

## ABSTRACT

Title of dissertation: CHILDREN'S DECISION MAKING ABOUT  
SOCIAL RELATIONSHIPS: THE IMPACT OF  
SIMILARITY, RACIAL ATTITUDES, AND  
INTERGROUP CONTACT

Heidi Elizabeth McGlothlin, Doctor of Philosophy, 2004

Dissertation directed by: Professor Melanie Killen  
Department of Human Development

Cross-race friendships are a significant factor in the reduction of prejudice. The frequency of cross-race friendships is low throughout childhood and further declines with age. Three factors proposed to influence children's decision-making about cross-race friendships were investigated: racial attitudes, perceptions of similarity, and intergroup contact. Participants were 138 European American first- and fourth-graders who attended ethnically homogeneous schools. Three assessments were administered. The Ambiguous Situations Task assessed implicit bias in children's interpretations of ambiguous interracial encounters. The Similarity Task assessed children's perceptions of similarity between peer dyads that varied by race and by whether or not they shared

activity interests. The Intergroup Contact Assessment was administered to measure the amount of contact participants experienced with members of racial and ethnic groups other than their own. Results of the Ambiguous Situations Task were that children interpreted the ambiguous situations involving a Black transgressor as more negative than the situations involving a White transgressor. Moreover, the characters were evaluated as less likely to be friends in the situations involving a Black transgressor than in those involving a White transgressor. The findings from the Similarity Task were that children focused on shared interests to a greater extent than shared race in judgments of similarity and friendship potential. Evidence of the outgroup homogeneity effect was found, however. European American participants judged same-race Black dyads as more similar than same-race White dyads. Overall, participants reported low amounts of intergroup contact. Higher intergroup contact scores were related to perceptions of greater between-race similarity and to perceptions of less same-race similarity. In sum, the factors investigated had varying degrees of influence on decision-making about cross-race friendship. The findings point to the need for a multi-method assessment of racial attitudes in children, as well as to further investigation of the impact of intergroup contact.

CHILDREN'S DECISION-MAKING ABOUT SOCIAL RELATIONSHIPS:  
THE IMPACT OF SIMILARITY, RACIAL ATTITUDES, AND  
INTERGROUP CONTACT

by

Heidi Elizabeth McGlothlin

Dissertation submitted to the Faculty of the Graduate School of the  
University of Maryland, College Park in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
2004

Advisory Committee:

Professor Melanie Killen, Chair  
Professor James Byrnes  
Professor Natasha Cabrera  
Professor David Cooper  
Professor Kenneth Rubin

©Copyright by

Heidi Elizabeth McGlothlin

2004

## ACKNOWLEDGMENTS

The attainment of this Ph.D. would not have been possible without the support of many people. First of all, I would like to acknowledge the contribution of my family. My husband, Dave McDowell, has provided unwavering support and encouragement. His patience, understanding, and sense of humor have been a source of strength, and his editorial skills have been invaluable throughout this process. My parents, Jim and Judy McGlothlin, deserve much credit as well. I thank them for giving me the confidence to pursue my goals and succeed. Their various means of support have also made the journey more comfortable and enjoyable. The great family vacations “out-west” each year rejuvenated my spirit and refreshed my mind. I am so glad my graduate school memories are highlighted with these family events. I would also like to acknowledge my sister, Heather Piliponis, who has been on my side since the day I was born. She has provided so much support and comfort in my life that I am not sure where I would be without her. In addition, I would like to thank her husband Rick for never allowing me to take myself, or my family, too seriously. To my nieces, Emma and Elise, I thank you for giving me a stronger commitment to the study of human development and to making the world a better place. I love you all.

Much gratitude also goes to my academic family. Professor Melanie Killen has been a wonderful advisor and mentor. Melanie has allowed my graduate career to be challenging and rewarding, while balanced with a life outside of school. She has been an incredible role model as a researcher, professor, and mentor. I appreciate her generous support and guidance. Another extraordinary role model has been Professor Elizabeth Lemerise. Elizabeth is credited with awakening my interest in developmental

psychology. Working in her research lab provided me with the skills and tools needed for graduate study. She has been my advocate, and I appreciate her support tremendously. I can only hope to emulate these two incredible women.

I would also like to thank my dissertation committee. Professors Ken Rubin, Jim Byrnes, Natasha Cabrera, David Cooper, and Sandra Nettles provided thoughtful feedback and suggestions. My dissertation was a better project thanks to their expertise. They created a comfortable and constructive arena in which to present my work. I am grateful for their professionalism and for their support. I am also thankful to Suzanne Lebida, Anita Mazzocchi, Tiffany Puckett, and Nicole Putnam-Frenchik for being terrific research assistants on this project. I must also thank the principals, teachers, and students who participated in this project, as well as Montgomery County Public Schools, Maryland, for allowing me to conduct the research.

I have met many great colleagues and friends in the Department of Human Development. It has been a wonderful place to study and work. I appreciate the support from fellow graduate students, especially Kirsten VanMeenan, who has become a dear friend over the past six years. I must acknowledge another great friend, Janese Daniels, for keeping me on track and making sure we both met the many deadlines during this last semester of study. I have enjoyed the collegiality and friendship of my laboratory mates, Jennie Lee-Kim, Christina Edmonds, Yoonjung Park, Nancy Margie, Stefanie Sinno, Sasha Henning, Alaina Brenick, and Holly Bozeman, and appreciate their contributions to my projects. I am also grateful to the students who came before me, Stacey Horn and Alicia Ardila-Rey, for their advice, guidance, and friendship. I have been fortunate to be surrounded by truly outstanding people.

There have been many wonderful friends outside of school as well who have provided encouragement in the pursuit of this degree. From childhood friends, Emily Johnson and Wendy McDowell, to newer friends, Carolyn Luepkes, Mica Evans, Rachel Watkins, Ricia Weiner, Lisa Rosser, Shannon Bramblett, and Tiffany Rogers, I am thankful for their companionship on much needed breaks from work. They have made this process a fun one. Last but not least, I would like to thank my furry friend Zimmer for insisting that I take at least two breaks a day from the computer and enjoy the sidewalks of the District of Columbia.

## TABLE OF CONTENTS

List of Tables .....	vii
Chapter I: Theoretical Rationale .....	1
Chapter II: Background Literature .....	17
Children's Cross Race Friendships .....	17
Benefits of Cross-Race Friendships .....	17
Frequency of Cross-Race Friendships .....	19
Quality of Cross-Race Friendships .....	24
Children's Racial Attitudes .....	25
Acquisition of Racial Attitudes .....	26
Previous Studies Examining Children's Racial Attitudes .....	29
Racial Attitudes and Children's Social-Cognitive Reasoning.....	33
Implicit Racial Biases in Adults .....	38
Implicit Racial Biases in Children.....	40
Children's Perceptions of Similarity .....	46
Importance of Similarity in Friendship Selection and Maintenance .....	46
Social Cognition about Groups .....	48
Research on Children's Perception of Similarity .....	49
Intergroup Contact.....	56
The Contact Hypothesis .....	56
Intergroup Contact and Children's Racial Attitudes .....	59
Overview of Present Study.....	63
Purpose and Design .....	63
Hypotheses .....	65
Chapter III: Methodology.....	72
Participants .....	72
Procedure .....	73
Measures.....	73
Ambiguous Situations Task.....	73
Dependent Measures and Coding Categories for the Ambiguous Situations Task .....	74
Filler Task.....	76
Similarity Task.. .....	76
Dependent Measures and Coding Categories for the Similarity Task .....	77
Intergroup Contact Assessment.....	78
Dependent Measures and Coding Categories for the Intergroup Contact Assessment .....	79
Design.....	81
Reliability Coding .....	81
Chapter IV: Results .....	83
Ambiguous Situations Task.....	83



Biases in Interpreting Ambiguous Situations .....	83
Evaluations of Cross-Race Friendships in the Ambiguous Situations .....	87
Reasons for Cross-Race Friendship Potential in the Ambiguous Situations.....	88
Perceptions of Similarity Task .....	90
Ratings of Similarity.....	90
Reasons for Ratings of Similarity.....	91
Judgments of Friendship Potential .....	93
Reasons for Potential Friendship Judgments.....	95
Intergroup Contact Assessment.....	97
Amount of Intergroup Contact .....	97
Influence of Intergroup Contact on Dependent Measures.....	100
Chapter V: Discussion .....	102
Children’s Racial Attitudes .....	102
Children’s Racial Biases and Decision-Making about Friendship.....	105
Children’s Perceptions of Similarity .....	108
Children’s Perceptions of Similarity and Decision-Making about Friendship .....	112
Children’s Intergroup Contact.....	114
Limitations.....	118
Conclusions .....	119
Tables .....	124
Appendix A: Parental Consent Form .....	144
Appendix B: Complete Version of the Interview.....	146
Appendix C: Ambiguous Situations Task Picture Cards .....	155
Appendix D: Similarity Task Picture Cards.....	160
Appendix E: Intergroup Contact Assessment Picture Cards.....	165
References .....	168

## LIST OF TABLES

Table 1: Descriptions of Scenarios in the Ambiguous Situations Task .....	124
Table 2: Descriptions of Pairings in the Similarity Task.....	125
Table 3: Descriptions of Groups in the Intergroup Contact Assessment.....	126
Table 4: Summary of Hypotheses.....	127
Table 5: Story Orders.....	130
Table 6: Means for Initial Action Ratings in the Ambiguous Situations Task.....	131
Table 7: Means for Subsequent Action Ratings in the Ambiguous Situations Task...	132
Table 8: Judgments of Friendship Potential in the Ambiguous Situations Task.....	133
Table 9: Means for Ratings of Similarity in the Similarity Task.....	134
Table 10: Proportions of Non-Racial Physical Characteristics used in the Similarity Ratings.....	135
Table 11: Proportions of Race/Skin Color used in the Similarity Ratings.....	136
Table 12: Proportions of Sports Interests used in the Similarity Ratings.....	137
Table 13: Judgments of Friendship Potential in the Similarity Task.....	138
Table 14: Proportions of Non -Racial Physical Characteristics used in Reasoning about Friendship Potential in the Similarity Task.....	139
Table 15: Proportions of Race/Skin Color used in Reasoning about Friendship Potential in the Similarity Task.....	140
Table 16: Proportions of Sports Interests used in Reasoning about Friendship Potential in the Similarity Task.....	141
Table 17: Proportions of Beyond Sports Interests used in Reasoning about Friendship Potential in the Similarity Task.....	142
Table 18: Percentage of Responses in the Intergroup Contact Assessment.....	143

## CHAPTER I

### Theoretical Rationale

Over the past 25 years, schools and communities in the United States have become more diverse and more highly integrated as a function of laws and immigration patterns (Fisher, Jackson, & Villarruel, 1998). Children interact with individuals from a wide range of ethnic and racial backgrounds in many parts of the U.S. (Fisher et al., 1998; Ogbu, 1994; Greenfield & Cocking, 1994). One positive outcome of this increased contact is the potential for the formation of long-lasting friendships between members of different racial and ethnic backgrounds. As research in social psychology has demonstrated, cross-race friendships are a significant factor in the reduction of prejudice (Aboud & Amato, 2001; Pettigrew & Tropp, 2000; Schofield, 1995b; Schofield & Eurich-Fulcer, 2001; Slavin & Cooper, 1999). This is because children with a friend of a different race or ethnicity recognize the variation that exists among individuals from different groups. In addition, there is recognition that people from different backgrounds often share similar attitudes. This experience reduces stereotypes about others, which are labels attributed to groups without consideration of the variation that exists within the group. Cross-race friendships also encourage children to take another's perspective with regard to issues such as prejudice and discrimination. Children become more personally aware of the pain and humiliation inflicted by racist remarks and practices (Cook, 1984; Pettigrew, 1997a, b; Reich & Purbhoo, 1975). These beneficial effects continue into adulthood, as cross-race friendships in childhood predict positive racial attitudes later in life (see Aboud & Amato, 2001; Ellison &

Powers, 1994; Jackman & Crane, 1986; Oliner & Oliner, 1988; Patchen, 1983; Pettigrew & Tropp, 2000).

Unfortunately, much of the research on cross-race friendships, however, has shown that these types of relationships are lower in frequency than same-race friendships, and their numbers decline further as children get older (Aboud, Mendelson, & Purdy, 1993; Epstein, 1986; Graham & Cohen, 1997; Hallinan & Teixeira, 1987; Hartup, 1983; Howes & Wu, 1990; Shrum, Creek, & Hunter, 1988). Moreover, the cross-race friendships that do form are less durable than friendships between members of the same race (Hallinan & Teixeira, 1987). Thus, understanding children's decision-making about cross-race friendships has implications for research on racial attitudes and intergroup relations.

The present study examined children's evaluation of intergroup relationships and the features that children attend to when making judgments about same-race and cross-race friendships. The goals of the study were three-fold. The first goal was to understand how racial attitudes and bias affect children's interpretations of intergroup encounters and their evaluations of friendship. Second, the study aimed to investigate the features of social relationships that influence children's perceptions of similarity and how this impacts reasoning about friendship. The third goal was to examine how contact with other racial and ethnic groups relates to children's racial attitudes and reasoning about cross-race friendships.

Studies assessing prejudice levels in European American children have found that prejudice is high around the age of 4 years and then declines around the age of 9 years (Bigler & Liben, 1993; Doyle & Aboud, 1995; Doyle, Beaudet, & Aboud, 1988;

Katz, 1973; Katz, Sohn, & Zalk, 1975). Two commonly used assessments, the Preschool Racial Attitudes Measure (PRAM, Williams, Best, Boswell, Mattson, & Graves, 1975) and the Multi-Response Attitude Measure (MRA, Doyle et al., 1988), are based on trait assignment. Children are asked to assign negative traits (e.g., dirty) and positive traits (e.g., smart) to a member of their own race (e.g., a White child) or to a member of another race (e.g., a Black child) or, in the MRA, to members of both races. These studies have shown that young European American children assign positive traits to their own group and negative traits to the other group, while older European American children assign positive and negative traits to both groups.

