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Aversive Affect Versus Racism as Predictors of Racial Discrimination in Helping

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ABSTRACT

We examined aversive affect and racism as predictors of differences in helping White versus Black targets. According to aversive racism theory, Whites may express egalitarian attitudes but experience discomfort in interracial interactions, producing discrimination. Participants completed racism measures and reported their likelihood of helping White or Black targets. Racism negligibly predicted discriminatory helping across studies. In Studies 2 and 3, participants experiencing aversive affect were less likely to help Black than White targets. Results demonstrate negative feelings, more so than racial biases, impacts discriminatory helping. We hope to inspire future research examining why White bystanders experience aversion in interracial helping.

The following studies examined motivations for why White people are less likely to provide help to Black people than to White people who need help. We examined racism in Studies 1 through 3 and aversive affect in Studies 2 and 3, as motivations for White people providing less help to Black than White targets. Overall, we predicted that aversive affect, or negative feelings, that arise from the helping situation would produce discriminatory helping; we expected racism, however, to have little impact on differences in helping White and Black targets. Aversive racism theory provides support for why aversive affect leads to providing less help to Black than White targets.

Helping and discrimination

In studies examining racial discrimination in helping situations, the basic premise is that if White people are less likely to help, and provide lesser quality help to Black people than to White people needing help, then discrimination occurred. Reviews of the literature, however, demonstrate that clear-cut discrimination—where White people are less likely to help Black versus White targets—is rarely found, and they suggest that discriminatory helping is more likely to occur when certain situational factors are present (Saucier, 2015). In their literature review of discrimination in helping situations, Crosby, Bromley, and Saxe (1980) discovered that White individuals were more likely to provide help to White versus Black targets in only 40% of the reviewed studies, but the authors noted that the quality of help was different: White individuals provided lesser quality help to Black than to White targets. Similarly, a meta-analysis examining the relationships between race and helping indicated that overall there was not discrimination in helping situations: White and Black targets were helped equally in the reviewed studies (Saucier, Miller, & Doucet, 2005). Instead, the meta-analysis found that discrimination was more evident in certain situations: Less helping was provided to Black than White targets when providing help was costlier (e.g., when helping involved greater time, risk, effort, difficulty, distance).

One variable that has yet to be included in studies on discrimination in helping situations is the racism of potential helpers. It seems logical to conclude that White racists—those who hold negative attitudes toward Black people—are going to be less likely to provide help to Black than to White targets, and may do so even in face-to-face situations (Crosby et al., 1980) and in situations that involve lesser cost (Saucier et al., 2005). Racism, however, was not measured in the previously mentioned reviews, and because these previous studies did not measure White participants' levels of racism, the relationship between race, racism, and helping is not clear. There are two

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studies in which the relationship under investigation was studied. Both studies, however, failed to find a noteworthy relationship between helping Black targets and racism scores (Bernard, McManus, & Saucier, 2014; Kunstman & Plant, 2008). Research has successfully linked biases toward racial minorities with discriminatory behaviors besides helping (e.g., friendliness in interracial interactions; see Triplett, 2012, for review), and biases therefore should also be related to discrimination in helping situations.

More recent studies varied situational contexts (e.g., bystander characteristics, perceived benevolence of the target, cognitive load, group threat) and consistently demonstrated that individuals provide more help to ingroup than to outgroup members (Gamberini, Chittaro, Spagnolli, & Carlesso, 2015; Levine, Cassidy, Brazier, & Reicher, 2002; Levine & Crowther, 2008; Meiring, Subramoney, Thomas, Decety, & Fourie, 2014; Siem, Lotz-Schmitt, & Sturmer, 2014; van Leeuwen, 2006) but do so without measuring prejudice or biased attitudes toward the outgroup. If discrimination occurs in helping under certain situational contexts, then it makes sense that discrimination would be exacerbated for those who are biased toward outgroup members. Therefore, we designed a series of studies to demonstrate the effects of race and racism on helping. In each study, we predicted that White participants who scored higher on measures of racism would be less likely to help Black versus White targets.

Studies 1a-1e: Racism and helping

Participants completed each of the following studies in two parts. In the first part, participants completed measures of racism, and in the second part they were randomly assigned to a condition in which either a White or Black person was in need of help. The two parts were completed at separate times so that their responses to the helping scenario were less likely to be influenced by immediately preceding responses to the racism measures. The racism measures included the short form of the Racial Argument Scale (RAS; Saucier & Miller, 2003; five items), the Modern Racism Scale (MRS; McConahay, Hardee, & Batts, 1981; seven items; e.g., *Blacks are getting too demanding about their push for equal rights*), and the Attitudes toward Blacks Scale (ATB; Brigham, 1993; 20 items; e.g., *Some Blacks are so touchy about race that it is difficult to get along with them*). Higher scores indicated greater levels of racism toward Black people. Each study was completed in approximately 30 minutes, after which participants were thanked and debriefed. Each study complied with ethical standards and was approved by the Kansas State University Institutional Review Board.

Unless otherwise noted, we followed a similar data analytic strategy using hierarchical multiple regression procedures. These procedures as outlined by Aiken and West (1991) include entering all main effects into the first step of the regression; variables representing all possible two-way interactions into the second step of the regression; and, when applicable, variables representing all possible three-way interactions into the third step of the regression (see also Cohen & Cohen, 1983; Cohen, Cohen, West, & Aiken, 2003; Frieman, Saucier, & Miller, 2018). All continuous variables were standardized and all categorical variables were dummy coded before they were entered into the regressions. Interactions were probed using simple effects analyses.

Study 1a: Support for student scholarships

We predicted that participants with greater racist beliefs would be less supportive of scholarships helping Black versus White students.

Methods

White participants ($N = 420$; M age $= 19.28$, $SD = 1.98$; 55.7% female) completed a series of racism measures (MRS $\alpha = .77$; ATB $\alpha = .78$; RAS $\alpha = .65$) during a mass screening session at the beginning of the semester. As part of a separate study, participants read a description of a proposal to increase funding for student scholarships (see Appendix A). The scholarships would be funded by increasing tuition by $2, $12, $24, $48, or $240. In addition, the scholarships would be awarded to Black first-year students or first-year students generally. After reading about the proposal, participants indicated how supportive they were of the proposal on a scale of 1 (*very unsupportive*) to 9 (*very supportive*).

Results and discussion

A series of three-step hierarchical multiple regressions were conducted to test the extent to which race of scholarship recipient,[1] racism,[2] and the increase in tuition[3] influenced participants' support of the scholarship funding proposal. To test the hypothesis that those who hold more negative attitudes toward Black people will be less likely to help Black than White students, we were most interested in the interactions containing race of the scholarship recipient and racism. Therefore, results from the two-way

interactions between race and racism and the three-way interactions between race, racism, and amount of tuition increase on support for the scholarship are discussed.

The two-way interactions between race and RAS scores ($B = 0.19$, $SE = .23$, $\beta = 0.01$), race and MRS scores ($B = -0.20$, $SE = .24$, $\beta = -0.06$), and race and ATB scores ($B = -0.13$, $SE = .24$, $\beta = -0.04$) demonstrated weak relationships between race and racism on support for the scholarship proposal. Therefore, we cannot conclude those who hold greater racist beliefs are less supportive of the scholarship helping Black versus White students.

Likewise, the three-way interactions between race; amount of tuition increase; and RAS scores ($B = 0.75$, $SE = .23$, $\beta = 0.23$), MRS scores ($B = 0.39$, $SE = .24$, $\beta = 0.12$), and ATB scores ($B = -0.05$, $SE = .26$, $\beta = -0.01$) demonstrated a general pattern of weak relationships between race, racism, and increase in tuition on support for the scholarship.[4] Therefore, regardless of how much money they were asked to contribute to the scholarship, those who hold greater racist beliefs generally were not less likely to support the scholarship helping Black versus White students. Our hypothesis that racism would predict discrimination in helping was not supported.

Study 1b: Donating to student scholarships

In the previous study, participants were asked to what extent they supported an increase in tuition to help incoming first-year students. If such a proposal were to be accepted, all students' tuition would increase, regardless of whether they supported the proposal. Consequently, support for a proposal may not be the best measurement of helping first-year students. Therefore, we redesigned the study indicating that the scholarship would be funded through donations, giving participants greater choice to help their peers. We hypothesized that those with greater racist beliefs would donate less to scholarships to help Black versus White students.

Methods

White participants ($N = 59$; M age $= 18.42$, $SD = .70$; 62.7% female) completed a series of racism measures (MRS $\alpha = .83$; ATB $\alpha = .87$; RAS $\alpha = .63$) during a mass screening session at the beginning of the semester. Participants later read a description of a scholarship funded through student donations (see Appendix A). We manipulated the race of the scholarship recipient by indicating that the scholarships would be for Black students or for students who do not qualify for minority scholarships. We also manipulated the scholarship's eligibility requirements as being based on merit (*high school GPA of 3.5, an ACT score of 27, and complete a 500-word essay*) or financial need (*the student must come from a family with a combined annual household income less than $30,000 per year*). After reading about the scholarship, participants indicated how much they would donate to the scholarship fund.

Results and discussion

A series of three-step hierarchical multiple regressions were conducted to test the extent to which race of scholarship recipient,[5] racism,[6] and if the scholarship was need or merit based[7] influenced participants' donation to the scholarship fund. To test the hypothesis that those who hold more negative attitudes toward Black people would donate less money to scholarships for Black versus White students, we were most interested in the interactions containing race of the scholarship recipient and racism. Therefore, results from the two-way interactions between race and racism and the three-way interaction between race, racism, and need or merit-based scholarship on the amount donated to the scholarship fund are discussed.

The two-way interactions between race and the RAS ($B = -300.36$, $SE = 296.42$, $\beta = -0.30$), race and the MRS ($B = -52.76$, $SE = 291.55$, $\beta = -0.05$), and race and the ATB ($B = -320.31$, $SE = 279.71$, $\beta = -0.30$) demonstrated an inconsistent pattern of relationships between race and racism on donations made to the scholarship fund.[8] Therefore, we cannot conclude that those who hold greater racist beliefs are less likely to help their Black than White peers through donations made to a scholarship fund.

The three-way interactions between race; scholarship type; and RAS ($B = -46.06$, $SE = 728.06$, $\beta = -0.03$), MRS ($B = -129.36$, $SE = 619.31$, $\beta = -0.07$), and ATB ($B = -146.41$, $SE = 1201.88$, $\beta = -0.10$) also demonstrated weak relationships between race, racism, and type of scholarship on the donations made to the scholarship fund. Therefore, regardless of the type of scholarship, greater racist beliefs were weakly associated with intentions to donate to a scholarship that would help their Black versus White peers. Our prediction that racism would predict discrimination in helping was not supported.

