

Intergroup Contact and Pluralistic Ignorance

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The present work examined the relationship between people's own interpretations of why they avoid intergroup contact and their interpretations of why out-groups avoid intergroup contact. Studies 1 and 2 demonstrate that Whites and Blacks would like to have more contact with the out-group but believe the out-group does not want to have contact with them. Studies 3–5 show that Whites and Blacks make divergent explanations about their own and their potential out-group partner's failure to initiate contact. Specifically, individuals explained their own inaction in terms of their fear of being rejected because of their race but attributed the out-group members' inaction to their lack of interest. Study 6 examined the behavioral consequences of this self–other bias. Finally, Study 7 applied theoretical work on the extended contact hypothesis to explore a means to reduce this self–other bias. The implications of these studies for improving intergroup interactions are discussed.

Research on intergroup contact has a rich history in social psychology, with scholars devoting considerable effort to investigating factors that facilitate smooth intergroup interactions. Much of this work has considered the relationship between dominant group members' beliefs about minority groups and their experiences during intergroup encounters (e.g., Dovidio, Kawakami, & Gaertner, 2002; Richeson & Shelton, 2003; for reviews, see Fiske, 1998; Mackie & Smith, 1998; Pettigrew, 1998). More recently, researchers have begun to take the view from the other side of the interaction by examining minority group members' perspectives on intergroup encounters (for reviews, see Crocker, Major, & Steele, 1998; Major, Quinton, & McCoy, 2002). One disturbing finding from the majority of this research is that whenever possible, both dominant and minority group members avoid interacting with out-group members. The purpose of the present research was to explore individuals' construals for their own and out-group members' avoidance of intergroup contact. We argue that people fail to recognize that out-group members' avoidance of intergroup contact reflects the same interpersonal concerns as their own. Further, we argue that this attributional bias has important implications for initiating future intergroup interactions as well as for the perpetuation of negative intergroup relations.

Approaching and Avoiding Intergroup Contact

As the United States becomes increasingly multicultural, people are encountering situations in which they have the opportunity to

interact with out-group members on a more frequent basis. When faced with these opportunities, individuals must decide whether to approach or avoid intergroup contact. There has been an abundance of research on situational and personality factors that help determine which plan of action is taken (for reviews, see Brewer & Miller, 1998; Fiske, 1998; Stephan & Stephan, 1985). Of particular interest to us are individuals' interpersonal concerns with issues of prejudice.

Recent work has suggested that Whites and racial minorities are concerned with how they will be viewed and treated as members of their racial groups during interracial interactions (Shelton, 2003; Vorauer, Hunter, Main, & Roy, 2000; Vorauer & Kumhyr, 2001; Vorauer, Main, & O'Connell, 1998). Vorauer and her colleagues' work on metastereotypes suggests that some Whites are concerned that out-group members will perceive them in an undesirable manner, particularly as being prejudiced, selfish, and closed minded. Moreover, Vorauer and colleagues' research has shown that Whites' concerns with how they will be viewed by out-group members influence their social judgments about and during intergroup contact. For instance, Whites tend to anticipate negative evaluations from their minority interaction partners (Vorauer & Kumhyr, 2001), even though such evaluations are sometimes unwarranted (Shelton, 2003). Furthermore, when intergroup contact does occur, Whites who are concerned about appearing prejudiced are often self-conscious and self-critical (Devine, Evett, & Vasquez-Suson, 1996; Vorauer & Kumhyr, 2001).

Similar to Whites, Blacks are concerned about how they will be treated in intergroup interactions because of their racial group membership. Evidence has been accumulating to suggest that some Blacks are concerned that they will be perceived in terms of negative stereotypes associated with their group and that they will be discriminated against because of their group (Branscombe, Schmitt, & Harvey, 1999; Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002; Pinel, 1999). This concern influences Blacks' attitudes about and behaviors during intergroup contact encounters (Shelton, 2003; Shelton & Richeson, 2003). For instance, Black students who are sensitive to being rejected on the basis of their race had fewer White friends at the end of their 1st year of college compared with Blacks who were less anxious about

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potential race-based rejection (Mendoza-Denton et al., 2002). This work suggests quite clearly that Blacks who expect interactions with Whites to be negative limit the amount of their interracial contact experiences. When intergroup contact is unavoidable, however, Blacks seem to use compensatory strategies to ward off any negative outcomes during the interaction (Shelton, 2003; Shelton & Richeson, 2003; see also C. T. Miller & Myers, 1998).

Considering the research examining Whites' and Blacks' perspectives on intergroup contact in tandem, a common theme seems to capture both Whites' and Blacks' interpersonal concerns with intergroup interactions. That is, both seem to harbor fears that they will be rejected because of their group memberships. Specifically, Whites feel that Blacks think they are prejudiced and, as a consequence, are concerned that Blacks will reject them during interactions. Likewise, Blacks feel that Whites hold negative stereotypes about their group, and thus, they are concerned that Whites will reject them during interactions. We argue that both groups' fears of rejection not only influence the dynamics of intergroup interactions but also influence their explanations for why they avoid intergroup interactions altogether.

Consider the following scenario. A White male student notices a Black male student looking for a place to sit in a very busy library reading room. The White individual has a free seat next to him and considers what he should do in the situation. Should he approach the opportunity for interracial contact and invite the Black individual to sit with him? But what if he invites the Black individual to sit with him and is rejected? Concern with being rejected may lead the White individual into deliberation (of a sort) to decide on a plan of action regarding whether to approach or avoid the intergroup encounter. During such deliberations, we argue, individuals consider not only their own behavioral options but also those of their potential interaction partner. In our example, the White student sitting at the table may wait to see if the Black student begins walking in his direction, suggesting his desire to sit at the table. If the Black individual is not approaching (most likely, we argue, because he is also deliberating on his own plan of action), the White individual may think, "Why is this person not making a move to approach me? This person does not seem to be interested in sitting with me." If this is the White individual's thought process, he is less likely to initiate "approach-related" nonverbal behaviors, such as welcoming gestures, open body language, or mutual eye gaze. Of course, the absence of such behaviors is likely to communicate to the Black individual that the White individual does not want him sitting at his table, despite the open seat.

What is of most interest from this example to the present research is the attribution individuals make in order to explain their potential interaction partner's inaction compared with the attribution they make to explain their own inaction. We argue that people use divergent explanations to account for their own inaction and the out-group person's inaction. More specifically, people focus on their own fear of rejection to explain their inaction, whereas they interpret their potential partner's inaction as lack of interest in getting to know them. As many readers have probably already noticed, the picture that we paint through the scenario described above closely resembles the phenomenon of *pluralistic ignorance*. Pluralistic ignorance occurs when people observe others behaving similarly to themselves but believe that the same behaviors reflect

different feelings and beliefs (D. Miller & McFarland, 1987, 1991; Prentice & Miller, 1996). People perceive their own behavior as reflecting fears of social exclusion but do not consider such fears a legitimate explanation for other people's behavior. Instead, they take the other person's behavior at face value and believe that the behavior reflects the person's true feelings. Applying this to intergroup contact, we suggest that Whites and Blacks are inferring that the identical actions (or inactions) displayed by both the self and others reflect fundamentally different internal states. Specifically, individuals infer that out-group members' inaction accurately reflects their disinterest in interracial contact.

The Pluralistic Ignorance of Intergroup Contact

Pluralistic ignorance was first used to explain the discrepancy between public behaviors and private beliefs (Allport, 1954; Katz & Allport, 1931). The term captures the notion that although people publicly express support for and conform to norms that they do not privately accept, they believe that another person's public support reflects his or her true sentiment. For example, pluralistic ignorance was used to explain the mismatch between Whites' attitudes and behavior toward segregation in the 1960s and 1970s (O'Gorman, 1975, 1979; O'Gorman & Garry, 1976). Whites assumed that other Whites' exclusion of Blacks in social settings reflected their genuine racial beliefs. In contrast, Whites believed that their own racial beliefs were more liberal than their exclusionary behavior might indicate. Whites' exclusionary behavior was based on their concern regarding what others thought, not on their own private racial beliefs. Pluralistic ignorance has been demonstrated in other aspects of social life ranging from alcohol consumption (Prentice & Miller, 1993) to emergencies (Latane & Darley, 1970) to students' responses to teachers' requests for clarification in lectures (D. Miller & McFarland, 1987).

Although pluralistic ignorance has been applied to many areas, it has not been extended to understand the dilemma individuals face during potential intergroup contact situations. Closest has been Vorauer and Ratner's (1996) discussion of relational pluralistic ignorance in the context of romantic encounters. Across a series of studies, Vorauer and Ratner found convergent evidence that individuals make different attributions for their own and a potential romantic partner's failure to make the first move. Similar to our prediction, Vorauer and Ratner found that individuals attribute their own failure to make the first move to fear of being rejected but attribute their potential partner's failure to lack of interest. Vorauer and Ratner's work was an important initial foray into the area of relational pluralistic ignorance. Our work extends their work in this area. However, there are several differences. First, the context of intergroup contact is fundamentally different than romantic encounters. Unlike romantic encounters, interactions between Whites and Blacks are often tainted with negative historical relations between the two racial groups. Interracial interactions, compared with romantic encounters between individuals of the same racial group, are more likely to spark concerns about prejudice, discrimination, and racism. Thus, in addition to the normal anxiety experienced when strangers encounter one another, interracial interactions are also fraught with anxiety related to the history of oppression and discrimination in American society.

Second, our work builds on Vorauer and Ratner's (1996) research by incorporating recent theoretical work on the category divide hypothesis (D. Miller & Prentice, 1999). According to the category divide hypothesis, when individuals from different groups disagree with one another, they tend to explain their disagreement in terms of salient group differences. Although our work does not focus on disagreements between members of different groups, we believe a similar process occurs. We suggest that the divergent explanations people make regarding a specific interracial encounter reflect how they think people of each racial group feel in general. For example, when a White person notices that a Black person does not approach him or her despite the fact that the opportunity for doing so is available, the White person is apt to claim that the Black individual's inaction reflects the sentiments of Blacks as a group. That is, the White individual may believe that Blacks, as a group, are not interested in interacting with Whites. Similarly, we argue that in explaining his or her own inaction, the White person is apt to think that he or she is avoiding Blacks because Blacks, as a group, are prone to reject Whites.

In sum, the present work considers the applicability of pluralistic ignorance to intergroup contact. We argue that pluralistic ignorance is a useful framework to account for individuals' failure to engage in interracial contact and will advance our theoretical understanding of intergroup relations more generally. Specifically, the present research highlights the notion that people's conceptions of what others think, feel, and do are just as important as their own thoughts, feelings, and behaviors. Approaching intergroup contact from a pluralistic ignorance perspective allows for the possibility that individuals avoid contact because they misconstrue the feelings held by out-group members. Of course, we do not deny that the individual's own racial beliefs and feelings also influence intergroup contact. However, the present work calls attention to the fact that the inferences individuals make about others, compared with the inferences they make about themselves, also influence the general avoidance of intergroup contact.