Researchers have raised a number of issues to consider, however, when interpreting these findings. For example, by asking children to choose between their own group and another group, ingroup bias is confounded with outgroup negativity (Brewer, 2001; Cameron, Alvarez, Ruble, & Fuligni, 2001). In other words, these measures may be accurately assessing positive attitudes toward one's own group but may not be accurately assessing the attitudes held about another group (see Aboud, 2003). This confounding of ingroup bias with attitudes about the outgroup, as well as the finding that prejudice declines with age, is also problematic when examining children's decision-making about friendships.

While negative attitudes about members of another race or ethnicity likely influence children's selection of friends, it is not known how the form of prejudice measured by the PRAM or MRA (i.e., negative trait assignments to the outgroup) relates to children's decision-making about friendship. As levels of prejudice on the MRA decline with age, the rate of cross-race friendships also declines throughout

childhood and adolescence. In other words, if the findings show that a 9 year old European American child acknowledges that Black and White children are both “smart” whereas a 4 year old European American child assigns the “smart” trait only to the White child, it is also less likely that the 9 year old will have a cross-race friend than will the 4 year old, according to the frequency reports on cross-race friendships (that they decline with age). This discrepancy raises the possibility that different forms of prejudice, other than the one measured by trait assignment techniques, manifest in children’s decision-making about such things as friendship selection.

An alternative way to measure prejudice involves investigating how children reason about situations in which race is used as a factor to make decisions, such as exclusion and friendship. Recent studies based on social-cognitive domain theory have shown that, with age, children use race as a reason for making decisions about friendship (Killen & Stangor, 2001). In general, this line of work has shown that different forms of reasoning are brought to bear on issues involving racial exclusion from friendship or from larger peer groups (Killen, Lee-Kim, McGlothlin, & Stangor, 2002; Killen & Stangor, 2001). Researchers using the social-cognitive domain model have proposed that complex issues, such as exclusion, involve moral, social-conventional, and personal considerations. These studies have found that children and adolescents focus predominantly on the wrongfulness of discrimination and the harm involved (i.e., moral concerns) and disagree with the decision to exclude someone based on race. However, with age, adolescents consider nonmoral aspects of exclusion situations, such as personal choice and group functioning when evaluating exclusion from social groups. While these age-related findings parallel the decline in cross-race

friendship with age, the vast majority of children and adolescents at all grades judge exclusion as wrong for moral reasons.

Thus, different pictures of prejudice in childhood have been documented. On the one hand, positive trait assignment to the outgroup increases with age; on the other hand, the frequency of cross-race friendships decreases with age. In addition, nonmoral considerations, such as personal choice and group functioning increase with age regarding evaluations of racial exclusion in friendship contexts. Studies using the PRAM or MRA find that prejudice is high in early childhood and declines around 9 years of age, while the rate of cross-race friendships also declines with age and is relatively low throughout childhood. Meanwhile, studies assessing children's reasoning about racial exclusion find that the majority of children do not use stereotypes to justify exclusion but reject it based on moral considerations. With age, reasoning supporting exclusion increases, with group functioning and personal choice taking priority over moral considerations but only in a small number of circumstances.

One possible explanation for these discrepancies is that children hold implicit biases that are not presented when making explicit judgments about racial exclusion but are revealed in real-life decisions about friendship. Moreover, while personal choice and group functioning may be legitimate concerns in some circumstances, these concerns may also be used to disguise decisions based on unspoken negative racial attitudes.

Indeed, a line of research by social psychologists has found evidence of implicit biases in adults that often operate at a subconscious level (Dovidio & Gaertner, 1996, 1998; Dovidio, Kawakami, & Gaertner, 2002; Gaertner & Dovidio, 1986; Hodson,

Dovidio, & Gaertner, 2002). European American adults who consider themselves egalitarian and non-racist exhibit negative bias toward Black individuals in situations that are ambiguous or require a quick response. This “aversive” form of racism (Gaertner & Dovidio, 1986) may also be expressed in a situation in which a reasonable excuse can be given that conceals the negative racial attitudes which are the actual basis for the decision. An example of implicit racism would be when an individual denies a Black person membership in an all White music club by explaining that the club does not have room for more members, when in fact, no maximum number of members had been previously set. Or for instance, implicit bias may be operating when concerns with group functioning (e.g., “It is okay to exclude because the club wouldn’t work as well if they are uncomfortable with a Black child in it”) override the wrongfulness of discrimination. While results supporting the presence of implicit biases in adult samples have been robust, few known studies have investigated whether children hold implicit biases.

Studies testing implicit biases in children have used ambiguous situations to assess children’s racial attitudes (Lawrence, 1991; Sagar & Schofield, 1980). Ambiguous situations can detect implicit biases because the child is not asked explicitly about race but only asked to describe what happened in the picture. If implicit biases are present, different interpretations of the same act performed by either a White character or a Black character will be given. These differences, even when very subtle, suggest biases that may affect decision-making about friendship. For example, if an African American child is perceived as more aggressive than a European American child performing the same behavior, it is less likely the African American child will be



considered a good candidate for a friend. Indeed, Lawrence (1991) and Sagar and Schofield (1980) found that children rated the ambiguous behavior of a Black character more negatively than the same behavior of a White character.

There are several ways in which the prior studies using ambiguous pictures need to be extended in order to provide a comprehensive view of implicit racial biases. First, Sagar and Schofield (1980) included only sixth grade males in their study. While racial bias was found in the interpretation of interracial ambiguous encounters, it is not clear how generalizable the findings are to a wider age range or to females. Lawrence (1991) included first and fourth-grade males and females; however, the situations involved two White characters or two Black characters. Interpretations were not made of cross-race encounters. Assessing cross-race encounters is important in order to understand decision-making about cross-race friendships. Neither study above examined cross-race friendship. Thus, one goal of the present study was to investigate children's interpretations of ambiguous cross-race encounters and decision-making about the possibility of friendship between the characters.

The second factor proposed to influence children's decision-making about cross-race friendships is perceptions of similarity. Research on children's friendships has indicated that friendship dyads are typically homogeneous with respect to demographic variables (e.g., age, gender, and race), as well as with respect to activities and interests (Aboud & Mendelson, 1996; Bukowski, Hoza, & Boivin, 1994; Rubin, Bukowski, & Parker, 1998; Sullivan, 1953; Werner & Parmelee, 1979). That is, children typically interact with others who are like themselves with respect to age, gender, and race. Sharing interests and activities is not only important in the initial selection of friends,

but is likewise important to the longevity of the friendship. Enjoying the same hobbies or sports increases the attraction between individuals and the time spent together. A focus on similarity, however, may also discourage children from pursuing relationships with cross-race peers. Children may assume that differences in skin color also signify differences in activity interests and personality traits (Katz, 1982).

In previous studies investigating children's perceptions of similarity, children have been shown pictures of same-race pairs of children (e.g., two African American children) and different-race pairs of children (e.g., a European American child and an African American child) and have been asked to rate how similar the two children in the pictures are to one another (Doyle & Aboud, 1995; Katz, 1973; Katz et al., 1975). For example, in a study by Doyle and Aboud (1995), participants were asked to place photos of same-race and cross-race children on a board according to how much alike the children were to one another, with the more similar pairs being placed closer together. Other studies have asked children to assess similarity by moving a lever closer together when the pictures were similar and further apart when they were different. On these tasks, White participants judged children of the same race (e.g., a pair of European American children or a pair of African American children) as more alike than children from different races (e.g., a pair consisting of a European American child and an African American child). With age, White children perceived more variability within groups and less variability between groups. That is, older White children (9 year olds), for example, placed photos of two European American children further apart than did younger White children (6 year olds). In addition, the older children indicated that a

European American child and an African American child were more alike by placing their photos closer together than the younger children placed them.

European American children's perceptions of similarity have also been found to correlate with their negative racial attitudes (Doyle & Aboud, 1995; Katz, 1973; Katz et al., 1975). The more European American children judged individuals of the same race as alike, and individuals of different races as dissimilar, the higher their level of prejudice tended to be (Doyle & Aboud, 1995; Katz, 1973; Katz et al., 1975). With age, however, children perceived less similarity within the same race and more similarity between races, reducing the focus on race as a distinguishing feature (Doyle & Aboud, 1995). This decline in the focus on race as a variable for making social comparisons leads to a decline in prejudice, according to Aboud and her colleagues (Aboud & Amato, 2001; Doyle & Aboud, 1995).

There are several limitations to previous measures of similarity perception. No other information about the children being judged in the photos was given; thus, the only cues by which to judge similarity were physical characteristics, the most obvious of which was skin color. While skin color certainly stands out a physical difference between children of different races, it is important to understand the relative importance of skin color when children have additional information to use in their judgments of similarity. For instance, do children consider having different skin colors more defining than a shared interest in playing soccer when evaluating how similar two children are? When children are making actual decisions about friendships, they have multiple pieces of information to consider, including the potential friend's skin color and activity interests. Thus, a second goal of the dissertation study was to examine children's

perceptions of similarity by using multiple indices. By varying both race and shared or nonshared activity interests, the present study investigated the relative importance of each in children's judgments of similarity and in their reasoning about potential friendship.

A recent study was designed to provide a methodology for studying children's judgments about ambiguous pictures as well as perceptions of similarity (McGlothlin, Killen, & Edmonds, in press). A measure to assess children's implicit biases was designed using ambiguous situations involving a Black character and a White character. Four situations were depicted on picture cards in which a transgression may or may not have taken place. In one scenario (*Stealing*), the potential perpetrator was bending down to pick up money that has fallen out of the other child's pocket and it was unclear whether the money will be returned or kept. Another picture card (*Pushing*) depicted two children on the playground and one child had either fallen off or had been pushed off a swing. A third scenario (*Not Sharing*) involved one child possibly not sharing toys. And the fourth situation (*Cheating*) depicted a possible cheating situation (for detailed descriptions, see Table 1). There were two versions of each situation: one in which the White character was the potential transgressor and one in which the Black character was the potential transgressor. Participants were asked to describe what happened in the picture and to rate the behavior of the potential perpetrator. Participants were also asked what they thought the potential perpetrator would do next and to rate that action. Then participants were asked if the two characters could be friends and why.

Results indicated that the European American participants did not interpret the situations differently based on whether the potential perpetrator was White or Black. That is, no implicit biases were revealed. There were differences regarding the possibility of friendship, however. For European American males, a negative act by a Black character precluded the possibility of friendship more often than the same act by a White character in the situation involving stealing. Overall, though, the children interviewed did not show preferential treatment of their ingroup (i.e., European Americans) nor negative attitudes towards the outgroup (i.e., African Americans). This finding is counter to the findings from previous studies using ambiguous situations (Lawrence, 1991; Sagar & Schofield, 1980). The finding is also counter to those from studies using the PRAM or MRA, which find that prejudices is high until the age of 9 years. In the presents study, this measure for assessing implicit bias will be used.

In the second task, European American first and fourth-graders were shown same-race pairs (two African American children or two European American children) and different-race pairs (an African American child and a European American child) in which the children either shared an interest in a sport or did not share an interest in a sport. For example, one pair consisted of two White children, one of whom liked to play basketball and one of whom did not. Another pair consisted of a Black child and a White child who both liked to play volleyball (for descriptions of all pairings, see Table 2). Each participant received all possible pairings of race (same or different) and sports interest (same or different). Participants were asked to rate the similarity of the two children in each pair and to give reasons for their rating. In addition, participants were asked about the possibility of friendship between the two children.

Results indicated that the European American children based their ratings of similarity on whether the pair shared the same interest in a sports activity more so than whether they shared the same skin color. These European American children did, however, rate pairs of Black children as more alike than pairs of White children. This phenomenon of perceiving less variation within the outgroup than within the ingroup is referred to by social psychologists as the outgroup homogeneity effect (Mullen & Hu, 1989; Ostrom & Sedikides, 1992; Quattrone & Jones, 1980). Perceiving the outgroup as homogeneous reinforces stereotypes, which emphasize differences between groups while attributing little or no variation within groups (Brewer & Brown, 1998). Furthermore, skin color was mentioned more by younger children than by older children when justifying their similarity rating. Skin color did not emerge as an explicitly important feature in the children's decision-making about friendship, however. Friendship between the two children in all pairings was judged as possible by most participants, although friendship between children with different sports interests was considered less likely than friendship between children with shared sports interests. Skin color did not, however, influence judgments of friendship potential. In the present study, the measure for assessing perceptions of similarity described above will be used.

While the McGlothlin et al. (in press) study provided a methodology for studying children's evaluations of intergroup relationships, a goal of the dissertation project was to extend the methodology to examine intergroup contact. One factor that may have contributed to the findings in the preliminary study was the location in which the sample was drawn. Participants were students at schools with great racial and ethnic diversity. According to the school district records, the students interviewed

attended schools which consisted of almost even proportions of African American, European American, and Hispanic American students. This daily contact with members of different racial and ethnic groups may function to reduce prejudice in several ways. First of all, when there are significant numbers of minority students, there are greater opportunities for friendship. As discussed above, intergroup friendships are significant predictors of lowered prejudice in children of all ages (Aboud & Levy, 2000; Ellison & Powers, 1994; Pettigrew, 1997a, b, 1998; Pettigrew & Tropp, 2000; Schofield, 1995b; Schofield & Eurich-Fulcer, 2001; Slavin & Cooper, 1999). Furthermore, contact with members of different races and ethnicities has a positive impact on racial attitudes outside the scope of friendship (Brewer & Miller, 1984; Desforges, Lord, Ramsey, Mason, Van Leeuwen, West, & Lepper, 1991; Pettigrew & Tropp, 2000; Slavin & Madden, 1979). Therefore, even if the participants did not have a high number of cross-race friendships, their contact with outgroup members in school possibly lowered their levels of prejudice and implicit biases. Given the importance of cross-race friendships and the changing demographics in the U.S., it is important to investigate the impact of contact on implicit biases and perceptions of similarity. Thus, a third goal of the present study was to assess children's amount of intergroup contact and how it is related to their perceptions of similarity, racial attitudes, and decision-making about cross-race friendship.