Study 1c: Participating in the Great American Cleanup

In the two previous studies, we asked White college student participants to help their peers through supporting a tuition increase and donating to a scholarship fund. Given that many college students receive some type of financial assistance (e.g., scholarships, loans) to attend college themselves, they may not have the ability to support their fellow peers financially. In addition, there was no accountability for helping: If participants reported they would donate money to the scholarship fund, we do not know if they would actually donate. With this is mind, we designed a study that, instead of asking participants to donate money, employed a measure of intent to help. Using intent to help as a dependent measure arises from Coke, Batson, and McDavis' (1978) Katie Banks paradigm. In this paradigm, participants learned about a woman named Katie Banks, a college student who needed help; participants indicated their willingness to volunteer to help Katie. Inspired by this paradigm, we asked participants to indicate their willingness to volunteer to help White or Black persons during the Great American Cleanup. In the current study, we predicted that those who scored higher on racism measures would be less likely to intend to help Black versus White persons.

Methods

White participants ($N = 85$; M age $= 18.54$, $SD = .77$; 72.9% female) completed the RAS ($\alpha = .45$) during a mass screening session at the beginning of the semester. Later, they participated in a separate study in which they read about the Keep America Beautiful Foundation's Great American Cleanup and the ways in which volunteers can help homeowners and neighborhoods (see Appendix A). Participants were randomly assigned to one of two conditions in which the homeowners receiving help were described as White or Black; a picture of a White or Black man receiving help from a volunteer was also included. The caption on the picture indicated that the homeowner's name was Steve or Tyronne.

After reading the description and viewing the picture, participants responded to a series of items about how much they believe they should help (five items; e.g., *I should help neighborhood residents through volunteering for events like the Great American Cleanup*; $\alpha = .90$), the extent to which they can help (five items; *I can help residents of neighborhoods with their yard work (ex. mowing, raking)*; $\alpha = .88$), and the extent to which they would help (five items; *I will participate in events like the Great American Cleanup*; $\alpha = .89$). Participants responded to items using a scale from 1 (*strongly disagree*) to 9 (*strongly agree*). In addition, participants were provided with a list of eight ways that they could help the Keep America Beautiful Foundation (e.g., *I would like to volunteer in the events by picking up litter in parks and neighborhoods*) and a space to write their contact information so that the foundation could contact them to volunteer.[9] The number of checkbox items they selected and whether they provided their contact information were counted to represent a dependent measure of helping interest where scores ranged from 0 (*no checkboxes or contact information provided*) to 9 (*all eight boxes checked and contact information provided*).

Results and discussion

Data were analyzed using a series of two-step hierarchical multiple regressions to examine the extent to which the race of the person being helped[10] and racism[11] influenced the likelihood of helping through the Keep America Beautiful Foundation. To test the hypothesis that those who have more negative attitudes about Black people will be less likely to help Black versus White targets, we are most interested in the two-way interaction between race and racism on helping in the second step of the regression.

Results revealed weak relationships between the two-way interactions between race and racism on participants' beliefs about if they should help ($B = -0.17$, $SE = .45$, $\beta = -0.07$), the extent to which they can help ($B = -0.19$, $SE = .46$, $\beta = -0.01$), the extent to which they would help ($B = -0.39$, $SE = .47$, $\beta = -0.15$), and the number of boxes they checked to help ($B = -0.47$, $SE = .75$, $\beta = -0.12$). The results of this study do not allow us to conclude that those with greater racist beliefs are less likely to help Black versus White targets. We again did not find support for our prediction that racism would predict discrimination in helping.

Study 1d: Helping those with Cardiasis Istereidus

In the preceding studies, it is possible that participants did not interpret the helping situations as emergencies; the scholarship recipients and those receiving help through the Keep America Beautiful Foundation were not in dire situations in which their lives were at risk. Previous research has demonstrated differences in helping White versus Black targets in emergency situations (e.g., Gaertner & Bickman, 1971; Gamberini, Chittaro, Spagnolli, & Carlesso, 2015;

Kunstman & Plant, 2008; Piliavin, Dovidio, Gaertner, & Clark, 1981; Saucier et al., 2005). We then designed a study where participants indicated if they would help those with a chronic and terminal skin disease named *Cardiasis Istereidus*. (This disease is fictitious but plausible, and we created it for this study.) Given that we explained that those affected by this disease experience extreme and adverse symptoms and are likely to die from their illness, this situation evokes more of an emergency than the preceding studies. We predicted that participants with greater negative attitudes toward Black people would be less likely to help Black versus White targets affected by *Cardiasis Istereidus*.

Methods

White participants ($N = 68$; M age $= 19.04$, $SD = 1.14$; 58.8% female) completed the RAS ($\alpha = .61$) during a mass screening session at the beginning of the semester. At a later time, they participated in a study in which they learned about a chronic, fictitious skin disease called *Cardiasis Istereidus* (see Appendix A); they were randomly assigned to conditions in which the disease affected White or Black people. After reading about the skin disease and learning that the Student Government Association at their university was holding a telethon to help those affected by the disease, participants responded to questions about their ability to help (four items; e.g., *Do you think you have the ability to volunteer at this event in order to benefit those with* Cardiasis Istereidus*?*; $\alpha = .89$) and their likelihood of helping (five items; e.g., *How likely would you be to help people suffering from* Cardiasis Istereidus*?*; $\alpha = .97$); participants responded using a scale from 1 (*not at all*) to 9 (*very much*). Finally, participants were given a list of 10 ways they could help those with *Cardiasis Istereidus* through their university (e.g., *I would like to participate in the telethon in order to benefit those with* Cardiasis Istereidus) along with a space to write their name and contact information to be contacted to later help with an on-campus telethon. The number of checkbox items and whether they provided their contact information were counted to represent a dependent measure of helping interest where scores ranged from 0 (*no checkboxes or contact information provided*) to 11 (*all 10 boxes checked and contact information provided*).

Results and discussion

Data were analyzed using a series of two-step hierarchical multiple regressions to examine the extent to which race[12] and racism[13] influenced helping those with *Cardiasis Istereidus*. To test the hypothesis that those who have more negative attitudes about Black people will be less likely to help Black versus White targets, we are most interested in the two-way interaction between race and racism in the second step of the regression.

Results revealed weak relationships between the two-way interaction between race and racism on participants' beliefs about their ability to help ($B = -0.33$, $SE = .64$, $\beta = -0.15$), their likelihood of helping ($B = -0.20$, $SE = .94$, $\beta = -0.07$), and the number of boxes they checked to help ($B = -0.98$, $SE = 1.81$, $\beta = -0.20$). The pattern of results of this study do not allow us to conclude that those with higher racist beliefs are less likely to help Black versus White targets with *Cardiasis Istereidus*. Our hypothesis that racism would predict discrimination in helping was not supported.

Study 1e: Behavioral study

One limitation of the studies we have so far discussed is that they all include self-report measures of helping. It is possible that self-reports of helping and helping intentions are not truly representative of what people would do in an actual helping situation. We designed the next study to measure whether White participants would help a confederate who was perceived to have passed out during a study. We predicted that racism would interact with the race of the confederate such that for White confederates, racism scores should make little difference in helping. However when the confederate was Black, we expected that those who are higher in racism would be less likely to help than those who are lower in racism.

Methods

Participants completed the RAS ($\alpha = .63$) during a mass screening session at the beginning of the semester. To find participants with high and low racism scores, we split the data into thirds and allowed only the participants in the upper and lower thirds to participate in the study. These participants ($N = 71$; M age $= 19.07$, $SD = 1.41$; 62.0% female) later signed up for a study on cognitive abilities in which the goal was to solve anagram puzzles. Using block randomization procedures based on their racism scores, participants were randomly assigned to a condition where the confederate in the room was either White or Black. It should be noted that confederates and experimenters were blind to the participants' racism scores. After explaining the study, the experimenter

left a single participant and a single confederate alone in a room to solve a series of anagram puzzles. The experimenter explained that they would be given 5 minutes to solve the anagrams. Three minutes after the start of the study, the confederate pretended to pass out (see a photo in Appendix A), and we measured to see if the participant helped the confederate. We coded helping to include the participant going to the next room to inform the experimenter that something was wrong with the confederate or the participant communicating directly to the confederate to see if he was okay.

Results and discussion

This created a 2 (racism: high vs. low) × 2 (confederate: White vs. Black) between-groups design with a categorical dependent measure (help: yes or no). When the confederate was White, 35% of the low racist participants helped and 52% of the high racist participants helped ($\phi = -.18$). When the confederate was Black, 68% of the low racist participants helped and 75% of the high racist participants helped ($\phi = -.07$). These findings suggest that racist attitudes had very little influence on participants' decision to help White versus Black confederates. We did not support our hypothesis that racism would predict differences in helping White and Black persons.

Overall discussion and conclusion from Studies 1a–1e

We predicted that racism would influence differences in helping White and Black targets. We expected that White participants with higher racism scores would be less likely to help Black than White targets. However, across a variety of different manipulations, several measures of racism, and varied operational definitions of helping, we found that racism and race weakly interacted in predicting helping. Our findings are consistent with studies that failed to find a noteworthy relationship between measures of racism and helping White versus Black targets (Bernard et al., 2014; Kunstman & Plant, 2008). Why does racism produce negligible differences in helping Black versus White targets?

Study 2: Aversive affect, racism, and helping

One study that may begin to help answer this question is Kunstman and Plant's (2008) examination of racial bias in high- and low-emergency helping situations. Their results indicated that in emergencies, White participants provided faster and better quality help to White than Black targets. Consistent with what we found in Studies 1a–1e, the difference in helping was not attributed to participants' implicit biases toward Black people. Instead, the differential helping response was found to be related to participants' aversion to the helping situation. According to Kunstman and Plant (2008), participants reported greater aversion to situations involving Black compared to White targets, and greater aversion led to helping White targets faster and helping Black targets slower. Kunstman and Plant concluded that "these findings indicate that White people's racial biases in helping behavior may be influenced more by immediate affective and cognitive responses in the specific situation than by their general implicit negativity to Black people" (p. 1506). Here they proposed that implicit racism may play less of a role in predicting differences in helping; rather *individuals' feelings about the helping situation* have a greater impact on the helping decision. The initial intent of Kunstman and Plant's studies was to test the extent to which emergency levels influenced racial discrimination, not the extent to which implicit racism impacted discriminatory helping; however, this unintended and small finding in a larger series of studies appears to have important implications and is deserving of further exploration. Therefore, we decided to formally test their predictions and examine if aversive feelings about the helping situation had a greater impact than racism on predicting discrimination in situations involving White and Black targets who need help. We predicted that racism would have a negligible effect and aversive feelings about the situation, would have a greater effect on predicting discrimination in helping situations.

