

# Having an Open Mind: The Impact of Openness to Experience on Interracial Attitudes and Impression Formation

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This article considers how Openness to Experience may mitigate the negative stereotyping of Black people by White perceivers. As expected, White individuals who scored relatively high on Openness to Experience exhibited less prejudice according to self-report measures of explicit racial attitudes. Further, White participants who rated themselves higher on Openness to Experience formed more favorable impressions of a fictitious Black individual. Finally, after observing informal interviews of White and Black targets, White participants who were more open formed more positive impressions of Black interviewees, particularly on dimensions that correspond to negative racial stereotypes. The effect of Openness to Experience was relatively stronger for judgments of Black interviewees than for judgments of White interviewees. Taken together these findings suggest that explicit racial attitudes and impression formation may depend on the individual characteristics of the perceiver, particularly whether she or he is predisposed to consider stereotype-disconfirming information.

*Keywords:* Openness to Experience, impression formation, racial attitudes

Racial prejudice is a longstanding problem in the United States, particularly prejudice against Black people. Part of the problem is a set of negative stereotypes that White people ascribe to Black people. Many White people believe that Black people are not as intelligent or friendly as Whites (von Hippel, Silver, & Lynch, 2000). Further, Black people are believed to be less industrious and moral (Devine, 1989). Such prejudicial racial attitudes may explain much of the mistreatment that they receive in society. For example, White people who rated themselves as high on self-reported prejudice were more likely to discriminate against Black job candidates (McConahay, 1986) and were more likely to convict Black defendants than they were to convict White defendants who had been accused of the same crime (Wittenbrink, Judd, & Park, 1997).

Although racial prejudice is a general problem, some White people may be more prejudiced than others (e.g., Allport, 1954; Duckitt, 1992). One factor that may explain such differences is the social psychology of group membership. Research suggests that people enhance their evaluations of fellow in-group members and degrade their evaluations of out-group members in order to maintain high levels of self-esteem (e.g., Hogg & Abrams, 1988). To the extent that their feelings of self-esteem are threatened, in-group

members may be more willing to rely on negative out-group stereotypes and less willing to consider stereotype-disconfirming information (e.g., Tajfel & Turner, 1979; Turner & Reynolds, 2001). Studies of social cognition, social identity, and self-categorization have identified several situational conditions, such as the presence of equal-status group memberships, opportunities for self-revealing interactions, and egalitarian norms, that can reduce in-group/out-group bias and improve interracial relations (Gaertner et al., 2000; Gaertner, Mann, Dovidio, Murrell, & Pomare, 1990; Johnson, Johnson, & Maruyama, 1984; Slavin, 1983).

Another factor that might explain differences in racial prejudice is personality. In the 1950s and 1960s, authoritarian personality theory (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950) served as one of the dominant explanations of racism. Some individuals tend to demonstrate generalized prejudice toward out-groups owing to factors of the authoritarian personality, such as conventionalism, aggression, toughness, and power (Adorno et al., 1950). Recently, researchers have taken a renewed interest in the connection between authoritarianism and prejudice (e.g., Altemeyer, 1988, 1998), finding evidence that right-wing authoritarians, who strongly favor traditional values, are inclined to act aggressively toward out-groups, particularly gay men and lesbians, Black people, and women (e.g., Whitley, 1999; Altemeyer, 1998). Similarly, social dominance orientation, which refers to an individual's desire to have the in-group dominate and be superior to all out-groups, may predispose one to hold prejudicial attitudes against gay men and lesbians and racial minorities (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 1999).

Research on the relationship between prejudice and personality has given relatively little attention to the influence of Big Five

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I thank Rebecca Levine for her assistance in collecting the data for these studies. This article has also benefited from the thoughts and suggestions of Cameron Anderson, Eric Knowles, and Adam Galinsky.

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personality traits (Costa & McCrae, 1992; John & Srivastava, 1999). An exploratory study by Saucier and Goldberg (1998) found some initial correlational evidence of the impact of Big Five traits on self-report measures of racial prejudice. Further research by Silvestri and Richardson (2001) and others confirmed the idea that some of the Big Five personality traits are able to predict racial prejudice, although these results were somewhat inconsistent. A recent review of these studies by Ekehammar and Akrami (2003) has suggested that one factor—Openness to Experience—may have a stronger, more consistent relationship with standard measures of prejudice and interracial attitudes than any other factor.

Taken together, these studies offer a preliminary glimpse at how Big Five personality traits may predispose people to hold prejudicial racial attitudes. In this article, I draw further attention to the relationship between prejudice and one specific Big Five personality trait—Openness to Experience. I propose that the relationship between Openness to Experience and racial prejudice may extend beyond self-report measures of racial attitudes. Openness to Experience may correspond not only to racial attitudes but also to interracial impression formation. Specifically, White individuals who are relatively more open may refrain from invoking negative racial stereotypes and may be more receptive to stereotype-disconfirming information in forming an impression of a Black individual. Empirical support for this idea might shed more light on how personality traits can influence the way in which interracial attitudes affect person perception.

### Openness to Experience and Interracial Attitudes

In the Five Factor Model of personality (that is, the “Big Five”), Openness to Experience refers to people’s willingness to make adjustments to existing attitudes and behaviors once they have been exposed to new ideas or situations (Digman, 1990; John, 1990). Alternatively referred to as Culture (Norman, 1963), Intelligence (Hogan, 1987), or Flexibility (Gough, 1987), Openness to Experience distinguishes between people who prefer novelty, variety, and intense experience and people who prefer the familiar, routine, and traditional (McCrae, 1996; McCrae & Costa, 1997). Those who have high scores on this dimension tend to be more cultured, curious, imaginative, original, intelligent, broad-minded, and artistically sensitive than others (Barrick & Mount, 1991). As they get older, they tend to develop higher levels of self-esteem (Kling, Ryff, Love, & Essex, 2003). They also tend to be less risk averse and more willing to consider opinions that are different from their own (e.g., George & Zhou, 2001; Lauriola & Levin, 2001; McCrae, 1987).

Openness to Experience is closely associated with divergent thinking and creativity (McCrae, 1987). People who are relatively more open appreciate the merits of trying new things and the potential for improving on the past (Costa & McCrae, 1992). In addition to a greater willingness to experiment, more open individuals tend to have a broader range and depth of experience. Their positive reception to things that are novel combined with their greater range of experience enables them to derive novel solutions to problems and creative ideas that challenge the status quo (McCrae, 1987). In contrast, individuals who are low on Openness to Experience tend to demonstrate lower levels of divergent thinking because they find comfort in things that are routine. They prefer to

adopt familiar ways of doing things to reduce uncertainty about the soundness of their decisions (George & Zhou, 2001).