The sample in the present study consisted of European American first and fourth-graders who attended schools which were homogenous in ethnic makeup (i.e., the student population was over 85% European American). Because school is not the only place that children may be in contact with different racial and ethnic groups, a

questionnaire was designed to assess the amount of contact the child had with African Americans in various contexts. The amount of intergroup contact was proposed to be related to intergroup attitudes and perceptions of similarity, with higher amounts of contact associated with more positive attitudes and greater perceptions of different-race similarity.

In sum, there were three goals in the present study. The first goal was to understand how racial attitudes and bias affect European American children's interpretations of ambiguous intergroup encounters and their evaluations of friendship. European American children were shown picture cards depicting ambiguous situations involving a Black character and a White character. Children were asked to interpret what happened in the illustration and to rate the potential perpetrator's behavior. In addition, reasoning about friendship between the two characters was assessed. Second, the features of social relationships that influence European American children's perceptions of similarity and its impact on reasoning about friendship were investigated. European American children were asked to rate the similarity of same-race and different-race pairs of children, who also varied as to whether or not they shared a sports interest. Reasoning about the possibility of friendship between the children was also attained. Finally, the impact of contact with African Americans on European American children's racial attitudes and reasoning about cross-race friendships was examined by measuring the amount of contact participants have with African Americans and how this impacted their perceptions of similarity and their intergroup attitudes. Participants were 138 first and fourth-graders of European American descent, nearly evenly divided by grade and gender.



Because participants in the present study were expected to have low levels of intergroup contact, the findings were hypothesized to differ from those of the McGlothlin et al. (in press) study. The expected low level of intergroup contact was hypothesized to influence racial attitudes. Contrary to McGlothlin et al. (in press) findings, it was hypothesized that participants in the present study would display implicit biases when interpreting ambiguous situations. Behavior of the Black potential perpetrator was expected to be rated as more negative than the same behavior of the White potential perpetrator. Because negative intent was predicted to be attributed to the Black characters, it was also hypothesized that friendship between the two characters would be judged as less likely when the potential perpetrator was Black. Because the frequency of cross-race friendships has been shown to decline with age, the likelihood of friendship across both versions (i.e., White perpetrator, Black perpetrator) was predicted to be judged as lower by older children than by younger children. Moreover, based on the findings from Killen et al. (2002) and McGlothlin et al. (in press), males were expected to view friendship as less likely than were females.

Due to the expected low level of intergroup contact, it was also hypothesized that racial cues would be more salient in judgments of similarity. Thus, different-race pairs of children were expected to be rated as less similar than same-race pairs of children even when the different-race pair shared the same sports interest. Perceptions of outgroup homogeneity were expected to be strong; same-race pairs of Black children were expected to be rated as more similar than same-race pairs of White children. Furthermore, race was expected to influence reasoning about cross-race friendships. It was hypothesized that different-race pairs of children would be judged to have low

friendship potential, especially when the children in the pair also had different sports interests.

Although overall intergroup contact was expected to be minimal, the amount of intergroup contact experienced was predicted to be related to racial attitudes as well as perceptions of similarity. European American children with higher levels of intergroup contact were expected to display fewer biases when interpreting ambiguous situations than were European American children with lower levels of intergroup contact.

Intergroup contact was also hypothesized to be related to more positive judgments of cross-race friendship potential. It was further hypothesized that European American children with higher amounts of contact with African Americans would perceive greater similarity between different-race pairs of children. In addition, a greater amount of contact was predicted to be associated with a decrease in outgroup homogeneity. In other words, children who had contact with African Americans were expected to judge same-race Black pairs of children as less alike than were children who did not have contact with African Americans.

## CHAPTER II

### Background Literature

In this chapter four areas of literature relevant to the design of this study will be analyzed. First, the findings from research on cross-race friendships will be reviewed. This section will concentrate on the importance of cross-race friendships and the frequency and nature of these relationships. The following three sections will describe the literature of three areas which are proposed to influence the selection of cross-race peers as friends: 1) racial attitudes; 2) perceptions of similarity; and 3) interracial contact. The second section will analyze the research on children's racial attitudes. This section will focus on previous findings using forced-choice techniques to measure prejudice and on research based on social-cognitive domain theory, which will be further defined and explained. In the third section, the research on children's perceptions of similarity regarding racial cues will be examined. Specifically, an analysis of findings from previous studies will be reviewed as well as a critique of previously used measures. In the fourth section, the literature concerning the influence of interracial contact will be reviewed. Finally, an overview of the purpose and design of the present study will be described.

#### *Children's Cross-Race Friendships*

##### *Benefits of Cross-Race Friendships*

Research on peer relations has indicated that positive peer interaction is associated with the development of social skills and competence, prosocial behaviors, morality, and cognitive skills (see Rubin et al., 1998). A more specific form of peer interaction, friendship, has been of particular interest to developmental psychologists

because of the additional outcomes it has been found to impact, such as higher levels of self-processing and self-esteem, as well as better social skills (Buhrmester, 1990; Rubin, 1980; Sullivan, 1953). Moreover, research has shown that friendships between members of different ethnic or racial groups have a positive impact on intergroup attitudes by reducing prejudice (Pettigrew & Tropp, 2000; Schofield, 1995a; Schofield & Eurich-Fulcer, 2001; Slavin & Cooper, 1999).

Cross-race friendships influence positive racial attitudes in a number of ways (Aboud & Amato, 2001; Pettigrew, 1998; Pettigrew & Tropp, 2000). Children who have friends of another race or ethnicity recognize that members of different groups share similar attitudes and interests (Byrne, 1971; Pettigrew, 1997a, 1998; Stephan & Stephan, 1984). That is, European American children with African American friends realize that a person of another race or ethnicity may enjoy the same hobbies or hold the same opinions as themselves even though they look different. Children also learn that members of the same racial or ethnic group are unique individuals who differ from one another in a variety of ways (Pettigrew, 1997a, 1998; Rothbart & John, 1985). Understanding this variability prevents assumptions and judgments to be made about individuals based on stereotypes. In other words, having a friend who is Asian American breaks down the stereotypes held about that group by an African American child because he realizes that his Asian American friend is not exactly like other Asian Americans. And in fact, his friend may be more like himself than some members of his own ethnic group. In addition, because friendships entail an emotional bond between two individuals, having a friend of another race or ethnicity increases sympathetic awareness of the wrongfulness of prejudice and discrimination (Cook, 1984; Pettigrew,

1997a, b; Reich & Purbhoo, 1975). Witnessing a friend's pain in response to a racist remark brings home the harsh reality of racism. Likewise, observing discrimination against a friend illuminates the humiliation and pain caused by unfair treatment more so than witnessing discrimination against a stranger or by merely reading about it.

Thus, cross-race friendships reduce prejudice by altering cognition and emotions in three ways. First of all, engaging in an interracial friendship increases perceptions of similarity between groups. Secondly, these types of relationships break down stereotypes that assume all members of a particular group are alike. And the third way cross-race friendships reduce prejudice is by increasing emotional awareness of the wrongfulness of discrimination and prejudice. Understanding children's decision-making about cross-race friendships, therefore, is important in order to improve intergroup relations. This aim is particularly significant given the research findings that interracial friendships are infrequent.

#### *Frequency of Cross-Race Friendships*

Friendships form between two children based on a myriad of reasons, such as interest in the same activities or simply proximity; likewise, peers may be rejected from friendships due to a number of factors including perceptions of dissimilarity (Aboud & Mendelson, 1996; Clark & Ayers, 1988). Because peer rejection is detrimental to many aspects of development including social competence and academic achievement (Parker & Asher, 1987), the features children attend to when making decisions about accepting or rejecting a peer have been an important and prolific topic of research.

Studies examining peer rejection have primarily focused on the social skills of an individual child as the determining factor as to whether a child will be accepted or

rejected (Crick & Dodge, 1994; Putallaz & Wasserman, 1990). Children with poor group entry skills are often rejected by the group; meanwhile, children who have a more sophisticated approach to entering groups, such as imitating what the group is doing, have a much better chance at becoming a part of the group. Likewise, children who display aggressive tendencies are less well-liked in a classroom and nominated less often as a potential playmate than children who display prosocial and empathic tendencies. While the importance of social competence in forming and maintaining friendships has been well established empirically, other factors, such as the child's race or ethnicity, have been acknowledged but have not been systematically studied as factors contributing to rejection. Research examining the frequency of cross-race friendships, however, suggests that race and ethnicity do influence children's decision-making about friendship – but unfortunately, in a way most likely to lead to rejection.

While schools and communities have become increasingly diverse in the United States (Fisher et al., 1998), an extensive line of research has shown that children nominate same-race peers as friends more often than cross-race peers (Aboud et al., 2003; Graham & Cohen, 1997; Hallinan & Teixeira, 1987; Hartup, 1983; Howes & Wu, 1990; Kupersmidt, DeRosier, & Patterson, 1995; Ramsey & Myers, 1990; Shrum et al., 1988). That is, when children are asked to make a list of their friends, European American children's lists consist predominantly of other European American peers with relatively few peers from other backgrounds. African American children, likewise, have more African American friends than European American friends; however, several studies suggest this discrepancy is not due to fewer nominations of European Americans on the part of African Americans (Graham & Cohen, 1997; Hallinan & Teixeira, 1987;

Hallinan & Williams, 1987). Instead, African American children's friendship nominations of European American peers are less likely to be reciprocated. For example, an African American child may respond with the name of a European American child when asked who her friends are, but the European American child will not list the African American child as a friend. This lack of reciprocation has been found to begin around sixth grade, after which the nomination of European American children as friends by African Americans declines (Graham & Cohen, 1997; Hallinan & Teixeira, 1987). These events also coincide with a dramatic decline in the number of cross-race friendships in adolescence for both African American children and European American children (Aboud et al., 2003; Dubois & Hirsch, 1990; Graham & Cohen, 1997; Graham, Cohen, Zbikowski, & Secrist, 1998; Hallinan & Teixeira, 1987; Hartup, 1983; Shrum et al., 1988).

A number of factors have been related to the likelihood and frequency of cross-race friendships in the classroom. First of all, the opportunity for interracial friendships must be present in order for these friendships to form. Classrooms which are majority White offer few opportunities for European American children to engage in friendships with members of other ethnic groups. Likewise, classrooms which are majority Black limit the prospects of cross-race relationships for African Americans. In other words, the larger the number of same-race peers there are in the classroom, the larger the number of same-race friendships between majority group members in that classroom (Hallinan & Teixeira, 1987; Hallinan & Williams, 1987). A second factor that influences interracial relations and the likelihood of cross-race friendships in the classroom is the teacher's attitude and the organization of the classroom in terms of

ability grouping and curriculum tracking (Epstein, 1985; Hallinan & Sorensen, 1985; Hallinan & Williams, 1989; Khmelkov & Hallinan, 1999; Kubitschek & Hallinan, 1998). Ability grouping often re-segregates schools and classrooms. Classrooms in which students are grouped by ability and were encouraged to evaluate their similarity in terms of academic performance tend to produce fewer and less stable cross-race friendships. Hallinan and Williams (1987) also examined the longevity of friendships, both cross-race and same-race, based on the when the friendship formed. Friendships that began before the school year or at the very beginning of the school year had greater longevity than those formed later in the school year. Friendships between European American and African American children were unlikely to have formed before the school year, and these friendships were found to be less stable. This finding suggests that interracial contact and friendships outside of the classroom were minimal or nonexistent before the school year. The lack of intergroup relationships outside of school has been a common finding in other studies (see Aboud & Amato, 2001; Finkelstein & Haskins, 1983; Schofield, 1982).

One explanation for the low occurrence of cross-race friendships outside of school is that the opportunity to meet children of different ethnic groups may not exist in the child's neighborhood. Children living in integrated neighborhoods have been shown to have a significant number of cross-race friendships outside of school (DuBois & Hirsch, 1990). Unfortunately, although segregation has decreased in many regions of the United States, some areas, especially the metropolitan areas of the Northeast and Midwest, continue to be divided along racial lines (Glaeser & Vigdor, 2001). Segregation, furthermore, still exists at the neighborhood level in many places, though



this level is more difficult to define and measure in population data. Neighborhood segregation impacts the racial makeup of schools to a great extent. In fact, despite progress in the desegregation of public schools between the 1950's and the last 1980's, recent studies have shown that resegregation has dramatically changed the composition of schools throughout the past decade (Frankenberg, Lee, & Orfield, 2003; Orfield, 2001).

In spite of significant neighborhood and school segregation, contact with students of different racial and ethnic groups, may be increased or maintained in middle childhood and adolescence through cocurricular activities, such as sports teams or clubs (Epstein, 1986; Hallinan & Teixeira, 1987). In fact, cross-race friendliness and social acceptability of other groups have been shown to remain relatively high or to increase with age (Aboud & Mendelson, 1996; Aboud et al., 2003; Hallinan & Teixeira, 1987; Schofield & Whitley, 1983). In other words, less same-race preference is evident when students are asked to rate how much a cross-race classmate is liked as opposed to whether or not she is a friend. Patchen (1982) also found that friendly cross-race contact was common in high school when surveying adolescents about their interracial encounters. Contact was limited, however, to the school context; more intimate forms of interaction such as visiting one another at home or dating were extremely rare.

While considerable research has examined the pattern of cross-race friendships in middle childhood through adolescence, much less research has examined this pattern in young children. Several studies have found that children as young as five years old displayed same-race preference (Finkelstein & Haskins, 1983; Ramsey & Myers, 1990) and in fact, one study has shown that cross-race friendship and cross-race peer

interaction was higher in third grade than in kindergarten (Howes & Wu, 1990). Thus, research shows that European American children from early childhood through adolescence have a selection bias for same-race peers when nominating peers as their friends. Moreover, the friendships that do form in spite of being interracial are less likely to last as long as same-race friendships (Hallinan & Williams, 1987). Although children's social groups are marked by homogeneity on a variety of dimensions, such as gender and age (Aboud & Mendelson, 1996; Bukowski et al, 1994; Rubin et al., 1998; Sullivan, 1953; Werner & Parmelee, 1979), racial homogeneity in friendships is of particular concern given the unique benefits associated with interracial relationships described above. Therefore, understanding why cross-race friendships are infrequent is critical, and examining cross-race friendships in early childhood is especially important given the shortage of research on this age group.