Aversive racism theory, affective states, and helping

There are several theoretical explanations for why we observe differences in helping Black and White targets but cannot fully account for this difference because of individuals' reported levels of racism. Aversive racism theory (Gaertner & Dovidio, 1986) and the feel good, do good hypothesis (Rosenhan, Salovey, & Hargis, 1981) provide explanations for how the way a person feels in a situation may influence his or her decision to help a person in need. Given that helping situations evoke emotional responses from bystanders, bystanders can find ways to reduce negative emotions though their decision to help or not help.

Aversive racism theory states that in societies where prejudiced attitudes are discouraged, overt forms of discrimination are less likely to occur; there are,

however, still instances of unfair treatment based on race in these egalitarian societies. That covert forms of bias are more prevalent than overt forms can be explained by White individuals often holding nonprejudiced and egalitarian values but simultaneously experiencing feelings of discomfort around Black people. White individuals likely engage in behaviors that reduce this discomfort, such as avoiding interactions with Black people (Dovidio & Gaertner, 2000, 2004; Gaertner & Dovidio, 1986; Pearson, Dovidio, & Gaertner, 2009). Although this form of bias is subtler, indirect, and often unintentional, the consequences are still dire. Because White individuals may hold egalitarian values but be unaware their actions are discriminatory, this form of prejudice is particularly dangerous (Dovidio & Gaertner, 2004). In the current study, we predicted that aversive and negative feelings would produce avoidant and discriminatory responses. Concurrent with our hypothesis, if many people do hold egalitarian beliefs and values, then we should expect to see that they would score lower on self-report measures of racism, but as aversive racism theory states, they still may feel uncomfortable (i.e., experience aversive affect) in those situations that may produce discrimination (i.e., avoiding and therefore not helping Black targets).

In addition, research concerning affect and helping indicates that feelings do influence the likelihood of helping (see Bekkers & Wiepking, 2011; Miller, 2009; Salovey, Mayer, & Rosenhan, 1991, for reviews). The feel good, do good hypothesis indicates that positive affective states lead to greater helping (Baron, 1997; Carlson, Charlin, & Miller 1988; Cunningham, 1979; Guéguen, 2012; Isen & Levin, 1972; Isen & Simmonds, 1978; Levin & Isen, 1975; Rosenhan, Salovey, & Hargis, 1981), and overall conclusions agree that positive feelings are more likely than negative feelings to increase helping (Carlson & Miller, 1987; Forgas, Dunn, & Granland, 2008; Niesta Kayser, Greitemeyer, Fischer, & Frey, 2010; North, Tarrant, & Hargreaves, 2004). Therefore, in line with our hypotheses, we predicted that participants may experience greater positive emotions concerning helping White targets and greater negative emotions helping Black targets; these emotional states may then produce a greater likelihood of helping White targets and a lesser likelihood of helping Black targets.

Overview of the current study

We tested the hypothesis that aversive affect would have a greater impact than racism on predicting discrimination in helping situations. After completing several racism measures, participants were asked to indicate the likelihood that they would help a White or Black person and their feelings about the helping situation. We predicted that when the person needing help was Black, participants would experience aversive affect and would be less likely to help. Racism, however, was expected to predict only small differences in helping White and Black targets. These hypotheses were founded in aversive racism theory (Gaertner & Dovidio, 1986), the feel good, do good hypothesis (Rosenhan et al., 1981), and the predictions proposed by related research (Kunstman & Plant, 2008).

We were interested in not only participants' general willingness to help but also the quality of that help. In any situation, there is more than one way that helpers may help (e.g., helping jump-start a stranded car vs. calling a tow truck); in one instance the helper is providing direct and immediate assistance, and in the other they are delaying the helping response and passing the responsibility of helping to another party. Thus, we also measured the extent to which participants would directly help the person. Consistent with the previous findings on quality of help (Crosby et al. 1980; Gamberini et al., 2015; Kunstman & Plant, 2008), we predicted that aversive affect would be related to being less likely to provide help and to provide higher quality help (i.e., direct helping) to Black than to White targets.

Method

Participants

Participants ($N = 163$) had completed a mass screening session containing several racism measures. Because we were interested in White individuals' attitudes and feelings about helping Blacks and Whites, 25 participants were removed from data analysis because they indicated that they were not White or did not report their race. Another seven participants were removed after failing the manipulation check, which asked participants to identify the race of the target in the helping situation. The final 131 participants[14] who were included in data analysis had an average age of 18.96 ($SD = 1.31$), were primarily female (63.4%), and in their first year of college (68.7%). In exchange for their participation, participants received credit toward their general psychology research requirement.

Measures

Unless otherwise indicated, participants responded to items on the following measures using a Likert-type

scale from 1 (*disagree very strongly*) to 9 (*agree very strongly*). Necessary items were reverse coded before creating averaged composite scores for each measure.

Racism measures

As in Study 1, participants completed a short form of the RAS ($\alpha = .59$), the MRS ($\alpha = .69$), and the ATB ($\alpha = .82$). Higher scores indicated greater levels of explicit racism toward Black people.

Helping situation

Participants were asked to imagine themselves in one of two scenarios where a person named Andrew (the White target) or Tyrone (the Black target) needed help. Originally there were two different helping situations, of which participants read one. In one scenario, participants imagined leaving classes for the day, getting to the school parking lot where their car was parked, and noticing another student having problems with his car. The other student introduced himself as Andrew or Tyrone and indicated that his car was not starting. In the other scenario, participants imagined receiving an e-mail from their professor about helping another student in a math course in which they were currently enrolled. The student, Andrew or Tyrone, had been sick, missed several classes, and needed help catching up on the material he missed.

During data analysis, we found only small differences in helping depending on the type of helping situation.[15] Subsequently, we report our test of the hypothesis without including the type of helping situation as a predictor variable. Only the race of the target was used as a predictor variable in tests of the hypothesis.

Aversive affect

Participants responded to 34 items measuring their feelings about the helping situation (from Devine, Monteith, Zurwerink, & Elliot, 1991); nine items representing the discomfort subscale ($\alpha = .89$) were used to assess participants' aversive or negative feelings about the helping situation (e.g., *tense, distressed, anxious, uncomfortable*) using a Likert-type scale from 1 (*does not apply at all*) to 9 (*applies very much*). Higher scores indicated that participants experienced higher levels of aversive affect in the helping situation.

Helping the target

Participants reported the likelihood that they would help the target in general (two items, $\alpha = .91$; e.g., *What is the likelihood that you will help?*) using a Likert-type scale from 1 (*very low/very unlikely*) to 9 (*very high/very likely*). Higher scores indicated that participants would be more likely to help the target.

Directly helping the target

Participants reported the likelihood that they would directly help the target (four items, $\alpha = .69$; e.g., *What is the likelihood that you would help Andrew jump-start his car? What is the likelihood that you would meet with Andrew after class to review what you just learned?*) using a Likert-type scale from 1 (*very low/very unlikely*) to 9 (*very high/very likely*). Higher scores indicated that participants would be more likely to directly help, and therefore provide higher quality help, to the target.

Procedure

Participants first completed racism measures (the RAS, MRS, and ATB) during a mass screening session at the beginning of the semester. While participating in a study later in the semester, they were randomly assigned to one of two conditions in which they read about a White (i.e., Andrew) or Black (i.e., Tyrone) person who needed help. After reading the vignette, they indicated their feelings about the helping situation, responded to the criterion variables related to helping,[16] completed a manipulation check to assess whether they perceived the race of the target as intended (i.e., perceiving Andrew to be White or Tyrone to be Black), and reported their demographic features. Participants completed the study in approximately 30 minutes, after which they were thanked and debriefed. The study complied with ethical standards and was approved by the Kansas State University Institutional Review Board.

Results

Preliminary analyses

Participants were nearly equally likely to report that they would help White ($M = 6.96$, $SD = 2.34$) and Black ($M = 6.75$, $SD = 2.19$) targets ($d = .09$). Likewise, they were almost equally likely to directly help White ($M = 5.21$, $SD = 1.85$) and Black ($M = 5.24$, $SD = 1.92$) targets ($d = .02$). Further, the correlations between aversive affect, racism, and helping and directly helping White and Black targets demonstrated interesting patterns (Table 1). Consistent with our predictions, explicit racist attitudes appeared to have little influence on helping Black or White targets. Aversive affect, however, appeared to have a negative effect on helping and directly helping the Black target and a

positive effect on helping the White target. As predicted, when participants experienced greater aversive affect, they were less likely to help the Black target and more likely to help the White target.

To further compare the relationships between racism, aversive affect, and race on helping and directly helping the targets, we used Fisher's z transformations to examine the differences in helping White and Black targets (Table 1). The z scores suggest that aversive affect had a greater effect on differentially helping ($z = 2.97$) and directly helping ($z = 1.47$) White and Black targets than did racism scores ($zs = -0.32$ to 0.23).

Test of hypothesis: Data analysis

As in Studies 1a–1d, data were analyzed using three-step hierarchical multiple regressions to test the relationships between target race,[17] aversive affect,[18] and racism[19] on helping and directly helping Whites and Blacks. The hypothesis that aversive feelings about helping situations would have a greater impact than racism on differences in helping Whites and Blacks was tested through the two-way interactions between race and aversive affect and between race and racism (RAS, MRS, and ATB) in the second step of the regressions. Therefore, next we report the Race × Aversive Affect and the Race × Racism interactions on helping and direct helping. Full reports of the results are available in Tables 2 and 3.

The effects of aversive affect, racism, and race on helping

The three regression analyses containing aversive affect, racism, and race as the main predictors of helping are displayed in Table 2. Consistent with predictions, the two-way interactions between race and aversive affect ($Bs = -1.46$ to -1.31, $SEs = .47$ to .49; $\beta s = -0.53$ to -0.49) were stronger than the interactions between race and racism ($Bs = 0.27$ to 0.58, $SEs = .46$ to .48; $\beta s = 0.09$ to 0.19). The Race × Aversive Affect interactions were probed using simple slopes analyses and revealed that participants were more likely to report that they would help White targets when they experienced higher levels of aversive affect ($Bs = 0.57$ to 0.79, $SEs = .35$ to .39; $\beta s = 0.27$ to 0.37). However, individuals were less likely to report that they would help Black targets when they experienced higher levels of aversive affect ($Bs = -0.66$ to -0.62, $SEs = .25$ to .26; $\beta s = -0.37$ to -0.35). Hence, consistent with hypotheses, racism levels were weakly associated with discriminatory helping, whereas individuals' experiences of aversive emotions were associated with being less likely to help Blacks and more likely to help Whites (see Figure 1). Specifically, when experiencing aversive affect, participants were more likely to help White targets and less likely to help Black targets.