Several related streams of research have suggested that White individuals who score relatively high on Openness to Experience may adopt more tolerant interracial attitudes and form more favorable impressions of Black people. First, studies have shown that Openness to Experience is positively correlated with the Universal–Diverse Orientation (UDO), a scale measuring awareness and acceptance of both similarities and differences among people (Strauss & Connerley, 2003; Thompson, Brossart, Carlozzi, & Miville, 2002). Those who score higher on UDO are able to bond with others who are similar, while also understanding and appreciating people who are different (Strauss & Connerley, 2003). These individuals demonstrate a realistic appreciation of others’ unique qualities, are comfortable when confronted with differences of opinion, and enjoy a diversity of contact in their interpersonal relations (Thompson et al., 2002). In contrast, Openness to Experience is negatively correlated with right-wing authoritarianism (Altemeyer, 1981), which has been consistently linked to prejudicial attitudes in previous research (Adorno et al., 1950). In short, these previous findings suggest that more open individuals are less likely to report having prejudicial racial attitudes.

Second, Openness to Experience corresponds to an individual’s social and political beliefs. As Trapnell (1994) points out, although most scholars “do not equate Openness to liberalism, they have on occasion identified liberal values with this facet (e.g., McCrae and Costa, [1993])” (p. 282). Saraglou (2002), for example, found a negative correlation between Openness to Experience and religious fundamentalism. Such fundamentalism demands a strict adherence to religious authorities, which may be unappealing to more open individuals. According to McCrae and Costa (1997), “questioning authority is a natural extension of an open individual’s curiosity” (p. 837). In addition, Openness to Experience was negatively correlated with right-wing political ideologies (van Hiel, Kossowska, & Mervielde, 2000). Conservative ideology is often discordant with policies promoting racial tolerance, such as affirmative action, support for minority-owned businesses, and investing in urban renewal for economically depressed communities (Hochschild, 1995). White perceivers who are relatively more open will espouse more liberal ideologies, which would make them less likely to adopt prejudicial racial attitudes than White perceivers who are relatively less open.

Third, individuals who are more open actively seek opportunities to learn about new ideas that challenge conventional wisdom (McCrae, 1987). Conversely, those who are less open tend to adopt strong opinions and remain firmly committed to them (John, 1990). Thus, White perceivers who are relatively more open may be less likely to rely on negative stereotypes when forming impressions of Black people because they prefer to give others, even those who are different from them, the benefit of the doubt. White perceivers who are relatively less open, on the other hand, will invoke negative racial stereotypes because they believe in their general use and value, even if they lack evidence of the stereotype’s validity. Whites who score relatively high on Openness to Experience may also be more willing to consider stereotype-disconfirming information provided by Black individuals and then adjust their impressions accordingly. Openness to Experience suggests flexibility, or a willingness to change one’s attitudes and

behaviors after being exposed to new ideas or conflicting information (McCrae, 1987). People who are more open adapt more quickly and effectively to unexpected change (LePine, Colquitt, & Erez, 2000). Thus, a Black individual who presents him- or herself as intelligent, moral, and industrious—qualities that contradict common Black stereotypes—will likely elicit a more positive impression from a White perceiver who is relatively more open. In contrast, White perceivers who are relatively less open will remain steadfast in their adherence to negative racial stereotypes, even when they are confronted with conflicting information (John, 1990).

### Why Is This Important?

White perceivers may be quite different from one another, even if their visible characteristics are similar (Jackson et al., 1991). Some White people may be predisposed to judge Black people favorably, and others may be predisposed to judge them harshly. For Black people, the utility of sharing personal, stereotype-disconfirming information may depend on whether those receiving it are willing to consider it. Receptivity to stereotype-disconfirming information often has been taken for granted in research on interracial attitudes. The contact hypothesis, for example, assumes that White people will respond reasonably to information that disconfirms negative stereotypes about Black people (Allport, 1954; Brewer & Miller, 1988; Miller & Brewer, 1984; Stephan & Brigham, 1985). Yet support for the contact hypothesis is largely mixed (Pettigrew & Tropp, 2000). Some studies have shown, for example, that increased contact did not improve interracial attitudes (Merkwan & Smith, 1999), discourage subtle forms of prejudice (Villano, 1999), or reduce the incidence of harassment (Ragins & Scandura, 1995).

One explanation for the inconsistent findings produced by tests of the contact hypothesis is that certain people may be more receptive than are others to stereotype-disconfirming information. The present research is designed to test the idea that individual differences in receptivity to new, challenging, and disconfirming information may be a critical factor in mitigating the use of negative racial stereotypes. Demonstrating that certain personality traits can influence how different others are perceived may help explain why increased contact improves interracial relations in some cases, but not in others (e.g., Hewstone & Brown, 1986). Further, because Openness to Experience is associated with many malleable behaviors (see McCrae & Costa, 1997, for a review), linking Openness to Experience to interracial impression formation might help researchers develop interventions aimed at reducing the influence of negative racial stereotypes.

### Predictions and Research

I made three central predictions. First, I posited that White participants' self-reported ratings of Openness to Experience would correlate with explicit measures of racial attitudes. That is, the more open an individual was, the less racist he or she would be, specifically in regard to explicit attitudes toward Black targets. Second, White participants who are relatively more open would be more willing to consider stereotype-disconfirming information referring to a Black target. That is, those who scored high on Openness to Experience would form more favorable impressions

of a Black individual than would those who scored low on Openness to Experience, particularly more favorable impressions of attributes or characteristics that are associated with common negative racial stereotypes. Third, Openness to Experience would have a greater positive effect on White participants' judgments of Black targets than on their judgments of other White individuals, again on dimensions that are commonly associated with negative racial stereotypes.

### Plan of Study

I tested these predictions in three experimental studies. In Study 1, I collected self-report measures of Openness to Experience and compared them with measures of explicit racial attitudes (e.g., the Modern Racism Scale). In Study 2, I attempted to build on these findings by asking White participants to review a fictitious biographical sketch of a Black undergraduate student and rate him on several dimensions. In a third study, I asked White participants to view informal interviews of Black individuals and White individuals and provide ratings of them on several individual characteristics—some that referred to negative racial stereotypes and some that did not.

