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## It is Who You Know That Counts: Intergroup Contact and Judgments about Race-Based Exclusion

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### Abstract

Intergroup contact and evaluations about race-based exclusion were assessed for majority and minority students in fourth, seventh, and tenth grades ( $N = 685$ ). Students were presented with scenarios depicting cross-race relations in contexts of dyadic friendship, parental discomfort, and peer group disapproval. Participants reporting higher levels of intergroup contact gave higher ratings of wrongfulness of exclusion and lower frequency estimations of race-based exclusion than did participants reporting lower levels of such contact. Intergroup contact also predicted students' attributions of motives in two out of three scenarios. Findings are discussed in terms of the extant literature on peer relations, moral reasoning, and intergroup contact.

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One of the key developments in the field of social psychological research on intergroup relations is a renewed appreciation of Allport's (1954) intergroup contact hypothesis (Dovidio, Glick, & Rudman, 2004). Allport (1954) specified, among other things, the conditions under which contact between individuals from different racial groups can be effective in reducing prejudice, in particular, when contact is: among groups of equal status, based on common goals, based on cooperation rather than competition, and supported by external authorities. Abundant research in social psychology exists on the benefits of intergroup contact among adults (e.g., Brown & Hewstone, 2005; Dixon, Durrheim, & Tredoux, 2005; Dovidio, Gaertner, & Kawakami, 2003; Hewstone, Cairns, Voci, Hamberger & Niens, 2006; Pettigrew & Tropp, 2006; Tausch, Kenworthy & Hewstone, 2006).

What such social psychological research does not address, however, are the essential developmental questions of acquisition and emergence, that is how individuals' intergroup contact is related to intergroup attitudes in childhood and adolescence. Further, social psychological research has shown that racial biases and stereotypes are difficult to change in adulthood (Stangor & Schaller, 2000), providing a strong rationale for understanding these

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attitudes in childhood, when change is more feasible. In addition, most adult studies of intergroup contact are set in the laboratory (e.g., Gaertner, Mann, Dovidio, Murrell, & Pomare, 2000), or in the work place (e.g., Voci & Hewstone, 2005). These settings are substantively different from the schools and neighborhoods in which interracial contact among children commonly occurs indicating that childhood intergroup contact may be quite effective for promoting change. To do this it is necessary to better understand the links between intergroup contact and intergroup attitudes (see Tropp & Prenovost, in press). Since racial bias among youth, as exemplified in peer harassment and conflicts in school contexts (Graham & Juvonen, 1998), still constitutes a major social problem in the U.S., the fact that few studies have examined the effects of intergroup contact on race-related measures among children and adolescents represents an obvious void in the literature (for exceptions, see Rutland, Cameron, Bennett, & Ferrell, 2005; McGlothlin & Killen, 2006).

Our present conceptualization of intergroup contact is informed by the theoretical work of Piaget (1932), by research in developmental social cognition (Smetana, 1995), and by the peer relations literature (Rubin, Bukowski, & Parker, 1998). Piaget contended that children learn morality through everyday interactions with peers. Through such everyday interactions, he believed, children become aware of and learn to operationalize key issues regarding the treatment of others, including, equality, fairness, and empathy. Recent meta-analyses and reviews of the literature on intergroup contact have reported findings that are consistent with Piaget's (1932) theorizing. Work by researchers such as Dovidio et al. (2003), Pettigrew and Tropp (2000, 2005, 2006), and Tropp & Prenovost (in press), have documented that intergroup friendship—fostered by daily interactions—is one of the strongest predictors of prejudice reduction. Empirical studies, as well, attest to the efficacy of intergroup friendships for reducing racial segregation and prejudice (Aboud, Mendelson, & Purdy, 2003; Khmelkov & Hallinan, 1999; Stephan, 1999).

Developmental peer relations literature that addresses daily interactions with peers and awareness of issues regarding fair and equal treatment of others stems from research on peer exclusion, where the race of the excluder differs from that of the excluded. For example, in a series of studies, Killen and her colleagues (Killen, Henning, Kelly, Crystal & Ruck, in press; Killen, Lee-Kim, McGlothlin, & Stangor, 2002) have reported that moral reasoning is more likely to be used in intergroup-related than non-intergroup-related exclusion interactions, and that children using moral reasoning are likely to reject intergroup-based exclusion. Killen and associates have also found that context plays an important role in children's and adolescents' decisions regarding the rightness and wrongness of race-based exclusion (Killen, et al., 2002). Therefore, in our current study, we chose different contexts of interracial peer exclusion as the main stimuli with which to examine correlates of intergroup contact. This approach to studying intergroup contact also responds to the call by Dixon and colleagues (Dixon et al., 2003) for research that utilizes naturalistic, everyday contexts to study how interracial interactions influence intergroup bias as well as views on fair or just treatment.

Previous developmental literature indicates that peers and parents are among the most potent sources of influence on children's intergroup attitudes (Aboud & Levy, 2000; Abrams, Rutland, Cameron, and Marques, 2003; Devine, 1989; Fishbein, 2002; Hallinan & Teixeira,

1987a,b; Sinclair & Dunn, 2005). For this reason, we examined cross-race social exclusion in three situations of increasing intimacy: cross-race companionship in the context of a dyadic friendship (*Lunch*), cross-race companionship in the context of parental disapproval (*Sleepover*), and cross-race dating in the context of peer group disapproval (*Dance*). Based on the historical dimensions of racial exclusion in the United States, in each situation, a European-American child was portrayed as excluding an African-American child.