The effects of aversive affect, racism, and race on direct helping

The results reported here are for the three regression analyses containing aversive affect, racism measures, and race as the main predictors of direct helping (see Table 3). As predicted, the interactions between race and aversive affect ($Bs = -0.66$ to -0.87, $SEs = .41$ to .42; $\beta s = -0.37$ to -0.28) were stronger than the interactions between race and racism ($Bs = 0.01$ to 0.14, $SEs = .40$ to .41; $\beta s = 0.002$ to 0.06). The two-way interactions between race and aversive affect were probed using simple effects analyses to find that aversive affect had little influence on the likelihood of reporting that participants would directly help the White target ($Bs = 0.06$ to 0.31, $SEs = .30$ to .32; $\beta s = 0.03$ to 0.17). However, individuals were less likely to report that they would directly help the Black target when they experienced higher levels of aversive affect ($Bs = -0.50$ to -0.52,

Table 1. Means, standard deviations, and correlations between racism measures and aversive affect on helping and direct helping White and Black targets in Study 2.

	M (*SD*)	Correlation with helping White targets	Correlation with helping Black targets	Difference between helping White and Black targets (*z*)
RAS	4.57 (1.49)	0.01	0.03	−0.09
MRS	3.31 (1.26)	−0.17	−0.11	−0.27
ATB	3.44 (1.11)	−0.24	−0.17	−0.32
Aversive affect	2.43 (1.39)	0.19	−0.33	2.97
		Correlation with directly helping White targets	Correlation with directly helping Black targets	Difference between directly helping White and Black targets (*z*)
RAS	4.57 (1.49)	−0.09	−0.07	−0.09
MRS	3.31 (1.26)	−0.07	−0.12	0.23
ATB	3.44 (1.11)	−0.09	−0.11	0.09
Aversive affect	2.43 (1.39)	−0.01	−0.31	1.47

Note. RAS = Racial Argument Scale; MRS = Modern Racism Scale; ATB = Attitudes toward Blacks Scale.

Table 2. Hierarchical multiple regression analyses displaying the effects of aversive affect, racism (RAS/MRS/ATB), and race on helping in Study 2.

Step	Predictor Variable	β	B	SE	Partial correlation
Step 1					
	Race	.051	.208	.451	.050
	Aversive affect	−.056	−.109	.216	−.055
	Racism (RAS)	.032	.066	.233	.031
Step 2					
	Aversive Affect × Race	**−.533**	**−1.457**	**.491**	**−.311**
	Race × Racism (RAS)	.089	.273	.458	.066
	Aversive Affect × RAS	−.122	−.178	.192	−.102
Step 3					
	Aversive Affect × RAS × Race	−.039	−.124	.415	−.033
Step 1					
	Race	.055	.227	.452	.055
	Aversive affect	−.015	−.029	.221	−.015
	Racism (MRS)	−.137	−.295	.242	−.133
Step 2					
	Aversive Affect × Race	**−.540**	**−1.480**	**.474**	**−.331**
	Race × Racism (MRS)	.188	.579	.469	.138
	Aversive Affect × MRS	−.023	−.043	.230	−.021
Step 3					
	Aversive Affect × MRS × Race	−.018	−.068	.495	−.016
Step 1					
	Race	.036	.149	.463	.036
	Aversive affect	−.009	−.018	.232	−.009
	Racism (ATB)	−.200	−.436	.243	−.197
Step 2					
	Aversive Affect × Race	**−.486**	**−1.315**	**.477**	**−.300**
	Race × Racism (ATB)	.189	.544	.478	.129
	Aversive Affect × ATB	.077	.165	.248	.076
Step 3					
	Aversive Affect × ATB × Race	−.037	−.122	.500	−.028

Note. RAS = Racial Argument Scale; MRS = Modern Racism Scale; ATB = Attitudes toward Blacks Scale.

Table 3. Hierarchical multiple regression analyses displaying the effects of aversive affect, racism (RAS/MRS/ATB), and race on direct helping in Study 2.

Step	Predictor Variable	β	B	SE	Partial correlation
Step 1					
	Race	.111	.388	.380	.110
	Aversive affect	−.150	−.251	.182	−.148
	Racism (RAS)	−.049	−.086	.195	−.048
Step 2					
	Aversive Affect × Race	**−.373**	**−.873**	**.424**	**−.222**
	Race × Racism (RAS)	.023	.060	.396	.017
	Aversive Affect × RAS	−.189	−.236	.166	−.156
Step 3					
	Aversive Affect × RAS × Race	.003	.009	.359	.003
Step 1					
	Race	.137	.484	.380	.139
	Aversive Affect	−.147	−.246	.186	−.144
	Racism (MRS)	−.059	−.108	.204	−.058
Step 2					
	Aversive Affect × Race	**−.283**	**−.661**	**.420**	**−.174**
	Race x Racism (MRS)	.002	.007	.415	.002
	Aversive Affect × MRS	−.045	−.070	.203	−.039
Step 3					
	Aversive Affect × MRS × Race	−.013	−.041	.438	−.011
Step 1					
	Race	.126	.438	.386	.126
	Aversive Affect	−.093	−.161	.193	−.093
	Racism (ATB)	−.082	−.148	.203	−.082
Step 2					
	Aversive Affect × Race	**−.357**	**−.802**	**.413**	**−.212**
	Race × Racism (ATB)	.058	.137	.414	.036
	Aversive Affect × ATB	.012	.021	.214	.011
Step 3					
	Aversive Affect × ATB × Race	.024	.067	.433	.018

Note. RAS = Racial Argument Scale; MRS = Modern Racism Scale; ATB = Attitudes toward Blacks Scale.

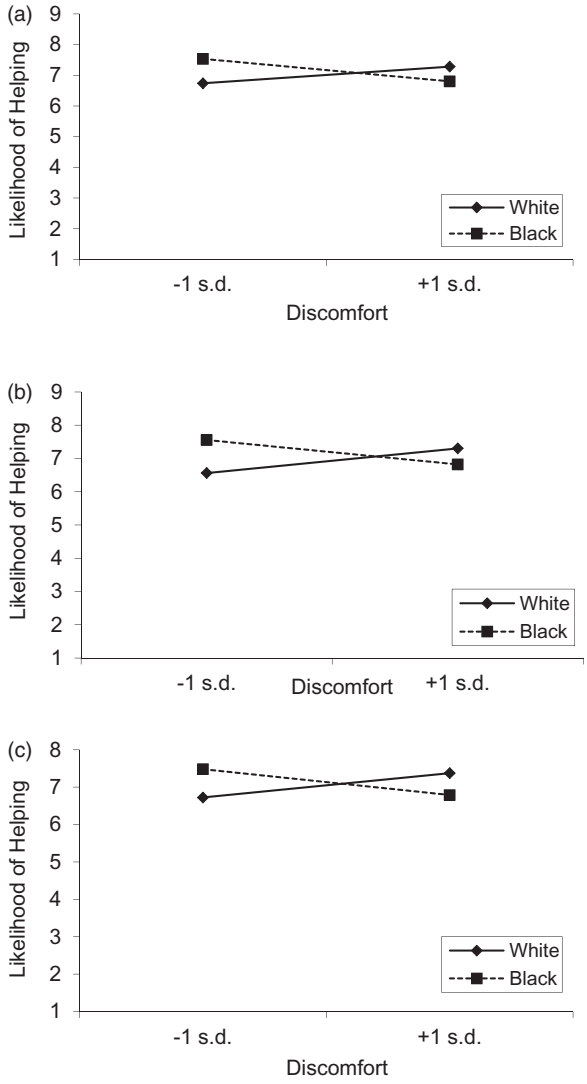

Figure 1. The effects of aversive affect and race on helping. *Note.* (a) Interaction between aversive affect and race for regressions containing the Racial Argument Scale. (b) Interaction between aversive affect and race for regressions containing the Modern Racism Scale. (c) Interaction between aversive affect and race for regressions containing the Attitudes Toward Blacks Scale.

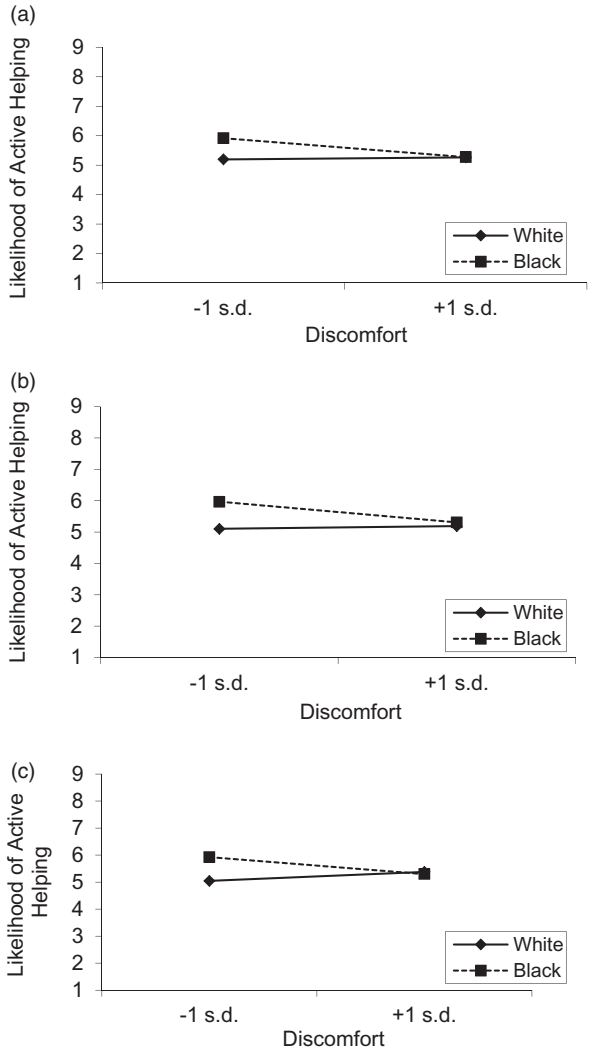

Figure 2. The effects of aversive affect and race on direct helping. *Note.* (a) Interaction between aversive affect and race for regressions containing the Racial Argument Scale. (b) Interaction between aversive affect and race for regressions containing the Modern Racism Scale. (c) Interaction between aversive affect and race for regressions containing the Attitude Toward Blacks Scale.