### Study 1

#### Method

Seventy-eight White undergraduate students from Columbia University volunteered to participate in this experimental study. Participants were paid \$5 for 20 min of their time.

At the beginning of the experimental session, each participant was seated at a computer terminal and instructed to complete an anonymous Web-based survey. Each of the terminals was situated in a separate cubicle so the participant could complete the survey in privacy. Following are brief descriptions of the measures included in the survey.

*Assessment of Openness to Experience.* Openness to Experience was measured using 10 items drawn from the Big Five Inventory (BFI), which is both reliable and valid (John, Donahue, & Kentle, 1991). Each of these items was rated on a 5-point scale ranging from *very uncharacteristic to very characteristic*. Sample items include "Has an active imagination," "Values artistic, esthetic experiences," "Is ingenious, a deep thinker," "Likes to reflect, play with ideas," and "Has few artistic interests" (reverse scored). The items were then averaged to create an overall score for Openness to Experience ( $\bar{x} = 3.87$ ,  $SD = 0.62$ ). The coefficient alpha reliability estimate of the Openness to Experience scale was .80. To limit the possibility of demand effects, participants were asked to fill out the BFI in its entirety before proceeding to the rest of the study (descriptive statistics for the BFI scales are reported in Table 1).

*Assessment of explicit racial attitudes.* Participants were asked to complete a questionnaire that purportedly dealt with social and political attitudes. Following Wittenbrink et al. (1997), I included the Modern Racism Scale (McConahay, Hardee, & Batts, 1981)<sup>1</sup>, the Pro-Black Scale (Katz & Hass, 1988), and the Discrimination and Diversity Scales (Wittenbrink et al., 1997) to assess explicit racial attitudes. Sample items from the Modern Racism Scale include "It is easy to understand the anger of Black people in America" (reverse) and "Blacks are getting too demanding in their push for equal rights." The Pro-Black Scale includes items such as "It is surprising that Black people do as well as they do, considering all the

<sup>1</sup> Following others (e.g., Wittenbrink et al., 1997), I used only six of the seven items from the original Modern Racism Scale. One of the items refers to racial segregation, a concept that is too dated to be of any use.

Table 1  
Descriptive Statistics for Big Five Inventory Personality Scales

Personality trait	<i>M</i>	<i>SD</i>	Minimum	Maximum	Normative <i>M</i>
Study 1					
Extraversion	3.2	0.8	1.0	5.0	3.3
Agreeableness	3.5	0.4	2.3	4.7	3.6
Conscientiousness	3.6	0.4	2.8	4.9	3.7
Neuroticism	3.3	0.4	2.4	4.4	2.8
Openness	3.9	0.6	2.2	5.0	3.7
Study 2					
Extraversion	3.4	0.8	1.0	5.0	3.3
Agreeableness	3.6	0.6	1.8	5.0	3.6
Conscientiousness	3.6	0.7	1.9	5.0	3.7
Neuroticism	2.9	0.8	1.1	4.9	2.8
Openness	3.8	0.5	2.4	5.0	3.7
Study 3					
Extraversion	3.3	0.9	1.5	4.9	3.3
Agreeableness	3.7	0.6	2.2	4.7	3.6
Conscientiousness	3.6	0.7	1.8	4.8	3.7
Neuroticism	3.0	0.7	1.5	4.4	2.8
Openness	3.7	0.4	2.6	4.8	3.7

obstacles they face” and “Most Blacks are no longer discriminated against” (reverse). The Discrimination Scale was designed to tap beliefs about patterns of discrimination in our society (Wittenbrink et al., 1997). Items for this scale include “Discrimination against Blacks is no longer a problem in the United States” and “Blacks are ultimately responsible for the state of race relations in this country.” Finally, the Diversity Scale, which assesses more general attitudes toward ethnic diversity in our society, includes items such as “There is a real danger that too much emphasis on cultural diversity will tear the United States apart” and “Whites will need to learn about Black culture if positive interethnic relations are to be achieved” (reverse).

Participants responded to each of these items on a 5-point scale ranging from *strongly disagree* to *strongly agree*. The items for each scale were then averaged to create an overall score. A high score on the Modern Racism Scale ( $\bar{x} = 2.10$ ,  $SD = 0.83$ ), the Diversity Scale ( $\bar{x} = 2.43$ ,  $SD = 0.88$ ), and the Discrimination Scale ( $\bar{x} = 2.70$ ,  $SD = 0.61$ ), and a low score on the Pro-Black Scale ( $\bar{x} = 3.47$ ,  $SD = 0.65$ ) indicate intolerant racial attitudes. Coefficient alpha reliabilities for these scales were .82 (Modern Racism Scale), .79 (Pro-Black Scale), .82 (Discrimination Scale), and .73 (Diversity scale).

*Assessment of the effect of social desirability.* To control for the impact of social desirability in responding to sensitive questions about racial attitudes, I included Marlowe–Crowne’s 2(10) Social Desirability Scale (Strahan & Gerbasi, 1972) in the study questionnaire. This measure includes 10 true–false items meant to assess an individual’s tendency to provide responses that make him or her look good. The 10 items were averaged (true = 2; false = 1) to create an overall score ( $\bar{x} = 1.54$ ,  $SD = 0.19$ ). A high score indicates a strong tendency to provide the socially desired response.

## Results

I examined participants’ self-reported ratings of Openness to Experience and their explicit racial attitudes, as assessed by four different scales. As predicted, those who were relatively more open tended to express more tolerant racial attitudes, particularly toward Black people (most of the measures focus on Black targets). Specifically, the correlation between Openness to Experience and the participant’s score on the Modern Racism Scale was negative and significant ( $r = -.30$ ,  $p < .01$ ), as was the correlation between Openness to Experience and the participant’s score

on the Diversity Scale ( $r = -.41$ ,  $p < .01$ ). The correlation between Openness to Experience and the participant’s score on the Discrimination Scale was negative and directionally significant ( $r = -.20$ ,  $p = .06$ ), whereas the correlation between Openness to Experience and the participant’s score on the Pro-Black Scale was positive, but not statistically significant ( $r = .16$ ,  $p = .15$ ).