#### *Quality of Cross-Race Friendships*

One possible explanation to account for the discrepancy in the frequency and durability between cross-race friendships and same-race friendships is that the quality of the friendship differs depending on whether the peers are of the same race or of different races. In other words, friendship between an African American child and a European American child may differ from a same-race friendship with respect to how fulfilling the relationship is in terms of qualities such as companionship or emotional support. A study by Aboud et al. (2003), however, found that children in cross-race relationships do not rate the quality of their friendship lower than do children in same-race relationships with regards to reliable alliance, exciting companionship, help, emotional security, and self-validation. Only intimacy was reported as lower in cross-

race friendships. In addition, Kerner and Aboud (1998) investigated the extent to which African American and European American children differ in the importance of particular qualities in friendships. That is, do European American children place more value on particular qualities, such as intimacy, than do African American children? Their results indicate that children of both ethnicities rate the importance of the qualities listed above in similar ways. Therefore, friendships between African American and European American children are not fundamentally different from friendships between two European American children or two African American children in terms of the qualities valued and the quality of the relationship. Yet, children do not choose peers of another race or ethnicity as friends with the same frequency as they choose peers of their own race or ethnicity. Given these findings and the importance of cross-race friendships, an understanding of how children reason about race and what it means with respect to forming friendships and peer groups is needed.

The following three sections will examine three areas of research proposed to impact children's decision-making about cross-race friendship and contribute to the low frequency of interracial friendships. These areas are: 1) children's racial attitudes, 2) children's perceptions of similarity, and 3) the amount of contact children have with members of different groups.

### *Children's Racial Attitudes*

Friendships form between two individuals who generally hold one another in positive regard, having positive emotions and positive attitudes for one another (Hallinan & Kubitschek, 1990; Rubin et al., 1998). Emotions and attitudes about others, however, may be based on factors not having to do with the individual's

personality but on factors outside of the person's control, such as his or her race.

Although two individuals may have much in common and would get along well, a friendship may not be given a chance because of negative attitudes one holds about the other's race. These attitudes may be influenced by racial stereotypes and by prejudice, which involves negative attitudes about and negative affective reactions to members of particular groups (Dovidio, Brigham, Johnson, & Gaertner, 1996). Holding negative attitudes about a racial group makes it unlikely that a member from that group will be selected as a friend. Aboud et al. (2003) found a relationship between European American children's prejudice levels and exclusion of African American children. European American children who had low prejudice scores reported having more African American companions and higher quality cross-race friendships, while those with high prejudice scores tended to exclude African Americans. Thus, when investigating children's decision-making about cross-race friendships, it is important to assess racial attitudes. In order to assess racial attitudes, it is important to understand how these attitudes form and develop.

#### *Acquisition of Racial Attitudes*

Just as racial attitudes are complex, how these attitudes form and develop is, likewise, a complex process. Traditional socialization theories propose a top-down approach to children's acquisition of attitudes and social knowledge (for a review, see Smetana, 1997). Parents, as authority figures, pass down values and attitudes to their children through verbal or behavioral communication. According to these approaches, children are passive recipients of social knowledge. Structural-developmental theories, in particular social-cognitive domain theory (Smetana, 1997; Tisak, 1995; Turiel 1983;

Turiel, Killen, & Helwig, 1987), have criticized this top-down approach by emphasizing the importance of children's interactions with peers, as well as parents, in the development of social knowledge. In addition, social-cognitive domain theory proposes that the child plays an active role in the acquisition of values and attitudes. Attitudes are not merely internalized by the child in whole, but the child actively constructs social knowledge based on interactions with the social world, which includes parents, peers, and the broader culture (see Smetana, 1997).

In terms of racial attitudes, research has supported the tenet of social-cognitive domain theory that children do not simply internalize parental attitudes. Studies have shown that children's racial attitudes do not correlate highly with their parents' racial attitudes (see Aboud & Amato, 2001; Aboud & Doyle, 1996). Children and adolescents, furthermore, do not condone racial discrimination that is authorized by parents (Killen et al., 2002). Parents, however, do control many aspects of children's (especially young children's) social environments, which contribute to the construction of racial attitudes. For instance, parents, who are responsible for setting up play dates and encouraging children to spend time together, may not take advantage of or create opportunities for their children to interact with children of different ethnic backgrounds, or they may even actively oppose these types of interactions. Children may learn from an early age that associations with members of particular groups are discouraged or forbidden by their parents. It is important, however, not to assume that the child's intergroup attitudes will match his or her parents' intergroup attitudes, whether those attitudes are positive or negative (see Aboud & Amato, 2001). While parents are one

source of influence, children also construct their racial attitudes from social knowledge gleaned from other interactions as well.

While the direct influence of peers on children's attitudes has not been well researched, the literature on children's cross-race friendships, as discussed above, does inform our understanding of how positive interracial contact contributes to greater tolerance and more positive attitudes (Pettigrew & Tropp, 2000; Schofield, 1995a; Schofield & Eurich-Fulcer, 2001; Slavin & Cooper, 1999). The influence of same-race peers on racial attitudes is less understood. Conformity to peer pressure certainly underlies aspects of children's reported attitudes and behavior towards outgroup members. However, children are not often accurate in their assumptions of peers' attitudes (Aboud & Doyle, 1996). Moreover, research has shown that children and adolescents reject peer influence that condones racial discrimination (Killen et al., 2002). As with parental interaction, peer interaction is one of several sources of influence that contribute to the construction of racial attitudes, but peer interaction is not a direct source of children's attitudes.

The broader society and culture is yet another source of influence on children's racial attitudes. Stereotypes perpetuated by the media and societal institutions are learned by children at a very early age (Aboud, 1992; Bigler & Liben, 1993). The acceptance of stereotypes can lead to negative attitudes towards members of that group. Indeed, commonly used measures of prejudice in children (e.g., PRAM, Williams et al., 1975; MRA, Doyle et al., 1988) have used trait assignment, which is related to stereotyping, as assessments of attitudes. Studies using these measures have also attributed young children's high level of prejudice to their cognitive limitations with

regard to classification and conversation skills (see Aboud, 1988). The use of stereotypes to justify acts of racial discrimination has also been examined using social-cognitive domain theory (Killen et al., 2002; Killen & Stangor, 2001). The following sections will examine the findings from these previous studies on children's racial attitudes more closely.

#### *Previous Studies Examining Children's Racial Attitudes*

Studies examining children's racial attitudes have found that positive White bias and negative Black bias peak around the age of 5 – 6 years for European American children (Bigler & Liben, 1993; Clark, Hocevar, & Dembo, 1980; Johnson, 1992; Katz & Kofkin, 1997; Yee & Brown, 1992). This high level of prejudice towards Blacks decreases for over half of White children by the age of 8 – 9 years (Bigler & Liben, 1993; Black-Gutman & Hickson, 1996; Clark et al., 1980; Doyle & Aboud, 1995). However, because racial attitudes are complex and influenced by social cognitive processes, as well as societal stereotypes, it is important to understand the assessments used to measure racial attitudes.

One popular method of assessing prejudice in young children is the Preschool Racial Attitude Measure (PRAM; Williams et al., 1975). The PRAM is a forced-choice technique which requires the child to choose between a member of his or her own race and a member of another race as to who possesses a particular trait. Pictures depicting 6 positive (clean, nice, kind, happy, healthy, wonderful) and 6 negative (bad, stupid, ugly, cruel, sad, selfish) traits as belonging to a White stimulus target in one set and a Black stimulus target in another set are presented in pairs. The child is asked, "One of these children is kind; once he saved a kitten from drowning. Who is kind?" One point

is given for choosing the White target in response to a positive adjective, and one point is given for choosing the Black target in response to a negative item. The prejudice score is the sum of positive White choices and negative Black choices (maximum score = 12), with high scores ( $\geq 9$ ) indicating a pro-White/anti-Black bias. Scores around the midpoint indicate no bias, and low scores ( $\leq 3$ ) reveal an anti-White bias.

Although the PRAM has been frequently used to assess children's level of prejudice, there are several limitations to this measure. First of all, ingroup bias is often the outcome of group differentiation (Mackie et al., 1996). In other words, when individuals are differentiated by group membership, they will prefer their own group (i.e., the ingroup) to other groups (i.e., outgroups). Preference for a positive evaluation of one's ingroup, however, does not necessitate a negative evaluation of the outgroup. An individual may hold high opinions of his or her own group but not necessarily derogate other groups. A girl, for instance, may believe that girls are exceptional at math without holding boys' math abilities in low regard. By forcing the child to choose whether an ingroup member or an outgroup member is, for example, "kind," forced-choice measures are confounded with ingroup attitudes. Thus, the forced-choice measures may exaggerate negative evaluations of the outgroup, while accurately assessing positive ingroup attitudes (Aboud, 2003, Cameron et al., 2001).

An adapted version of the PRAM has been used by researchers in order to overcome some of its limitations (Bigler & Liben, 1993; Doyle & Aboud, 1995; Doyle et al., 1988). The Multiple-response Racial Attitude measure (MRA; Doyle et al., 1988) is an improvement over the PRAM in that it allows the child to assign a trait to "both" group members. The child is presented with positive and negative adjectives or traits



from the PRAM and then asked to choose whom the item is describing from a selection of individuals of different races, including the child's own race. However, unlike in the PRAM, the child may choose to assign the trait to both racial targets. In other words, the participant must choose whether a member of his or her own group, a member of another group, or members of both groups are, for example, "naughty." Studies using the PRAM and the MRA have found that for European American children, pro-White/anti-Black bias peaks around the age of 5 – 6 years and declines around the age of 9 years, with more older children assigning negative traits to "both" characters (Bigler & Liben, 1993; Doyle & Aboud, 1995).

Although the MRA is an improvement over the PRAM, it suffers similar limitations. By explicitly asking the child to judge based on race, social desirability bias, especially in older children, is a threat to both the PRAM and the MRA (Katz, 1973; Katz et al., 1975). Participants are forced to choose between racial categories or to choose both group members based on no other information besides the race of the targets. Older children are sophisticated in knowing the appropriate responses to questions concerning racial issues (Katz et al., 1975). Therefore, the decline with age in level of prejudice on the PRAM and the MRA may be influenced by social desirability rather than an actual change in racial bias.

In addition, the MRA, though less so than the PRAM, may still be somewhat confounded by ingroup bias, particularly for younger children. This limitation is suggested by evidence that the MRA is biased against young children due to limitations in their cognitive ability. Use of the "both" category increases with age (Bigler & Liben, 1993; Doyle & Aboud, 1995; Doyle et al., 1988). That is, 9 year old children are

more likely to assign positive traits to both the White target and the Black target than are 4 year old children, who very rarely use the “both” category. Bigler and Liben (1993) found a relationship between the increase in the use of the “both” category and the child’s classification skill. In other words, as the child matures, he or she is able to recognize that a person of a specific race can have both positive and negative traits, and that members of two different groups can share the same trait. This pattern of results suggests, on the one hand, that the MRA may indeed be measuring a cognitive change in the way children classify individuals of different races and an increase in counterbias (i.e., positive Black bias) among older children. In fact, Aboud (1988) argues that young children are more prejudiced precisely because of these cognitive limitations. On the other hand, because a child is unable to classify a person on both positive and negative traits does not necessarily mean that the child is prejudiced. Instead, the MRA, like the PRAM, is assessing ingroup bias in young children and not outgroup negativity. The “both” category is not truly an option for young children if they do not possess the cognitive capacity to use multiple classification.

The PRAM and the MRA are also limited in their scope of assessment. Negative trait assignment is only one aspect of prejudice. Moreover, research suggests that prior to age seven or eight, children do not perceive the behavior of others as reflecting trait dispositions (Rholes & Ruble, 1984; Rotenberg, 1980). In other words, traits are not used by young children to predict future behavior, nor are traits used by young children to describe themselves or others (Livesley & Bromley, 1973). Thus, trait assignment may not be a sensitive measure of racial attitudes in young children. Furthermore, while trait assignment techniques are useful in documenting ingroup bias,

other aspects of prejudice, such as how racial attitudes are related to and manifested in reasoning, judgment, and consequent behavior, are also important avenues by which to investigate outgroup bias in children.

### *Racial Attitudes and Children's Social-Cognitive Reasoning*

Recently, researchers have examined children's and adolescents' reasoning about situations involving racial exclusion from a social-cognitive domain perspective (Killen et al., 2002; Killen & Stangor, 2001). Social-cognitive domain theory proposes that social judgments are influenced by the reasoning processes that individuals apply to the evaluations of events (Turiel, 1983, 1998; Turiel, Killen & Helwig, 1987). Social reasoning is divided into three conceptually distinct domains: moral, social-conventional, and psychological (Turiel, 1983, 1998). The moral domain consists of concerns related to justice, rights, and others' welfare. Knowledge in the social-conventional domain relates to traditions, rules, and norms. Social conventions ensure smooth group functioning and promote group identity. The psychological domain pertains to issues of personal choice, such as choice of clothing or hairstyle. An extensive line of research has shown that individuals from as early as two years of age differentiate events along these domain distinctions (for reviews, see Smetana, 1995; Tisak, 1995; Turiel et al., 1987).