The first scenario described a situation in which a majority protagonist decides not to invite a minority protagonist to have lunch with him/her and another friend. This scenario represented a prototypical cross-race dyadic situation of potential friendship at school (Hallinan & Teixeira, 1987a), a setting in which race-based exclusionary attitudes often emerges (McGlothlin, Edmonds, & Killen, in press). The second scenario addressed the possible influence of parental uneasiness concerning outgroup members on children's race-based exclusion. Investigators have suggested that, through processes such as illusory correlation, young children may come to feel that outgroup members are to be avoided because their family associates with such individuals so rarely (Johnston & Jacobs, 2003). Based on such research, as well as on evidence suggesting the long-term effects of parental disapproval of cross-race peer relations on later racial attitudes (Devine, 1989), the second scenario (*Sleepover*) depicts a majority protagonist deciding not to invite a minority student over to his/her house for a sleepover party out of concern for parental discomfort regarding the minority guest. The third scenario, which involves the greatest degree of intimacy, presents a majority boy who refrains from inviting his minority girlfriend to a school dance for fear of his friends' disapproval. While the frequency of cross-race companionship, although relatively rare, may hold steady through the elementary school years, some studies have found that it drops off measurably by early adolescence (Aboud et al., 2003; Graham & Cohen, 1997; Howes & Wu, 1990; Hallinan & Teixeira, 1987a). One reason for the decrease at this developmental period may be found in the onset of cross-race dating and the potential for cross-race romantic partners (Fang, Sidanius & Pratto, 1998; Kennedy, 2003). Therefore, the third scenario was designed to capture the possible influence of peer group displeasure, intensified by considerations of romantic relations between cross-race partners, on students' attitudes toward race-based exclusion.

Prior investigations of racial exclusion among youth have utilized measures that directly ask participants about race-based reasons for exclusion (e.g., "Is it all right to exclude on the basis of race?") (Killen et al., 2002). Studies such as that by Hodson, Dovidio, and Gaertner (2002), however, demonstrate that having participants weigh competing factors so as to create a situation of ambiguity, in tandem with racial characteristics, can be an even more effective method for detecting race-related bias. Consequently, each scenario used in the current investigation presented, in addition to the issue of race, at least one explicit non-race reason for the exclusion decision.

For example, researchers have found that common interests and shared activities play a unique role in the development and maintenance of friendship at all stages of life (Cole & Teboul, 2004; Zarbatany, Ghesquiere & Mohr, 1992; Goldman, Cooper, Ahern, & Corsini, 1981; Rubin, Bukowski, & Parker, 1998). Thus, in the *Lunch* scenario, the alternative reason for exclusion was a lack of common interests (e.g., the two students do not share the same

interest in sports). In designing the Sleepover scenario, we were guided by the knowledge that parental attitudes towards and monitoring of children's friends, both new and old, is one of the best predictors of parent-child conflict and adolescent health risk behavior (Barber & Delfabbro, 2000a; Borawski, Levers-Landis, Lovegreen, & Trapl, 2003). Therefore, the alternative reason for parents' discomfort in the Sleepover scenario was parents' unfamiliarity with the new friend (who happens to be a minority).

Finally, several investigations indicate that school identification is significantly associated with a number of important outcomes for youth, including academic performance, coping style, and parental attachment (Edwards & Kelly, 1981; Finn & Frone, 2004; Meeus, Oosterwegel, & Vollebergh, 2002). Moreover, investigators such as Abrams et al. (2003) have shown the importance of school loyalty to the maintenance of ingroup norms. In the Dance scenario, therefore, the alternative reason for exclusion was that the minority student attended a rival high school. In sum, we specifically designed scenarios in which the majority protagonist's motives for exclusion could be interpreted ambiguously so as to provide a more indirect measure of potential race-related attribution bias.

On the basis of such ambiguity, one set of hypotheses focused on the relationship between intergroup contact and attributions of motives in race-based and non race-based exclusion scenarios. Attribution research by Dodge and colleagues (Crick & Dodge, 1994) shows that aggressive children, as compared to non-aggressive children, tend to attribute hostile intent to peers in ambiguous situations. One interpretation of this finding is that children are likely to attribute characteristics that they themselves possess to protagonists acting in situations where the motives for action are ambiguous or multifaceted. In line with such research, McGlothlin and Killen (2006), using picture cards depicting protagonists of different races engaging in morally ambiguous interactions, reported that European-American children in homogeneous schools were more likely to use race as a reason to attribute negative motives to the protagonists than were European-American children in heterogeneous schools.

Taken together, these findings imply that, in the present study, children who have little interaction with outgroups, perhaps due to purposeful avoidance of outgroup individuals, may be more likely to attribute racial motives to protagonists in ambiguous exclusion situations than their counterparts who have more interaction with outgroups. Additionally, Killen et al. (2002) found that, with age, students in schools where intergroup contact was high were less critical of peer-motivated than of parent-motivated race-related exclusion. Based on such findings, and the expectation that students with low intergroup contact lack familiarity with the dynamics of cross-race relationships, we predicted that students with high intergroup contact would be less likely to attribute racial motives to peer-instigated exclusion, and more likely to attribute such motives to parent-instigated exclusion than would their low contact peers.

The vast majority of adult studies on intergroup contact, as well as Allport's (1954) original thesis, focus on reducing racial bias. However, racial bias takes many forms, and researchers and theorists have found that the benefits of intergroup contact may generalize to other areas of cognition and emotion (Dovidio et al., 2003; Miller, 2002). For example, intergroup contact is seen as increasing what people know about others (i.e., the outgroup) and, thus,

increasing the likelihood of seeing members of the outgroup in individuated and personalized ways (Pettigrew, 1998). A second cognitive benefit of intergroup contact is thought to be the development of new social representations, leading to a recategorization of a common ingroup identity in which those formerly perceived as outgroup members are now viewed as part of the ingroup (Gaertner & Dovidio, 2000; Nier et al., 2001).

As for emotional benefits, regular interactions with outgroup members have been shown to enhance empathy toward outgroup individuals (Dovidio et al., 2003). Empathy, in turn, can lead one to feel more positively about members of another group (Batson, Polycarpou, Harmon-Jones, & Imhoff, 1997), and can elicit an emotional experience, termed empathic concern, that produces a prosocial motivation to improve the welfare of another person (Batson, 1991). Perceptions of outgroup members as separate individuals, recategorization of them as part of one's ingroup, and concerns about their welfare would seem to heighten one's sense of equality, fairness, and justice vis a vis outgroup individuals. These attributes—equality, fairness, and justice—are the hallmarks of moral reasoning (Turiel, 1983, 1998). Such findings suggest that intergroup contact may enhance individual sensitivity to moral transgressions implicit in race-related interactions and cross-race relations in general.