I also calculated correlations between the other four personality factors and each of the measures of explicit racial attitudes. Extraversion, Agreeableness, and Conscientiousness were not correlated with any of the measures of prejudice. Neuroticism, on the other hand, was negatively correlated with the Modern Racism Scale ( $r = -.21$ ,  $p < .10$ ) and with the Diversity Scale ( $r = -.25$ ,  $p < .05$ ) and positively correlated with the Pro-Black Scale ( $r = .26$ ,  $p < .05$ ), which suggests that Neuroticism may be related to lower levels of prejudice. This result is somewhat surprising, given that recent research has found a weak, positive correlation between Neuroticism and right-wing authoritarianism, which would indicate more racist, rather than less racist, attitudes. To assess the unique relationship between Openness to Experience and explicit racial attitudes, I calculated partial correlations that controlled for each of the other four major personality factors, including Neuroticism. These partial correlations (reported in Table 2) are relatively unchanged in terms of magnitude and significance, which indicates that the relationship between Openness to Experience and racial prejudice is robust.

The measurement of explicit racial attitudes may be unreliable because people are reluctant to express such attitudes openly (Wittenbrink et al., 1997). According to Katz, Cohen, and Glass (1975), White individuals are motivated to defend a self-image as a fair-minded person when faced with a Black individual who displays behavior contrary to their stereotype of Black people. Those who rate themselves higher on Openness to Experience may be particularly motivated to defend this fair-minded self-image because they espouse liberal ideals. Even if their responses are anonymous, White responders who are more open may choose to modify their answers to survey questions in order to present a socially desirable, or “politically correct,” image. To test the impact of social desirability, I calculated partial correlations, controlling for the participant’s average score on the Marlowe–Crowne 2(10) Social Desirability Scale. The magnitude and significance of each of the correlations remained virtually unchanged, providing further support for the results of the previous analyses ( $r_{\text{Modern Racism}} = -.29$ ,  $p < .01$ ;  $r_{\text{Diversity}} = -.41$ ,  $p < .01$ ;  $r_{\text{Discrimination}} = -.20$ ,  $p = .07$ ;  $r_{\text{Pro-Black}} = .16$ ,  $p = .14$ ).

Table 2  
Partial Correlations Between Openness to Experience and Explicit Racial Attitudes (Controlling for Other Personality Factors)

Personality factor controlled	Modern Racism Scale	Discrimination Scale	Diversity Scale	Pro-Black Scale
Extraversion	-.30**	-.23*	-.45**	.22†
Agreeableness	-.30**	-.20†	-.42**	.16
Conscientiousness	-.31**	-.21†	-.44**	.16
Neuroticism	-.28*	-.19†	-.40**	.14

†  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

## Study 2

In this study, I attempted to build on the findings from Study 1 by examining the impact of Openness to Experience on a White perceiver's judgment of a Black target. The design for Study 2 was based on a design developed by Lambert, Cronen, Chasteen, and Lickel (1996), in which participants were asked to form an impression of a fictitious Black individual on several individual characteristics. In this case, I considered the effect of Openness to Experience on White perceivers' impressions of the fictitious Black target, particularly on dimensions related to negative racial stereotypes.

### Method

Participants were 80 White undergraduates from Columbia University who were paid \$5 for 25 min of their time.

At the beginning of the experimental session, participants were asked to complete the BFI, which includes 10 items that relate directly to Openness to Experience (descriptive statistics for the BFI scales are reported in Table 1). As in Study 1, participants responded to each of these 10 items along a 5-point scale ranging from 1 (*very uncharacteristic*) to 5 (*very characteristic*). The items were then averaged to create an overall score for Openness to Experience ( $\bar{x} = 3.76$ ,  $SD = 0.59$ ). The coefficient alpha reliability estimate of the Openness to Experience Scale was .81.

Following the original study conducted by Lambert et al. (1996), participants were told that "we are interested in the processes by which people form impressions of other persons based on the information they receive about them." Participants were then presented with a biographical sketch of the target person (the same fictitious sketch of a male, undergraduate student was used in all cases). This brief sketch consisted of a one-page form, which had purportedly been filled out by the target. The information presented on the form included the target's name, address, social security number, place of birth, current educational status, academic major, expected graduation date, citizenship status, gender, and racial/ethnic background. There were no special instructions asking participants to pay special attention to the target's racial background or to consider it when forming their impressions of him. Instead, the target's race, which was checked "African American," was just one of several pieces of incidental background information presented in the brief sketch.

After reviewing the brief biographical sketch of the target person, participants were asked to read through a one-page description of his activity on a particular day. This account highlighted information about a specific trait dimension—intelligence—that is considered a core component of the Black stereotype (Devine, 1989). Specifically, Black people are viewed as being less intelligent than White people. The personal description of the target person provided detailed information about his grade point average and general academic performance (moderately high on both accounts) to convey information about his intelligence that contradicted the negative stereotype. The entire description read as follows:

It was Thursday morning. John got up a little earlier than his usual time because he had remembered that he needed to get some work done before class. After his usual hot shower, John got dressed and sat down at his desk to try to do some reading. After working for a while, John looked up from his books to have another look at the letter that had been sitting on his desk. He had gotten a 3.5 again and made the Dean's list for the 3rd semester in a row. His parents were really proud of him. If things went the way they had been going, it looked like he was going to get all A's this semester, with maybe one B+. His accomplishments so far made him determined to keep it up and make the list again next semester. With a little luck, John would be able to get into that graduate program on the east coast that he had heard so much about. After his morning classes, John grabbed some lunch at

the cafeteria. The place was a little crowded, but John found a table in the back and sat down. He thought about how much he was looking forward to going home. John thought how nice it would be to eat some real food instead of the tasteless stuff they served at school. Later on that day, John needed to do a couple important errands in the city, but unfortunately his car started making some noises. John thought it might be something pretty serious, and so he looked for a shop that could fix it. When John brought the car in to the shop, he told the garage mechanic that he would have to go somewhere else if he could not fix his car that same day. While he was waiting for the car to be fixed, John went to a store to buy some supplies that he had been meaning to buy for a while. Afterward, John picked up his car, did some more errands, and drove back to his place for dinner.

After reading the description of the target person's behavior, participants were asked to report their overall impressions of the target person using a scale ranging from  $-5$  (*very unfavorable*) to  $+5$  (*very favorable*). In addition, they were asked to rate the target on several trait dimensions using an 11-point scale ranging from 0 (*not at all*) to 10 (*extremely*). The set of traits covered intelligence (e.g., bright, intelligent) and overall likeableness (e.g., likeable). Finally, participants were asked to report how much they would like to meet the target person using an 11-point scale ranging from  $-5$  (*not at all*) to  $+5$  (*very much*).