*SE*s = .22 to .23; βs = −0.33 to −0.34). Hence, consistent with the hypotheses, racism was negligibly associated with discriminatory helping, whereas individuals' experiences of aversive emotions were associated with providing lower quality help to Black targets but weakly associated with their decision to directly help White targets (see Figure 2).

Overall discussion and conclusions from Study 2

Our overarching hypothesis that racism would have little impact on discriminatory helping but that aversive affect would have greater influence in predicting differences in helping White versus Black targets was supported. Although race interacted with aversive affect, the interactions between race and the racism measures were generally weak in predicting the likelihood that participants reported they would help or directly help in the situation. Participants who reported experiencing aversive affect were less likely to report that they would help and directly help Black targets. Negative emotions may be associated with a greater likelihood of helping same-race individuals but are less related to directly helping them. Racism produced negligible differences in reporting helping or directly helping White and Black targets.

When participants experience discomfort in a helping situation, the discomfort appears to motivate

participants' helping response differently depending on whether the target is White or Black. When the target is White, the discomfort has little impact on their helping response (or trends toward increasing their helping response). On the other hand, when the target is Black, the greater discomfort motivates them to indicate that they would help less. Not only are they less likely to indicate that they would help the Black person in general when experiencing discomfort, but they are less likely to provide direct and higher quality help to the person.

Study 3: Experimentally manipulating aversive affect

To add further support to the evidence that aversive affect differentially motivates helping White and Black targets, we conducted a third study that manipulated aversive affect. Many studies that examine the effects of affect on helping use experimental paradigms (e.g., thinking happy thoughts, good smells) to induce greater emotional experiences for their participants (e.g., Baron, 1997; Cunningham, 1979; Guéguen, 2012; Isen & Levin, 1972; Isen & Simmonds, 1978; North, Tarrant, & Hargreaves, 2004). In the preceding study, we did not use experimental induction of affect; participants' feelings were their own and presumably arose from the helping situation and race of the target. If aversive affect motivates discrimination in helping situations, we should expect experimentally manipulating participants' feelings to produce similar differences in helping White and Black targets.

We developed a paradigm to increase aversive affect in which participants anticipated an interaction with a stranger involving uncomfortably close physical contact. Invasions of personal space elicit feelings of discomfort and individuals generally try to maintain a comfortable distance between themselves and others within interpersonal interactions (Bailenson, Blascovich, Beall, & Loomis, 2001; Dewever, 1977; Evans & Werner, 2007; Kaya & Erkip, 1999; Sardar, Joose, Weiss, & Evers, 2012). Following the aversive affect manipulation, participants were asked about their likelihood of helping a White or Black person. We predicted that we would replicate the findings in Study 2 such that White participants who experimentally experience greater aversive affect would be less likely to help Black targets and more likely to help White targets. We expected racism scores to have little influence on differential helping of White and Black targets.

Methods

Participants

White participants ($N = 287$) completed this study in exchange for partial credit toward their general psychology research credit. A majority of participants were female (73.9%) and had an average age of 18.89 ($SD = 2.35$).

Measures

Racism measures

As in Studies 1 and 2, participants completed the MRS ($\alpha = .80$), ATB ($\alpha = .86$), and RAS ($\alpha = .76$) and responded to items using a Likert-type scale from 1 (*disagree very strongly*) to 9 (*agree very strongly*). Higher scores indicated higher levels of racism toward Blacks.

Race and aversive affect manipulations

Participants were randomly assigned to watch one of four videos in which race (White or Black) and aversive affect (experimental or control) were manipulated. The video showed either a White or Black confederate who indicated that he was in need of participants for his honors thesis study (see Appendix B for confederate scripts). The honors thesis study asked participants either to write about positive childhood memories (control condition) or to come in close physical contact with another participant (experimental condition). The purpose of the experimental condition was to increase participants' aversive affect through imagining themselves in a study where they sit face-to-face with another participant they do not know, take off the other participant's shoes and let the other participant take off their shoes, place their feet on top of their partner's feet (the video states that socks will be provided if the participant is not wearing socks), touch knees with the other participant, hold hands, make eye contact, and synchronize their breathing. Participants were then told (and the video showed) that in the study they would hold this close contact for 2 minutes, which would be followed by discussing an uncomfortable topic, like building sexual intimacy in romantic relationships with each other. Participants listened to the confederate outline each of these behaviors, had a checklist in front of them so that they also read this information, and watched a video of two participants engaging in the study tasks. Anecdotally, experimenters reported that participants' body language often palpably conveyed their discomfort. As indicated by the pilot test data reported next,

this manipulation appears to effectively create aversive affect in participants.

Helping the experimenter

Participants indicated if they wanted to help the experimenter by circling *Yes* or *No*. If they circled *Yes*, they were further asked to provide their e-mail address so that the experimenter could contact them at a later time. Responses were coded as *No Help Provided* if participants indicated *No* or if they circled *Yes* but did not write their e-mail address; responses were coded as *Help Provided* if participants circled *Yes* and wrote their e-mail address to be contacted to help at later time. Participants were also asked to respond to a single item about their willingness to help the experimenter (*How much would you want to help the researcher by participating in this study?*) where higher scores indicated a greater willingness to help.

Perceptions of the experimenter's research

Two items asked participants to indicate participants' perceptions about how valuable they believe the study to be (*How valuable do you think this study is?*) and how beneficial they believe the study is to science (*How beneficial to science do you think this study is?*). Higher scores indicate a greater perception of the study as valuable and as beneficial to science, respectively.

Aversive affect

Participants responded to the items on the discomfort subscale ($\alpha = .94$) that was also used in Study 2 (Devine et al., 1991) using a Likert-type scale from 1 (*does not apply at all*) to 9 (*applies very much*). Higher scores indicated that participants experienced greater aversive feelings about providing help to the experimenter by participating in his study.

Procedure

Participants first completed a series of racism measures followed by a filler measure about their movie preferences. The filler measure was used so that participants would be less likely to associate their responses on the racism measure with the experimental manipulations. Next, participants were asked to watch a video of a student who is in need of participants for his senior thesis study. Participants were randomly assigned to one of four conditions where the student researcher was either White or Black and was asking for help in the experimental or control study just described. After listening to the video, participants indicated whether they would want to help and recorded their perceptions of the research in which they were asked to participate. After the study concluded, participants were debriefed, told of the true nature of the study, and informed they would not be contacted by the experimenter to participate at a later time.

Pilot study results

The first pilot study ($N = 34$; M age $= 20.32$, $SD = 1.01$, 85.3% White, 88.2% female) asked participants to respond to all 34 items on the affect scale (Devine et al., 1991) after they were exposed to the experimental manipulation. Results confirmed that the aversive affect manipulation created greater discomfort ($M = 4.69$, $SD = 1.46$) than negative feelings toward the self ($M = 2.76$, $SD = 0.96$), positive feelings ($M = 3.26$, $SD = 1.58$), negative feelings toward the conversation partner ($M = 1.63$, $SD = 1.30$), threatened feelings ($M = 2.26$, $SD = 1.83$), or depressed feelings ($M = 1.66$, $SD = 1.44$), $F(5, 165) = 31.04$, partial $\eta^2 = .47$.

The second and third pilot tests compared participants' discomfort levels after being randomly assigned to either the control or experimental condition. The second pilot test ($N = 209$; M age $= 37.63$, $SD = 13.53$, 100% White, 63.2% female) indicated that participants felt greater discomfort in the experimental condition ($M = 4.77$, $SD = 2.23$) than in the control condition ($M = 2.78$, $SD = 2.22$), $d = 0.89$. Similarly, the third pilot test ($N = 26$; M age $= 19.31$, $SD = 1.62$, 100% White, 61% female) indicated that participants felt greater discomfort in the experimental condition ($M = 4.12$, $SD = 2.06$) than in the control condition ($M = 1.43$, $SD = 0.54$), $d = 1.79$.

Finally, a fourth pilot study was conducted ($N = 90$; M age $= 19.09$, $SD = 1.76$, 72.2% White, 62.2% female) in which we tested the relationship between discomfort and helping only in the experimental condition with a Black confederate. These results confirmed that participants who experienced greater discomfort were less likely to provide help to the Black experimenter ($r = -.52$).

Together, these pilot data suggest that our manipulation is successful in creating aversive affect among participants. After being exposed to the experimental condition, participants experienced greater discomfort in comparison to other negative emotions, they reported greater levels of aversive affect in the experimental than in the control condition, and greater

Table 4. Means, standard deviations, and correlations between racism measures and aversive affect on helping in the control and experimental conditions in Study 3.

	Control condition		Experimental condition	
	M (*SD*)	Correlation with helping	*M* (*SD*)	Correlation with helping
MRS	2.59 (1.22)	−0.15	2.28 (0.93)	−0.16
ATB	2.52 (1.10)	−0.11	2.18 (0.76)	−0.19
RAS	4.31 (1.55)	−0.10	3.78 (1.74)	−0.11
Aversive affect	1.79 (1.00)	−0.16	4.29 (1.60)	−0.65

Note. RAS = Racial Argument Scale; MRS = Modern Racism Scale; ATB = Attitudes toward Blacks Scale.

aversive affect was associated with less willingness to help a Black confederate.

Study 3 results

Preliminary analyses

Overall, a majority of participants (65.9%) reported that they would not help the experimenter. The experimenter's race did not seem to have much impact on participants' decision to help; 65.3% of participants in the White experimenter condition indicated that they would not help, and 66.4% of participants in the Black experimenter condition indicated that they would not help. The experimental manipulation, however, did impact participants' decision to help; participants were more likely to report that they would not help in the experimental condition (72.8%) than in the control condition (58.6%).

Next, we examined if race impacted the percentage of participants indicating that they would help in the experimental and control conditions. In the control condition, 42.6% of participants reported that they would help the White experimenter, and 40.3% indicated that they would help the Black experimenter. In the experimental condition, 27.6% of the participants reported that they would help the White experimenter and 26.8% reported that they would help the Black experimenter. These data suggest that participants were nearly as likely to help the White and Black experimenter in each condition.

Table 4 displays the means and standard deviations for each of the racism measures and for aversive affect in the experimental and control conditions. This table also shows the correlations between helping, racism, and aversive affect in the experimental and control conditions.