We discussed above studies by Killen and associates (Killen et al, in press; Killen et al., 2002) who reported that children's use of moral reasoning was positively correlated with rejection of race-based exclusion. In conjunction with findings on the emotional and cognitive benefits of intergroup contact (Batson, 1991, 1997; Dovidio et al., 2003; Miller, 2002), Killen et al.'s results indicate that in contexts where, for example, a white child excludes a black child, children with higher levels of intergroup contact would be more likely than their counterparts with lower levels of such contact, to view the excluded child as a separate individual, consider him/her as part of their ingroup, feel more empathy for him/her, and therefore, perceive such white-to-black exclusion as a moral transgression. For this reason, the current study also investigated the effects of intergroup contact on judgments regarding the wrongfulness of race-based exclusion. More specifically, we predicted that higher levels of intergroup contact would be associated with a greater negative evaluation of the wrongfulness of exclusion in situations of interracial peer exchanges.

Although cross-race friendship has been found to be a significant predictor of prejudice reduction (Pettigrew & Tropp, 2000, 2006), such friendship, especially among children, usually takes place in a group context (see Tropp & Prenovost, in press). As children develop, the influence of friends on behavior, achievement, and attitudes becomes increasingly strong (Rubin, et al., 1998). For these reasons, in the current study, we also investigated whether students with high intergroup contact perceived more or less race-based exclusion among their peers than those with low intergroup contact. This question is important because it indirectly addresses the issue of peer groups, and the extent to which such groups potentially encourage race-related biases and exclusion.

For example, if students with low intergroup contact perceive more race-based exclusion among their peers than those with high intergroup contact, it might suggest that excluding students associate with other excluding students, thus possibly reinforcing biased attitudes. This, in turn, would indicate that interventions to reduce such biases be focused on peer

groups rather than individuals. If, on the other hand, low contact students perceived the same or less race-related exclusion than high contact students, it would imply that peer groups are unlikely to play a role in promoting race-related bias, and would point to the need for more individualized targeting in regard to prejudice reduction.

To explore this issue, we asked students to estimate the frequency of occurrence of race-based exclusion among their peers. Numerous studies have documented that similarity of attitudes, social perceptions, and behavioral preferences—all of which would contribute to inclusion or exclusion of other-race peers—play a role in friendship selection (Aboud & Mendelson, 1998; Barrett, Wilson, & Lyons, 2003; Kupersmidt, DeRosier, & Patterson, 1996; Poulin, Cillessen, Hubbard, & Coie, 1997). Thus, children with higher intergroup contact are likely to know and associate with high contact children, and children with lower intergroup contact are likely to know and associate with low contact children. In line with this reasoning, and studies such as that by Harris, Durso, Mergler, and Jones (1990) who found that frequency estimations are based on domain-specific knowledge of stimuli, that is, on people one knows rather than on people one does not know, we predicted that students with higher levels of intergroup contact would give relatively lower estimations of race-based exclusion, while those with lower levels of intergroup contact would give relatively higher estimations of such exclusion among their friends and acquaintances.

### Age-related factors

Research demonstrates that from middle childhood to mid-adolescence age-related changes occur in categorization, social reasoning, and relations with parents that have implications for the emergence of various stereotypes and race-related biases (Aboud, 1988; Levy & Dweck, 1999; Killen et al., 2002). Furthermore, research on school desegregation has shown that with age children have the potential to interact with a wider range of students from diverse ethnic backgrounds (due to the neighborhood demographics for elementary school in contrast to the demographics for upper level schools which feed from a wide range of neighborhoods, see Frankenberg & Orfield, in press; Orfield, 2001). In the present study, therefore, we sampled youth in 4<sup>th</sup>, 7<sup>th</sup>, and 10<sup>th</sup> grades. We predicted that 4<sup>th</sup> graders, experiencing less intergroup contact than 7<sup>th</sup> and 10<sup>th</sup> graders, would be more willing to condone, and would perceive less racial exclusion than would older children. As for attributions of motive, we hypothesized that, given age-related increases in youth's challenges to parental support of race-based exclusion (Killen et al., 2002), with age, students would be more likely to attribute non-racial motives to peer-related exclusion, and less likely to attribute such motives to parent-related exclusion.

### Majority-minority status

The inclusion of majority and minority youth (from similar socioeconomic levels) in our sample was an important aspect of this study in light of the overwhelming focus on European-American participants in U.S research on prejudice and stereotypes (Fisher, Jackson, & Villarruel, 1998). Given their greater experiences with discrimination in U.S. society (Fisher, et al., 1998), we hypothesized that minority students would perceive higher levels of wrongfulness and estimate higher frequencies of race-based exclusion than their

majority peers. It was an open question whether minority or majority children would attribute racial motives on behalf of the protagonist, that is, the one making an exclusionary decision. On the one hand, minority children's experience with racial exclusion might make them more aware of this type of motive and therefore they would expect it to occur. On the other hand, majority children who experience less intergroup contact than do minority children may interpret racial motives to interracial exchanges given the unfamiliarity of this type of encounter. Therefore, we made no explicit predictions regarding relations between majority/minority status and attributions of motive.

## Method

### Participants

Participants were 685 children in 4<sup>th</sup>, 7<sup>th</sup>, and 10<sup>th</sup> grades, attending 13 public schools in mixed-ethnicity (range was 20% to 45% minority) suburbs of a mid-size city in the mid-Atlantic region. There were 94 girls and 70 boys in 4<sup>th</sup> grade ( $M = 9.85$  years,  $SD = .42$ ), 167 girls and 113 boys in 7<sup>th</sup> grade ( $M = 12.86$  years,  $SD = .49$ ), and 133 girls and 108 boys in 10<sup>th</sup> grade ( $M = 15.89$  years,  $SD = .52$ ). The ethnic breakdown for the sample was: European-American, 60%; African-American, 14%; Asian-American, 12%; Hispanic-American, 6%; and Other, 8%. The sample was evenly divided by gender for each ethnic group. Based on school demographics, all participants were from working- to middle-class backgrounds.

### Procedure

Written parental consent was obtained for all participants in the study. Participants were individually interviewed in a quiet room at their school by a trained research assistant, matched on ethnicity. Interviewers first administered the *Social Reasoning about Exclusion* interview, which was audio-taped and later transcribed for coding purposes. After the interview, all participants completed the *Intergroup Contact Survey*; the interviewers read the survey to the fourth graders; seventh and tenth graders completed the survey by themselves.