Following Lambert et al. (1996), I calculated composite scores that represented participants' overall affective reaction to the target (i.e., John) and ratings of the target's intelligence. To assess participants' affective reaction to the target, I computed the average of their overall evaluation of the target, their ratings of general likeableness, and their self-reported desire to meet him. Participants' perceptions of John's intelligence were based on an average of the trait terms: *intellectual*, *bright*, *successful*, *responsible*, and *ambitious*. For each of these composites, higher scores indicate more favorable impressions of the target. The coefficient alpha reliability estimates of the likeableness and intelligence scales were .77 and .85, respectively.

Finally, to control for the impact of social desirability in responding to sensitive questions about racial attitudes, I again included Marlowe-Crowne's 2(10) Social Desirability Scale in the study questionnaire.

### Results

One of the concerns of this study design is that participants might not notice the race of the target while skimming the biographical sketch. If true, this may have undermined the study's primary purpose. Following Lambert et al. (1996), I attempted to confirm that participants had noticed John's race by asking them to recall as much information from the biographical sketch as they could after reporting their impressions. Immediately after they provided their ratings of John, participants were asked to "Try to remember as much about John as you can. Type everything you can recall in the text box below." They were then given an online text box of unlimited size in which they could type their responses. Responses to this open-ended question were then scanned for some mention of the target's race. Those participants who failed to identify John's race (or failed to identify the correct race) were removed from the sample ( $n = 28$ ). Participants who were removed from the sample did not differ significantly from those who remained in the sample in terms of their level of Openness to Experience, 3.71 vs. 3.78, respectively,  $t(79) = -0.71$ , *ns*.

To test the idea that White perceivers who score relatively high on Openness to Experience would form more favorable impressions of a Black target individual, I examined the correlations between Openness to Experience and participants' impressions of the fictitious target individual's (John's) personal characteristics.

Consistent with this prediction, the correlations between participants' impressions of the target individual's likeableness and intelligence and their Openness to Experience were positive and significant. Specifically, participants who were high on Openness to Experience had a more positive affective reaction to the target person ( $r = .50, p < .01$ ). That is, they liked John more and were relatively more interested in meeting him than were less open participants. Further, participants who were relatively more open were more likely to view John as intelligent ( $r = .41, p < .01$ ) than were those who were relatively less open.<sup>2</sup> It is worth noting that the items included in the intelligence scale are not all definers of what is commonly known as intelligence. To clarify whether particular items were more or less affected by the perceiver's level of openness, I calculated separate correlations for each of the five individual items. As it turns out, the correlation between Openness to Experience and each of the five items was positive and significant ( $r_{\text{intelligent}} = .28, p < .05$ ;  $r_{\text{bright}} = .41, p < .01$ ;  $r_{\text{successful}} = .35, p < .01$ ;  $r_{\text{responsible}} = .23, p = .05$ ;  $r_{\text{ambitious}} = .36, p < .01$ ).

Once again, I calculated partial correlations, controlling for the participant's average score on the Social Desirability Scale. The correlation between Openness to Experience and overall likeability remained positive and significant, although the magnitude of the correlation decreased substantially ( $r = .33, p < .01$ ). Similarly, the correlation between Openness to Experience and ratings of intelligence remained positive and significant when controlling for social desirability, but the magnitude of the correlation was not as strong ( $r = .32, p < .01$ ). Taken together, these correlations provide further support for the previous analyses, while suggesting that social desirability may have enhanced the effect of Openness to Experience (or that social desirability is an aspect of Openness to Experience that corresponds to less prejudiced impressions of a Black target individual). Finally, I calculated partial correlations that control for each of the other four personality factors (Extraversion, Agreeableness, Conscientiousness, and Neuroticism). The magnitude of the correlations decreases slightly in each case, but the significance level remains the same.

### Study 3

In this study, I aimed to replicate the findings from Study 2, particularly the positive effect of Openness to Experience on White perceivers' judgments of Black individuals. I focused on a different context—a personal interview, in which Black interviewees were asked to describe their personalities and the White perceiver was asked to evaluate the interviewees following the interview. In this case, no attempt was made to manipulate information given by the Black target person. Again, I expected that White perceivers who scored relatively high on Openness to Experience would form more favorable impressions of Black targets than would White perceivers who scored relatively low on Openness to Experience. I also expected that this effect would be limited to characteristics that correspond to negative racial stereotypes. Further, to test the possibility that Openness to Experience increases the favorability of judgments of all people, regardless of their race, I used both Black and White targets. I predicted that Openness to Experience would have a greater impact on White perceivers' judgments of Black targets than of White targets.

The design for Study 3 was based on a design developed by Park and Judd (1989). In this previous study, participants viewed vid-

eotapes of interviews in which the questions focused on information relevant to various personality traits. Some of these personality traits (e.g., intelligence, honesty) clearly relate to negative racial stereotypes, and others (e.g., talkativeness, sense of humor) do not clearly relate to negative racial stereotypes. Whereas Park and Judd were interested in the ability of perceivers to agree on a target's traits, I focused on whether the traits of the perceiver influenced his or her judgment of the target.

### Method

Participants were 75 White undergraduates from Columbia University who were paid \$10 for 45 min of their time.

Participants were recruited for a study on impression formation. Once again, at the beginning of the experimental session, participants were asked to complete the BFI using a 5-point scale ranging from *very uncharacteristic* to *very characteristic*. Ten items relating to Openness to Experience were then averaged to create an overall score ( $\bar{x} = 3.72, SD = .43$ ). The coefficient alpha reliability estimate of the Openness to Experience Scale was .83. Descriptive statistics for the BFI scales are reported in Table 1.

Each participant was shown a videotape of informal interviews. Participants were informed that the interviewees were fellow students at Columbia University, and they were instructed to use the information disclosed in the interview to form an impression of each interviewee. Each of the participants had a private cubicle in which they could view the videotape and record their impressions. The tape included four interviews: two interviewees who were Black and two interviewees who were White (a male and a female of each race). The interview questions concerned a variety of traits, including adventurous, humorous, outgoing, intelligent, responsible, and honest. To elicit information about whether the interviewee was responsible, for example, the interviewer asked, "Would you characterize yourself as someone who can be counted on to do what you say you will do even if it becomes difficult? Can you give me a concrete example?" (for the full set of interview questions, see Park & Judd, 1989). The same questions were used in each interview. Two different orders of interviewees were used in the ratings and in the presentation of the videotaped interviews.