Overview of Studies

In the first series of studies, we focused on the extent to which people are interested in having intergroup contact compared with their perceptions of the interest of out-group members. Do individuals believe they want to have more contact with out-group members than they perceive out-group members want to have contact with them? We predict that they do. Although such an asymmetry does not provide evidence for pluralistic ignorance, it does set the stage for pluralistic ignorance to occur by indicating that people make different attributions for their own and out-groups' relative culpabilities in the lack of contact that does occur between groups. In the second series of studies, we investigated the attributions individuals make regarding their own and out-group members' willingness to establish contact. We were particularly interested in two attributions: (a) fear of being rejected and (b) lack of interest. Building on these experiments, the final series of studies investigated the consequences of intergroup pluralistic ignorance and proposes a potential strategy for the reduction of the bias.

Series 1: Self–Other Difference in Desire for Intergroup Contact

Because of their similarity in methods and results, two studies are reported below as Studies 1A and 1B. The methods for each study are described first, followed by the results.

Method

Study 1A. A total of 151 White (42 men and 109 women) and 11 Black (5 men and 6 women) students at the University of Massachusetts participated in this study. Participants completed the questionnaire at the end of a lecture in an introductory psychology course. They were asked the following:

1. To what extent would you like to have more Black friends at the University of Massachusetts?
2. To what extent would you like to have more White friends at the University of Massachusetts?
3. To what extent do you think the average White student at the University of Massachusetts would like to have more Black friends at the University of Massachusetts?
4. To what extent do you think the average Black student at the University of Massachusetts would like to have more White friends at the University of Massachusetts?

Participants answered all questions using a 7-point scale, where 1 = *not at all* and 7 = *very much*. We counterbalanced the two "self" and "other" questions across participants. A little more than half of the participants ($n = 94$) rated themselves first; the others ($n = 68$) rated the average student first.

Study 1B. A total of 107 White (49 men and 58 women) and 16 Black (3 men and 13 women) students at Princeton University completed this questionnaire along with other unrelated questionnaires for pay (\$8). Participants completed the four questions described above with one change. Students answered questions about contact in general as opposed to friendship (e.g., "To what extent would you like to have more contact with Blacks at Princeton University?"). As with the previous sample, participants answered all questions using a 7-point scale, where 1 = *not at all* and 7 = *very much*. Approximately half of the participants ($n = 62$) answered the "self" questions first; the other half ($n = 61$) rated the "other" questions first.

Results and Discussion

Study 1A. Because of the large sample size differences, we examined the responses of each racial group separately. Consistent with predictions, paired *t* tests revealed significant self–other differences among Whites' responses.¹ Specifically, as shown in Table 1, Whites indicated that they would like to have more Black friends than the average Black student would like to have more White friends, $t(150) = 9.71, p < .01$. Additionally, Whites reported that the average White student would like to have more Black friends than the average Black student would like to have more White friends, $t(150) = 5.87, p < .01$. Finally, Whites

¹ The 3 (person) \times 2 (order of question) \times 2 (gender of participant) ANOVA did not reveal a significant three-way interaction for Whites ($F < 1, p = .75$) or for Blacks ($F < 1, p = .53$). As a result, order of question and gender of participant were dropped from all analyses. Likewise, in all analyses reported in this article, when the order of question and gender of participant did not influence the results, these variables were dropped from the analyses.

Table 1
Study 1: Mean Likelihood Ratings of Participants' Own Interest in Intergroup Contact and Perceptions of Out-Group Members' and In-Group Members' Interest in Intergroup Contact

Variable	Self		Out-group		In-group	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Study 1A (out-group friendships)						
Whites	4.39 _a	1.34	3.40 _b	1.04	3.88 _c	1.05
Men	4.28	1.29	3.59	1.02	3.86	1.07
Women	4.43	1.37	3.35	1.05	3.89	1.05
Blacks	3.82 _a	1.60	2.73 _b	0.65	3.73 _{ac}	1.42
Men	3.40	1.95	2.80	0.84	2.80	0.84
Women	4.17	1.33	2.67	0.51	4.50	1.39
Study 1B (general out-group contact)						
Whites	4.37 _a	1.56	2.99 _b	1.26	3.91 _c	1.21
Men	4.31	1.67	3.05	1.33	3.98	1.23
Women	4.43	1.49	2.95	1.21	3.84	1.19
Blacks	3.56 _a	2.03	2.19 _b	1.24	2.50 _c	1.41
Men	4.00	3.00	1.67	0.58	2.00	1.73
Women	3.46	1.89	2.31	1.55	2.62	1.39

Note. Within each row, means sharing a common subscript do not differ from one another; those with a different subscript are different from one another.

indicated that they would like to have more Black friends than the average White student would like to have more Black friends, $t(150) = 5.79, p < .01$.

Parallel analyses revealed similar results for Blacks (see Table 1). Specifically, Blacks indicated that they would like to have more White friends than the average White student would like to have more Black friends, $t(10) = 2.78, p < .05$. Blacks also reported that the average Black student would like to have more White friends than the average White student would like to have more Black friends, $t(10) = 2.62, p < .05$. Finally, there were no significant differences in Blacks' perceptions of how much they would like to have more White friends and how much the average Black student would like to have more White friends, $t(10) = 0.18, p = .86$.

Study 1B. We conducted the same set of analyses using the responses of participants from the second sample to examine individuals' interest in having intergroup contact in general. Again, we examined the responses of White and Black participants separately. Consistent with predictions, paired t tests revealed significant self-other differences among Whites' responses.² Specifically, as shown in Table 1, Whites indicated they would like to have more contact with Blacks than the average Black student would like to have more contact with Whites, $t(106) = 8.90, p < .01$. In addition, Whites believed that the average White student would like to have more contact with Blacks than the average Black student would like to have more contact with Whites, $t(106) = 7.43, p < .01$. Finally, Whites indicated they would like to have more contact with Blacks than the average White student would like to have more contact with Blacks, $t(106) = 3.23, p < .01$.

Similarly, Blacks indicated that they would like to have more contact with Whites than the average White student would like to have more contact with Blacks, $t(15) = 2.20, p < .05$. However, there was no significant difference in Blacks' perception of how

much the average Black student and the average White student would like to have more intergroup contact, $t(15) < 0.75, p = .46$. Finally, Blacks indicated they would like to have more contact with Whites than the average Black student would like to have contact with Whites, $t(15) = 2.35, p < .05$.

Taken together, these results are informative in two key respects. First, the data provide initial evidence that Whites and Blacks might perceive themselves and their in-group to be somewhat unique in wanting to have more intergroup contact. Individuals believe that they want to have intergroup contact and friendships, but the out-group is the problem—the out-group does not want to have contact or be friends with them. Given that a self-other discrepancy exists for both Whites and Blacks, it is easy to understand how this phenomenon could lead to misunderstandings between the groups. Moreover, this self-other difference sets the stage for individuals to hesitate rather than to initiate intergroup contact and friendships.

Study 2

The results of Study 1 provide initial evidence that individuals believe they differ from out-group members with respect to their desire to have more intergroup contact. In Study 2, we considered the extent to which this belief is reflected in the judgments that individuals make in social situations in which intergroup contact could potentially occur. That is, instead of examining desires for intergroup contact and friendships in the abstract, we provided participants with a specific social situation in which they could choose to have contact with an out-group member. We predicted that individuals would believe that they are more interested in having the contact than the out-group member. Somewhat paradoxically, we also predicted that individuals would not be any more willing to initiate such contact compared with the willingness they perceive the out-group member to have. Individuals are aware that intergroup contact can be awkward, and given their belief that out-group members desire contact less than they, individuals tend to allow opportunities for intergroup contact to pass them by. In other words, we believe that people realize, perhaps from previous experience, that they are just as likely not to initiate intergroup contact as out-group members. In order to examine these issues, we explicitly focused individuals' attention on one particular situation that occurs often in students' lives—entering the dining hall alone and trying to find a place to sit.

Method

Sixty-nine White students (30 men and 39 women) from Princeton University completed the brief questionnaire in an introductory psychology discussion section or at the end of an unrelated study. All participants imagined the following situation:

You enter the dining hall for dinner. You are alone because your close friends are in a review session. As you look around the dining hall for a place to sit you notice several White (or Black) students who live near you sitting together.

² The 3 (person) \times 2 (order of question) \times 2 (gender) ANOVA did not reveal a significant three-way interaction for Whites ($F < 1, p = .45$) or for Blacks ($F < 1, p = .17$).

Forty-three of the participants imagined that the targeted students were White, and the other 26 participants imagined that the targeted students were Black. Participants then answered the following four questions:

1. How interested would you be in sitting with these students?
2. How interested do you think these students would be in sitting with you?
3. How likely is it that you would invite yourself over to sit with this group?
4. How likely is it that someone from the group would invite you over to sit with them?

Participants answered all questions using a 7-point scale, where 1 = *not at all* and 7 = *very much*. We counterbalanced the two “self” and “other” questions across participants. Approximately half of the participants rated the “self” questions first; the other half rated the “other” questions first.

Results and Discussion

The data were analyzed using a 2 (race of targets: White vs. Black) × 2 (person: self vs. other) analysis of variance (ANOVA) with repeated measures on the person factor.³ In general, participants indicated that they ($M = 4.32, SD = 1.74$) would be more interested in sitting with the other students than the other students ($M = 4.11, SD = 1.34$) would be interested in sitting with them, $F(1, 67) = 3.82, p = .06$. Additionally, as predicted, results revealed a significant Race of Targets × Person interaction for interest in establishing contact, $F(1, 67) = 10.01, p = .002$ (see Table 2)⁴. Simple effect analyses revealed that when the targeted students were White, participants did not differ in their interest in interacting with the students and their perceptions of the other students’ interest in interacting with them, $F(1, 67) = 0.97, p = .33$. In contrast, when the targeted students were Black, participants indicated that they would be more interested in interacting with the students than the students would be interested in interacting with them, $F(1, 67) = 10.50, p < .01$.

Additionally, we conducted a 2 (race of target: White vs. Black) × 2 (person: self vs. other) ANOVA to examine participants’ perceptions of who would be more likely to initiate contact. Neither the main effects for race of targets, $F(1, 67) = 2.42, p =$

.12, or of person, $F(1, 67) = 0.30, p = .58$, were significant, nor was the two-way interaction, $F(1, 67) = 0.84, p = .36$.

Consistent with the findings of Study 1, these data reveal that even when considering a specific opportunity to interact with out-group members, Whites believed that they would be more interested in having intergroup contact than out-group members. This self–other difference was not apparent when participants imagined the same contact opportunity with in-group members. Clearly, individuals have different beliefs regarding the factors that promote or prevent intra-group, compared with intergroup, contact. Most notably, our findings suggest that despite a professed desire for contact with out-group members, participants did not think they were more or less likely than out-group members to sit with the individuals at the table. This finding implies that Whites are very much aware that there are factors that prevent them from initiating contact and that there are factors that prevent out-group members from initiating contact with them. In the second series of studies, we explored what these factors are and predicted that the perceived factors for self and out-group would differ in a manner reflective of pluralistic ignorance.