### Measures

The *Social Reasoning about Exclusion* interview consisted of three stories, each representing a different interracial social context in which exclusion occurred. After each of the stories, participants were posed a number of questions, among them, those regarding attributions of motive, wrongfulness judgments, and frequency estimations. For several of these questions, participants were also asked to justify their answers (i.e., social reasoning). For reasons of economy of focus, the analyses of participants' social reasoning responses were not included in this paper.

Based on pilot testing and previous research designs published in the literature (Killen et al., 2002), we used a pre-established order of the stories for all participants. Stories were given in the order of least to most intimate. This was purposely done so as to avoid priming the least intimate with the most intimate context. We have used similar techniques in previous research, for example, consistently presenting gender- before race-related exclusion

scenarios (Killen et al., 2002). Therefore, the contexts of the three stories, presented in the following order, were: Lunch (personal choice about cross-race friendship with no external pressure), Sleepover (inviting a cross-race friend to the home with external pressure from parental authority), and Dance (cross-race dating in high school with external pressure from the peer group). As noted above, in light of the history of racial exclusion in the United States, all stories portrayed a European-American child excluding an African-American child.

After each story, participants were first asked to attribute a motive to the protagonist's behavior. For participants who attributed the actor's decision to racial motives, interviewers asked for several judgments and ratings; for participants who attributed the actor's decision to non-racial motives, the interviewer asked the same set of follow-up questions for non-raced based motives. Then, the interviewers went back to ask participants for their evaluations as a function of the other consideration (race-based or non-race based). The measures were: (1) wrongfulness of the exclusion decision depicted in the scenario, and (2) the frequency of the type of exclusion observed among their peers. The following descriptions of the assessments are based on the Lunch scenario. In the scenario, two White girls, both interested in sports, decide not to invite to lunch a new girl in school who is Black and is rumored not to like sports, because they think they won't have much in common with her.

Attribution of motives: "Why do you think that Karen believes that she and her friend Jane don't have much in common with Diane?" Responses were coded as (1) *Race only* (e.g., "Because she is Black"); (2) *Non-race only* (e.g., "Because she doesn't like sports, but they do"), or (3) *Both Race and Non-Race* (e.g., "She's Black and they're White, and anyway she doesn't like sports"). We focused on the "non-race only" responses as expressing the clearest attribution of motive. Consequently, we created a dichotomous variable with "1" representing "non-racial motive" and "0" representing "other" for each of the three scenarios. Wrongfulness of race-based exclusion: "What if Karen thinks that they won't have much in common because Diane is Black? How good or bad is that?" Responses ranged from 1 ("very very good") to 8 ("very very bad"). Frequency estimations of race-based exclusion: "How often do you think kids your age might not invite someone to lunch because they are a different race?" Responses ranged from 1 ("never") to 5 ("always").

### Measuring intergroup contact

After the interview, participants completed the Developmental Intergroup Contact Survey (Crystal, Killen, & Ruck, 2005), containing, among other demographic items, ten questions adapted from the Diversity Attitudes Questionnaire (DAQ, Kurlaender & Yun, 2001). This questionnaire is used by the Harvard University Civil Rights Project, and has been administered to over 10,000 students in U.S. public schools. The DAQ was designed to assess the effects of school desegregation on perceptions of intergroup contact, broadly construed (school, neighborhood, and community interactions). Thus, our measure included items about interracial interactions in the neighborhood and community as well as the existence of cross-race friendship. It reflected, therefore, a balance between depth (cross-race friendships in classrooms, neighborhood, and community) and breadth (interracial



interactions on school projects, in the neighborhood, messages from teachers) of intergroup contact.

The ten DAQ questions were subjected to a principal axis factor analysis with a varimax rotation (Kaiser normalization), which yielded a primary factor, explaining 31% of the variance, and consisting of the following six items: a) How many students in your school are from racial or ethnic groups different from your own?, b) How often do you work on school projects and/or study with students from other racial or ethnic groups?, c) At school how many friends do you have who are from a different racial or ethnic group than you?, d) Outside of school how many friends do you have who are from a different racial or ethnic group than you?, e) In the neighborhood where you live, do you have neighbors from other racial or ethnic backgrounds?, f) How many of your friends from your neighborhood are from a different racial or ethnic group than you? Responses to these items, which ranged from 1 (“none”) to 4 (“many”), were combined to form the *Intergroup Contact Scale*, with a Cronbach's alpha of .79.<sup>1</sup>

## Data Analysis

For attribution of motives, we conducted three separate logistic regression equations (one for each scenario) with the non-racial attributions serving as the dependent variables, and the Intergroup Contact Scale, grade, and majority/minority status serving as the independent variables. Univariate analysis of variance (ANOVA) was used to provide descriptive analyses on the Intergroup Contact Scale. We used Repeated Measures ANOVA to assess main, interaction, and contextual effects on participants' judgments of wrongfulness, and, in a separate analysis, frequency estimations of race-based exclusion. The between-subjects factors were levels of intergroup contact (low/high); grade (4<sup>th</sup>, 7<sup>th</sup>, and 10<sup>th</sup>); and majority/minority status (majority, minority). Because gender was neither a theoretical nor empirical variable of interest, it was omitted from the analysis. The within-subjects factor was context of exclusion (Lunch, Sleepover, Dance).

## Results

### Intergroup contact: Grade, gender, and majority/minority status

A univariate ANOVA was performed on the Intergroup Contact Scale with grade, gender, majority/minority status and their interactions serving as the independent factors. Significant main effects were found for grade,  $F(2,683) = 18.31, p < .001$ , and majority/minority status,  $F(1,683) = 164.19, p < .001$ . Follow-up analyses revealed that, as expected, 7<sup>th</sup> graders ( $M = 3.00, SD = .62$ ) and 10<sup>th</sup> graders ( $M = 3.11, SD = .58$ ) reported higher levels of intergroup contact than did 4<sup>th</sup> graders ( $M = 2.62, SD = .72$ ). Also, minority students ( $M = 3.33, SD = .52$ ) reported more intergroup contact than did majority students ( $M = 2.70, SD = .63$ ). Mean

<sup>1</sup>To explore the potentially differential effects of various aspects of intergroup contact on race-based exclusion, we broke down our intergroup contact measure into the following components: “opportunity for contact” (items “a” and “e”), “cross-group friendship” (items “c” and “d”), and “school-based contact” (3 items that reflected relations between intergroup contact and schoolwork). We combined these items into separate variables and then ran bivariate correlations between these newly created variables and our chief outcome measures such as the wrongfulness ratings and frequency estimations for each of the three scenarios. Results showed no consistent significant differences between the magnitude of correlations of one compound variable compared with the others in relation to the outcome measures. We therefore concluded that the best index of intergroup contact was the initial overall assessment contained in our *Intergroup Contact Scale*.

levels of intergroup contact, broken down by grade and majority/minority status, appear in Table 1.