In addition to the distinct forms of reasoning pertaining to each domain, the three domains are further defined by their relation to a set of criteria, which includes generalizability, authority jurisdiction, and rule contingency (see Smetana, 1995; Tisak, 1995 for full set of criteria used). Generalizability refers to whether or not the wrongfulness of the act is specific to a particular context. In other words, does the

wrongfulness of the act generalize to other situations or is the act only wrong in a specific context, such as school. Events in the moral domain are generalizable – moral transgressions are wrong regardless of the location of the event. The wrongfulness of social-conventional transgressions, however, does depend upon the context. For example, hitting someone (a moral transgression) would be wrong even in another country, but eating with your fingers (a social-conventional event) may be appropriate in some countries while inappropriate in others. Authority jurisdiction refers to whether or not the wrongfulness of the act is reliant upon authority. Even if an authority figure says the act is okay, moral transgressions are still wrong. Hitting is still wrong even if a teacher condones or even advocates the behavior. Authority figures may, however, annul the wrongfulness of a social-conventional transgression. For instance, if a teacher requests that students call her by first name, the act of calling her by her first name is no longer wrong though it may still be wrong in other classrooms. Likewise, rule contingency refers to whether or not the wrongfulness of an act is contingent upon a rule. That is, is the act okay if there was no rule against it? Events in the moral domain are not contingent upon rules. Hitting is still wrong even if there was no rule against it. The wrongfulness of social-conventional acts, however, does hinge upon the rule forbidding them.

Much of the social-cognitive domain research has focused on prototypic events. Prototypic events elicit concerns associated with one domain. For example, unprovoked hitting is a prototypic moral transgression. Children as young as two years of age reason that hitting is wrong because it hurts someone. Furthermore, hitting is wrong across contexts independent of authority and rules. Many events in the social

world, however, do not involve a single domain but are multifaceted and require coordinating concerns from several domains. Multifaceted events are often controversial issues in society, such as abortion and drug use. However, the complexity of issues may also be subtle, or straightforward in the abstract but more complicated in specific circumstances. An increasing number of studies have been conducted to investigate reasoning about multifaceted events, including racial biases.

Biases toward individuals from different racial backgrounds bear on different domains. Racial biases can result in discrimination, which involves the treatment of others (i.e., the moral domain). At the same time, racial attitudes are informed by stereotypes about others, which are part of the social-conventional realm. Furthermore, appeals to group functioning and group identity, both social-conventional aspects, are often used to justify the exclusion of racial and ethnic minorities. These appeals, however, may also be guises for what is really prejudice and discrimination. Racial biases can bear on the psychological domain as well. The selection of friends is most often considered a matter of personal choice. But is rejection of an individual from a different racial background just a matter of personal preference or a matter of discrimination? A study by Killen and her colleagues (Killen et al., 2002) investigated how children and adolescents evaluate exclusion based on race.

Killen et al. (2002) examined the judgments and reasoning of fourth, seventh, and tenth graders regarding the exclusion of a Black child from three contexts: friendship, music club, and school. Participants were asked for their judgment of the exclusion (is it okay or not okay?) and for justifications for their judgment (why is it okay or not okay?). In addition, participants were asked a series of questions designed

to assess how the exclusion is classified in terms of the domain criteria (i.e., generalizability, authority jurisdiction, and social influence). Participants were asked if exclusion based on race would be okay in another country, if exclusion would be okay if a parent or the government condoned it, and if exclusion would be okay if other friends or citizens condoned it.

Results indicated that the majority of children and adolescents judged exclusion based on race as wrong and focused on the wrongfulness of discrimination and harm to the individual (i.e., moral concerns). Differences did arise between the contexts of exclusion. Virtually all children and adolescents viewed excluding a Black child from school as wrong; however, a small but significant number of participants judged exclusion in the friendship context and in the music club context as okay. Analyses of the reasons behind the judgments indicated that children and adolescents appealed to personal choice when condoning not being friends with someone because of the person's race. That is, these participants reasoned that it is okay for someone to not be friends with a Black person because of his race due to the personal nature of the decision – it is up to the individual to decide who his friends are. For the music club context, exclusion was justified on the basis of preserving group identity and group functioning. For instance, the participants contended that group members may be uncomfortable with a Black child in the club and therefore, the group would not get along as well. Some participants argued that if the club wanted to remain all-White then that was their choice. For a small number of participants, appeals were made to stereotypes about the musical preferences of African American and European Americans (e.g., “He [the black child] probably listens to hip-hop and they don't, so he

wouldn't fit in with the group.”). Thus, justifications supporting exclusion in the friendship and music club contexts were based on social-conventional considerations, while reasoning condemning exclusion was based on moral concerns.

Age differences in judgments and reasoning about exclusion were also found. Adolescents were more likely than were younger children to evaluate exclusion from friendship and a music club as okay. In other words, older children viewed racial exclusion as a multifaceted issue more often than did younger children, who focused primarily on moral considerations. The decline with age in evaluating exclusion as wrong is consistent with the findings that cross-race friendships decline as children grow older. Meanwhile, the findings are contradictory with that of the PRAM and MRA, which show racial bias declines with age. While the majority of children and adolescents in the Killen et al. study judged exclusion as wrong across all contexts, the age-related findings that acceptance of racial exclusion increases is important to understand. It also suggests that social desirability was not necessarily a factor. However, participants did not base their acceptance of exclusion on stereotypes or negative views of race per se, but instead appealed to the individual's autonomy in making the friendship decision or the importance of the group to maintain an identity and high level of functioning. Although participants did not display explicit racial bias, it is not clear how implicit biases may have influenced their judgments and reasoning. Research in social psychology on implicit biases in adults may contribute to a better understanding of the contradictory pictures drawn by the findings from studies on children's racial attitudes.

*Implicit Racial Biases in Adults*

Positive changes in racial policies over the past fifty years (e.g., civil rights legislation, the bygone era of the Jim Crow South) are both evidence of and a source of the decline in explicit prejudice and overt discrimination (Schuman, Steeh, Bobo, & Kryson, 1997), as well as the decline in the endorsement of negative stereotypes about African Americans (Devine & Elliot, 1995; Dovidio & Gaertner, 1998; Gaertner & Dovidio, 1986). However, research has shown that even among European American adults who reject racial stereotypes and prejudice, subtle forms of bias permeate their treatment of African Americans (Crosby, Bromley, & Saxe, 1980; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997).

While explicit attitudes operate on a conscious level and can be measured by traditional assessments of prejudice, such as self-report measures, implicit attitudes are subconscious beliefs that are automatically activated by the presence of the attitude object (Dovidio et al., 1996; Dovidio, Kawakami, & Beach, 2001). That is, although individuals are not aware of their implicit negative attitudes, these biases influence their behavior toward African Americans. Differential treatment of African Americans has been evidenced by those who sincerely support egalitarian principles and truly believe themselves to be nonprejudiced (Dovidio & Gaertner, 1998; Gaertner & Dovidio, 1986).

Implicit biases have been revealed using a variety of methodologies, including priming studies using photos and semantic categories, response latency techniques, and indirect self-report measures, such as attributional biases (see Dovidio et al., 2001). Researchers have also used behavioral situations to assess implicit biases. Gaertner and



Dovidio (1986) examined the likelihood of Black and White persons to elicit prosocial behavior from European Americans. In one study, households received an apparent wrong number phone call in which the caller whose car had broken down asked for help in contacting a garage. Another situation involved helping a stranger in distress. The findings indicated that European Americans were less likely to call a garage to help a stranded African American and less likely to help an African American stranger in a bystander situation. Thus, in situations involving ambiguity and unclear guidelines, European Americans were less likely to help Black individuals than White individuals.

Duncan (1976) also employed the use of an ambiguous situation involving aggressive behavior to measure prejudice in White college students and found highly differential evaluations of the same act based on whether the actor was African American or European American. The participants were asked to interpret a situation in which African American and European American confederates acted out scenes involving a disagreement that led to a shove by one of the actors. The race of the protagonist and victim was varied. The results indicated that the White college students evaluated the behavior of the protagonist as violent when he was Black but as playing around, dramatizing, or aggressive when he was White. The participants were also more likely to attribute the behavior to personal attributes (e.g., "He is a violent person.") when the protagonist was Black but to situational attributes (e.g., "He is having a bad day.") when the protagonist was White.

Thus, research in social psychology based on adult samples has shown clear evidence of implicit racial biases. Little is known, however, about the developmental

trajectory of implicit racial biases and whether implicit biases influence children's interpretations of events.

### *Implicit Racial Biases in Children*

Relatively few studies (Lawrence, 1991; Margie, Killen, Sinno, & McGlothlin, 2004; McGlothlin et al., in press; Sagar & Schofield, 1980) have examined implicit racial biases in children. The method used in the few existing studies has involved asking children to interpret ambiguous situations. Sagar and Schofield interviewed 6<sup>th</sup> grade European American males and African American males at an interracial urban middle school. In observations at the school, the researchers found no incidents of overt racial conflicts and found numerous positive interracial encounters. However, in response to an interview question about the students' own experiences with cross-race peers, European American students reported being intimidated by African American students. The details of the reported incidents were unclear, however. In other words, there was some ambiguity as to the intent of the African American perpetrator in most of the reported interactions. The authors suggest that the ambiguity allowed race-related cues to influence the interpretation of the situation. In other words, the children's racial attitudes clouded their perceptions of interracial encounters. Although the frequency of cross-race friendships was not assessed with this study, it is likely that the biased interpretations of ambiguous behaviors also decreased the likelihood of interracial friendships.

Sagar and Schofield (1980) further assessed children's racial attitudes by presenting picture cards involving situations in which the intention of the actor was ambiguous. The situations involved bumping in the hallway, requesting food from

another student, poking a student in the classroom, and using another's pencil without asking. There were four versions of the situations. One version involved two White characters, and one version included two Black characters. The other two versions involved an interracial encounter, with the roles of actor and target alternated by race. Participants were asked to rate how well each of several adjectives (playful, friendly, mean, and threatening) described the actor's behavior. They were then asked to rate the personal characteristics of both actor and target on sets of semantic differential scales (thoughtless – considerate, strong – weak, threatening – harmless). The findings revealed that the behavior of Black actors was rated as more mean or threatening than the same behavior of White actors. However, there was no difference in the assignment of negative traits, suggesting that the evaluation of behavior provides a more sensitive measure of racial attitudes than trait assignment techniques.

While Sagar and Schofield's work provides evidence of implicit biases in 6<sup>th</sup> grade males, it is not clear the findings are generalizable to other age groups or to females. Lawrence (1991) assessed racial attitudes of 6 – 9 year old male and female children using ambiguous situations. The situations involved two male characters, one of whom displayed behavior that could be interpreted as positive or as negative. There were four situations: a small boy falling down steps while a large boy is at the top of the steps, a small boy with his arms out while a large boy has a lollipop, a boy looking for a shoe while another boy is holding it in another room, and a boy dropping money unknowingly while another boy is walking behind him picking up the money. All situations involved either two Black characters or two White characters. Participants were asked to report what happened in the picture and whether they thought the actor

was “a good or bad boy most of the time”. Overall, European American children rated the behavior of the White actors more positively than the behavior of the Black actors. The differential ratings were most evident in the more aggressive situations, which were the situations involving pushing and taking a lollipop. Moreover, younger children showed more bias in the aggressive situations than did older children. As in Sagar and Schofield, the trait perception task was not as sensitive to bias as the behavioral assessment.

Thus, two studies using implicit assessments of racial attitudes have found anti-Black bias in European American children. While findings from the Lawrence (1991) study extend the findings of Sagar and Schofield (1980) to younger children as well as to females, the situations involved only same-race pairs of characters. Children’s interpretations interracial encounters were not measured. Evaluations of interracial encounters, however, are an important element in children’s decision-making about cross-race friendships.

In order to assess children’s racial attitudes involving potential interracial conflict and the possibility of friendship between the two characters, an instrument was designed and administered to first and fourth-grade European American students in a study by McGlothlin et al. (in press). A second study by Margie et al. (2004) administered the same measures to first and fourth African American, Hispanic American, and Asian American students. The instrument entailed four ambiguous situations involving a Black character and a White character (see Table 1 for descriptions of the situations). Four situations were depicted on picture cards in which a transgression may or may not have occurred. The potential transgressions were

stealing, not sharing, cheating, and pushing. One version of the cards depicted a Black child as the potential perpetrator, and one version depicted a White child as the potential perpetrator. Children were shown the picture card and asked to describe what had happened. Ratings of the perpetrator's action were obtained using a Likert scale (1 = very, very good; 9 = very, very bad). Participants were then asked to describe what the potential perpetrator would do next and to rate that action. In addition, participants were asked about the possibility of friendship between the two characters.

Results indicated that European American children did not differentiate between the actions of the Black character and the White character (McGlothlin et al., in press). Although interpretations ranged from positive to negative, validating that the situations were ambiguous, the race of the potential perpetrator did not influence how the behavior was perceived. Likewise, the European American participants did not differ based on race of the transgressor in their predictions of what would happen next in the situation. White characters were as likely as Black characters to perform negative acts, and Black characters were as likely as White characters to perform positive acts. The Margie et al. (2004) study also found no evidence of bias displayed by ethnic minority children.

Some bias was found in the McGlothlin et al. (in press) study, however, with regards to the possibility of friendship. Cross-race friendship was evaluated as likely by older participants than by younger participants. Although overall, negative interpretations of the perpetrator's action were correlated with negative evaluations of the possibility of friendship, the European American children, especially the males, were more pessimistic as to whether the two children could be friends when the perpetrator was Black as opposed to White in the context involving stealing. In other

words, a negative action by a Black child was viewed as precluding friendship more often than a negative action by a White child. This finding was not replicated in the Margie et al. (2004) study. One possible explanation for this finding is that European American children ascribe negative behavior of Black children to personal attributes but negative behavior of White children to situational attributes, as found with college students in Duncan (1976). That is, a Black child who acts in a negative manner does so because of his personality, while a White child does so because of the particular context. This explanation, however, does not coincide with the findings from Lawrence (1991) and Sagar and Schofield (1980) that children do not differ in trait perception of Black and White characters. Thus, more research investigating children's reasoning about post-conflict friendship in interracial situations is warranted.