After viewing the videotape, which lasted about 35 min, participants were asked to provide ratings of the interviewees. To aid their memory, a still photo of the target person accompanied each set of questions. Ratings of the interviewee focused on 12 traits: intelligent, smart, responsible, dependable, honest, truthful, outgoing, talkative, adventurous, daring, humorous, and amusing. These ratings were made using a 7-point scale, ranging from *definitely does not describe this person* to *definitely does describe this person*. Finally, to control for the impact of social desirability in responding to sensitive questions about racial attitudes, I included Marlowe-Crowne's 2(10) Social Desirability Scale in the study questionnaire.

To ensure the perceiver had been paying attention while viewing each of the videotaped interviews, I asked the perceiver to answer several questions pertaining to the content of the targets' responses (e.g., "What did she say is her favorite class in school?"). If the participant failed to answer any of these questions correctly, the participant's responses were removed from the sample. Thirteen participants who failed to answer one or more of these questions correctly were removed from the sample.

<sup>2</sup> When the entire sample was used, the correlations between Openness to Experience and overall likeability and between Openness to Experience and intelligence remained positive and significant ( $r_{\text{likeability}} = .39, p < .01$ ;  $r_{\text{intelligence}} = .37, p < .01$ ).

Results

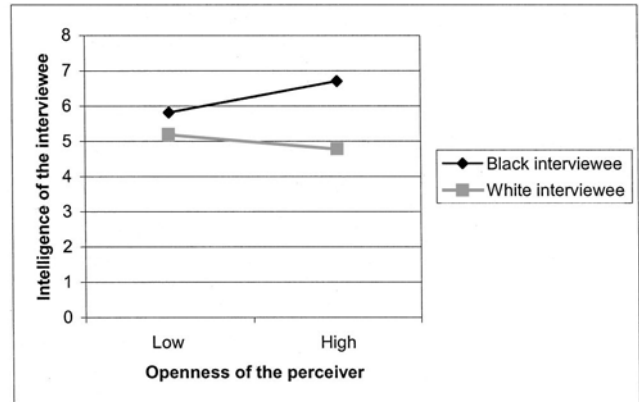
Participants' ratings for both Black targets and for both White targets were collapsed. The following analyses refer to both targets in each condition. The 12 personality ratings were reduced to six pairs of ratings that converge on similar traits: intelligent (intelligent and smart), responsible (responsible and dependable), honest (honest and truthful), outgoing (outgoing and talkative), adventurous (adventurous and daring), and humorous (humorous and amusing). The average score in each pair was used to represent these six dimensions. The correlations between the two items in each pair were positive and significant ( $r_{\text{intelligence}} = .86, p < .01$ ;  $r_{\text{responsible}} = .89, p < .01$ ;  $r_{\text{honest}} = .82, p < .01$ ;  $r_{\text{outgoing}} = .82, p < .01$ ;  $r_{\text{adventurous}} = .90, p < .01$ ;  $r_{\text{humorous}} = .91, p < .01$ ).

First, I examined the correlations between participants' Openness to Experience and their impressions of Black interviewees on dimensions that correspond to negative racial stereotypes. Each of the correlations was positive and significant. Specifically, participants who scored relatively high on Openness to Experience viewed the interviewee as being more intelligent ( $r = .16, p < .05$ ), responsible ( $r = .27, p < .01$ ), and honest ( $r = .26, p < .01$ ) than did participants who scored relatively low on Openness to Experience. Second, I examined the correlations between participants' Openness to Experience and their impressions of Black interviewees on dimensions that did not clearly correspond to negative racial stereotypes. The correlations between Openness to Experience and the extent to which the Black interviewees were judged to be outgoing ( $r = .05, ns$ ), adventurous ( $r = .07, ns$ ), and humorous ( $r = -.05, ns$ ) were not significant.

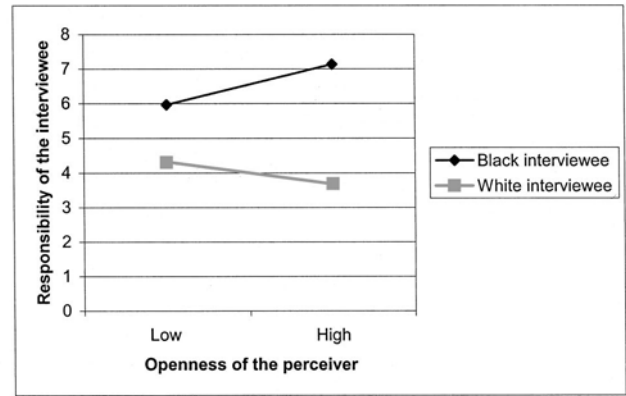
I suggested that White perceivers' judgments of a Black interviewee would be more positively affected by Openness to Experience than would their judgments of a White interviewee on dimensions relating to negative racial stereotypes. To test this idea, I ran a regression in which I entered a dummy variable for race of the target on the first step, the perceiver's Openness to Experience score on the second step, and an interaction term (Target Race  $\times$  Perceiver's Openness to Experience) on the third step for each of the three trait dimensions that relate to negative racial stereotypes. As predicted, the interaction term was significant for each of the three dimensions. Specifically, the impact of Openness to Experience was stronger when White perceivers were making judgments about whether a Black target was intelligent ( $\beta = .99, p < .05$ ), responsible ( $\beta = 1.07, p < .05$ ), and honest ( $\beta = 1.25, p < .01$ ).