### Intergroup contact as a predictor of attributions of motive

We used separate logistic regression analyses to test hypotheses about attributions of motive in each of the three exclusion scenarios. Our hypotheses focused only on main effects. In the analyses on the Lunch scenario, only grade emerged as a significant predictor (see Table 2). Univariate tests revealed that, consistent with expectations, students were increasingly likely with age to attribute non-racial motives to peers (4<sup>th</sup> graders,  $M = .39$ ,  $SD = .49$ ; 7<sup>th</sup> graders,  $M = .44$ ,  $SD = .50$ ; 10<sup>th</sup> graders,  $M = .52$ ,  $SD = .50$ ) (see Figure 1). In the Sleepover scenario, both intergroup contact and grade were found to be significant predictors (see Table 2). In accord with hypotheses, students with high contact ( $M = .44$ ,  $SD = .50$ ) were less likely than students with low contact ( $M = .52$ ,  $SD = .50$ ) to perceive parent-related exclusion as motivated by non-racial reasons. Also in line with hypotheses, 4<sup>th</sup> graders ( $M = .57$ ,  $SD = .50$ ) were more likely than 7<sup>th</sup> graders ( $M = .51$ ,  $SD = .50$ ) who were more likely than 10<sup>th</sup> graders ( $M = .37$ ,  $SD = .49$ ) to attribute non-racial motives to parent-related exclusion (see Figure 1). In the Dance scenario, intergroup contact and majority/minority status were significantly associated with attributions of motive (see Table 2). Again consistent with predictions, more students with high contact ( $M = .59$ ,  $SD = .49$ ) than students with low contact ( $M = .53$ ,  $SD = .50$ ) attributed non-racial motives to the interracial exclusion among peers. Lastly, more majority ( $M = .60$ ,  $SD = .49$ ) than minority ( $M = .50$ ,  $SD = .50$ ) students perceived the exclusion in the Dance scenario as motivated by non-racial reasons.

### Intergroup contact as a predictor of evaluations of race-based exclusion

Results of the repeated measures ANOVA on students' ratings of wrongfulness in the three scenarios yielded significant between-subject effects of intergroup contact,  $F(1,666) = 15.55$ ,  $p < .001$ , partial  $\eta^2 = .02$ , and majority/minority status,  $F(1,666) = 6.76$ ,  $p < .01$ , partial  $\eta^2 = .01$ . Follow-up tests showed that, as hypothesized, students with high contact ( $M = 7.42$ ,  $SD = .97$ ) were more likely than students with low contact ( $M = 7.14$ ,  $SD = .77$ ) to perceive race-based exclusion as wrong (see Figure 2). Contrary to predictions, however, majority students ( $M = 7.36$ ,  $SD = 1.00$ ) gave higher ratings of wrongfulness than minority students ( $M = 7.14$ ,  $SD = 1.13$ ) (see Figure 3), and grade was not significantly associated with overall ratings of wrongfulness. No significant within-subjects effects were found.

### Intergroup contact as a predictor of frequency estimations of race-based exclusion

The repeated measures ANOVA testing hypotheses on frequency estimations of race-based exclusion revealed significant between-subjects effects for intergroup contact,  $F(1,668) = 9.06$ ,  $p < .01$ , partial  $\eta^2 = .01$ , grade,  $F(1,668) = 5.82$ ,  $p < .01$ , partial  $\eta^2 = .02$ , and majority/minority status,  $F(1,668) = 10.21$ ,  $p < .001$ , partial  $\eta^2 = .02$ . Post hoc analyses showed that, as predicted, students with high contact ( $M = 2.22$ ,  $SD = .77$ ) estimated lower frequencies of race-based exclusion than did students with low contact ( $M = 2.41$ ,  $SD = .90$ ). Also consonant with hypotheses, frequency estimations of race-based exclusion increased with age (4<sup>th</sup> grade,  $M = 2.20$ ,  $SD = .82$ ; 7<sup>th</sup> grade,  $M = 2.28$ ,  $SD = .85$ ; 10<sup>th</sup> grade,  $M = 2.46$ ,

$SD = .79$ ). Finally, as expected, minority students ( $M = 2.42$ ,  $SD = .87$ ) gave higher estimations than did their majority counterparts ( $M = 2.21$ ,  $SD = .75$ ).<sup>2</sup>

As for within-subjects effects, a significant interaction between context, intergroup contact, and majority/minority status emerged,  $F(2,1336) = 9.36$ ,  $p < .001$ , partial  $\eta^2 = .01$ . Follow-up analyses revealed two findings: students with high contact evinced the most consistent responses across the three scenarios (Majority: Lunch,  $M = 2.08$ ,  $SD = 1.03$ , Sleepover,  $M = 2.11$ ,  $SD = .87$ , Dance,  $M = 2.14$ ,  $SD = .98$ ; Minority: Lunch,  $M = 2.38$ ,  $SD = 1.03$ , Sleepover,  $M = 2.30$ ,  $SD = .85$ , Dance,  $M = 2.32$ ,  $SD = .97$ ), relative to those with low contact (Majority: Lunch,  $M = 2.32$ ,  $SD = .93$ , Sleepover,  $M = 2.15$ ,  $SD = .79$ , Dance,  $M = 2.50$ ,  $SD = .89$ ; Minority: Lunch,  $M = 2.36$ ,  $SD = .93$ , Sleepover,  $M = 2.75$ ,  $SD = .78$ , Dance,  $M = 2.41$ ,  $SD = .88$ ). Moreover, the Sleepover scenario elicited the greatest difference in response, in particular, among students with low contact of both majority and minority status.

