses to the prejudicial statements made by others. This finding is consistent with the idea that an external motivation to respond without prejudice elicits a more superficial desire to conform one’s own behavior to societal norms of egalitarianism, rather than the personal adoption of egalitarian goals that would trigger an emotional response to biases expressed by others. While we recognize that insufficient power reduced our ability to test for a three-way interaction between IMS, EMS, and condition predicting emotional responding, we suspect that this interaction would not be present even in a larger sample given our conceptual argument that this external motivation is often irrelevant for how one responds to other people’s actions.

There may be some contexts, however, in which external motivation to control prejudice would have a stronger role in eliciting emotional reactions to observed prejudice. In the current study, participants did not have a relationship with the two individuals they were observing. However, if there were a relationship between those involved, external motivation to control prejudice might predict one’s response. For example, if one’s parent or child made a racist remark in a public setting, the concern that one might be judged based on the behavior of a close other could drive a stronger vicarious response (Lickel et al., 2005). In this type of context, there might also be more potential for the reaction of an outgroup member to prompt negative emotional responding. In the current research, the response of the Black confederate appeared not to play a major role in moderating emotional reactions. However, if the offending ingroup member was a close other, thus increasing concern of vicarious judgment, the target’s anger as compared to disengagement might provide more meaning as a signal of possible retaliation.

It should be noted that a possible limitation to the design of the present study was the confounding of the content of the remarks about diversity with a negative response from a Black confederate. Although our pilot study suggested that internal motivation to respond without prejudice predicted a similarly negative response to antidiversity comments even in the absence of a Black confederate, we cannot completely rule out the possibility that the confederate’s negative demeanor (either disengaged or angry) enhanced the negative emotional reaction that participants had. Given other research suggesting that emotional experience is shaped by the social context (Schachter & Singer, 1962) and that interracial situations heighten social referencing (Crosby et al., 2008), it seems likely that the emotional reactions of others should modulate one’s own response in these situations. However, one must keep in mind that we endeavored to create pro- and antidiversity conversations that were unambiguous in their attitudes; perhaps more veiled and ambiguous comments would strengthen the influence of other’s reactions on one’s own emotions. Additional research is needed to explore this possibility.

Diversity as a threat

It is notable that among participants with relatively lower levels of internal motivation to respond without prejudice, there was physiological evidence consistent with a negative reaction to the prodiversity statements. Although these participants’ explicit responses were more negative to the antidiversity discussion, they actually exhibited greater vasoconstriction while observing others espouse the benefits of living in a culturally diverse society. Of note, however, is that the variability of internal motivation is constrained by the simple fact that responses on this
measure tend to be negatively skewed, especially for a college sample. With a greater representation of participants reporting low internal motivation to respond without prejudice, we might expect to see more people self-reporting a negative reaction to prodiversity discussions in addition to those exhibiting a physiologically negative response. In any case, this negative physiological reaction to diversity should be investigated in future research.

In an increasingly diverse U.S. society, it is quite common to hear discussions that seek to promote diversity in a positive way in educational, organizational, and public life. Our findings reveal that Whites who have not internalized this goal are likely to experience physiological distress when confronted with these diversity messages, perhaps reflecting a threat response to attitudes at odds with their own values and beliefs. Since this study demonstrates that Whites with a relatively low internal motivation to respond without prejudice showed a negative physiological response to the idea of diversity, an important research goal is to investigate ways of alleviating the threat people feel with regard to changing levels of diversity.

Responses to prejudice

Finally, additional research is needed to connect the emotional reactions studied here with intergroup behavior. When another person is seen as violating norms of egalitarian attitudes and behavior toward an outgroup, one possible response of internally motivated individuals may be to initiate behaviors that punish or confront these behaviors (Eidelman & Biernat, 2003). Efforts to confront bias might be more likely when the perpetrator of bias is an ingroup member whose behavior seems to tarnish the image of the group (Iyer, Schmader, & Lickel, 2007; Johns et al., 2005), and more effective from an ingroup member who is viewed as a more persuasive source (Lickel et al., 2005; Rasinski & Czopp, 2010). In addition, such confrontational behavior is also likely to be inhibited or facilitated by other contextual factors such as the status of the perpetrators relative to the perceiver, the perceived efficacy that prejudice can be changed, diffusion of responsibility for influencing members of one’s group, and whether or not the outgroup has already sought to retaliate.

Furthermore, punishment or confrontation of individuals who act in a prejudiced manner is only one possible response to such behavior. When the perpetrator is an ingroup member, as they were in this study, a likely alternative is to decrease one’s identification with the racial ingroup identity (Eidelman & Biernat, 2003; Kessler & Hollbach, 2005; Schmader & Lickel, 2006), although denying one’s ingroup identity is unlikely to have strong benefits to changing intergroup inequities. A more socially beneficial response to observing ingroup members act in a prejudiced manner is to increase commitment to social change that supports diversity and restores equality. Although confronting individuals who are biased may be considered the most “proactive” response, increased support for diversity initiatives may also play a role in social change (Thomas, McGarty, & Mavor, 2009). Thus, further research should examine not only the factors that predict whether people confront prejudiced others, but also the range of responses (e.g., disidentification; support for social change) that may be employed in these situations. In an increasingly diverse society, it is important to understand the full range of responses that majority group members show to the prejudiced statements and behavior of others.

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Notes

1. Although these three-way interactions were not significant in either analysis (both \( \Delta R^2 < .03 \), both \( \beta \)s...
> .40), we caution against drawing strong conclusions from these null effects as the study is likely underpowered to detect these higher order effects.

2. When analyses are conducted separately on five conceptually based subsets of these negative emotions, this interaction is significant for shame, guilt, anger, and sadness, and marginal for anxiety (p = .08).

3. Degrees of freedom for analyses of TPR are reduced due to loss of quality signals from one of the three sources (ECG, impedance cardiography [ICG], or blood pressure) collected resulting in lost data from 23 participants. This occurred due to equipment malfunction, experimenter error, or power surge, and the distribution of data lost was equal across condition (7–9 lost per cell). Patterns of results on self-report measures are unchanged when restricted to this smaller subsample.

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