Series 2: Divergent Attributions for Lack of Intergroup Contact

Considered together, the first two studies revealed that Whites and Blacks believed that they were more interested in having intergroup contact than were out-group members. Our second series of studies examined the attributions individuals use to explain situations in which intergroup contact could but does not occur. We predicted that when intergroup contact fails to occur, individuals make different attributions regarding their own and the out-group member’s willingness to establish contact. Consistent with our reasoning outlined in the introduction, we predicted that individuals would attribute their own inaction primarily to concerns about being rejected because of their race, whereas they would attribute out-group members’ inaction primarily to a lack of interest. Moreover, we predicted this effect would be stronger in intergroup contact situations compared with intragroup contact situations.

Study 3: Method

A total of 74 White (34 men and 40 women) and 32 Black (14 men and 17 women; 1 Black student did not indicate gender) students at Princeton University completed this brief questionnaire and additional measures unrelated to this study in a large testing session. We paid participants \$8 for their participation. All participants imagined the following situation:

You enter the dining hall for dinner. You are alone because your close friends are in a review session. As you look around the dining hall for a place to sit, you notice several White [Black] students who live near you sitting together. These students also notice you. However, neither of you explicitly makes a move to sit together.

Half of the participants imagined White targeted students ($n = 52$), whereas the other half imagined Black targeted students ($n = 54$). Participants then answered the following questions:

Table 2
Study 2: Mean Likelihood Ratings of How Interested White Participants Would be in Establishing Contact With In-Group and Out-Group Individuals

Variable	White targets		Black targets	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Self	4.07 _a	1.85	4.73 _{ab}	1.48
Men	3.58	1.89	4.27	1.56
Women	4.46	1.77	5.07	1.39
Other	4.27 _a	1.31	3.84 _{ac}	1.37
Men	4.32	1.20	3.91	1.37
Women	4.25	1.42	3.80	1.42

Note. Within each row and column, means type sharing a common subscript do not differ from one another; those with a different subscript are different from one another.

³ The 2 (race of targets) × 2 (person) × 2 (order of question) × 2 (gender of participant) ANOVA did not reveal a significant four-way interaction, $F(1, 61) = 1.52, p = .22$.

⁴ The error terms used to test simple effects in repeated-measures ANOVAs in this article were computed according to the formulas provided by Howell (1987).

1. How likely is it that fear of being rejected because of your race would inhibit you from sitting with these students?
2. How likely is it that your lack of interest in getting to know these students would inhibit you from sitting with them?
3. How likely is it that fear of being rejected because of their race would inhibit the students from inviting you over?
4. How likely is it that the other students' lack of interest in getting to know you would inhibit them from inviting you over?

Similar to the other studies, participants answered all questions using a 7-point scale, where 1 = *not at all* and 7 = *very much*. We counterbalanced the questions such that half of the participants rated the "self" questions first ($n = 53$); the other half rated the "other" questions first ($n = 53$).

Study 3: Results and Discussion

White participants' responses. We analyzed Whites' explanations for their own and the other person's inaction with a 2 (race of targets: White vs. Black) \times 2 (person: self vs. other) \times 2 (explanation: fear of rejection because of race vs. lack of interest) ANOVA with repeated measures on the last two factors.⁵ A main effect of explanation emerged, indicating that Whites thought that lack of interest ($M = 3.95, SD = 1.81$) was a better explanation for their own and the targeted students' behavior than fear of rejection based on race ($M = 2.59, SD = 1.80$), $F(1, 72) = 31.80, p < .01$. Additionally, there was a significant Race of Targets \times Explanation interaction, $F(1, 72) = 6.73, p < .05$, and a significant Person \times Explanation interaction, $F(1, 72) = 16.60, p < .01$, both of which were modified by the predicted three-way interaction, $F(1, 72) = 9.38, p < .01$ (see Table 3).

To examine this interaction more closely, we divided the data into two sets based on the race of the targeted students. As predicted, when the target group consisted of White students (i.e., in-group members), the Person \times Explanation interaction was not significant, $F(1, 35) = 0.65, p = .42$. However, when the target group consisted of Black students (i.e., out-group members), the interaction between person and explanation was reliable, $F(1, 37) = 21.50, p < .01$. Whites believed that fear of rejection because of their race would be a more likely explanation for their own inaction than for the target group's inaction, $F(1, 37) = 22.10, p < .01$. Conversely, but also consistent with our predictions, Whites indicated that lack of interest would be a more likely explanation for the Black target group's inaction than for their own, $F(1, 37) = 10.40, p < .01$. Additionally, when considering the reasons behind the Black target group's failure to establish intergroup contact, Whites felt that the target group's lack of interest was a more likely explanation than fear of being rejected because of their race, $F(1, 37) = 23.30, p < .01$. In contrast, when considering the reasons behind their own failure to establish intergroup contact, Whites did not reveal a preference for either the fear of rejection or the lack of interest explanation, $F(1, 37) = 0.86, p = .36$, although the means tend to show a preference for fear of rejection. Thus, these findings reveal that Whites applied divergent explanations for their own and out-group members' inaction.

Black participants' responses. Black participants' responses were also subjected to a 2 (race of targets: White vs. Black) \times 2 (person: self vs. other) \times 2 (explanation: fear of rejection because of race vs. lack of interest) ANOVA with repeated measures on the last two factors.⁶ A main effect of explanation emerged, indicating

Table 3
Study 3: Mean Likelihood Ratings Assigned to Fear of Rejection Because of Race and Lack of Interest Explanations for Own and Other Person's Inaction

Variable	Fear of rejection		Lack of interest	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
White participants ($n = 74$)				
White target				
Self	2.00	1.78	3.86	1.91
Men	2.42	1.89	4.47	1.68
Women	1.53	1.59	3.18	1.97
Other	2.13	1.55	4.33	1.70
Men	2.53	1.58	4.32	1.34
Women	1.71	1.45	4.35	2.09
Black target				
Self	3.74 _a	1.85	3.31 _{ac}	1.94
Men	3.26	1.91	3.73	1.98
Women	4.04	1.79	3.04	1.92
Other	2.42 _b	1.63	4.34 _a	1.69
Men	2.67	1.84	3.73	1.62
Women	2.26	1.51	4.74	1.66
Black participants ($n = 32$)				
White target				
Self	4.12 _a	2.15	3.43 _{ac}	2.09
Men	3.75	2.22	4.00	2.94
Women	4.00	2.14	3.45	1.81
Other	2.87 _b	1.67	5.12 _d	1.71
Men	2.75	1.71	5.75	0.96
Women	3.09	1.70	4.73	1.85
Black target				
Self	1.62	1.02	3.56	2.25
Men	1.60	0.97	3.60	2.17
Women	1.67	1.21	3.45	1.81
Other	1.75	1.00	3.12	1.58
Men	1.60	0.97	3.40	1.65
Women	2.00	1.09	2.67	1.51

Note. Within each row and column, means sharing a common subscript do not differ from one another; those with a different subscript are different from one another. Subscripts were not used within the in-group comparison, because the interaction was not significant.

that Blacks thought that lack of interest ($M = 3.81, SD = 2.20$) was a better explanation for both their own and the target group's behavior than fear of rejection ($M = 2.59, SD = 1.78$), $F(1, 30) = 12.98, p < .01$. Furthermore, and consistent with our predictions,

⁵ The 2 (race of targets) \times 2 (person) \times 2 (explanation) \times 2 (order of question) \times 2 (gender of participant) did not reveal a significant five-way interaction, $F(1, 66) = 0.02, p = .89$.

⁶ Because of the small sample size, we were unable to conduct a 2 (race of targets) \times 2 (person) \times 2 (explanation) \times 2 (order of question) \times 2 (gender of participant) ANOVA to assess order of question and gender of participant effects simultaneously. As a result, two separate ANOVAs were conducted to assess these effects. Neither the 2 (race of targets) \times 2 (person) \times 2 (explanation) \times 2 (order of question) ANOVA, $F(1, 28) = 0.09, p = .77$, nor the 2 (race of targets) \times 2 (person) \times 2 (explanation) \times 2 (gender of participant) ANOVA, $F(1, 27) = 0.03, p = .87$, revealed a significant four-way interaction. (The degrees of freedom are different for these analyses because 1 Black student did not indicate gender.)

the three-way interaction between race of target group, person, and explanation also emerged statistically significant, $F(1, 30) = 8.01$, $p < .01$ (see Table 3).

To examine this interaction more closely, we divided the data into two sets based on the race of the targeted students. As predicted, when the target group consisted of Black students (i.e., in-group members), there was not a significant interaction between person and explanation, $F(1, 15) = 2.93$, $p = .11$. However, when the target group consisted of White students (i.e., out-group members) the interaction between person and explanation was statistically significant, $F(1, 15) = 6.07$, $p < .05$. There was a tendency for Blacks to believe that fear of rejection because of their race would be a more likely explanation for their own inaction than the targeted White students' inaction, $F(1, 15) = 2.95$, $p = .09$. Conversely, but also consistent with our predictions, Blacks indicated that lack of interest would be a more likely explanation for the White target group's inaction than for their own inaction, $F(1, 15) = 7.31$, $p < .05$. Additionally, when considering the reasons behind the target group's failure to establish intergroup contact, Blacks felt that the White target group's lack of interest was a more likely explanation than fear of being rejected because of their race, $F(1, 15) = 17.60$, $p < .01$. In contrast, when considering the reasons behind their own failure to establish intergroup contact, Blacks did not reveal a difference in their attributions to fear of rejection based on race and lack of interest, $F(1, 15) = 0.58$, $p = .45$. Thus, similar to Whites, Blacks tended to apply divergent explanations to their own and to out-group members' inaction.

The results of Study 3 provide compelling evidence for pluralistic ignorance in the context of intergroup contact. Both Whites and Blacks reported that different psychological states were likely to motivate their own and out-group members' inaction in a situation where there was potential for intergroup contact to occur. Consistent with our predictions, the results varied between the intergroup and intragroup contact situations. Participants attributed their behavior and the target group's behavior to the same motivation in the intragroup contact scenario. By contrast, participants in the intergroup contact conditions were more likely to explain their own inaction in terms of their fear of being rejected because of their race but to explain the out-groups' inaction in terms of their lack of interest. Clearly, the results of this study reveal the presence of pluralistic ignorance in intergroup encounters.