The contradictory findings of McGlothlin et al. (in press) with previous studies (Lawrence, 1991; Sagar & Schofield, 1980) of European American children's implicit racial attitudes also point to the need for further research. There are several possible explanations for the conflicting results. First of all, the design and methodology of the three studies differed in significant ways. Both earlier studies used a between subjects design; participants evaluated each situation one time with either the Black character or the White character as the perpetrator. The McGlothlin et al. (in press) study, on the other hand, used a within-subjects design. Each participant evaluated both versions of the situations. A filler task was used halfway through the task in order to distract from the similarity of the situations. It is possible participants monitored their interpretations and gave similar ratings to both White and Black characters. In order to test this explanation, analyses were conducted using a between-subjects design by splitting the

sample into two groups based on the order of the Ambiguous Situations Task. The judgments and ratings were then compared for each situation. As in the within-subject analyses, no evidence of bias was found.

Another possible explanation for the contradictory results is that the environment in which the children live and go to school influenced their racial attitudes. The demographic information about the participants in Lawrence (1991) was limited to the fact the sample was drawn from two YMCA day camps in a south-eastern metropolitan city. Therefore, besides possible geographical differences between racial attitudes in the South and Mid-Atlantic, little can be hypothesized to account for the different findings between the Lawrence study and the McGlothlin et al. (in press) study. However, the Sagar and Schofield (1980) study does provide demographic information, which may be useful in hypothesizing about the contradictory findings.

While the students participating in the Sagar and Schofield (1980) study attended an integrated school, the reported ratio of Black to White students was two to one. Moreover, the neighborhoods in which the students resided were highly segregated, and the economic disparity between racial groups was high. On the other hand, the students interviewed in McGlothlin et al. (in press) attended ethnically diverse schools, with populations of African American, European American, and Hispanic American students approaching even proportions according to school records. The neighborhoods in which the children lived are also regarded as diverse with significant integration of people from different ethnic and racial backgrounds. Furthermore, participants were all of working class and middle class socioeconomic status according to school records. Thus, the participants in McGlothlin et al. (in press) may differ from

those in Sagar and Schofield (1980) with respect to the amount and quality of intergroup contact experienced. In fact, the lack of differences between the European American children in McGlothlin et al. (in press) and the ethnic minority children in Margie et al. (2004) suggests that high level of intergroup contact available to both samples may have contributed to less biased attitudes. The quality and quantity of intergroup contact has been found to be a significant predictor in the reduction of prejudice (Pettigrew & Tropp, 2000). A later section will analyze the research on the impact of intergroup contact on racial attitudes. Next, the literature on children's perceptions of similarity will be reviewed.

### *Children's Perceptions of Similarity*

#### *Importance of Similarity in Friendship Selection and Maintenance*

Social psychological research on friendship has hypothesized that similarity plays an important role in friendship selection and maintenance because it increases attraction between individuals (see Aboud & Mendelson, 1996). The similarity-attraction hypothesis (Byrne & Griffitt, 1973) assumes that similarity between individuals on one or more of a variety of dimensions including attitudes, values, personality traits, behavior, and physical appearance, is critical to interpersonal attraction, which in turn is crucial to the formation of friendship.

As stated previously, children's friendships are marked by homogeneity of a number of features, including gender, age, race, as well as similarity of interests and activities (Aboud & Mendelson, 1996; Bukowski et al., 1994; Kandel, 1978; Rubin et al., 1998; Sullivan, 1953; Werner & Parmelee, 1979). And as evident from the research on cross-race friendship outlined above, similarity in demographic variables such as



sex, age, and race is the rule rather than the exception in friendships between children and adolescents at all ages (Aboud, 1988; Finkelstein & Haskins, 1983; Hamm, 2000; Hartup, 1983, 1993; Kandel, 1978; Shrum et al., 1988). Likewise, similarity in activity preferences is important in childhood friendships as well as in adolescent and college friendships (Aboud & Mendelson, 1996; Gottman, 1983; Kandel, 1978; Werner & Parmelee, 1979). Sharing activity interests operates at the initial stages of friendship to increase attraction between individuals and the desire to interact with one another. Similarity in activities also functions to maintain friendships. When two people share interest in the same hobbies and activities, they spend more time together and the friendship is more likely to last (Hallinan & Williams, 1987; Newcomb, 1961). Moreover, friends tend to become more similar in attitudes, values, social perceptions, and activities the longer they are friends, indicating that friendships act as socialization agents (Deutsch & Mackesy, 1985; Hill & Stull, 1981; Kandel, 1978; Lea & Duck, 1982).

While similarity in activity interests has a legitimate influence on the selection of friends and maintenance of friendship by increasing time spent together and the enjoyment of being together, physical similarity may also impact decision-making but in a less beneficial way. Because demographic variables such as race are extremely salient, they may be used as the initial criteria for selecting or rejecting peers (Finkelstein & Haskins, 1983). Thus, although an African American child and a European American child may enjoy the same activity, the two children may not become friends merely because they do not share the same color of skin. It is important to investigate children's perceptions of similarity pertaining to race in order to

understand why children prefer same-race peers to different-race peers. Why are individuals with the same skin color considered more similar and in what ways are they more similar? What is the relative significance of skin color compared to shared activities? Examining research in social psychology on intergroup relations and studies on children's perceptions of similarity of race is beneficial in addressing these questions.

### *Social Cognition about Groups*

Research by social psychologists with adult populations has revealed that when a person is classified into a group, that person is no longer viewed as a distinct individual but rather as a member of a particular group, thus taking on the identity of that group (Mackie, Hamilton, Susskind, & Rosselli, 1996). In addition, members of groups are perceived as more similar to one another than individuals in an arbitrary aggregate. For example, Asians, as members of an ethnic group, would be judged to be more similar to one another than would a group of individuals who are taking an introductory psychology class in college. Likewise, members of different groups are perceived as more dissimilar from each other, and especially as dissimilar from the individual's ingroup. For instance, European Americans may believe that an African American and a Hispanic American are less alike than are two African Americans or two Hispanic Americans, but that an African American and a Hispanic American would be even less similar to a European American. A related phenomenon called the outgroup homogeneity effect is also evident in adults' judgments of interracial similarity (Mullen & Hu, 1989; Ostrom & Sedikides, 1992; Park et al., 1992; Quattrone & Jones, 1980). The outgroup homogeneity effect refers to the finding that individuals

perceive more variability between members of their own group than between members of another group (Quattrone, 1986). In other words, European Americans recognize that they differ from other European Americans in numerous ways and on a variety of dimensions. However, European Americans do not ascribe the same extent of variability to other ethnic groups but instead attribute similar traits, attitudes, and behaviors to all members of the group. Stereotypes, which are labels applied to all individuals of a particular group, also assume homogeneity within the group. While most research on group perception has been conducted using adult samples, there have been a number of studies investigating how children view similarity between groups.

#### *Research on Children's Perception of Similarity*

As with adults, young children have been found to homogenize members of groups (Doyle & Aboud, 1995; Katz, 1973; Katz et al., 1975), and in some cases homogenize even their own ingroup (Bigler, 1995; Bigler, Jones, & Lobliner, 1997). Doyle and Aboud (1995) measured six- through nine-year-old children's perceived same-race similarity and different-race similarity by asking participants to rate the similarity of children in photos of same-race and different-race, same-sex pairs by placing them on a board. Photos placed closer together were judged to be more similar. Likewise, those farther apart were judged to be more different. Similar assessments have been used in other studies (e.g., Katz, 1973; Katz et al., 1975). Overall, findings indicate that European American children judge the pairs of same-race photos as more similar than the pairs of different-race photos.

Age-related changes in perceived same-race and different-race similarity have also been found (Doyle & Aboud, 1995; Katz, 1973; Katz et al., 1975). While both

older (9 year-olds) and younger (6 year-olds) children perceived less similarity in the different-race condition than in the same race condition, older children judged the different-race pairs as more similar to one another than did younger children. In other words, 9 year-old European American children evaluated an African American child and a European American child as more similar to one another than did 6 year-old European American children. However, there was also evidence of the outgroup homogeneity effect in older children's ratings of similarity. Older children judged individuals of the same race as more similar than did younger children (Doyle & Aboud, 1995). That is, older European American children perceived greater similarity between two African American children than did European American younger children.

Correlations between perceived same-race and different-race similarity and the child's level of prejudice have also been found (Doyle & Aboud, 1995; Katz, 1973; Katz et al., 1975). In Doyle and Aboud (1995), perceived same-race similarity (e.g., rating two Black children as highly similar) was positively associated with prejudice scores at both ages. Declines in the prejudice scores were correlated with increases in the perceived similarity of different-race pairs (e.g., rating a Black child and a White child as being similar). Katz et al. (1975) also found a relationship between the perceptual judgment task, described below, and level of prejudice, with race related cues being more salient for high prejudice children of both races at all age levels. In both studies, children who scored higher on the prejudice measure tended to rate members of the same race as more similar than children who had lower prejudice scores. In other words, the more a child perceived members of the same race as similar and members of different races as dissimilar then the higher the child's level of

prejudice tended to be. With age, children judged different-race pairs as more similar and prejudice scores declined.

Katz (1982) suggests that the overgeneralization of group members by children is an example of Piaget's notion of transductive reasoning. If two people are alike in skin color, then the child assumes that they must be alike in other ways, too.

Furthermore, if two people have different skin colors, then the child assumes that they must be different in other ways from one another. For example, a European American child may assume that because an African American child has darker skin, he may also enjoy different activities and have a much different personality than the European American child. However, previously used assessments of same-race and different-race similarity have not directly tested this assumption, but rather have presumed this is the case.

When young children judge members of an outgroup as more similar to one another than two individuals of different racial backgrounds, it is assumed the children are implying that the members of the outgroup are also similar in other ways besides that of being of the same race, and that the individuals of different races are dissimilar in ways other than race. This cannot be necessarily inferred by the measures used, however. In the study by Doyle & Aboud (1995), no additional information about the children in the photos was given to the participants. Because the pairs were of same-sex children, the race of the individuals in the different-race pairs was particularly salient. Correspondingly, differences between the same-race pairs were much less salient. In other words, the most obvious characteristic on which to judge the photos was race. But this does not verify that children place the most emphasis on race as a measure of

similarity between individuals. Of course, children do use distinguishing physical characteristics when making similarity judgments; however, many other cues come into play when making judgments in particular contexts.

Katz (1973) proposed that the continuous use of the same label to refer to members of a group also contributes to the difficulty in discriminating differences between members of another group. Katz found that when children were taught to associate names to the pictures of individuals of another race, they evaluated the faces as less similar to one another than children who were not taught the distinctive labels. This indicates that children will use information available when making judgments of the similarity between others. The perceptual judgment task used by Katz et al. (1975) likewise presented children with more than the dichotomy of black and white racial pairs. While similar to the task used in Doyle & Aboud (1995) in that it involved the presentation of facial pairs, Katz et al. also systematically varied the skin color and shade, facial expressions, and types of hair of the stimuli. The participants (second, fourth, and sixth graders) were asked to rate the similarity of the two faces by sliding a lever along a track ranging from “alike as they can be” to “as different as they can be.” The results showed that children did take into account the varying cues. The slides of a black face and a white face were judged as most distinctive, while pairs varying in type of hair and facial expression were judged as most similar. Shade cues were judged to be more distinguishing than non-racial cues, such as facial expression and presence of glasses. However, it should be noted that the only difference-race condition was in the black-white pairing, no non-racial cues were given in this condition.

It is not clear then from previous studies if children would use non-racial cues in judging the similarity of different-race pairs. While Katz and her colleagues (Katz, 1973; Katz et al., 1975) have used methods that give the child additional information to consider, the information is still of physical characteristics and limited to same-race pairs. Other dimensions on which to judge similarity, such as activity preferences, remained unknown to the participants. Because children often have multiple variables to consider when making actual decisions about friendships, asking children to rate the similarity of people in pictures without any information besides physical characteristics may be an inadequate method to assess the dynamic perceptions of similarities involved in children's decisions about friendship.

A further limitation of the above tasks is the actual measurement of the degree of similarity. In Doyle and Aboud (1995), the participants were not given precise definitions of how the distances between the pictures were interpreted. Two participants may place the photos at the same distance apart but have different judgments of similarity. A clearly defined scale may be a more reliable instrument to use. The assessments of same-race and different-race similarity in Katz et al. (1975) were based on the degree of movement of a lever. The extremes of the track were defined; however, each child may have a different interpretation of the degree of movement. In order to directly compare the children's responses, a Likert-type scale in which each level of rating is explicit to the participant may be more appropriate.

In order to address the above limitations when examining children's perceptions of similarity, an assessment was developed and administered to first and fourth-grade European American children who attended ethnically diverse schools (McGlothlin et

al., in press). The assessment consisted of presenting children with pictures of same-race and different-race pairs of children. In addition, children were told that the pairs of children either shared the same interest in a sport activity or did not share the same interest. Six pairs of pictures were presented: 2 pairs of a Black peer dyad (two African American children), 2 pairs of a White peer dyad (two European American children), and 2 pairs of a cross-race peer dyad (an African American child and a European American child). Within each racial grouping, one pair shared the same interest in a sport and one pair did not share the same interest in a sport. For instance, one pair of African American children both liked to play soccer, while the other pair of African American children consisted of one child who liked to play softball and another child who did not like to play softball (see Table 2 for descriptions of all pairings). Two dependent measures were used to assess similarity between the children presented in the pairs. Participants were first asked to rate the similarity of the two children using a Likert scale (1 = not at all alike, 6 = very, very alike). The second assessment asked participants to explain their reasons for why the pair was either alike or different. Assessing children's reasoning about similarity is an important expansion from previous work, which inferred from the child's rating of similarity that race was the primary factor being compared.

McGlothlin et al. (in press) further expanded previous work on children's perceptions of similarity by including questions concerning the possibility of friendship between the pairs of children presented. Previous studies (Doyle & Aboud, 1995; Katz, 1973; Katz et al., 1975) did not assess children's judgments and reasoning about friendship. Two dependent measures were used to assess the potential for friendship



between the peer dyads. Participants were asked whether or not the two children could be friends. Participants were then asked to justify their friendship evaluation.