## Discussion

Three new findings from this study contribute to the literature on intergroup contact and the developmental trajectory of prejudice. Specifically, intergroup contact, based on race and ethnicity, was significantly related to children's ratings of wrongfulness of race-based exclusion across the three scenarios, frequency estimations of race-based exclusion across the three scenarios, and attributions of motive to excluding protagonists in two of the three scenarios. The vast majority of prior studies conducted on intergroup contact have used adult samples with artificially contrived groups in the laboratory, or non-ethnic (racial) categories, and outcome measures unrelated to evaluations of racial exclusion (Pettigrew & Tropp, 2005). By contrast, our research design and stimuli followed directly from the theoretical framework informing the study: that of Piaget's (1932) conceptualization of morality as learned by children through everyday interactions with peers (see Turiel, 1983). Consistent with the suggestions of Dixon et al. (2005), the current investigation used real groups (based on a widely used measure of intergroup contact, and samples comprised of both majority and minority students) and everyday, familiar contexts to assess a range of measures associated with race-related exclusion. We know of no other empirical study that has systematically examined the effects of intergroup contact on assessments reflecting social and moral judgments about everyday interracial peer interactions among a large sample of majority and minority youth. Due to the real-world nature of our groups and stimuli, we assume that our results as well more accurately reflect actual positive effects of intergroup contact on children and adolescents as reported above.

What is more, most studies of intergroup relations only look at the effect of intergroup contact on assessments of race-related attitudes or racial bias (Pettigrew & Tropp, 2005). The current investigation is unique in exploring the influence of intergroup contact on a diverse range of outcome measures including ratings of wrongfulness, frequency

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<sup>2</sup>To ascertain whether skew in the wrongfulness ratings might have affected the results of the ANOVAs, we performed a LOG transformation on the variables and reran the repeated measures ANOVAs on the transformed wrongfulness ratings as well as the transformed frequency estimations. In both cases, the results of the ANOVAs were exactly the same as they were before we performed the LOG transformations. The apparent skew in the data, therefore, did not affect the results of the multivariate analyses.

estimations, and attributions of race-based motives regarding racial exclusion. Consonant with work of Dovidio et al. (2003) and Miller (2002), our findings provide support to the notion that the effects of intergroup contact may generalize to a number of related areas of social cognition and emotion in children and adolescents as well as in adults.

Additionally, it is important to note that, although our scenarios depicted exclusion of African-American children only, our measure of intergroup contact inquired about contact with outgroups in general, rather than focusing specifically on contact with African-Americans. We know of no studies in the intergroup contact literature that specifically target one contact outgroup, unless the study uses a minimal group paradigm (artificially generated laboratory groups) (see Tropp & Prenovost, in press). Moreover, most studies of intergroup relations with children or adolescents use the heterogeneity or homogeneity of the school as the measure of intergroup contact (Pettigrew & Tropp, 2005), and heterogeneous school populations typically include many different ethnic groups in the U.S. (Latino, Asian-American, African-American, Biracial, European-American). In comparison with school composition, in the present study, we used a more focused and, we believe, a more accurate measure of intergroup contact by obtaining individual reports of contact with others based on race and ethnicity, which certainly does not exclude contact with African-Americans. The intergroup contact hypothesis (Allport, 1954) states that positive experiences with members of the outgroup reduce prejudice. Research by Tropp and Prenovost (in press) has shown that interactions with individuals from diverse ethnic backgrounds reduce prejudice, and prejudice is typically assessed by students' attitudes towards members of outgroups. Thus, we expected that students would generalize their positive interactions with members of outgroups (including non-African-Americans) and apply them to the more specific situation of exclusion of African-American peers, which is what we found.

More specifically, the data showed that students with high contact were, overall, more likely than students with low contact to perceive wrongfulness in race-based exclusion. These results are consistent with Allport's (1954) intergroup contact hypothesis and with a large body of empirical research on adults demonstrating that face-to-face intergroup relations are effective in reducing prejudice (Dovidio, Kawakami, & Beach, 2001; Pettigrew & Tropp, 2000, 2005, 2006). They are also in line with studies associating intergroup contact with increases in empathy (Dovidio et al., 2003), interpersonal differentiation (Pettigrew, 1998), and recategorization towards a common ingroup identity (Gaertner & Dovidio, 2000; Nier et al., 2001) in regard perceptions of outgroup individuals.

We hypothesized that these attributes would enhance a person's moral sensitivity regarding the potentially biased treatment of outgroup members, leading to a heightened sense of moral transgression in the face of exclusion based on race. Our results were consonant with this hypothesis. The higher ratings of wrongfulness given by students with high levels of intergroup contact, relative to their low contact peers, may be seen as reflecting a more salient use of moral reasoning regarding race-related exclusion. These findings accord as well with the association reported by Killen et al. (2002) between children's use of moral reasoning and their rejection of race-based exclusion. The increased intergroup sensitivity that we documented adds to a list of social-cognitive benefits of intergroup contact, among them, greater feelings of personal safety and social satisfaction as recently reported by

Juvonen, Nishina, and Graham (2006). Nevertheless, future research will need to explore in greater depth which specific mechanism and/or social cognition (e.g., empathy, recategorization, personalization) are responsible for the apparently enhanced moral sensibility that we found among students with high levels of intergroup contact.

In view of their stronger ratings of the wrongfulness of racial exclusion, students with high contact might be expected to be more aware of race-based exclusion and thus report more of it. Instead, as predicted, students with high contact perceived less racial exclusion among their peers than did students with low contact. Such results are in line with the notion that both high contact and low contact students tend to associate with peers who share their racial attitudes and behaviors, as suggested by literature documenting the importance of similarity in values, cognitive style, and social skills as a basis for friendship (Aboud & Mendelson, 1998; Altermatt & Pomerantz, 2003; Morry & Gaines, 2005).