Furthermore, the results of the present study are particularly intriguing because they reveal Whites' concerns about and sensitivity to race-based rejection. Despite issues of racial prejudice and discrimination being a concept typically associated with Blacks, we found that Whites were more likely to attribute their own inaction to racial concerns than the inaction of Black targets. In other words, although Whites expected to be rejected based on their race by Black interaction partners, they did not expect for their potential Black interaction partners to harbor similar concerns. Because Blacks are more likely to experience prejudice than Whites, the present findings are relatively counterintuitive. Why would Whites be more likely to associate race-based rejection with their own inaction than Blacks' inaction? As noted in the introduction, some understanding of this phenomenon can be gleaned from recent work by Vorauer and colleagues (e.g., Vorauer et al., 1998, 2000) that examined dominant group members' metaperceptions in intergroup interaction contexts. This research found that Whites are often concerned about the impression they make on

out-group members regarding issues of race and prejudice. Whites anticipate that out-group members will perceive them as being cold and prejudiced and, as a consequence, will behave negatively toward them. The findings of the present study echo Vorauer et al.'s (1998, 2000) work, showing that Whites explain their avoidance of intergroup contact as a result of their concerns about being rejected because of their race.

Despite being consistent with Vorauer et al.'s (1998, 2000) intergroup metaperception work, the present results are somewhat at odds with Vorauer and colleagues' work on relational pluralistic ignorance. Vorauer and Ratner (1996) found that individuals make different attributions for their own and a potential romantic partner's failure to initiate contact. Specifically, individuals attributed their own failure to make the first move to fear of being rejected but their potential partner's failure to lack of interest. Vorauer and Ratner predicted that relational pluralistic ignorance should extend to any acquaintance process. They wrote, "We believe that the present research illuminates a process that can occur around the formation and development of a variety of different kinds of social and personal relationships" (p. 504). As such, we should have found evidence for relational pluralistic ignorance in the intragroup contact situations. One could argue, however, that the wording of our rejection attribution (i.e., rejection because of my race) was too heavy handed, making it somewhat irrelevant to the intraracial contact situations. Similarly, we were concerned that drawing attention to race in the rejection attribution may have exaggerated the effect in the intergroup context. Because of the importance of demonstrating intergroup pluralistic ignorance as cleanly as possible in the present work, we sought to replicate the findings of Study 3 without the taint of a direct allusion to race. Thus, in Study 4, we used a rejection attribution that did not mention race. We predicted that attributional biases indicative of pluralistic ignorance would emerge in both the intragroup and intergroup contexts but that intergroup pluralistic ignorance would be decidedly larger than intragroup pluralistic ignorance.

Study 4: Method

Eighty-three White students from Dartmouth College completed the short questionnaire at the end of an unrelated study. Participants received course credit or \$5 for their participation in both studies. We presented participants with the same vignette and self-other questions used in Study 3. The questionnaire was the same except for one change—we removed "because of your [their] race" from the "fear of being rejected" explanation questions. For example, participants rated, "How likely is it that fear of being rejected would inhibit you from sitting with these students?" Participants answered all questions using a 7-point scale, where 1 = *not at all* and 7 = *very much*. As in the previous studies, we counterbalanced the two "self" and "other" questions across participants, such that half of the participants ($n = 43$) completed the "self" questions first, and the other half ($n = 40$) completed the "other" questions first.

Study 4: Results and Discussion

We analyzed the data using a 2 (race of targets: White vs. Black) \times 2 (person: self vs. other) \times 2 (explanation: fear of rejection vs. lack of interest) ANOVA with repeated measures on

the last two factors.⁷ Results revealed a significant main effect for person, $F(1, 81) = 3.84, p = .05$; a significant Race of Targets \times Explanation interaction, $F(1, 81) = 33.70, p < .01$; and a significant Person \times Explanation interaction, $F(1, 81) = 73.90, p < .01$. These effects, however, were modified by the predicted three-way interaction, $F(1, 81) = 5.05, p < .05$ (see Table 4). To understand the pattern of results for this complex interaction, we divided the data into two sets based on the race of the targeted students.

As predicted, when the target group consisted of Black students, a significant two-way interaction between person and explanation emerged, $F(1, 39) = 60.60, p < .01$ (see Table 4). The pattern of results was identical to that of Study 3. Specifically, Whites believed that fear of rejection would be a more likely explanation for their own inaction than for the target group's, $F(1, 39) = 26.60, p < .01$. Conversely, but also consistent with our predictions, Whites indicated that lack of interest would be a more likely explanation for the target group's inaction than for their own, $F(1, 39) = 56.70, p < .01$. Additionally, when considering the reasons behind their own failure to establish intergroup contact, Whites reported that fear of being rejected was a more likely explanation for their inaction than lack of interest, $F(1, 39) = 50.80, p < .01$. In contrast, when considering the reasons behind the target group's failure to establish intergroup contact, Whites felt that lack of interest was a more likely explanation than fear of being rejected, $F(1, 39) = 15.60, p < .01$. Thus, these findings replicate those reported in Study 3, again documenting the presence of pluralistic ignorance in intergroup contexts.

Consistent with Vorauer and Ratner (1996), when the target group consisted of White students, the Person \times Explanation interaction was also reliable, $F(1, 42) = 19.80, p < .01$ (see Table 4). However, an examination of the means reveals that the difference between self–other explanations was enhanced in the Black relative to the White condition. Additional analyses further support our claim that race plays a pivotal role in Whites' explanation for self and other's inaction. Specifically, Whites reported that fear of being rejected was a more likely explanation for their behavior when the targets were Black than when the targets were White, $F(1, 81) = 5.36, p < .05$. In contrast, Whites reported that lack of interest was a less likely explanation for their behavior when the targets were Black than when the targets were White, $F(1, 81) = 25.10, p < .01$. Despite our removal of the direct race-based

rejection attribution, therefore, the present results suggest that White participants were concerned with being rejected because of their race. If being concerned about racial issues was not an important factor in Whites' explanation for their inaction toward others, then they should not have been influenced by the race of the targeted students.

In addition, these data also show that Whites were just as likely to believe that fear of rejection could explain the target's inaction when the target was Black ($M = 2.82$) as when the target was White ($M = 2.55$), $F(1, 81) < 1$. This result is fascinating in that it reveals a failure on the part of Whites to recognize that Blacks may be relatively more concerned about being rejected by a White person (our participant) than a White individual would be. Considered in tandem with Whites' own relatively high attributions to rejection in explaining their inaction in both intragroup and intergroup contexts (respective M s = 3.86 and 4.67), these results arguably reflect Whites' tendency to discount the role of race when estimating the extent to which targets may be concerned about being rejected by them but include race as a factor in their own rejection concerns. Consistent with the correspondence bias (Gilbert & Jones, 1986; Jones & Harris, 1967; Ross, 1977), participants failed to see how the target's behavior could be constrained by situational factors (i.e., the racial demographics of the interaction).

Study 5

Although Studies 1–4 suggest that Whites and Blacks make divergent explanations for their own and out-group members' inaction, several limitations of this work must be addressed to provide a stronger test of pluralistic ignorance. First, our methodology puts into question the generalizability of the self–other discrepancy to nonhypothetical situations. The use of vignettes allows people to report only what they believe they should think and do or what they hope they would think and do. When given the opportunity to interact with an out-group member, do people believe they are more interested in having contact than the out-group member? Similarly, do people believe they are more concerned about being rejected than the out-group member? It is important to address these questions using a nonhypothetical situation. A second limitation of the studies above is that in order to make participants aware of the intergroup nature of the situation, we explicitly stated the race of the target in the vignette. Drawing attention to race in the vignette may have exaggerated the effect in the intergroup context. In essence, our reliance on vignettes allows people the opportunity to self-enhance by overreporting their interest in intergroup contact.

These limitations reveal the larger issue of self-enhancement as an alternative to the hypothesized pluralistic ignorance account. The attributions that we asked of participants make it difficult to rule out self-enhancement motives completely. Because individuals want to view themselves in a more positive manner than others, they may be less likely to report that lack of interest influences

Table 4
Study 4: Mean Likelihood Ratings Assigned to Fear of Rejection and Lack of Interest Explanations for Own and Other Person's Inaction

Variable	Fear of rejection		Lack of interest	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
White target				
Self	3.86 _a	1.57	3.97 _a	1.40
Other	2.55 _c	1.27	4.65 _d	1.46
Black target				
Self	4.67 _a	1.67	2.42 _c	1.41
Other	2.82 _b	1.51	3.95 _d	1.28

Note. Within each row and column, means sharing a common subscript do not differ from one another; means with a different subscript are different from one another.

⁷ The 2 (race of targets) \times 2 (person) \times 2 (explanation) \times 2 (order of question) ANOVA did not reveal a significant four-way interaction, $F(1, 79) = 0.45, p = .50$. We were unable to assess gender of participant effects because gender was not collected from our participants.

their inaction in intergroup interactions. However, there are several factors that we believe reduce the influence of self-enhancement on the observed patterns of results. First, we assured all participants that the data collection was anonymous and confidential. As a result, there would have been little incentive, at least externally, for participants to try to construct a more positive self-image. Second, there is no evidence suggesting that fear of rejection is more socially desirable than not being interested in getting to know someone. Moreover, it is not self-enhancing for individuals to believe that others, even if the others are out-group members, are not interested in interacting with them. In general, people prefer to be seen as likable and desire that others want to get to know them (Baumeister, 1982; Schlenker, 1980). Thus, it is just as likely that self-enhancement motives would have led individuals to indicate that lack of interest explained their own rather than an out-group member's inaction. Finally, if individuals were primarily concerned about portraying a positive image, they should have indicated that they would be more likely than out-group members to initiate intergroup contact (Study 2), but they did not. Nevertheless, we conducted Study 5, in part, to lessen the likelihood that the pattern of results is attributable to self-enhancement.

A third limitation in our previous studies is that we used a situation in which we compared the perceived reaction of an individual with perceived reactions of a group. That is, we asked our participants to imagine they were alone and were contemplating joining several members of a group. One could argue that an individual may only be fearful of being rejected by a group of out-group members rather than when contemplating an interaction with just one out-group member. Likewise, people may perceive a group as lacking interest in interacting with someone outside of their group, whereas an individual who is alone would be interested in joining a group. Although group contexts may amplify these concerns and perceptions, we believe that the self–other discrepancy we have demonstrated thus far is also relevant to situations between individual members of different groups.

Hence, the goal of Study 5 was to address these limitations of the previous studies. Specifically, we moved from a scenario-based situation in which individuals imagined entering a group of out-group members to a laboratory setting in which individuals anticipated an actual interaction with a single out-group member.

Method

Forty students from Princeton University participated in the study. The sample consisted of 20 White (10 men and 10 women) and 20 Black (8 men and 12 women) students. We paid participants \$8 for their participation. We collected data from participants in individual sessions.

The experimenter (a White woman) told participants that the focus of the study was on friendship formation processes. Furthermore, the experimenter told participants that they would have a short “get-to-know-you” interaction with another student and that both individuals would be able to decide whether or not they felt a friendship could develop between the two of them. Thus, participants believed that they would be evaluating the other participant as a friend and that the other participant would be evaluating them as a friend.