The effects of aversive affect, racism, and race on helping

Separate binary logistic regression analyses were computed for the experimental and control conditions to examine the extent to which race,[20] aversive affect,[21] and racism[22] impacted participants' decision to help or not help[23] the experimenter. As in Studies 1a–1d and Study 2, a three-step hierarchical analysis was used. The hypothesis that aversive feelings about helping would have a greater impact than racism on discrimination in helping was tested through the two-way interactions between race and aversive affect and between race and racism (MRS, ATB, and RAS) in the second step of the regressions. These two-way interactions are reported next, and a full report of the results is available in Table 5.

In the control condition, the interactions between race and aversive affect were weak (*B*s = 0.50 to 0.69, *SE*s = .81 to .84), as were the interactions between race and racism (*B*s = −0.05 to 0.30, *SE*s = .37 to .43). In the experimental condition, however, the interactions between race and aversive affect were stronger (*B*s = −2.17 to −1.93, *SE*s = .89 to 1.01) than were the interactions between race and racism (*B*s = −0.37 to −0.05, *SE*s = .49 to .62).

The Race × Aversive Affect interactions in the experimental condition were probed using simple slopes analyses. As participants experienced greater aversive affect in the experimental condition, they were less likely to help the White experimenter (*B*s = −1.19 to −1.15, *SE*s = .37 to .39) and, to a greater extent, were also less likely to help the Black experimenter (*B*s = −3.45 to −3.34, *SE*s = .81 to .88). Consistent with hypotheses racism had little impact on discriminatory helping, whereas aversive affect predicted discriminatory helping such that when participants felt uncomfortable in the experimental condition, they were less likely to help the White participant and, to a greater extent, less likely to help the Black participant.

Secondary analyses

Additional analyses were conducted to examine the extent to which race,[24] aversive affect,[25] and racism[26] impacted participants' willingness to help the experimenter, how valuable they believed the study to be, and how beneficial they believed the study to be for science. Separate analyses were conducted for the

Table 5. Binary logistic regression analyses displaying the effects of aversive affect, racism (RAS/MRS/ATB), and race on helping in the control and experimental conditions in Study 3.

		Control condition			Experimental condition		
Step	Variable	χ^2	*B*	*SE*	χ^2	*B*	*SE*
1		13.25			46.72		
	Aversive affect		−0.91	0.39		−1.90	0.37
	Race		−0.01	0.36		0.47	0.47
	MRS		−0.42	0.19		0.01	0.24
2		1.42			9.94		
	Aversive Affect × Race		**0.50**	**0.81**		**−2.04**	**0.93**
	Race × MRS		0.30	0.39		−0.37	0.62
	Aversive Affect × MRS		−0.29	0.47		0.39	0.29
3		0.21			0.01		
	Affect × Race × MRS		−0.47	1.02		−0.09	1.13
1		9.15			46.72		
	Aversive affect		−0.96	0.40		−1.89	0.37
	Race		−0.04	0.35		0.46	0.47
	ATB		−0.18	0.18		−0.02	0.24
2		0.74			10.88		
	Aversive Affect × Race		**0.69**	**0.83**		**−1.93**	**1.01**
	Race × ATB		−0.05	0.37		−0.05	0.60
	Aversive Affect × ATB		0.09	0.42		0.63	0.37
3		0.55			0.003		
	Affect × Race × ATB		−0.68	0.90		0.06	1.19
1		8.91			47.23		
	Aversive affect		−0.94	0.40		−1.86	0.36
	Race		−0.01	0.36		0.41	0.47
	RAS		−0.19	0.20		−0.16	0.22
		0.73			8.25		
2	**Aversive Affect × Race**		**0.67**	**0.84**		**−2.17**	**0.89**
	Race × RAS		0.06	0.43		−0.20	0.49
	Aversive Affect × RAS		−0.12	0.48		0.12	0.31
3	Affect × Race × RAS	0.79			0.57		
			−1.09	1.22		−0.71	1.00

Note. RAS = Racial Argument Scale; MRS = Modern Racism Scale; ATB = Attitudes toward Blacks Scale.

experimental and control conditions. Data were analyzed using the three-step hierarchical multiple regression procedures outlined in Studies 1a–1d and Study 2. The two-way interactions between race and aversive affect and between race and racism provide the direct test of the hypothesis and are presented next for each dependent measure.

Willingness to help the experimenter

In the control condition, the interactions between race and negative affect (*B*s = −0.10 to 0.09, *SE*s = .55 to .57, *β*s = −0.03 to 0.03) and the interactions between race and racism (*B*s = −0.30 to 0.13, *SE*s = .32 to .37, *β*s = −0.11 to 0.06)[27] had little effect on participants' willingness to help the experimenter. In the experimental condition, however, the interactions between race and negative affect (*B*s = −0.43 to −0.29, *SE*s = .35 to .36, *β*s = −0.13 to −0.09) were stronger than the interactions between race and racism (*B*s = −0.30 to 0.08, *SE*s = .29 to .35, *β*s = −0.08 to 0.03). These results suggest that when helping evokes feelings of discomfort, the extent to which individuals experience this discomfort plays a greater role in their willingness to help than do their racism levels.

The Aversive Affect × Race interactions in the experimental condition were probed to find that as participants experienced greater levels of aversive affect, they were less likely to report that they wanted to help the White (*B*s = −0.94 to −0.91, *SE*s = .22 to .22, *β*s = −0.45 to −0.44) or Black (*B*s = −1.36 to −1.33, *SE*s = .26 to .26, *β*s = −0.53 to −0.51) experimenter. Thus, although experiencing greater aversive affect in the experimental condition was associated with wanting to help the White and Black experimenters less—consistent with the hypothesis—participants who experienced greater levels of aversive affect were less likely to report that they wanted to help the Black experimenter than White experimenter.

Perceived value of experimenter's study

In the control condition, the interactions between race and aversive affect (*B*s = −0.16 to −0.14, *SE*s = .43 to .45, *β*s = −0.04 to −0.05) were weaker than the interactions between race and racism (*B*s = −0.29 to −0.13, *SE*s = .25 to .30, *β*s = −0.15 to −0.06).[28]

Likewise in the experimental condition, the interactions between race and aversive affect ($Bs = -0.19$ to -0.10, $SEs = .29$ to $.30$, $\beta s = -0.08$ to -0.04) were weaker than the interactions between race and racism ($Bs = -0.57$ to 0.10, $SEs = .25$ to $.29$, $\beta s = -0.10$ to 0.04).[29] These results suggest that racism had more of an impact than did how uncomfortable participants felt, in predicting differences in how valuable participants felt the experimenter's study was.

In the control condition, the Race × Racism interactions were probed to find that when the experimenter was White, racism had little effect on participants' perceptions about the value of the research ($Bs = 0.004$ to 0.05, $SEs = .21$ to $.22$, $\beta s = 0.002$ to 0.03). However, when the experimenter was Black, those who scored higher in racism perceived the researcher's study to be less valuable ($Bs = -0.23$ to -0.22, $SEs = .13$ to $.14$, $\beta s = -0.18$ to -0.18).

In the experimental condition, the Race × Racism interactions were probed to find that when the experimenter was White, racism had little effect on participants' perceptions about the value of the research ($Bs = -0.10$ to -0.01, $SEs = .15$ to $.16$, $\beta s = -0.07$ to -0.01). However, when the experimenter was Black, those who scored higher in racism perceived the researcher's study to be less valuable ($Bs = -0.58$ to -0.45, $SEs = .25$ to $.25$, $\beta s = -0.26$ to -0.21). Regardless of condition, these results suggest that the race of experimenter influences the perceived value of the experimenter's research, particularly among individuals with more racist beliefs.

Perceived benefit of experimenter's study to science

In the control condition, the interactions between race and aversive affect ($Bs = 0.02$ to 0.09, $SEs = .42$ to $.44$, $\beta s = 0.01$ to 0.03) were weaker than the interactions between race and racism ($Bs = -0.41$ to -0.17, $SEs = .24$ to $.29$, $\beta s = -0.22$ to -0.08).[30] Likewise in the experimental condition, the interactions between race and aversive affect ($Bs = 0.02$ to 0.03, $SEs = .29$ to $.29$, $\beta s = 0.01$ to 0.01) were weaker than the interactions between race and racism ($Bs = -0.65$ to -0.03, $SEs = .25$ to $.29$, $\beta s = -0.22$ to -0.01)[31]. These results suggest that racism had a greater impact than did how uncomfortable the participants felt in predicting differences in how beneficial to science participants felt the experimenter's study was.

In the control condition, the Race × Racism interactions were probed to find that when the experimenter was White, racism had little effect on participants' perceptions about the benefits of the study to science ($Bs = -0.02$ to 0.09, $SEs = .19$ to $.20$, $\beta s = -0.01$ to -0.06). However when the experimenter was Black, those who scored higher in racism perceived the researcher's study to be less beneficial to science ($Bs = -0.37$ to -0.31, $SEs = .14$ to $.15$, $\beta s = -0.30$ to -0.24).

In the experimental condition, the Race × Racism interactions were probed to find that when the experimenter was White, racism had little effect on participants' perceptions about the benefits of the study to science ($Bs = -0.04$ to -0.03, $SEs = .14$ to $.15$, $\beta s = -0.03$ to -0.02). However, when the experimenter was Black, those who scored higher in racism perceived the researcher's study to be less beneficial to science ($Bs = -0.70$ to -0.63, $SEs = .25$ to $.26$, $\beta s = -0.31$ to -0.29). Results from the experimental and control conditions suggest that the race of experimenter may influence how beneficial the participants perceive this study to be within the broader context of psychological science, particularly among individuals with more racist beliefs.

Summary of secondary analyses

These findings add additional support to the hypothesis that aversive affect has a greater impact on discrimination in helping than racism. In addition, these data also demonstrate that although racism has little impact on predicting differences in participants' actions (i.e., their willingness to help), it does predict differences in participants' perceptions of the researcher's work. Specifically, participants who score higher in racism devalue the work of the Black experimenter and perceive his study to be less beneficial to science.

Overall discussion and conclusion from Study 3

Study 3 provides additional support for the hypothesis that aversive affect, to a much greater extent than racism, predicts discrimination in helping and provides an additional nuance in understanding this pattern. This distinction can be highlighted by comparing the differences in the control and experimental conditions. The control condition generally did not elicit feelings of discomfort in participants, and participants were nearly equally likely to help the Black and White targets in this condition. However, in the experimental condition, which was designed to elicit feelings of discomfort, discrimination was evident, but only when participants experienced the discomfort we intended to elicit. Specifically in the experimental condition, greater aversion was associated with less help for the

White target and even less help for the Black target. Thus, the level of discomfort experienced appears to be an individual difference, and not something that can be universally created by this study manipulation (i.e., people experience the same event but interpret it differently).