To clarify the pattern by which the race of the target person moderated the effect of Openness to Experience on participants' ratings of the target person, I graphed the interaction between target race and Openness to Experience at two levels of openness—one standard deviation below the mean and one standard deviation above the mean (Aiken & West, 1996). The graphs of these interactions are presented in Figure 1A–1C. As expected, the graphs show clear differences in the impact of Openness to Experience on impressions of Black targets versus White targets for each of the three dimensions that relate to negative racial stereotypes (intelligence, responsibility, and honesty). The predicted ratings of intelligence, for example, suggest that a relatively more open perceiver will judge a Black target to be more intelligent than will a less open perceiver (6.71 vs. 5.82). In contrast, a relatively more open perceiver will judge a White target to be less intelligent than will a relatively less open perceiver (4.79 vs. 5.16). The same

A. Intelligent



B. Responsible



C. Honest

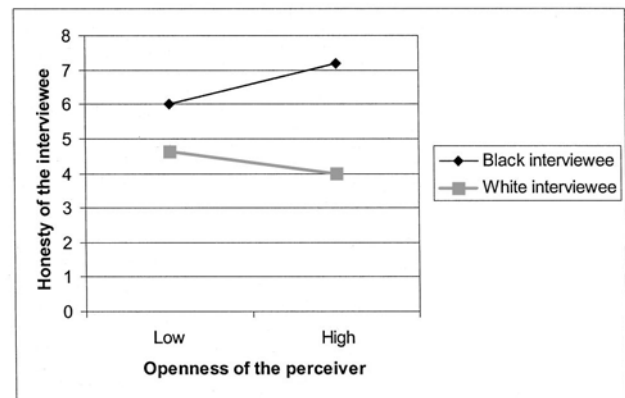


Figure 1. The relationship between Openness to Experience and impressions of Black and White interviewees.

pattern of results appeared in the moderating analyses of ratings of responsibility and honesty. The predicted values indicate that White participants who are relatively more open perceive Black targets as more responsible (7.14 vs. 5.97) and honest (7.20 vs.

6.01) than do those who were less open. As for White participants' judgments of White targets, the predicted values suggest that perceivers who are relatively more open judge White targets as being less responsible (3.69 vs. 4.31) and honest (3.98 vs. 4.61) than do those who are less open.

I predicted that the effect of Openness to Experience on White perceivers' judgments of an actual target person would be more positive when the target was Black rather than White. Indeed, this was the case. I did not predict, however, that Openness to Experience would have a negative effect on White perceivers' judgments of White targets, but this appears to be the case as well. Although I did not predict this effect, it is consistent with the theoretical arguments presented earlier. Just as White perceivers who are relatively more open may be more willing to reconsider negative racial stereotypes that apply to Blacks, White perceivers who are relatively less open may be less willing to reconsider positive racial stereotypes that apply to Whites.

Again, the measurement of impressions in the context of interracial judgment may be unreliable because people choose to modify their responses to present a socially desirable image. To control for this possibility, I calculated partial correlations, controlling for the participant's average score on the Social Desirability Scale, for each of the correlations reported previously. The magnitude and significance of the correlations between Openness to Experience and each personality judgment remained virtually unchanged. In particular, the correlation between Openness to Experience and intelligence ( $r = .16, p = .05$ ), responsibility ( $r = .28, p < .01$ ), and honesty ( $r = .27, p < .01$ ) remained positive and significant. I also calculated partial correlations that controlled for the influence of each of the other four personality measures (Extraversion, Agreeableness, Conscientiousness, and Neuroticism). The correlations remained positive and significant, except in one case (controlling for extraversion, the correlation between Openness to Experience and intelligence was no longer significant,  $p = .12$ ). Finally, I reran the regression analyses, including the measure of social desirability and the other four personality measures as control variables. The magnitude and significance of the coefficients in this set of analyses were nearly identical to the original results.

*Supplementary analyses.* The overall ratings for the four interviewees are unusual in that the Black targets were rated as more intelligent, responsible, and honest than were the White targets (if the participants were prone to use negative racial stereotypes, one would expect the opposite result). Perhaps this result was obtained because the Black targets were truly more impressive on each of these three dimensions, controlling for their demographic differences. Alternatively, perhaps the differences reflect the perceivers' attempt to appear nonprejudicial by inflating their ratings. To shed some light on this issue, I transcribed the interviews and asked a sample of 40 White participants to provide their impressions of the transcriptions, using the same items listed above. Each participant was asked to rate the text of all four interviews (the order was varied). After the ratings for each interview were provided, I asked the participants to guess whether each of the interviewees was Black or White. Participants reported the correct race only 58% of the time. The ratings provided by those who guessed the correct race did not differ significantly from the ratings provided by those who did not, which suggests the participants' intuitions about the

target's possible race did not affect their ratings in a meaningful way.

If the participants' ratings reveal no differences between the Black and White interviewees, it would indicate that the participants in Study 3 were attempting to appear nonprejudicial by inflating their ratings. Instead, the results reveal that the Black students were more impressive than the White students on each of the three stereotypical dimensions—intelligence, 5.46 vs. 4.95,  $t(74) = 1.86, p < .10$ , responsibility, 5.09 vs. 4.46,  $t(74) = 2.71, p < .01$ , and honesty, 5.31 vs. 3.60,  $t(74) = 8.49, p < .01$ . These results suggest that the Black interviewees might have appeared more intelligent, responsible, and honest than the White interviewees. More important, the ratings suggest that the more open perceivers in Study 3 reached a judgment of the interviewees that was less biased by the target's race than were the judgments made by the less open perceivers.

The interviewees' physical attractiveness may have varied in ways that influenced the results of Study 3. In a separate questionnaire, 40 White participants were also asked to rate the physical attractiveness of the four interviewees, using color photos taken from the video footage of their interviews. These ratings were made using a 7-point scale, ranging from *definitely does not describe this person* to *definitely does describe this person*. The participants' ratings of the Black and White targets' physical attractiveness did not vary significantly, 3.72 vs. 3.76,  $t(74) = 0.17, ns$ , which casts doubt on the possibility that physical attractiveness serves as an alternative explanation for these results.

## General Discussion

Researchers have attempted to identify the source of Whites' prejudicial attitudes toward Blacks in the hope that such understanding can help improve interracial attitudes and impression formation (for example, Dovidio, Kawakami, & Gaertner, 2002; Greenwald & Banaji, 1995; Lepore & Brown, 1997). In this article, I propose that one personality trait, Openness to Experience, may partially explain prejudice and interracial judgment. Specifically, I suggest that Whites who score relatively high on Openness to Experience are less rigid in their use of Black stereotypes and more open to stereotype-disconfirming information. I found support for these ideas in a series of empirical studies. First, self-reported ratings of Openness to Experience correlated with Whites' explicit racial attitudes toward Blacks. Second, Whites who were relatively more open were more willing to consider stereotype-disconfirming information relating to a fictitious Black target. Finally, after watching live interviews of Black subjects, Whites who rated themselves higher on Openness to Experience formed more favorable impressions of Black target individuals on several dimensions relating to negative racial stereotypes.