The experimenter explained that to facilitate the interaction, participants would exchange some background information and a picture with their partner. The participants completed the background information sheet, which required them to indicate their hometown, number of siblings, and what they liked to do in their spare time. In addition, the experimenter took

a Polaroid of the participant and attached it to the participant's background information sheet. Next, the experimenter left the room to ostensibly collect the same information from the other participant. In reality, there was not another participant. Instead, participants received a Polaroid of a same-sex confederate and a fictitious background information sheet. Most important, all White participants received a photograph of a Black confederate, and all Black participants received a photograph of a White confederate.⁸ Thus, all participants believed they were going to have an interaction with an out-group member. The background information sheet indicated that the confederate was from Pennsylvania, had two siblings, and enjoyed hanging out with his or her friends and watching TV during his or her spare time.

After allowing the participants a few minutes to examine the photograph and the background information sheet of their anticipated interaction partner, the experimenter informed participants that it was important for them to complete a pre-interaction questionnaire. Of most importance to this study, participants answered two questions regarding how interested they were in having the interaction (i.e., “How interested are you in getting to know the other participant?” and [reversed] “How much would you prefer not to have the interaction with the other participant?”). These questions were combined to form a lack of interest composite score ($\alpha = .67$). In addition, participants indicated how concerned they were that the other participant would reject them as a friend (i.e., “To what extent are you concerned about being accepted by the other participant?”, “To what extent are you nervous that the other participant will not like you?”, and “To what extent do you think the other person will reject you as a friend?”; $\alpha = .81$). Additionally, participants answered these same questions with respect to the extent they thought the other participant was interested and disinterested in having the interaction ($\alpha = .51$) and how concerned they thought the other participant was about being rejected as a friend ($\alpha = .83$).

After participants completed the questionnaire, the experimenter informed participants that she would like to get their impressions of the study thus far. This allowed the experimenter to probe for suspicion to assess whether or not participants believed there was another participant in the study and that they would have an interaction with this person. Fortunately, all participants believed the cover story. After checking for suspicion, the experimenter informed participants that they would not have an interaction with the other participant, debriefed the participants, and compensated them (\$8) for their participation. In addition, during the debriefing process, the experimenter asked all participants to indicate the race and gender of their anticipated interaction partner. All participants correctly identified this information.

Results and Discussion

We analyzed the data using a 2 (race of participant: White vs. Black) \times 2 (person: self vs. other) \times 2 (explanation: fear of rejection vs. lack of interest) ANOVA with repeated measures on the last two factors.⁹ As predicted, results revealed a significant two-way interaction between person and explanation, $F(1, 38) = 12.70, p = .001$. Furthermore, consistent with our predictions, this interaction was not qualified by the three-way interaction, $F(1, 38) = 2.17, p = .15$, indicating that the pattern of results was the same for White and Black participants.

To understand the two-way interaction, we conducted simple effect analyses (see Table 5). The results revealed that both White and Black participants were more concerned with being rejected

⁸ Two confederates of each race and gender were used.

⁹ The 2 (race of participant) \times 2 (person) \times 2 (explanation) \times 2 (gender of participant) ANOVA did not reveal a significant four-way interaction, $F(1, 36) = 0.04, p = .84$.

Table 5
 Study 5: White and Black Participants' Mean Likelihood Ratings of Perceptions of Own and Out-Group Partner's Fear of Rejection and Lack of Interest Regarding Anticipated Interaction

Variable	Fear of rejection		Lack of interest	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Self	3.64 _a	0.83	3.24 _c	0.92
Men	3.31	0.66	3.12	0.79
Women	3.91	0.87	3.34	1.03
Other	3.27 _b	1.29	3.91 _d	0.83
Men	3.06	1.33	3.59	0.82
Women	3.44	1.25	4.16	0.78

Note. Within each row and column, means sharing a common subscript do not differ from one another; those with a different subscript are different from one another.

by the out-group individual than they were disinterested in interacting with this person, $F(1, 39) = 4.59, p < .05$. In contrast, both White and Black participants believed that the out-group individual was less concerned about being rejected than they were disinterested in having the interaction, $F(1, 39) = 7.96, p < .01$. Approaching the two-way interaction from another perspective revealed that both White and Black participants felt they were more interested in having the interaction compared with the out-group person, $F(1, 39) = 22.30, p < .01$. Conversely, White and Black participants believed they were marginally more concerned with being rejected as a friend compared with the out-group individual, $F(1, 39) = 3.60, p = .06$.

The present results are consistent with our previous findings and buttress our belief that the self–other difference effect that has emerged consistently in this work is not limited to individuals' construals of hypothetical situations, nor is it limited to the case of an individual approaching a group. Whites and Blacks who believed they were about to have an interaction with one out-group member felt they were more interested in having the interaction than the out-group person. Additionally, Whites and Blacks believed they were more concerned with being rejected as a friend than their anticipated out-group partner.

We must note that the situation created in this study is not as pure a depiction of pluralistic ignorance as were those in Studies 3 and 4. In a pure case of pluralistic ignorance, participants' avoidance of intergroup contact would have resulted from their own inaction. In the present study, individuals' inactions were constrained by the experimenter. We note, however, that our situation closely resembles pluralistic ignorance, because participants made construals regarding the same situation for the self and their anticipated partner. In addition, it is important to note that we did not include an intragroup comparison group in this study. On the basis of our previous studies, however, we predict that the self–other effects in an intragroup contact situation would not have been as strong compared with the intergroup contact situation. Despite these two limitations, the results clearly attest to the general self–other difference bias Whites and Blacks have regarding one another's feelings and concerns with respect to intergroup encounters.

Series 3: Consequences and Reduction

Impressions about how one expects to be treated by others as well as judgments about the underlying cause of others' behavior play an important role in how people interact with each other. (Mis)conceptions that out-group members will not accept them are likely to influence whether people avoid intergroup contact. This is unfortunate, because intergroup contact is essential in order to foster friendships across group boundaries, and intergroup friendships are known to reduce prejudiced attitudes and beliefs (Pettigrew, 1998). In the next series of studies, we consider what impact pluralistic ignorance may have on intergroup encounters and how intergroup pluralistic ignorance may be attenuated.

Study 6: Method

The purpose of Study 6 was to examine the consequences of applying divergent explanations for one's own and for out-group members' identical behaviors. It is possible that the more participants conform to the pluralistic ignorance bias, the less intergroup contact they are likely to have with out-group members. More specifically, the more individuals believe that their inaction compared with the out-group's inaction is driven by fear of rejection, the less contact they will have with out-group members. We opted to focus on quantity of contact as opposed to some other aspect of contact (e.g., quality) to be consistent with the general issue of the rest of studies dealing with the avoidance of contact.

Forty White students (26 men and 14 women) from Princeton University were selected at random at the campus center during the 2nd week of the fall semester. A White experimenter approached individuals and asked them to participate in a study about student experiences on campus. The experimenter informed participants that they would complete a survey at that time and would also be contacted at the end of the semester to complete a follow-up survey.

At the initial session, the experimenter gave participants two questionnaires to complete. One questionnaire was the intergroup contact vignette from Study 3 and the associated attribution questions. The second questionnaire assessed the frequency with which participants engaged in intergroup contact (these questions were embedded in additional unrelated questions). Specifically, participants were asked to "think about the different interactions you have had with people so far this semester. Approximately what percentage of these interactions has been with Whites? What percentage has been with Blacks?" The order in which the vignette–attributions and intergroup contact questionnaires were completed was counterbalanced.

Approximately 7 weeks after the first session, we sent a letter and the frequency of intergroup contact questionnaire to participants' campus addresses and asked them to complete and return the contact survey. Thirty-two participants returned the completed questionnaire.

Study 6: Results

Pluralistic ignorance attributions. We first analyzed participants' attributions for their own and out-group targets' failure to initiate intergroup contact in the vignette. A 2 (person: self vs. other) \times 2 (explanation: fear of rejection vs. lack of interest) repeated-measures ANOVA revealed the presence of pluralistic ignorance similar to Studies 3–5. Specifically, a significant interaction between person and explanation emerged, $F(1, 39) = 20.10, p < .01$. Additional analyses revealed that Whites believed that fear of rejection would be a more likely explanation for their own inaction ($M = 3.67, SD = 2.08$) than for the Black target group's inaction ($M = 2.60, SD = 1.64$), $F(1, 39) = 7.02, p < .05$.

Table 6
 Study 6: Correlations Among Contact and Self-Other Attribution Variables

Variable	1	2	3	4	5	6	7	8
1. Own fear of rejection	—	-.35*	.07	.13	.03	-.02	-.20	-.46*
2. Own lack of interest		—	-.19	.39**	.26	-.19	.31†	-.01
3. Other fear of rejection			—	-.20	.12	-.21	.24	-.09
4. Other lack of interest				—	.18	-.14	-.09	-.11
5. Intragroup contact T1					—	-.93**	.35*	-.46**
6. Intergroup contact T1						—	-.30†	.46**
7. Intragroup contact T2							—	-.32†
8. Intergroup contact T2								—

Note. For all variables collected at Time 1 (T1), $n = 40$. For all variables collected at Time 2 (T2), $n = 32$.
 † $p < .10$. * $p < .05$. ** $p < .01$.

Conversely, but also consistent with predictions, Whites indicated that lack of interest was a more likely explanation for the Black target group's inaction ($M = 4.22$, $SD = 1.57$) than for their own ($M = 2.62$, $SD = 2.03$), $F(1, 39) = 25.02$, $p < .01$. Additionally, when considering the reasons behind their own failure to establish intergroup contact, Whites reported that fear of being rejected because of their race was a more likely explanation than lack of interest, $F(1, 39) = 3.86$, $p = .05$. In contrast, when considering the reasons behind the Black target group's failure to initiate contact, Whites felt that lack of interest was a more likely explanation than fear of being rejected because of race, $F(1, 39) = 16.93$, $p < .01$. In replication of our previous findings, therefore, pluralistic ignorance was observed.

Descriptive statistics. Whites reported having had more intragroup ($M = 79.68$, $SD = 12.63$) than intergroup ($M = 18.75$, $SD = 12.76$) contact at Time 1, $t(39) = 16.20$, $p < .01$, and at Time 2 ($M = 74.96$, $SD = 15.21$ intragroup; $M = 14.00$, $SD = 9.36$ intergroup), $t(31) = 17.01$, $p < .01$. Additionally, participants reported having had more intergroup contact at the beginning of the semester than at the end of the semester, $t(31) = 2.27$, $p < .05$. However, the amount of intragroup contact did not differ between Times 1 and 2, $t(31) = 1.66$, $p = .12$. Table 6 contains the correlations between the contact and the self-other attribution questions.