The results indicated that European American children considered both race and shared interests when rating similarity. When rating the similarity of different-race peer dyads, children did not focus primarily on race. The different-race peer dyad who shared the same activity interests was rated higher in similarity than the different-race peer dyad who did not share the same activity interest. In fact, according to the rating scale, the means indicated that children viewed the different-race dyad with the same interests as “a lot alike” and the dyad with different interests as “not much alike”. The different-race peer dyad who shared the same activity interests was furthermore rated higher in similarity than the same-race peer dyads who did not share the same activity interests. Thus, European American children focused primarily on the shared or unshared activity interests and not on differences in skin color. Race was not ignored, however. The European American children rated the same-race peer dyads (both Black and White pairs) who shared the same activity interests as more similar than the different-race peer dyad who shared the same interests. Furthermore, evidence of the outgroup homogeneity effect was found. In the unshared activity interests condition, the same-race Black peer dyad was judged to be more similar than both the same-race White peer dyad and the different-race peer dyad. Thus, the European American children attributed greater variability to the same-race White dyad (the ingroup) than to the same-race Black dyad (the outgroup). The results from the friendship assessments indicated that European American children focused on the similarity of activity interests and not race when determining the possibility of friendship.

In a second study (Margie, Killen, Sinno, & McGlothlin, 2004), the similarity task was administered to first and fourth-grade African American, Hispanic American, and Asian American children who attended ethnically diverse schools. Like the European American children, these children also focused predominantly on the similarity of activity interests and not race when making similarity judgments and friendship judgments. Furthermore, no evidence of outgroup homogeneity effect was found in the African American children's ratings of same-race White dyads or in the Hispanic American and Asian American children's ratings of either same-race White dyads or same-race Black dyads. Overall, these children from ethnic minority backgrounds did not use skin color as a basis for similarity or friendship decisions.

The measure of children's perceptions of similarity described above was used in the present study to extend previous findings (to be discussed below). The next section will examine the literature on intergroup contact and its impact on children's racial attitudes and perceptions of similarity.

### *Intergroup Contact*

#### *The Contact Hypothesis*

The hypothesis that contact with others from different racial and ethnic groups reduces prejudice was first proposed by Williams (1947) and Allport (1954). Mere contact, however, is not a sufficient condition for lowering prejudice. Instead, the contact situation must meet four conditions in order to have an optimal impact on racial attitudes (Allport, 1954; Dovidio, Gaertner, & Kawakami, 2003; Pettigrew, 1971). First of all, equal status between the groups must be present the situation. Secondly, the contact needs to be supported by authority. The third condition is that the situation

must involve an attainment of common goals. Related to this condition, the fourth condition requires that there be no competition between groups in the situation. Contact situations which entail these four conditions have been shown to reduce negative attitudes toward the outgroup across a variety of societies, situations, and groups (Caspi, 1984; Cook, 1984; Desforges et al., 1991; Herek & Capitiano, 1996; Pettigrew & Tropp, 2000; Wagner, Hewstone, & Machleit, 1989).

Pettigrew (1998) proposes that the positive effects of intergroup contact come about through four processes: 1) learning about the outgroup, 2) ingroup reappraisal, 3) changing behavior, and 4) generating affective ties. When a situation leads to contact with an individual from an outgroup, new learning occurs that corrects negative views of that outgroup. An individual realizes that stereotypes about that outgroup are inaccurate and that similarities exist between the ingroup and outgroup that were previously unrecognized. Although learning about the outgroup does not always promote these positive outcomes (e.g., Rothbart & John, 1985), it has also been shown to improve intergroup attitudes (e.g., Stephan & Stephan, 1984).

Just as contact changes the way the outgroup is viewed, contact with others also reshapes the view of the ingroup. As discussed previously, ingroup bias is often the outcome of group differentiation (Mackie et al., 1996); moreover, greater variability is attributed to members of the ingroup than to members of the outgroup (Brewer & Brown, 1998), thereby increasing stereotyping of outgroup members. Contact with individuals from different groups reveals the contrasting, yet valid, ways that other groups manage the social world. In other words, intergroup contact illustrates that the norms, customs, and lifestyles of other groups operate as effectively as those of the

ingroup. This process acts to “humanize” the outgroup and reduce positive ingroup bias (Levin, van Laar, & Sidanius, 2003; Pettigrew, 1997a, 1998). In addition, contact with outgroup members reduces the time spent with ingroup members, which has been related to decreases in negative outgroup bias (Wilder & Thompson, 1980).

The third process leading to improved intergroup attitudes is changing behavior, which is based on the tenants of behavior modification. That is, by changing one’s behavior to be accepting of outgroup members, positive attitude change will follow (Pettigrew, 1998). Likewise, it is argued that the amount of cognitive dissonance is reduced when attitudes are revised to agree with one’s behavior (Aronson & Patnoe, 1997). Research has shown that positive effects from behavior change are most effective with repeated contact in varied settings (Jackman & Crane, 1986). By interacting with different groups repeatedly, the individual becomes more comfortable with the outgroup and this leads to “liking” the outgroup (Zajonc, 1968). Repeated intergroup encounters reduce the anxiety associated with interacting with unfamiliar groups (Brewer & Brown, 1998); this reduction in anxiety is necessary in order for affective ties to be generated.

Although anxiety is common in initial encounters with outgroup members, continued contact often reduces anxiety and arouses positive emotions such as empathy, thus generating affective ties with outgroup members (Levin et al., 2003; Pettigrew, 1997a, 1998; Reich & Purbhoo, 1975). Pettigrew argues that intergroup friendship is pivotal in changing intergroup attitudes because of the positive emotions that the friendship arouses. Individuals with friends from a different racial or ethnic background report having more sympathy and admiration for members of that outgroup

(Pettigrew, 1997a, b; Pettigrew & Meertens, 1995; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). Thus, there is evidence that positive emotions generated by interracial friendship generalize to the outgroup as a whole, therefore improving attitudes about the entire outgroup (see also Batson et al., 1997; Brewer & Miller, 1984; Cook, 1984; Herek & Capitanio, 1996). Furthermore, intergroup friendships produce positive emotions that may also influence attitudes toward other outgroups (Oliner & Oliner, 1988). In addition, Pettigrew contends, intergroup friendships are likely to meet all the key conditions of the intergroup contact hypothesis. In sum, friendships with individuals from different racial and ethnic backgrounds have a significant impact on the reduction of prejudice. As discussed previously, however, research has shown that interracial friendships are not frequent in childhood and decline with age. Although intergroup friendships are rare, research shows that intergroup contact may still play an important role in shaping and changing children's racial attitudes.

#### *Intergroup Contact and Children's Racial Attitudes*

Research investigating the effect of intergroup contact on prejudice in children has primarily been conducted in desegregated schools, where contact between groups is part of everyday life. The contact hypothesis has been supported in desegregated schools, primarily with respect to long-term effects, such as the likelihood of living in integrated neighborhoods as adults (Astin, 1982; Braddock & McPartland, 1989; Schofield, 1995b; Stephan & Stephan, 1984, 1996). Positive short-term effects of contact on intergroup relations are not as clear (Schofield, 1991; St. John, 1975). Interpretations of the findings depend primarily on the measures used and on the definition of successful intergroup relations. For instance, Schofield and Francis (1982)

measured the classroom behavior of students towards other group members and found no overt conflict between groups; thus, one may conclude intergroup contact was successful in that school. Schofield and Sagar (1977) also documented improvements in intergroup behavior over the course of a school year. When changes in racial attitudes were measured in Schofield (1989), however, White students' level of prejudice was found to increase. Sagar & Schofield (1980) also found evidence of implicit bias in White student's interpretations of interracial encounters at a newly desegregated school. Thus, the outcomes of studies on the effects of intergroup contact on intergroup relations depend partly upon the measures used to assess the quality of intergroup relations and how positive relations are defined. Furthermore, the effectiveness of the contact situation in a school is similarly constrained by the four conditions of the contact hypothesis outlined above: equal status between groups, authority support, common goals, and cooperation (Schofield & Eurich-Fulcer, 2001).

The school context, when serving a diverse student body, is capable of being an optimal contact situation by meeting the four conditions of the contact hypothesis. Although all conditions are feasible to meet in an educational setting, additional factors contribute to the success of an integrated student body, including the racial attitudes of the principal and of the teachers as well as whether desegregation was forced or voluntary. Therefore, generalizing the findings of studies examining the benefits of intergroup contact in a desegregated school is difficult (see Schofield & Eurich-Fulcer, 2001). Previous studies are further limited in generalizability due to the fact that most were conducted before the 1980's (Schofield, 1991). Because significant changes in racial attitudes have occurred over the past 20 years (Schuman et al., 1997), it is

important to examine the impact of intergroup contact in school settings in the new century.

While a positive impact of intergroup contact in desegregated schools on racial attitudes has not been strongly supported in past research, cross-race friendships in childhood, as in adulthood, are strong predictors of positive intergroup attitudes (Aboud & Levy, 2000; Jackman & Crane, 1986; Patchen, 1983; Powers & Ellison, 1995). Although cross-race friendships have been found to be infrequent, an extensive amount of research has shown that the frequency of cross-race friendships is related to the number of potential cross-race friends (Clark & Ayers, 1992; Hallinan & Smith, 1985; Hallinan & Teixeira, 1987; Howes & Wu, 1990; Shrum et al., 1988). In other words, the more balanced a classroom is with respect to the number of children from different groups, the more likely cross-race friendships will form. This is an understandable relationship in that in order to establish a cross-race friendship, one must be in contact with a member of another racial or ethnic group. However, just being in contact with outgroup members may also serve the functions outlined by Pettigrew (1998) of learning about the outgroup, reappraising the ingroup, changing behavior, and generating affective ties in childhood just as in adulthood. Through these processes, racial attitudes as well as reasoning about cross-race friendship may be altered. In fact, a recent study by Aboud (2003) found differences in intergroup attitudes between students attending a homogeneous school and students attending a heterogeneous school. As assessed by the MRA, positive ingroup bias and outgroup homogeneity was related to negative outgroup bias for children in a homogeneous environment, but not for children in a heterogeneous environment who had extremely low prejudice scores.

Thus, the lack of implicit bias found in the study by McGlothlin et al. (in press) may be due to the high level of intergroup contact experienced by the participants.

Attention to the diversity, or lack of diversity, in the environments from which samples are drawn is important in the study of racial attitudes. While the significance and passion formerly ignited by school desegregation has waned over the past several decades, research has shown that schools are becoming increasingly segregated, with White children comprising the most segregated group (Orfield, 2001). Given the findings on the influence of intergroup contact, the impact of ethnically homogeneous schools, particularly all-European American schools, on children's biases and decision-making about interracial relationships needs to be more closely examined.

The present study investigated the impact of intergroup contact on implicit biases and perceptions of similarity by sampling children and adolescents from homogeneous, predominantly European American, schools. Although no direct information of the amount of intergroup contact was gathered in the McGlothlin et al. (in press) study, the present study assessed the amount of intergroup contact experienced by participants. A questionnaire was developed, based on a similar measure used by Pettigrew and Meertens (1995), which asked children how many African American people live in their town and neighborhood, go to their school, play on their sports teams, are in their peer clubs, are their friends, and are in their family. Because the percentage of minority students in the sampled schools was under fifteen percent, it was hypothesized that the amount of contact, especially face-to-face contact, would be low. Because it is also important to ascertain the extent to which children learn about different groups through the media and through traveling, participants were



also asked if they have seen people from different racial and ethnic backgrounds on television or when on vacation.

### *Overview of Present Study*

#### *Purpose and Design*

In the present study, first and fourth-grade European American students attending ethnically homogeneous schools (e.g., European American) were interviewed. The purpose of the present study was to investigate three factors proposed to influence children's decision-making about cross-race friendships: 1) implicit racial biases, 2) perceptions of similarity, and 3) intergroup contact. Racial biases are one possible explanation of the low frequency of cross-race friendships. Though prejudice levels decline with age on some measures (i.e., PRAM and MRA), implicit biases may increase with age and thus hinder the development of interracial friendships. Little research has been conducted examining implicit biases in children. Children's perceptions of similarity play an important role in friendship selection and maintenance (Aboud & Mendelson, 1996). However, the relative importance of various sources of similarity and difference on children's reasoning about friendship has not been thoroughly studied. How do children weigh differences in skin color against similarity in activity interests and vice versa? Because of the importance of perceptions of similarity in friendships, understanding how children assess racial similarity is critical to the understanding of interracial relationships. The amount of intergroup contact experienced by children was also proposed to affect decision-making about cross-race friendships. Intergroup contact further influences perceptions of inter- and intragroup similarity as well as racial attitudes. The present study sought to investigate implicit

racial attitudes and perceptions of similarity in a sample of children who had low amounts of intergroup contact.

The interview consisted of three sections: 1) Ambiguous Situations Task (to assess implicit bias), 2) Similarity Task (to assess perceptions of similarity, and 3) Intergroup Contact Assessment (to assess self-reported amounts of intergroup contact). The Ambiguous Situations Task included four ambiguous situations (*Stealing, Cheating, Not Sharing, Pushing*) depicted on picture cards involving a White character and a Black character in which a transgression may or may not have occurred (for descriptions of the situations, see Table 1), and was designed to assess implicit racial bias. For example, in the *Stealing* situation, the potential victim was standing with his pockets pulled out and a dollar bill was lying on the ground behind him. The potential perpetrator was bending down to pick up the dollar bill. The situation was ambiguous because it was unclear what the potential perpetrator's intent was by picking up the dollar bill. There were two versions of each situation. In one version, the potential perpetrator was a White character; in the other version, the potential perpetrator was a Black character. All situations were of interracial encounters and gender of the characters was matched to gender of the participant. Participants were asked what they thought happened in the picture and to rate the action of the potential perpetrator. They were then asked what the potential perpetrator would do next and to rate that action. Next, participants were asked if the two children were friends and to give reasons for their judgment. Participants were shown both versions of all four situations (a total of 8 picture cards). A filler task was given half-way through the Ambiguous Situations Task in order to distract the participants from the similarity of the cards.