Further, Study 3 indicates that although racism has little impact on discrimination in helping, it does influence perceptions of the helping situation. In both the experimental and control conditions, participants who scored higher on measures of racism found the Black experimenter's study to be less valuable and less beneficial to science. This is similar to the finding in Kunstman and Plant (2008), where participants' levels of racism did not impact their decision to help but did influence their perceptions of the emergency level of Black and White targets (i.e., perceived the Black target's situation to be less of an emergency than the White target's situation).

Together these findings suggest that discriminatory behaviors (i.e., helping Black persons less than White) are more impacted by aversive feelings about the helping situation than by prejudices toward those in need of help. Perceptions and interpretations of the helping situation, on the other hand, may be more impacted by participant's racism levels than by their aversive affect. This observation is speculation, however, and warrants further empirical attention.

Overall discussion

Although we had originally reasoned that White individuals with racist beliefs would be less likely to help Black than White targets, across several studies with a variety of methodologies, we found that racism had very little impact on discrimination in helping. If racism cannot consistently account for discrimination in helping, then other factors related to the helping situation should be examined. The results of Studies 2 and 3 suggest that aversive affect is a factor of interest that produces differences in helping: When the helping situation produces aversive feelings in White bystanders, they are less likely to help Black than White targets.

These studies provide a consistent pattern concerning the negative relationship between aversive affect and helping Black targets, but the relationship regarding help for White targets is less clear. We found that greater aversive affect was associated with a greater likelihood of helping White targets in Study 2 but with a lesser likelihood of helping White targets in Study 3. This difference could be due the experimental manipulation in Study 3, which made participants less likely to help overall.

As predicted, and consistent with previous research (Bernard et al., 2014; Kunstman & Plant, 2008), explicit racism levels were negligibly associated with helping Black targets. Rather, aversive feelings about the helping situation produced discrimination in helping such that Black targets were helped less than White targets (Kunstman & Plant, 2008) and were provided with less direct and lower quality help (Crosby et al. 1980; Gamberini et al., 2015; Kunstman & Plant, 2008). Findings are consistent with aversive racism theory (Gaertner & Dovidio, 1986): White participants may hold egalitarian attitudes and report low levels of prejudice on self-report measures[32] but simultaneously experience discomfort and aversive feelings in interracial interactions and avoid situations with Black people to reduce negative feelings. Participants may have to interact with targets to help them; their feelings of aversion and discomfort may lead them to avoid, and ultimately not help, Black targets. Our results suggest that participants are not helping because they are trying to avoid negative feelings rather than because they are racist.

Future directions

One question remains unanswered: Why does negative affect produce different responses to helping White versus Black people? Kunstman and Plant (2008) discovered that participants cognitively reinterpreted situations involving Black targets as less severe and of lower emergency than situations involving White targets. Little research to this point has examined the role of racism and emotion in predicting differential helping between White and Black targets. Theoretically, emotions have two main functions: to promote the attainment of positive outcomes and the avoidance of negative outcomes (see Brehm, 1999). The function of these emotions is to avoid potential negative outcomes (in the case of our theoretical perspective, to avoid appearing racist). Helping situations, especially emergencies, evoke feelings of arousal that participants seek to reduce (Piliavin, Dovidio, Gaertner, & Clark, 1981). It is possible that to reduce feelings of aversion, individuals may avoid providing help to Black individuals because of a fear of appearing racist. Future research could examine interpretations of helping situations involving Black and White targets that allow potential helpers to reduce aversive feelings by providing help or avoiding the situation. For example, future research could examine how

competing aversive situations affect the likelihood of helping Black targets. In one such situation, participants are primed with a situation in which someone was called racist for not providing help to a Black individual; the idea that they might also be considered racist remains salient when they later encounter a Black person in need of help. There are competing hypotheses arising from this prime. If White individuals are experiencing stereotype threat because of a fear of confirming the stereotype that White people are racist (see Goff, Steele, & Davies, 2008), they would choose the alternative that most reduces the possibility of being called racist (i.e., helping the Black target). If, however, the discomfort comes from simply interacting with a Black target (e.g., interracial anxiety; Plant & Devine, 2003), White individuals would likely choose the option that most reduces the possibility of interacting with a Black target (i.e., not helping the Black target). Building on the results of the current studies, we predict the former would be the more likely choice, with White individuals attempting to avoid appearing racist, thus choosing the option that most alleviates their aversive affect.

Other potential explanations for why White bystanders experience greater aversion toward situations involving Black targets might include having negative expectations about interactions with Black targets (Siem et al., 2014), possessing fewer cognitive resources in emergencies (Meiring et al., 2014; Piliavin et al., 1981), perceiving less responsibility for helping (Kunstman & Plant, 2008; Piliavin et al., 1981), derogating victims (Piliavin et al., 1981), and experiencing guilt (Estrada-Hollenbeck & Heatherton, 1998; Harris, Benson, & Hall, 1975). Future research should examine each of these as a possible explanation for differential helping between Black and White individuals.

In addition, these findings should be replicated using observational methods. Self-report measures of helping intentions are not uncommon (e.g., Cuddy, Rock, & Norton, 2007; Levine et al., 2002; Sun, Zagefka, & Goodwin, 2013; van Leeuwen, 2006), and when both self-report and behavioral measures of helping are used, findings are often consistent (Levine & Crowther, 2008, Niesta Kayser et al., 2010; Sturmer et al., 2006). Crosby et al. (1980) debated differences between self-report and observational data on helping and concluded that there is correlational consistency between self-report and observational studies. Further, findings are consistent with research using behavioral measures to demonstrate that aversive affect more so than implicit biases predicts discrimination in emergencies (Kunstman & Plant, 2008). We predict that future studies using behavioral helping measures would produce similar findings.

Racism appeared to have little effect on discriminatory helping, and this pattern may draw different interpretations. First, it might be argued that the lower reliability of the racism measures can account for the lack of prediction in helping. Notably, across the presented studies, the racism measures sometimes demonstrated lower internal consistency[33] than typically desired. However, the MRS and the ATB generally demonstrated higher levels of reliability; in these studies, the Race × Racism interactions demonstrated only small effects on helping. In addition, racial prejudices did appear to impact perceptions of the helping situation in Study 3. This is to say that racism demonstrated predictive discriminatory effects concerning one set of variables (i.e., participants' perceptions of the helping situation) but not on another set of variables (i.e., participants' behaviors in the helping situation). Given that the measures generally demonstrated higher levels of internal consistency and that racism did demonstrate predictive effects, we are less inclined to believe that racism demonstrated only weak relationships with discriminatory helping because of low reliability.

Second, as noted earlier, the participants in this study reported lower levels of racism. The findings and conclusions drawn from our data may not apply to those who report higher levels of racism. Additional research examining the extent to which negative attitudes and aversive affect impact the helping decisions of those who have more conscious and higher levels of prejudice is needed to provide a more complete picture of the extent to which racism and aversive affect impact discriminatory helping.

Implications and conclusions

Prosocial behavior research explains why and how people decide to help others and perhaps has its greatest impact on studying helping after natural disasters and environmental crises. Natural disasters are settings where helping may depend on whether victims are ingroup or outgroup members (McManus & Saucier, 2012). Infamous claims were made that victim race impacted helping following Hurricane Katrina in New Orleans in 2005. More recently, the water crisis in Flint, Michigan, has been detrimental to Black citizens. Although accusations exist, natural disasters and environmental crises are not settings where racism measures can feasibly be administered to potential helpers and government officials—only speculation can be made about victim race influencing the helping

response. Researchers theoretically connected how victim race could have influenced the delayed government response through means of unintentional and implicit bias following Hurricane Katrina (Cuddy et al., 2007; Henkel, Dovidio, & Gaertner, 2006; Saucier, McManus, & Smith, 2010; Saucier, Smith, & McManus, 2007) and after the Japanese earthquake in 2011 (Sun et al., 2013). The current research provides implications for real-world situations where helping is immediately critical. We hope that research will continue to demonstrate that potential helpers' feelings about the situation affect whether or not they would help and if they would provide meaningful help (i.e., direct help) to victims, suggesting that if potential helpers' aversive feelings can be alleviated, greater help will be provided to those in need.

In conclusion, our studies generally demonstrate that individuals with low reported levels of prejudice treat White and Black persons differently in helping situations. These patterns of discrimination were associated with participants' levels of aversive feelings regarding providing help. In addition, this research opens interesting and important avenues for future research. In particular, knowing how individuals reevaluate helping situations to reduce their aversive affect may lead to less bias in everyday helping.