Thus, following the premise that one bases frequency estimates on domain specific knowledge (i.e., the people one knows) (Harris et al., 1990), if one associates with friends who tend to be inclusive of other-race members (i.e., other high contact students) then one is likely to observe such inclusiveness and generalize it to one's peers as a whole when making frequency estimates. Similarly, if one is part of a group that tends to exclude other-race members, then observations of such exclusion are likely to form the basis for frequency estimates of the behavior of one's peers. If this reasoning is accurate, then interventions aimed at reducing racial bias would benefit from identifying not only those individual students who hold biased views regarding other-race members, but also those biased individuals' cliques or social networks which, our research implies, may at the very least encourage such attitudes by practicing race-based exclusion. Such reasoning also indicates that prejudice-reducing interventions might need to focus on interpersonal group dynamics as well as intraindividual race-related attitudes.

Our stimuli scenarios varied between peer- and parent-instigated exclusion, and purposely depicted excluding protagonists with ambiguous (both race- and non-race-related) motives for their actions. To capture more subtle forms of race-based bias, we asked participants to make specific attributions regarding those ambiguous motives. Consonant with hypotheses, students with high contact were less likely to attribute racial motives to peer-related exclusion (Dance scenario) than were their low contact counterparts. At the same time, more students with high contact attributed racial motives to parent-related exclusion than did students with low contact.

These results highlight the importance of context in understanding the complexities of youths' responses to situations of race-based exclusion (see Killen, et al., 2006). Further, the findings also likely reflect the contrasting social experiences of students with high and low contact in terms of their assumed association with similar-minded peers, as noted above. Students with high contact may have more cross-race friendships, which makes them less focused on race as a factor in social decision-making about social relationships and, thus, less likely to attribute race-related motives to peer-instigated exclusion. Such an explanation accords with prior research on cross-race friendships, showing that these relationships are viewed as similar in quality to same-race friendships by students in heterogeneous school

environments (Aboud et al., 2003). In regard to the parent-related scenario, relative to students with low contact, students with high contact may be more critical of parents than of peers (Killen et al., 2002) because they are more likely to have experienced negative parental feedback about race given their greater potential opportunities for cross-race interaction. Given recent interest in the use of indirect assessments to measure racial prejudice and bias (Baron & Banaji, 2006; Shelton, Richeson, Salvatore, Trawalter, 2005; Frantz, Cuddy, Burnett, Ray, & Hart, 2004), our results suggest that, as demonstrated by other studies using a similar methodology (Margie et al., 2005; McGlothlin et al., 2005), employing attributions of motive in ambiguous or complex situations represents a subtle yet valid method for capturing potential race-related biases and judgments.

Our age-related findings revealed that, as predicted, with increasing age, students estimated higher frequencies of race-based exclusion across the three scenarios. At the same time, age was not, overall, significantly associated with students' perceptions of wrongfulness of race-based exclusion. This finding is consistent with prior research on evaluations of exclusion, which has found few age differences regarding judgments of straightforward moral transgressions, such as racial exclusion (Killen, et al., 2002).

As predicted, based on their long history and present experience of discrimination (Fisher et al., 1998), minority students overall estimated higher frequencies of race-based exclusion than did their majority counterparts. Interestingly, however, minority students, in general, perceived a lower degree of wrongfulness in race-based exclusion than did majority students (although this difference was small). Researchers have described a sense of resignation in discriminated groups—a feeling that discrimination is going to happen no matter what one does, and is a fact of life in modern America (Davis & Stevenson, 2006; Fisher et al, 1998). It may be that minimizing the badness or wrongfulness of such “inevitable” discrimination serves as a kind of protective mechanism for minority students. More research on this issue is warranted.

The question of social desirability effects needs to be addressed. Many traditional measures of racial bias and prejudice are vulnerable to such effects because of the high profile these topics are given in the national discourse and media of the U.S. There are several reasons why we believe that social desirability played a smaller role in the current investigation than it does in the majority of studies on racism and prejudice. First, questions regarding the rightness or wrongness of exclusion, even race-based exclusion, are quite different from and less direct than those asking frank opinions about outgroups and their members. Prior research shows that exclusion is multi-faceted, and that children and adolescents view some exclusion, such as that based on group functioning, as justified (Killen et al., 2002). As described above, we purposefully imbedded several possible reasons for exclusion into our interview scenarios so as to minimize such pure social desirability effects and present participants with more complex and, thus, ecologically valid dilemmas. Second, we sought to relate intergroup contact not only to indices of prejudice but to a diverse range of outcome variables, including frequency estimations and attributions of racial bias. These assessments are considerably more indirect than traditional measures of racism, yet as we hypothesized, intergroup contact was significantly associated with these more subtle outcome variables as well. Therefore, we believe that the measures in our study, based on everyday interactions,

captured the real-world influence of intercrop contact on race-based exclusion and its corollaries, beyond any possible social desirability effects.

In conclusion, our results provide initial evidence for the applicability of Allport's (1954) intergroup contact hypothesis to situations of interracial exclusion among children and adolescents. The relationship between such contact and a heightened moral sensitivity to race-based exclusion is consistent with, but not specifically documented in, previous literature. These findings indicate that promoting contact in schools and neighborhoods among children and adolescents of different races and ethnicities is likely to enhance young people's sense of moral transgression in the face of race-based exclusion during interracial peer interactions. The fact that students with high contact also estimated race-based exclusion as occurring less frequently than did their low contact peers suggests that students with similar levels of intergroup contact may associate with one another, and thus, that small social networks may be a prime target for school-based interventions aimed at reducing prejudice.

What is more, the greater reluctance of high contact students to attribute racial motives to peers, relative to students with low contact, may be seen as reflecting a more optimistic, "moral" view of others, as well as of themselves, and further contributes to the small but growing literature reporting positive and prosocial outcomes associated with the promotion of interracial interaction among youth (Juvonen et al., 2006; Frankenberg & Orfield, in press; Kurlaender & Yun, 2001). On the whole the findings of this study are especially important given recent assaults on and legal challenges to public policies aimed at fostering integration of schools in the U.S. (Greenhouse, 2006). At the very least, the results of studies such as this demonstrate the benefits of intergroup contact in terms of moral sensitivity to race-based exclusion among children and adolescents. If such sensitivity is an attribute that racially heterogeneous societies like the U.S. would seek to promote in their youth, then it is not only true that it's who you know that counts, but that the more diverse and variegated the "who" the better.