Does pluralistic ignorance predict interracial contact frequency? Recall that the purpose of conducting Study 6 was to examine the relation, if any, between pluralistic ignorance (i.e., self-other biases in individuals' attributions for why intergroup contact often does not occur) and the tendency to actually avoid interracial contact. To examine this possibility, we first computed bias scores (i.e., difference scores) for participants' attributions to race-based rejection for self and other as well as their attribution to lack of interest for self and other for the inaction described in the vignette. Furthermore, we computed a difference score between frequency of intergroup contact at Time 1 and frequency at Time 2 for each participant (i.e., Time 2 minus Time 1). A similar difference score was also computed for each participant's self-reported frequency of intragroup contact.

Correlations between Whites' self-other attributional biases and their change in intergroup contact revealed that the more participants believed fear of rejection was a better explanation for their own inaction than the out-group targets' inaction, the more their frequency of intergroup contact declined over the semester,

$r(30) = -.41$, $p < .05$. Also consistent with predictions, Whites' belief that fear of rejection was a better explanation for their own inaction than the out-group targets' inaction did not predict a change in the frequency with which they reported having intragroup contact over the semester, $r(30) = -.21$, $p = .25$. Results reveal, however, that there is not a significant difference between these correlation coefficients, Hotelling's $t(30) = 0.79$, *ns*. Contrary to predictions, the extent to which Whites believed that lack of interest was a better explanation for the target group's inaction than for their own inaction was unrelated to either the change in the amount of intergroup contact, $r(30) = -.15$, *ns*, or to the change in the amount of intragroup contact, $r(30) = .25$, *ns*, they engaged in over the course of the semester. Again, the difference between these correlation coefficients was not significant, Hotelling's $t(30) = 0.36$, *ns*.¹⁰

We also conducted a regression using how much Whites believed that fear of rejection and lack of interest tended to explain their own and the Black target group's inaction as predictor variables and change in frequency of intergroup contact over time as the dependent variable. Results revealed that only Whites' fear of rejection because of their race significantly predicted the observed decline in the frequency of intergroup contact during the semester ($\beta = -.43$, $p < .05$). This result underscores the practical importance of examining Whites' concerns regarding race-based rejection in order to understand Whites' likelihood of engaging in intergroup contact.

¹⁰ As another way of exploring the relationships reported here, we conducted a 2 (fear of rejection) \times 2 (lack of interest) \times 2 (time of intergroup contact) ANOVA. Results revealed a significant two-way interaction between fear of rejection and time, $F(1, 28) = 6.53$, $p = .02$, but a nonsignificant two-way interaction between lack of interest and time, $F(1, 28) = 0.39$, $p = .54$. Further analyses revealed that participants who believed fear of rejection was a better explanation for their own inaction than the target group's inaction had less contact with out-group members at the end of the semester ($M = 10.47$, $SD = 5.18$) than at the beginning of the semester ($M = 20.67$, $SD = 13.34$), $F(1, 14) = 8.82$, $p = .01$. By contrast, for participants who believed fear of rejection was just as likely to be an explanation for the self and the out-group, there was no significant difference in the amount of contact they had with out-group members at the beginning of the semester ($M = 17.06$, $SD = 12.38$) and at the end of the semester ($M = 17.12$, $SD = 11.15$), $F(1, 16) = 0$, $p = .97$. Thus, these results are similar to the correlations presented in the main text.

Study 6: Discussion

The data reported in Study 6 provide preliminary support that having divergent attributions for one's own failure and the failure of out-group members to initiate interracial contact has negative behavioral consequences. The self–other difference, indicative of intergroup pluralistic ignorance, was replicated in Study 6 and, furthermore, predicted the extent to which Whites reported having actually had contact with Blacks. Specifically, attributing one's own inaction in a vignette regarding potential intergroup contact to concern about rejection more than the inaction of the out-group members in the vignette predicted students' decline in interracial but not same-race contact over the course of a semester in college. In other words, the extent to which pluralistic ignorance pervades students' perceptions (at least White students' perceptions), the less they are likely to gain from the many university programs and practices designed to increase contact between members of different racial groups. Clearly, this finding highlights the potential negative consequences of pluralistic ignorance in interracial interpersonal encounters.

Given these potential practical implications, the results of the present study must be interpreted conservatively. The findings of the present study were only partially in support of our hypotheses. This bias in Whites' concern about being rejected because of their race was the only predictor of the change in the frequency with which they engaged in intergroup contact over the course of their first semester of college. Differential perceptions of lack of interest for self and other did not predict actual contact behavior. Additionally, our sample only consisted of Whites, who hold only half of the burden for contact between Blacks and Whites. Additional research is needed to examine the behavioral consequences of pluralistic ignorance in intergroup contact settings for Blacks. Despite these limitations, the present findings are intriguing because they suggest that similar to Blacks (Mendoza-Denton et al., 2002), concerns about being rejected because of race seem to lead Whites to avoid interracial interactions. On the basis of the observed relation between pluralistic ignorance and the avoidance of interracial contact, we conducted Study 7 to examine a potential strategy to reduce intergroup pluralistic ignorance.

Study 7

Several theoretical methods of reducing pluralistic ignorance in intergroup contact settings exist. First, we could reduce individuals' concerns with being rejected in intergroup interactions so that their concerns would be similar to their perceptions of out-group members' concerns. Similarly, we could help individuals recognize that members of out-groups are likely to be just as concerned about being rejected as they are. On the other hand, we could approach the problem from the other side of the attributional asymmetry by helping individuals perceive that out-group members are just as interested in having contact with them as they are interested in having intergroup contact. Likewise, we could help individuals recall situations in which they did avoid interracial contact out of their own lack of interest. Because of its direct correlation with the tendency to avoid interracial contact found in Study 6, however, we opted to focus primarily on reducing individuals' concerns about being rejected by out-group members.

The method through which we attempted to reduce participants' rejection concerns relies on theoretical work examining the ex-

tended contact effect (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). The extended contact hypothesis posits that being aware that an in-group member has a close relationship with an out-group member can lead to more positive intergroup attitudes. Previous research has demonstrated that individuals who know that an in-group member has a friend who is a member of a particular out-group tend to hold attitudes that are less prejudiced toward that out-group, controlling for the number of out-group friends that the individual has (Wright et al., 1997). For example, if a White person's close White friend has Black friends, then the White person will be less prejudiced compared with a White person whose close White friend does not have Black friends.

One explanation as to why the extended contact effect reduces individuals' level of bias is because both the close in-group friend and his or her out-group friends become part of the self. In other words, as close friends become part of the self, their close friends, regardless of race, are also drawn closer to individuals' perceptions of themselves (Aron & Aron, 1996). In the present study, we drew on this explanation in order to reduce individuals' rejection concerns. As a person becomes incorporated in the self-concept of an individual, the less likely that individual is to generate divergent explanations for their own behavior and for that of close others. Thus, as an out-group member becomes a part of the self, individuals will believe that the same forces driving their own behavior are also driving the out-group member's behavior, which should, in turn, reduce the intergroup pluralistic ignorance effect.

Hence, in Study 7, half of our participants received the identical vignette used in Studies 2 and 3, whereas the other half received a vignette in which they were asked to imagine that their best friend enjoys hanging out with the specified group of students. We examined the extent to which individuals attributed their own behavior, compared with the behavior of the targeted out-group students, to concerns about being rejected because of their race and to their lack of interest. We predicted that when participants do not have information about their best friend's acceptance of the targeted students, the typical pluralistic ignorance effect would emerge. The self–other differences, however, were not predicted to occur for individuals who were provided with information about their best friend's acceptance of the targeted out-group students. On the basis of the extended contact hypothesis, we predicted that this manipulation would lead participants to be less concerned about being rejected by the out-group person. If a close in-group friend, who has been included as part of the self, enjoys interacting with an out-group person, then clearly that out-group person is not biased against the in-group. Moreover, individuals were also expected to be less likely to think that the out-group members' inaction stemmed from their lack of interest.

Study 7: Method

One hundred nineteen White students (34 men and 85 women) from the University of Michigan completed the questionnaire in a midlevel psychology course and at the end of an additional study. Similar to Study 3, we asked participants to imagine the following situation:

You enter the dining hall for dinner. You are alone because your close friends are in a review session. As you look around the dining hall for a place to sit you notice several White [Black] students who live near you sitting together. These students also notice you. However, neither of you explicitly makes a move to sit together.

Table 7
Study 7: Mean Likelihood Ratings Assigned to Fear of Rejection and Lack of Interest Explanations for Own and Other Person's Inaction

Variable	White target				Black target			
	Fear of rejection		Lack of interest		Fear of rejection		Lack of interest	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
No knowledge of friend's opinion								
Self	2.12	1.40	4.87	1.50	4.17 _a	1.87	2.73 _c	1.83
Men	2.14	1.86	5.71	0.95	3.28	1.89	2.29	1.38
Women	2.12	1.29	4.62	1.55	4.56	1.79	2.94	2.02
Other	2.38	1.49	4.58	1.17	3.17 _b	1.55	3.91 _d	1.78
Men	2.86	1.95	4.71	0.75	2.86	1.68	3.86	1.77
Women	2.25	1.36	4.54	1.28	3.31	1.54	3.94	1.84
Knowledge of friend's opinion								
Self	1.32	0.80	4.17	1.64	3.35	1.87	3.38	1.66
Men	1.10	0.32	4.20	1.69	3.60	1.95	4.30	1.70
Women	1.42	0.93	4.17	1.66	3.24	1.87	2.95	1.49
Other	1.65	1.07	4.50	1.39	3.35	1.64	4.00	1.48
Men	1.40	0.96	4.10	1.45	4.20	1.62	4.60	1.17
Women	1.75	1.11	4.67	1.37	2.95	1.53	3.71	1.55

Note. Within each row and column, means sharing a common subscript do not differ from one another; those with a different subscript are different from one another.

Half the participants ($n = 65$) were asked to imagine that their best friend knew the targeted students. They read, "You do not know these students well, but your best friend enjoys hanging out with them." This sentence was placed immediately after "As you look around the dining hall for a place to sit, you notice several White [Black] students who live near you sitting together." A little over half of the White participants ($n = 65$) imagined that the targeted students were White, whereas the others ($n = 54$) imagined that the targeted students were Black. Participants then completed the same questions that were used in Study 3. We counterbalanced the questions such that a little fewer than half of the participants ($n = 53$) completed the "self" questions before the "other" questions, whereas the others ($n = 65$) completed the questions in the reverse order.

Study 7: Results and Discussion

We analyzed participants' explanations for their own and the targeted students' inaction via a 2 (knowledge of friend's acceptance: no vs. yes) \times 2 (race of targets: White vs. Black) \times 2 (person: self vs. other) \times 2 (explanation: concerns about rejection based on race vs. lack of interest) ANOVA with repeated measures on the last two factors.¹¹ Consistent with our predictions, the four-way interaction was reliable, $F(1, 115) = 8.57, p < .01$. To examine this complex interaction more closely, we analyzed the data separately on the basis of whether the participants had knowledge about their best friend's acceptance of the targeted students.