Notes

1. Dummy coded 0 = nonspecified race, 1 = Black.
2. The MRS, ATB, and RAS measures were standardized and entered into separate regressions.
3. Standardized and treated as a continuous variable.
4. The RAS measure demonstrated lower reliability, which may account for the inconsistencies in our findings.
5. Dummy coded 0 = nonspecified race, 1 = Black.
6. The MRS, ATB, and RAS measures were standardized and entered into separate regressions.
7. Dummy coded 0 = Need, 1 = Merit.
8. The RAS demonstrated lower reliability, which may account for the inconsistencies in our findings.
9. If they provided their contact information, it was sent to the Keep America Beautiful Foundation in Topeka, Kansas.
10. Dummy coded 0 = White, 1 = Black.
11. Standardized RAS scores.
12. Dummy coded 0 = White, 1 = Black.
13. Standardized RAS scores.
14. G*Power 3.0.10 (Faul, Erdfelder, Lang, & Buchner, 2007) confirmed the sample size provided a power level greater than 0.99 for the ability to detect a large effect.
15. Participants were slightly more likely to help (βs = .51–.55) and to provide direct help (βs = .03–.08) in the car scenario than the math scenario.
16. Participants responded to several items about their perceptions of helping (e.g., perceptions of victim blaming, responsibility to help, costs of helping). However, results revealed that aversive affect, racism, and target race did not influence these variables. These measures and results are not provided in this report; a full report of variables and results is available by request from the first author.
17. Dummy coded 0 = White, 1 = Black
18. Standardized
19. Standardized RAS, MRS, and ATB scores and entered into separate regression analyses
20. Dummy coded 0 = White, 1 = Black.
21. Standardized.
22. Standardized MRS, ATB, and RAS scores were entered into separate regression analyses.
23. 1 = no help; 2 = help.
24. Dummy coded 0 = White, 1 = Black.
25. Standardized.
26. Standardized MRS, ATB, and RAS scores were entered into separate regression analyses.
27. The interactions between race and scores on the RAS ($B = -0.30$, $SE = .37$, $\beta = -0.11$) produced results that were inconsistent with the pattern demonstrated by the interactions between race and scores on the MRS ($B = 0.10$, $SE = .32$, $\beta = 0.04$) and ATB ($B = 0.13$, $SE = .32$, $\beta = 0.06$). Therefore conclusions were drawn from the more consistent pattern demonstrated by racism's interaction with MRS and ATB scores.
28. The interactions between race and scores on the RAS ($B = -0.13$, $SE = .30$, $\beta = -0.06$) produced results that were inconsistent with the pattern demonstrated by the interactions between race and scores on the MRS ($B = -0.29$, $SE = .25$, $\beta = -0.15$) and ATB ($B = -0.20$, $SE = .25$, $\beta = -0.11$). Therefore we probed only the Race × Racism interactions that included the MRS and ATB.
29. The interactions between race and scores on the RAS ($B = 0.10$, $SE = .25$, $\beta = 0.04$) produced results that were inconsistent with the pattern demonstrated by the interactions between race and scores on the MRS ($B = -0.33$, $SE = .29$, $\beta = -0.11$) and ATB ($B = -0.57$, $SE = .29$, $\beta = -0.20$). Therefore we probed only the Race × Racism interactions that included the MRS and ATB.
30. The interactions between race and scores on the RAS ($B = -0.17$, $SE = .29$, $\beta = -0.08$) produced results that were inconsistent with the pattern demonstrated by the interactions between race and scores on the MRS ($B = -0.41$, $SE = .24$, $\beta = -0.22$) and ATB ($B = -0.35$, $SE = .24$, $\beta = -0.20$). Therefore we probed only the Race × Racism interactions that included the MRS and ATB.
31. The interactions between race and scores on the RAS ($B = -0.03$, $SE = .25$, $\beta = -0.01$) produced results that were inconsistent with the pattern demonstrated by the interactions between race and scores on the MRS ($B = -0.57$, $SE = .28$, $\beta = -0.20$) and ATB ($B = -0.65$, $SE = .29$, $\beta = -0.22$). Therefore we probed only the Race × Racism interactions that included the MRS and ATB.

[32]. To support that participants had lower levels of self-reported prejudice, the average values of racism scores across all studies were examined. For each measure, participants responding using a 1-to-9 scale, where higher scores were indicative of higher racism. Participants' average MRS scores ranged from 2.43 ($SD = 1.15$) to 3.31 ($SD = 1.26$)- average ATB scores ranged from 2.38 ($SD = 0.98$) to 3.54 ($SD = 1.25$)- and average RAS scores ranged from 4.04 ($SD = 1.63$) to 4.91 ($SD = 1.44$). All of these average values are below the midpoint of the scale, suggesting that, on average, the participants in these studies did not report extremely negative racial prejudices.

[33]. MRS αs = .69–.83; ATB αs = .78–.87; RAS αs = .45–.76.

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Appendix A

Materials used in Studies 1a–1e

Materials for Study 1a: Support for student scholarships

University administrators have been trying to figure out ways to increase funding for scholarships for incoming **African American** first-year students. One proposal was that starting next fall semester, tuition would be raised **.1**%. For a student paying in-state tuition, this would reflect a **$2.00** increase per semester. The revenue generated by the tuition increase would be awarded to 50 **African American** students who will start their freshman year at Kansas State University in August of 2007. In order to be eligible for the scholarship, students will have to have a minimum high school GPA of 3.0, an ACT score of 27, and complete a 500-word essay.

Note. Emphasis added in bold.

Materials for Study 1b: Donating to student scholarships

The student senate has been trying to figure out how to increase funding for scholarships for incoming first-year **African American** students. The senate has come up with a scholarship that is funded through student donations. This scholarship will be based on financial need, and to be eligible for the scholarship, **the student must come from a family with a combined annual household income less than $30,000 per year, complete a 500-word essay, and have a high school GPA of at least 3.0**.

However, before starting the campaign for donations, the student senate first wanted to get an idea of how much money they can hope to raise for the scholarship, as well as people's attitudes toward the proposal. Please be completely honest in your responses to the following questions so that the student senate may get accurate data that will allow the scholarship campaign to be as successful as possible.

Note. Emphasis added in bold.

Materials for Study 1c: Participating in the Great American Cleanup

Organizations such as the Keep America Beautiful Foundation (www.kab.org) organize events aimed to improve the look of cities and neighborhoods. In Kansas, the foundation hosts many beautification, recycling, litter reduction, and graffiti removal projects. One notable annual event is the Great American Cleanup. The goal of the Cleanup is to bring together community members and local businesses and organizations to help reduce the amount of litter and improve the look of neighborhoods. Volunteers all over the United States can contribute to the Cleanup by picking up litter and doing yard work for specified residents of the neighborhood. People can also donate money to the foundation to be used for supplies like garbage bags, gloves, and gardening tools.

Typically, those who receive help from the volunteers are between the ages of 30 and 80, are **Black**, live and work in the same city, and live with one to four other family members in the same household. Below is a picture of a volunteer helping a resident rebuild his fence.

Volunteer Katie helping **Tyronne**, homeowner, during a Great American Cleanup

Note. Emphasis added to Black and Tyronne in picture caption.

Note. Participants were later debriefed and told that KAB helps all individuals, regardless of race.

Materials for Study 1d: Helping those with Cardiasis Istereidus

Cardiasis Istereidus (Cardi•ass•is Is•stair•e•idus) is an inherited skin disease that mainly affects **White/Black people**. This disease causes painful, crusty, scaly, or oozing skin lesions that do not go away or heal. Over time, if untreated, it will lead to deterioration of the heart and central nervous system, tremors, seizures, slurred speech, and even death. This disease is becoming an increasing issue in our country, as it is estimated that 40,000 cases occur each year, with 15% resulting in fatalities. Because this disease is congenital (inherited), the victims can do nothing to prevent themselves from getting this disease. If they have a malformation on the gene that carries this disease, individuals will develop the disease no matter what they do. Scientists are looking

into gene therapy to see if there is a way to prevent it. Although there may be no cure yet, scientists have found a way to slow the progression of the disease, and many people are living healthier, longer lives than generations before.

The SGA (Student Governing Association) at Kansas State University is sponsoring a telethon, which will raise money for the Cardiasis Istereidus Foundation to help fund research to help those affected by the disease.

Note. Emphasis added in bold.

Note. Participants were debriefed and told that this is a fictitious disease.

Materials for Study 1e: Behavioral study

Photograph of a confederate pretending to pass out while the participant completed anagram puzzles.

Appendix B

Aversive Affect Manipulation Used in Study 3

Confederate script for experimental condition videos

Good afternoon! My name is Andrew Smith/Tyronne Harris and I am a senior at Kansas State University. I am a psychology major looking for participants for my senior thesis research project. In my project, I am interested in learning about social contact and communication. Specifically, I am interested in understanding whether certain behaviors may enhance face-to-face discussions between two people. I made this video to tell you about the study. You will have a chance to write down your email address if you would like to help me out and participate in my study.

At this time, you should have a checklist in front of you that describes what participants will do during my study. Please follow along as I read through each of the behaviors you would be engaging in with another participant while having a conversation. When you understand what you would be doing at each step, please put an X in the box next to the step. Please do not talk while I go through the items on the list. Sit facing the other individual; Take off your partner's shoes (your partner will take off your shoes); Make sure you have socks on (if not, socks will be provided by the researcher); Slowly slide your feet under your partner's relaxed feet so that their feet are now on top of yours; Touch your knees with your partner; Reach out and hold hands with your partner; Look into your partner's eyes; Lean in closer to your partner so your faces are approximately 6 inches apart; Synchronize your breathing with your partner by breathing in through your nose for two counts and out of your mouth for three counts; Hold eye contact, body position, and synchronized breathing for two minutes; After two minutes, break eye and body contact, sit across from one another and discuss a topic that the researcher provides to you and your partner; Potential topics include building sexual intimacy in romantic relationships.

The study will take thirty minutes total. Here is a short video that demonstrates what participants will do as part of my study.

If you would like to help me out by participating in my study, check the "yes" box on the back of your paper. You will also need to write down your email address so that I can contact you with dates and times to participate. If you would not like to help me out by participating, check the "no" box on the back of your paper.

The experimenter will now pass around an envelope. Please put your sheet of paper in the envelope. Thank you!

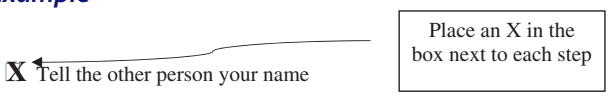
Study title: Social Contact and Communication

In this study, we are interested in understanding whether certain behaviors enhance face-to-face discussions between two people.

Please follow along with the video as the researcher reads through each of the behaviors you will be engaging in with another participant while having a conversation. When you understand what you will be doing at each step, please put an "X" in the box next to the step.

After checking off the items on the checklist, you will watch a video demonstrating the procedures of the study.

Example



Each of these behaviors will build on the previous, so please continue to maintain each of the previous steps as you move through the behaviors. Please do not talk to your partner while doing each of these behaviors.

- Sit facing the other individual
- Take off your partner's shoes (your partner will take off your shoes)
- Make sure you have socks on (if not, socks will be provided by the researcher)
- Slowly slide your feet under your partner's relaxed feet so that their feet are now on top of yours
- Touch your knees with your partner
- Reach out and hold hands with your partner

- Look into your partner's eyes
- Lean in closer to your partner so your faces are approximately 6 inches apart
- Synchronize your breathing with your partner by breathing in through your nose for two counts and out of your mouth for three counts
- Hold eye contact, body position, and synchronized breathing for two minutes
- After two minutes, break eye and body contact, sit across from one another and discuss a topic that the researcher provides to you and your partner
- Potential topics include building sexual intimacy in romantic relationships

Confederate script for control condition videos

Good afternoon! My name is Andrew Smith/Tyronne Harris and I am a senior at Kansas State University. I am a psychology major looking for participants for my senior thesis research project. In my project, I am interested in learning about memory processes. Specifically, I am interested positive memories that people have of their childhoods. I made this video to tell you about the study. You will have a chance to write down your email address if you would like to help me out and participate in my study.

In my study, you would respond to a short questionnaire about childhood memories and then have a chance to write a short story about your most positive memory. The study will take no longer than 10 minutes.

If you would like to help me out by participating in my study, check the "yes" box on your paper. You will also need to write down your email address so that I can contact you with dates and times to participate. If you would not like to help me out by participating, check the "no" box on your paper.

The experimenter will now pass around an envelope. Please put your sheet of paper in the envelope. Thank you!