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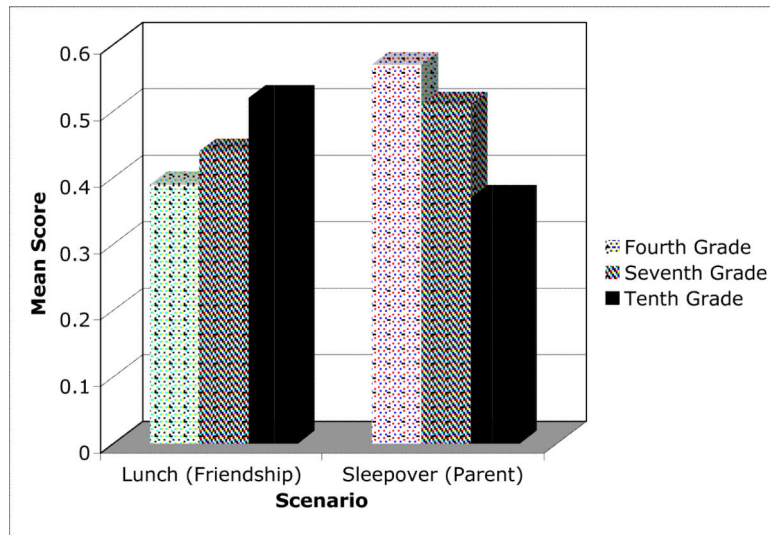


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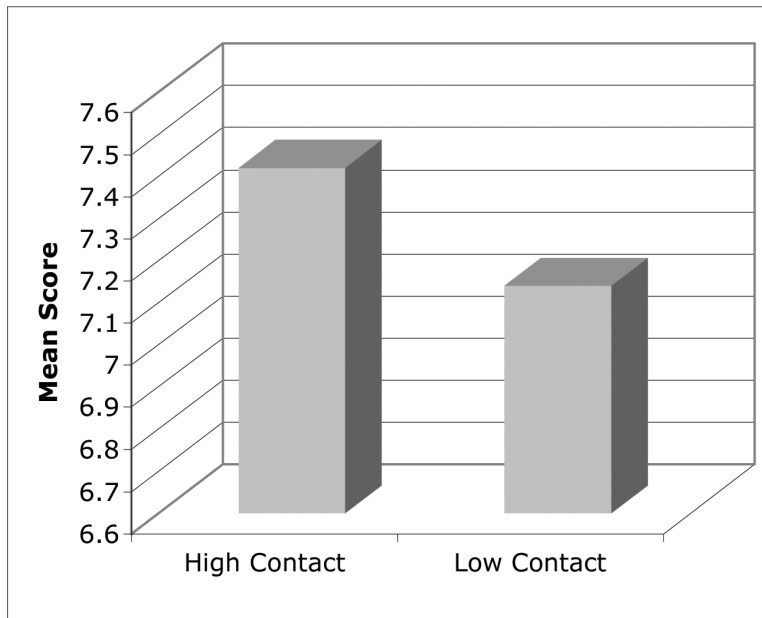
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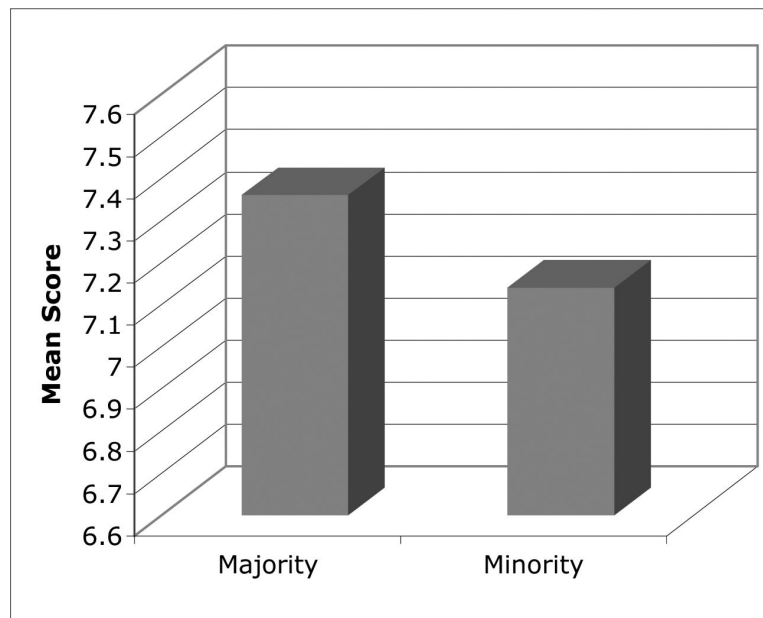
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**Figure 1.** Mean score of attributions of non-racial motives in situations of interracial exclusion as a function of grade.



**Figure 2.** Mean score of wrongfulness of race-based exclusion as a function of intergroup contact.



**Figure 3.** Mean score of wrongfulness of race-based exclusion as a function of majority/minority status.

**Table 1**

Level of Intergroup Contact by Grade and Ethnicity

<b>Intergroup contact</b>			
<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
4 <sup>th</sup> grade			
Majority	115	2.40	0.66
Minority	49	3.13	0.56
Total	164	2.76	0.61
7 <sup>th</sup> grade			
Majority	172	2.76	0.57
Minority	108	3.37	0.52
Total	280	3.07	0.55
10 <sup>th</sup> grade			
Majority	127	2.89	0.58
Minority	113	3.37	0.48
Total	240	3.13	0.53
Total			
Majority	414	2.70	0.63
Minority	270	3.33	0.52
Total	684	3.01	0.58



**Table 2**

## Logistic Regression Analyses on Attributions of Motive

Variable	<i>B</i>	<i>SE</i>	<i>Exp (B)</i>
Lunch			
Intergroup contact	.07	.14	1.29
Grade	.27	.11	1.31*
Majority/Minority status	.25	.18	1.07
Sleepover			
Intergroup contact	-.32	.14	.73*
Grade	-.32	.11	.72**
Majority/Minority status	.10	.18	1.11
Dance			
Intergroup contact	.48	.14	1.62***
Grade	-.10	.11	.90
Majority/Minority status	.72	.18	2.05***

Note.

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$ .