When Whites did not have knowledge of their friend's opinion, the expected pluralistic ignorance pattern was observed. That is, the three-way interaction between race of targets, person, and explanation was reliable, $F(1, 52) = 29.10, p < .01$ (see Table 7). Similar to the results of Study 3, when the targeted students were White (i.e., in-group members), the explanations Whites provided for their own and the targeted students' inaction did not reliably differ, $F(1, 31) = 3.60, p = .10$. However, when the targeted

students consisted of Black students (i.e., out-group members), the Person \times Explanation interaction was reliable, $F(1, 22) = 24.6, p < .01$. In replication of our previous findings, Whites reported that fear of rejection explained their own inaction more than the target group's inaction, $F(1, 22) = 6.84, p < .05$. They also reported that lack of interest explained the target group's inaction more than their own, $F(1, 22) = 11.02, p < .01$. Furthermore, fear of rejection was offered as a more likely explanation for their own inaction than lack of interest, $F(1, 22) = 20.98, p < .01$, but lack of interest tended to be perceived as the explanation of the target group's inaction relatively more than fear of rejection, $F(1, 22) = 3.82, p = .06$. Taken together, when Whites did not have knowledge of their friend's acceptance of the group of Black students, the familiar pattern of pluralistic ignorance emerged.

In contrast, Whites who were provided with information that their best friend enjoyed hanging out with the targeted group of Black students did not reveal the pluralistic ignorance of attributions; for the three-way interaction, $F(1, 63) = 1.48, p = .23$. As shown in Table 7, Whites indicated that the out-group targets were likely to be inhibited by fear of rejection just as much as they themselves were. Similarly, Whites indicated that they were inhibited because of a lack of interest to the same extent as the out-group members. Moreover, as can be seen in Table 7, the reduction was primarily due to a reduction in the extent to which individuals attributed their own inaction to their fear of being rejected.

¹¹ The 2 (friend's acceptance) \times 2 (race of targets) \times 2 (person) \times 2 (explanation) \times 2 (order of questions) \times 2 (gender) ANOVA did not reveal a significant five-way interaction, $F(1, 103) = 0.89, p = .35$.

The results of Study 7 suggest, therefore, that processes underlying the extended contact hypothesis can reduce pluralistic ignorance in intergroup encounters. When individuals are aware that a close friend enjoys interacting with a group of out-group members, they are less likely to be concerned that those out-group members might reject them. Given the accumulating literature on the negative impact of concerns regarding group-based rejection on intergroup contact (e.g., Mendoza-Denton et al., 2002; Plant & Devine, 2003), strategies of any sort that serve to reduce individuals' rejection concerns are likely to be of particular import.

Despite the findings of the present study, it should be noted that previous research on the extended contact hypothesis has focused primarily on having an in-group friend rather than a close friend who also has an out-group friend. In the present research, we did not explicitly indicate that the close friend was an in-group member. Rather, we simply assumed that most participants would think of their own best friend, who, given the paucity of intergroup contact revealed by the participants in any number of studies, would tend to be another in-group member. Nevertheless, the present findings reinforce the important influence of Whites' perceptions of their own and out-group members' concerns about being rejected during interracial encounters.

General Discussion

Intergroup interactions are marked by perceived differences. As Vorauer (2001) indicated,

the fact that an interaction partner belongs to an out-group may serve as a strong cue to potential differences in perspectives, leading individuals not to blur the boundary between self and other, but instead to perceive a gulf between them. (p. 271)

The present set of studies suggests that individuals do indeed perceive a gulf between themselves and out-group members when trying to understand why intergroup contact occurs so rarely. Study 1 demonstrated that both Whites and Blacks were interested in having contact with one another, but they were not likely to believe that the out-group wanted to have contact with them. Study 2 extended this general bias and demonstrated that given a specific situation, Whites believed they were more interested in interacting with targeted Black students than they thought the Black students were interested in interacting with them. However, Whites acknowledged that there are factors that are likely to inhibit both themselves and Blacks from engaging in interracial contact.

Studies 3–5 revealed differences in beliefs about the factors that inhibit self and out-group members from initiating contact. These studies demonstrate that individuals believe that their own inaction reflects a fear of being rejected but that the out-group's inaction reflects lack of interest. This pattern of attribution for self and other reflects pluralistic ignorance. Study 6 revealed that pluralistic ignorance regarding hypothetical intergroup contact predicts the amount of actual intergroup contact individuals have during their first semester in college. Last, Study 7 demonstrates that intergroup pluralistic ignorance is attenuated if individuals' concerns about race-based rejection are allayed—for instance, if they learn that a close friend feels positive about out-group members.

Pluralistic Ignorance and Intergroup Contact

The primary purpose of the present studies was to consider the applicability of pluralistic ignorance to a topic integral to race

relations—engagement in interracial contact. The pattern of results revealed in our work is remarkably similar to historical work on Whites' attributions regarding their own attitude–behavior mismatches and those of other Whites (O'Gorman, 1975, 1979; O'Gorman & Garry, 1976). However, whereas the previous research on pluralistic ignorance and race focused on within-group perceptions, our research extended into the intergroup realm by examining Whites' views of Blacks' behavior. Our research shows that pluralistic ignorance is indeed a useful framework through which to understand the antecedents, as well as potential consequences, of individuals' avoidance of interracial contact. That is, the inferences individuals make about others, compared with the inferences they make about themselves, are likely to impact the extent to which they avoid intergroup contact. These inferences can also influence individuals' understanding of why contact may not occur despite motivation and opportunity.

Misunderstandings and Intergroup Contact

Most researchers would agree that the construal process is a fundamental theme in social psychology. An abundance of research in social psychology has suggested that subjective interpretation can lead to disagreement and misunderstanding (see Griffin & Ross, 1991; Ross & Ward, 1996). Some of the research dealing with differences in the construal process has suggested that conflict arises between (racial) groups because people fail to recognize that out-group members genuinely see the world through a different lens than they do. Research examining naive realism has found, in contrast, that differences between in-group and out-group perspectives are often exaggerated (e.g., Robinson, Keltner, Ward, & Ross, 1995). When out-group members display different behavior and values than the in-group, such naive realism often leads to biased evaluations of out-groups. Similar to this research, our data suggest that part of the problem with intergroup contact is that people fail to recognize that they are actually very similar to out-group members. The underlying motives or reasons behind out-group members' behaviors are very similar to the motives and reasons behind one's own behavior. If people could recognize these similarities, then perhaps the gulf between the self and others could be reduced.

On entering any social setting in America where Whites and Blacks are present, one cannot help but notice the segregation of races—Whites are on one side of the room interacting with one another, and Blacks are on the other side of the room interacting with one another. This phenomenon is so common that Beverly Daniel Tatum (1997) titled a book examining race relations, *Why Are All of the Black Kids Sitting Together in the Cafeteria? And Other Conversations About Race*. In the text, Tatum discussed a host of psychological and structural factors that help explain this separation. For instance, she argued that for many Black students and members of other ethnic minority groups, sitting with other students from their racial group provides a sense of social support and protects them from the negative experiences of discrimination.

Although we certainly agree with Tatum's analysis (1997), as well as with the researchers who have tested these ideas empirically, our data suggest an additional explanation. It seems that the separation of races is perpetuated by basic misunderstandings of the relevant parties. According to our work, even when members of different racial groups would like to have more contact with

members of other groups, they are often inhibited from doing so because they think out-group members do not want to have contact with them. In addition, our data suggest that Whites' and Blacks' explanations for the reasons why contact does not occur may be in error. Both Whites and Blacks mistakenly underestimate how much the out-group is interested in intergroup contact as well as how much the out-group is concerned about being rejected because of race. Similarly, both groups mistakenly overestimate how much the out-group avoids intergroup contact because of lack of interest. We are aware, of course, that intergroup contact is a complex issue. As such, we are not arguing that misunderstanding is the only reason people avoid intergroup contact. However, the results of the studies reported herein suggest that misunderstanding, namely pluralistic ignorance, is just one of the many factors working against interracial contact.

Additionally, the racial misunderstandings observed in the present work are quite disturbing in their reflection of the communication problems that exist between Whites and Blacks in the United States. Participants in our study seemed to be interested in interacting with out-group members but misinterpreted the cues from out-group members as a sign that out-group members did not want to interact with them. Individuals are seemingly unable to recognize that the same fears preventing them from engaging in intergroup contact are also preventing out-group members from engaging in it. This possibility is bolstered by recent research on the illusion of transparency (Gilovich, Savitsky, & Medvec, 1998; D. Miller & McFarland, 1987; Vorauer & Claude, 1998). The illusion of transparency is the tendency for people to believe that their internal feelings are transparent to observers. Whites and Blacks probably fail to recognize that their inaction suggests that they are not interested in interacting with the out-group and that their actual desire is not transparent. Moreover, they mistakenly believe that out-group members and other observers recognize that fear of rejection is the cause of their inaction. In addition, Whites and Blacks may (mistakenly) think that because out-group members can clearly see their fear of rejection that they will empathize and make the situation more comfortable or even make the first move. Thus, not only do people walk away from a potential intergroup encounter thinking that the out-group is not interested in the interaction, but they also leave feeling that the out-group is not sensitive to their rejection concerns.

Furthermore, discrepancies between participants' own concerns and those they attribute to out-group members can have powerful social consequences. If individuals do not correct their attributional biases, they are likely to continue to avoid intergroup encounters (Study 6). Thus, attributional biases such as those observed in our work, and the resultant avoidance of interracial contact, could perpetuate negative racial stereotypes and attitudes about out-group members that reinforce patterns of social segregation. Recent research has suggested, for example, that intergroup friendships predict positive racial attitudes (Pettigrew, 1998). It may be difficult to establish these friendships if individuals underestimate others' interest in forming them. The lack of intergroup friendships, in turn, makes it difficult for individuals to be exposed to models that would help reduce their negative stereotypes and attitudes about the out-group.

Reducing Racial Misunderstanding

In the present work, we relied on the extended contact hypothesis to enable individuals to see similarities between their own and out-group members' behavior regarding intergroup contact. More specifically, our goal was to reduce individuals' concerns with being rejected in intergroup interactions, such that their concerns of rejection would then be similar to their perceptions of out-group member's concerns. In order to accomplish this goal, we focused on the finding that as close friends become part of the self, then their close friends, regardless of race, are also drawn closer to individuals' perceptions of themselves.

There are, of course, alternative solutions to reducing pluralistic ignorance in an intergroup contact setting, two of which have also been postulated as mechanisms to explain the extended contact effect. First, one mechanism behind the extended contact effect is that out-group individuals who are friends with one's in-group friend provide information that disconfirms one's negative expectations about how the out-group feels about the in-group. In the case of pluralistic ignorance, out-group individuals who are friends with one's in-group friend send the message that they are open to having intergroup interactions. This is likely to reduce participants' concerns that they will be rejected by the out-group person. Future research that focuses on reducing the self-other bias presented in this article could highlight individuals' expectations about the out-group.