### *A Personality Perspective on Mitigating Stereotype Use*

Over the past several decades, the content of racial stereotypes has gradually changed, so that Whites now view Blacks more positively than they did 30 years ago (Nelson, 2001). Despite such improvement, research suggests that it remains difficult to effect meaningful changes in racial stereotypes through interventions (some notable exceptions exist, including Rudman, Ashmore, & Gary, 2001). Although several theories assume that stereotypes

will change as a result of direct exposure to stereotype-disconfirming information (for example, contact hypothesis), stereotypes often remain rigid, even when they are shown to be inaccurate (Banks, 1995; Judd & Park, 1993). This enduring quality partly explains why researchers find stereotypes so interesting to study. It also suggests that personality traits, which possess a similarly enduring quality, can help explain the existence and use of racial stereotypes as well as their consequences.

Previous research on impression formation in interracial dyads has identified several situational conditions, such as the presence of equal-status group memberships, opportunities for self-revealing interactions, egalitarian norms, and a focus on tasks requiring cooperative interdependence, that can improve the perceiver's impression of an out-group member (for example, Chatman & Flynn, 2001). These theories assume the situation has a great deal of influence over a perceiver's receptivity to stereotype-disconfirming information. Yet, receptivity might also correspond to individual differences. Whites who score relatively high on Openness to Experience may be more willing to consider stereotype-disconfirming information provided by Black individuals and then adjust their impressions accordingly. Thus, a Black individual who presents herself as having qualities that contradict common Black stereotypes will likely elicit a more positive impression from a White perceiver who is relatively more open.

Perhaps the findings from this study (and others like it that focus on the relationship between personality characteristics and racial prejudice) can be useful in the development of effective interventions. For example, those hoping to improve White perceivers' impressions of Blacks might encourage perceivers to treat individuating information more openly through perspective taking, or other tactics that prompt divergent thinking. Further, Openness to Experience has been linked to many malleable behaviors in previous research (see McCrae, 1987 and McCrae & Costa, 1997 for a complete review). These variables can act as mediating mechanisms in theoretical models that aim to explain the relationship between personality and prejudice. From a practical standpoint, these mediating variables might also represent modifiable behaviors in interracial judgment and interaction.

### *Directions for Future Research*

The present research examined the relationship between personality traits, particularly Openness to Experience, and explicit racial attitudes and interracial judgments. Future research might build on these findings by examining the impact of Openness to Experience on interracial interaction. Black interactants may be better off when their White interaction partners are relatively more open because these individuals are less prejudiced and more receptive to stereotype-disconfirming information than their less open counterparts. I did not test this idea in the present research, but in future studies, one could have White interactants communicate with Black targets and then collect the White interactants' impressions to test the validity of this assumption.

Extending the present research to include interracial interaction opens up a number of new research opportunities. For example, future research might strengthen the link between personality and interracial interaction by examining whether certain personality traits of perceivers are well suited to certain personality traits of targets. A personality match may exist between an individual's

tendency to share stereotype-disconfirming information and perceivers' tendencies to accept such stereotype-disconfirming information. Research by Flynn, Chatman, and Spataro (2001) found that minorities who were more extraverted were viewed more favorably than those who were less extraverted. Perhaps Black targets tend to be judged most favorably when they are extraverted (i.e., they tend to share stereotype-disconfirming information) and the White perceivers who judge them are open (i.e., they tend to accept stereotype-disconfirming information). This notion of personality matching in interracial interaction warrants further attention.

Future research might also test whether Openness to Experience elicits more accurate impressions of Black targets. Perhaps openness leads to more favorable impressions, in general, or perhaps it leads to more favorable impressions when perceivers are given stereotype-disconfirming information, in particular. People who are relatively more open value novel information (e.g., stereotype-disconfirming information) more than they value mundane information (stereotype-confirming information). This suggests that White perceivers who are more open are more likely to adjust their impressions of a Black target when they are given information that debunks, rather than supports, negative racial stereotypes. In Studies 2 and 3, the information presented to participants was positive and counterstereotypical. A future study might have Black interviewees act in a manner that should result in lower ratings instead and see what effect Openness to Experience has under these circumstances.<sup>3</sup> Will White perceivers who are relatively more open make negative attributions or will they be more resistant to lowering their impressions?

The apparent correlation between Openness to Experience and reporting less racist attitudes toward Black targets may be driven by a need to provide the socially desirable response rather than a sincere response, or a heightened sense of "political correctness." I attempted to minimize this possibility by controlling for participants' responses to the Marlowe-Crowne 2(10) Social Desirability Scale. This scale and others like it have several limitations, however, which have been pointed out in previous research (McCrae & Costa, 1983; Piedmont, McCrae, Riemann, & Angleitner, 2000). For example, social desirability motives may account for a considerable amount of variance that represents valid self-description (i.e., it is possible that "political correctness" is simply one aspect of Openness to Experience). Future research might address the issue of social desirability more effectively by gathering informant ratings of participants' personality traits and using them to predict interracial impressions.

Finally, I examine the relationship between Openness to Experience and explicit racial attitudes, but some racial attitudes are implicit, rather than explicit. Researchers have found that spontaneously activated racial stereotypes among White people may be only loosely related to explicit measures of racial attitudes and prejudice (for a review, see Greenwald, McGhee, & Schwartz, 1998). Some studies suggest a similar pattern of effects (e.g., McConnell & Leibold, 2001; Wittenbrink et al., 1997), whereas others suggest they predict different outcomes (e.g., Fazio, Jackson, Dunston, & Williams, 1995). Future research on the relationship between personality traits and racial attitudes might assess

<sup>3</sup> I thank an anonymous reviewer for making this suggestion.

implicit racial attitudes using the Implicit Association Test and compare the results with self-reported measures of Openness to Experience. Future research might also use an alternative means of assessing Openness to Experience. The revised NEO Personality Inventory, for example, has several robust subscales that may shed more light on the links between Openness to Experience and racial prejudice (Costa & McCrae, 1992).

In conclusion, previous research has consistently shown that Black targets are unfairly stereotyped and discriminated against by White perceivers, but not all White perceivers are the same. Some may be more willing to give racial minorities the benefit of the doubt, and some may be relatively more receptive to stereotype-disconfirming information. The notion that a perceiver's personality traits, particularly Openness to Experience, can mitigate negative stereotyping highlights an important link between research on personality and research on interracial attitudes and prejudice. I hope this finding will inspire additional research on the impact of individual differences on interracial attitudes and impression formation.

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