A second factor that explains the extended contact effect is that the in-group friend who has out-group friends can serve as a positive exemplar and provide information regarding how to behave with out-group members, reducing the anxiety often associated with intergroup encounters (Islam & Hewstone, 1993; Stephan & Stephan, 1985). Future research focused on reducing pluralistic ignorance in an intergroup context could highlight how the in-group is an exemplar of their group.

A final solution to reduce intergroup pluralistic ignorance may involve empathy and perspective taking. When people empathize or take the perspective of another person, they are less likely to draw erroneous negative inferences from the person's behavior (Batson, Early, & Salvarani, 1997). When individuals stand in the shoes of out-group members, they may recognize that the out-group member is suffering from similar fears and anxieties. This recognition may make it easier for individuals to approach the out-group member in attempts to form a relationship. Future research should examine these and other methods of reducing the intergroup pluralistic ignorance observed in the present work.

Limitations and Future Directions

Although our results support an intergroup pluralistic ignorance account, they are limited in several ways. First, it is not clear to what extent the self-other discrepancy that emerged in this work generalizes to other situations and groups beyond the ones examined in these studies. The intergroup interactions used in our studies were all relatively informal and unstructured. Although we speculate that similar processes are likely to be similarly influential in more formal and structured situations (e.g., business meetings), future research is needed to address this question. Likewise, future work is needed to assess the extent to which intergroup pluralistic ignorance applies to intergroup interactions beyond

those between Whites and Blacks. Furthermore, additional work is needed that examines variability within group members regarding intergroup pluralistic ignorance. For example, it is possible that the self–other discrepancy observed in our studies is stronger for individuals with low perspective-taking skills or who have negative racial attitudes.

A second limitation of the present research is that the participants in most of our studies imagined entering a new context and joining a group in that context (see Study 5 for an exception). The social norms in the United States typically dictate that people should be invited to join a group rather than inviting themselves to join the group. Given how typical our scenario is for college students, however, we felt that this limitation was less relevant to our sample. Nevertheless, future research should examine if our effect is replicated when the tables are turned—when people imagine being in a situation where they fail to invite a person of another racial group to join them and their friends.

Final Thoughts

Contact among people of different racial groups continues to be a serious social issue in America. Making the first move to establish intergroup contact and form intergroup relationships can be a daunting task. Fears and anxieties about how they will be treated can prevent people from moving forward. In addition, (mis)perceptions about out-group members' thoughts, feelings, and motives can exaggerate tensions. Recognizing that out-group members' behavior may reflect motives similar to one's own may be an important first step in reducing the anxiety and frustration associated with intergroup encounters.

References

- Allport, G. (1954). *The nature of prejudice*. New York: Doubleday.
- Aron, A., & Aron, E. (1996). Love and expansion of the self: The state of the model. *Personal Relationships*, 3, 45–58.
- Batson, C. D., Early, S., & Salvarani, G. (1997). Perspective taking: Imagining how another feels versus imagining how you would feel. *Personality and Social Psychology Bulletin*, 23, 751–758.
- Baumeister, R. (1982). A self-presentational view of social phenomena. *Psychological Bulletin*, 91, 3–26.
- Branscombe, N., Schmitt, M., & Harvey, R. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology*, 77, 135–149.
- Brewer, M., & Miller, N. (1998). Intergroup relations. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, pp. 554–594). New York: McGraw-Hill.
- Crocker, J., Major, B., & Steele, C. (1998). Social stigma. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.) *The handbook of social psychology* (Vol. 2, pp. 504–553). Boston: McGraw-Hill.
- Devine, P. G., Evett, S. R., & Vasquez-Suson, K. A. (1996). Exploring the interpersonal dynamics of intergroup context. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: The interpersonal context* (Vol. 3, pp. 423–464). New York: Guilford Press.
- Dovidio, J., Kawakami, K., & Gaertner, S. L. (2002). Implicit and explicit prejudice and interracial interaction. *Journal of Personality and Social Psychology*, 82, 62–68.
- Fiske, S. (1998). Stereotyping, prejudice, and discrimination. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, pp. 357–411). New York: McGraw-Hill.
- Gilbert, D. T., & Jones, E. E. (1986). Perceiver-induced constraint: Interpretations of self-generated reality. *Journal of Personality and Social Psychology*, 50, 269–280.
- Gilovich, T., Savitsky, K., & Medvec, V. H. (1998). The illusion of transparency: Biased assessments of others' ability to read one's emotional states. *Journal of Personality and Social Psychology*, 75, 332–346.
- Griffin, D. W., & Ross, L. (1991). Subjective construal, social influence, and human understanding. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 319–359). San Diego, CA: Academic Press.
- Howell, D. C. (1987). *Statistical methods for psychology*. Boston: PWS.
- Islam, M. R., & Hewstone, M. (1993). Dimensions of contact as predictors of intergroup anxiety, perceived out-group variability, and out-group attitude: An integrative model. *Personality and Social Psychology Bulletin*, 19, 700–710.
- Jones, E. E., & Harris, V. A. (1967). The attribution of attitudes. *Journal of Experimental Social Psychology*, 3, 1–24.
- Katz, D., & Allport, F. (1931). *Student attitudes: A report of the Syracuse University research study*. Syracuse, NY: Craftsman Press.
- Latane, B., & Darley, J. (1970). *The unresponsive bystander: Why doesn't he help?* New York: Appleton-Century-Crofts.
- Mackie, D., & Smith, E. (1998). Intergroup relations: Insights from a theoretically integrative approach. *Psychological Review*, 105, 499–529.
- Major, B., Quinton, W., & McCoy, S. (2002). Antecedents and consequences of attributions to discrimination: Theoretical and empirical advances. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 34, pp. 251–330). New York: Academic Press.
- Mendoza-Denton, R., Downey, G., Purdie, V. J., Davis, A., & Pietrzak, J. (2002). Sensitivity to status-based rejection: Implications for African American students' college experience. *Journal of Personality and Social Psychology*, 83, 896–918.
- Miller, C. T., & Myers, A. (1998). Compensating for prejudice: How heavyweight people (and others) control outcomes despite prejudice. In J. K. Swim & C. Stangor (Eds.), *Prejudice: The target's perspective* (pp. 191–218). San Diego, CA: Academic Press.
- Miller, D., & McFarland, C. (1987). Pluralistic ignorance: When similarity is interpreted as dissimilarity. *Journal of Personality and Social Psychology*, 53, 298–305.
- Miller, D., & McFarland, C. (1991). When social comparison goes awry: The case of pluralistic ignorance. In J. Suls & T. Wills (Eds.), *Social comparison: Contemporary theory and research* (pp. 287–313). Hillsdale, NJ: Erlbaum.
- Miller, D., & Prentice, D. (1999). Some consequences of a belief in a group essence: The category divide hypothesis. In D. Prentice & D. Miller (Eds.), *Cultural divides: Understanding and overcoming group conflict* (pp. 213–238). New York: Russell Sage Foundation.
- O'Gorman, H. (1975). Pluralistic ignorance and White estimates of White support for racial segregation. *Public Opinion Quarterly*, 39, 313–330.
- O'Gorman, H. (1979). White and Black perception of racial values. *Public Opinion Quarterly*, 43, 48–59.
- O'Gorman, H., & Garry, S. (1976). Pluralistic ignorance—A replication and extension. *Public Opinion Quarterly*, 40, 449–458.
- Pettigrew, T. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49, 65–85.
- Pinel, E. (1999). Stigma consciousness: The psychological legacy of social stereotypes. *Journal of Personality and Social Psychology*, 76, 114–128.
- Plant, E. A., & Devine, P. G. (2003). The antecedents and implications of interracial anxiety. *Personality and Social Psychology Bulletin*, 29, 790–801.
- Prentice, D., & Miller, D. (1993). Pluralistic ignorance and alcohol use on campus: Some consequences of misperceiving the social norms. *Journal of Personality and Social Psychology*, 64, 243–256.
- Prentice, D., & Miller, D. (1996). Pluralistic ignorance and the perpetua-

- tion of social norms by unwitting actors. *Advances in Experimental Social Psychology*, 28, 161–209.
- Richeson, J. A., & Shelton, J. N. (2003). When prejudice does not pay: Effects of interracial contact on executive function. *Psychological Science*, 14, 287–290.
- Robinson, R. J., Keltner, D., Ward, A., & Ross, L. (1995). Actual versus assumed differences in construal: “Naïve realism” in intergroup perception and conflict. *Journal of Personality and Social Psychology*, 68, 404–417.
- Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 174–221). New York: Academic Press.
- Ross, L., & Ward, A. (1996). Naïve realism in everyday life: Implications for social conflict and misunderstanding. In T. Brown, E. Reed, & E. Turiel (Eds.), *Values and knowledge* (pp. 103–135). Hillsdale, NJ: Erlbaum.
- Schlenker, B. R. (1980). *Impression management: The self-concept, social identity, and interpersonal relations*. Monterey, CA: Brooks/Cole.
- Shelton, J. N. (2003). Interpersonal concerns in social encounters between majority and minority group members. *Group Processes and Intergroup Relations*, 6, 171–185.
- Shelton, J. N., & Richeson, J. A. (2003). *Daily interracial interactions among freshmen roommates*. Manuscript in preparation.
- Stephan, W., & Stephan, C. W. (1985). Intergroup anxiety. *Journal of Social Issues*, 41, 157–175.
- Tatum, B. D. (1997). *Why are all of the Black kids sitting together in the cafeteria? And other conversations about race*. New York: Basic Books.
- Vorauer, J. D. (2001). The other side of the story: Transparency estimation in social interactions. In G. Moskowitz (Ed.), *Cognitive social psychology: The Princeton Symposium on the Legacy and Future of Social Cognition* (pp. 261–276). Mahwah, NJ: Erlbaum.
- Vorauer, J. D., & Claude, S. D. (1998). Perceived versus actual transparency of goals in negotiation. *Personality and Social Psychology Bulletin*, 24, 371–385.
- Vorauer, J., Hunter, A., Main, K., & Roy, S. (2000). Concerns with evaluation and meta-stereotype activation. *Journal of Personality and Social Psychology*, 78, 690–707.
- Vorauer, J., & Kumhyr, S. M. (2001). Is this about you or me? Self- versus other-directed judgments and feelings in response to intergroup interaction. *Personality and Social Psychology Bulletin*, 27, 706–719.
- Vorauer, J. D., Main, K. J., & O’Connell, G. B. (1998). How do individuals expect to be viewed by members of lower status groups? Content and implications of meta-stereotypes. *Journal of Personality and Social Psychology*, 75, 917–937.
- Vorauer, J., & Ratner, R. (1996). Who’s going to make the first move? Pluralistic ignorance as an impediment to relationship formation. *Journal of Social and Personal Relationships*, 13, 483–503.
- Wright, S., Aron, A., McLaughlin-Volpe, T., & Ropp, S. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology*, 73, 73–90.

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