The Similarity Task, designed to assess perceptions of similarity regarding peer dyads, consisted of presenting participants with six pairs of peer dyads, which varied in racial makeup and whether they shared the same interest in a sports activity (for descriptions of the peer dyads, see Table 2). Two pairs of peer dyads were different-race (e.g., one African American child and one European American child), two pairs of peer dyads consisted of African American children, and two pairs of peer dyads consisted of European American children. Within each racial grouping, one dyad played the same sport and one dyad did not play the same sport. For example, one pair consisted of two African American children who both play softball, and one pair consisted of two African American children in which one played golf and the other child did not play golf. Participants were shown the peer dyad and asked to rate the similarity of the children and to provide justifications for the rating. Participants were then asked if the two children were friends and for their reasoning behind the judgment.

The third section of the interview was the Intergroup Contact Assessment, designed to assess participants' self reported responses regarding their intergroup contact. Participants were shown five groups of individuals (see Table 3 for descriptions of the groups). The ethnic makeup of the groups ranged from all European American to all African American. Children were asked which group of people looked most like the people in their town, neighborhood, school, clubs or teams, friendships, and family. In addition, participants were asked about their exposure to different groups on television and while traveling.

### *Hypotheses*

There were several hypotheses for this study. These hypotheses fall under three categories: 1) hypotheses concerning children's implicit biases elicited by the Ambiguous Situations Task and evaluations of cross-race friendship; 2) hypotheses concerning children's perceptions of similarity and the evaluation of cross-race friendships; and 3) hypotheses concerning the relationships between intergroup contact and implicit biases, perceptions of similarity, and evaluations of cross-race friendships. Hypotheses concerning age-related and gender differences also fall under these three categories. (For an overview of the hypotheses, see Table 4).

*Ambiguous Situations Task.* Based on previous research using ambiguous situations to assess children's attributions of intent (Lawrence, 1991; Sagar & Schofield, 1980), it was hypothesized that the European American participants would display negative implicit biases against the Black characters in the situations. That is, European American children were expected to judge the behavior of the Black potential perpetrator as negative more often than the same behavior of the White potential perpetrator. Likewise, the behaviors were expected to be rated differently depending upon the race of the character, with Black characters' behaviors rated more negatively than the White characters' behavior. It was further predicted that the fourth-grade students would display implicit biases to a greater extent than the first-grade students. This hypothesis was based on findings that older children exhibit bias in interpreting ambiguous interracial situations and have more engrained stereotypes (Sagar & Schofield, 1980), as well as by findings in the literature on implicit biases in adults (Crosby et al., 1980; Dovidio et al., 1997; Dovidio & Gaertner, 1998; Gaertner & Dovidio, 1986).

Hypotheses concerning participants' evaluations of cross-race friendship in the Ambiguous Situations Task were related to the above predictions. Because interpretations of the situations involving the Black potential perpetrator were expected to be more negative, it was predicted that the potential for friendship would be evaluated as less likely in those situations. Older European American children were expected to judge friendship as unlikely based on the hypothesis that older European American children would display more bias. This hypothesis was also supported by the findings of McGlothlin et al. (in press) that the potential for cross-race friendship decreased with age. Research on the trajectory of cross-race friendships in early childhood is minimal, however. Findings that cross race friendships decline with age have primarily been documented between middle childhood and adolescence (Dubois & Hirsch, 1990; Graham & Cohen, 1997; Graham et al., 1998; Hallinan & Teixeira, 1987; Shrum et al., 1988). Thus, age differences in the potential for cross-race friendships during this early childhood period are important in order to enhance our understanding of the trajectory of these relationships.

Predictions of gender differences were mixed. Although research indicates that European American females have fewer cross-race friends and acquaintances than do their male counterparts (Graham et al., 1998; Hallinan & Kubitschek, 1990; Hallinan & Teixeira, 1987), the findings in McGlothlin et al. (in press) revealed that females were more likely than males to view friendship as possible between the two characters. Furthermore, females were more likely than males to judge excluding someone from friendship based on race as wrong in the Killen et al. (2002) study. Thus, there is

evidence that females would judge friendship to be possible more often than would males.

*Similarity Task.* Based on previous findings (Aboud, 2003; Doyle & Aboud, 1995; Katz, 1973; Katz et al., 1975; McGlothlin et al., in press), it was predicted that the European American participants would judge the children in the same-race peer dyads as more similar than the children in the different-race peer dyad. It was further hypothesized that the European American children would judge the peer dyads that share activity interests as more similar than those dyads that did not share activity interests (McGlothlin et al., in press). An outgroup homogeneity effect was also expected, with participants rating the similarity of the Black peer dyads as higher than the similarity of the White peer dyads. While outgroup homogeneity effect was found in the McGlothlin et al. (in press) study in the ratings of the same-race Black dyad that did not share activity interests, it was predicted that the children in the present study would rate the same-race Black dyads in both activity conditions as more alike than the same-race White dyads due to their low level of intergroup contact. Previous studies have indicated that 9 year olds judge different-race dyads to be more alike, and same-race dyads to be less alike, than do 6 year olds (Doyle & Aboud, 1995; Katz et al., 1975); however, McGlothlin et al. found no age differences in ratings of similarity. Thus, predictions based on age are unclear.

Hypotheses concerning the justifications given for the ratings of similarity were based on the McGlothlin et al. (in press) study. It was predicted that non-racial physical similarity would be used more often to justify ratings of similarity for the same-race Black dyads than for the same-race White dyads as well as for the different-race dyads.

Although skin color was a factor more often for judgments of similarity in the different-race dyads in the McGlothlin et al. study, it was predicted that skin color would also be used in the same-race Black dyads due to the higher level of salience of race for this sample. Sports interests were predicted to be used more often for reasons of similarity for the same-race White dyads than for the other dyads. Thus, skin color was not expected to be a factor in the similarity ratings of same-race White dyads but was expected to be a factor in European American children's reasoning about same-race Black dyads and different-race dyads. Based on the McGlothlin et al. study, age-related differences were expected. Younger children were expected to use skin color and physical similarity more often than older children.

The vast majority of the European American children in the McGlothlin et al. (in press) study judged friendship to be possible between the two children regardless of shared interests or race, though the potential was lower for those pairs who did not share interests. It was expected that children in the present study would judge friendship as less possible when the pairs did not share activity interests. Furthermore, due to the limited intergroup contact of the sample in the present study, it was expected that when controlling for activity interests, friendship between two children of the same race (i.e., the same-race Black dyads and the same-race White dyads) would be judged as possible more often than friendship between two children of different races. Taking activity interests into consideration, it was predicted that the different-race dyad with different activity interests would be judged as least likely to become friends. Predictions of age differences were mixed. Although research indicates that interracial friendships decline with age (Dubois & Hirsch, 1990; Graham & Cohen, 1997; Graham et al., 1998;

Hallinan & Teixeira, 1987; Shrum et al., 1988), this decline is most often noted between middle childhood and adolescence. One study (Howes & Wu, 1990) found an increase in cross-race friendships and interaction from kindergarten to third grade. Furthermore, the increase in social-conventional reasoning justifying racial exclusion found in the Killen et al. (2002) study began after fourth-grade. However, because no age differences were found in judgments of friendship potential in the Similarity Task in the McGlothlin et al. (in press) study, no age related hypotheses were put forth in the present study.

*Intergroup Contact Assessment.* Based on school district records, it was predicted that overall, intergroup contact would be low for both face-to-face encounters as well as more distant encounters. It was hypothesized that greater contact with different racial and ethnic groups would be associated with less bias in the Ambiguous Situations Task (Pettigrew, 1997a, 1998; Pettigrew & Meertens, 1995). That is, children who had contact with different groups would be less likely to attribute negative intent to Black potential perpetrators. In addition, greater intergroup contact was predicted to be associated with higher ratings of similarity in the different-race conditions as well as lower ratings of similarity in the same-race conditions, including the same-race Black dyads (i.e., less outgroup homogeneity) (Aboud, 2003; Pettigrew, 1997a, 1998; Pettigrew & Meertens, 1995).

Decisions about cross-race friendships were also hypothesized to be influenced by the amount of intergroup contact. Based on findings by Pettigrew and colleagues (Pettigrew, 1997a, 1998; Pettigrew & Meertens, 1995), participants who had greater amounts of contact were predicted to view friendship between two children of different



racers as possible more often than participants who had less contact with different groups.

## CHAPTER III

### Methodology

#### *Participants*

Participants were 74 European American first-graders and 64 European American fourth-graders ( $N = 138$ ), attending elementary schools in the Mid-Atlantic region. Participants were nearly evenly divided by gender. The sample consisted of 40 female first-graders, 34 male first-graders, 36 female fourth-graders, and 28 male fourth-graders. The mean age of the first-graders was 6.99 years ( $SD = .32$ ) and the mean age of the fourth-graders was 10.01 years ( $SD = .36$ ). All students receiving parental consent were interviewed (for parental consent form, see Appendix A). The participation rate across schools was 73%.

Two schools were sampled from a rural area in northern Maryland. Schools were initially chosen if school records reported the student population was over 85% European American. Principals at five schools were contacted and asked to participate in the study. The first two principals to reply that they would participate were chosen. Based on school district records, the student population of School 1 was 91.2% European American and School 2 was 86.1% European American. According to the 2000 census records (United States Census Bureau, 2000), the population of the town in which School 1 was located was 93.6% White, and the town in which School 2 was located was 89.7% White. The African American population of each town was 2.9% and 4.6%, respectively. Populations at both schools were of middle-class socio-economic standing according to school records as well as census information about the towns.

### *Procedure*

Participants were interviewed by a trained female researcher in a quiet room at the school. Participants were told that there were no right or wrong answers and that all responses were anonymous and confidential. In addition, participants were told that their participation was completely voluntary and that they may choose stop at any time. The interview took an average of 30 minutes to complete.

### *Measures*

The interview consisted of three sections plus a filler task (for the complete interview, see Appendix B). Each interview followed the same order of sections: Ambiguous Situations Task, Similarity Task, and Intergroup Contact Assessment. The filler task was given half-way through the Ambiguous Situations Task. The Ambiguous Situations Task was always administered first in order to prevent sensitivity to race that may have occurred as a result of the Similarity Task and the Intergroup Contact Assessment (see Table 5 for descriptions of the orders). The Ambiguous Situations Task and the Similarity Task were identical to the measures used in McGlothlin et al. (in press) and Margie et al. (2004). These measures were designed based on similar instruments (Lawrence, 1990; Sagar & Schofield, 1980, for the Ambiguous Situations Task, and Doyle & Aboud, 1995, for the Similarity Task) and were extensively piloted to ensure reliability. The coding categories were adapted from McGlothlin et al. (in press). The Intergroup Contact Assessment was developed for the dissertation project and was based on a similar measure used by Pettigrew & Meertens (1995).

*Ambiguous Situations Task.* The Ambiguous Situations Task consisted of 8 brightly illustrated picture cards depicting 4 ambiguous situations in which a

transgression may or may not have occurred (for copies of cards used, see Appendix C). The ambiguous situations were: Stealing, Cheating, Not Sharing, and Pushing (for details of each situation, see Table 1). Each situation involved a White character and a Black character. For each situation, there was a version in which the White character was the potential perpetrator and the Black character was the potential victim, and a version in which the Black character was the potential perpetrator and the White character was the potential victim. The versions of the situations were identical except for the race of the characters. Facial expressions of the potential perpetrators were neutral. The background in each picture card consisted of typical items and scenes as would be encountered at school. Gender of the characters was matched to the gender of the participant.

*Dependent Measures and Coding Categories for the Ambiguous Situations Task.*

Participants were shown each picture card one at a time. The first assessment, *Interpretation*, asked participants to explain what happened in the picture card (“What do you think happened in this picture?”). Responses were coded according to whether the behavior of the potential perpetrator was interpreted as negative (1 = negative) or positive/neutral (0 = positive/neutral). The second assessment, *Initial Action Rating*, asked participants to rate the action of the potential perpetrator using a 9 point Likert scale (4 = very, very good, 0 = neither good nor bad, -4 = very, very bad). Participants were asked, “How good or bad is he/she for doing that?” A Likert scale card was used for all ratings. The card depicted smiley faces, which ranged from a big smile (positive end of the scale) to a neutral expression (mid-point) to a big frown (negative end of the scale) with numbers associated with each face along the scale. The third assessment,

*Subsequent Action Evaluation*, measured the consequent action of the potential perpetrator. Participants were asked, “What do you think he/she will do next?” The evaluations were coded according to whether the subsequent action was predicted to be negative (1 = negative) or positive/neutral (0 = positive or neutral). The next assessment, *Rating of Subsequent Action*, asked participants to rate the subsequent action on a 9 point Likert scale (4 = very, very good, 0 = neither good nor bad, -4 = very, very bad).

The final assessments in the Ambiguous Situations Task measured evaluations of potential friendship between the children in the situations. The first friendship assessment, *Friendship Potential*, asked participants if it is possible for the two children to be friends using a 4 point scale (1 = no way, 4 = definitely). Participants were asked, “Do you think X (name of potential perpetrator) and Y (name of potential victim) are friends?” The final assessment, *Friendship Potential Reasoning*, asked participants for their reasoning as to why the two children were or were not friends. Participants were asked, “Why are/aren’t they friends?” Responses were coded into one of the following categories: 1 = *Transgression*, 2 = *Reconciliation*, 3 = *Friendship*. Reasons coded as *Transgression* focused on the transgression that has taken place as a reason why the two children are not friends. Participants’ responses that recognized a transgression had taken place but that the two children are friends through some kind of reconciliation or that the transgression was not severe enough to prevent friendship were coded as *Reconciliation*. Participants’ responses that focused on the friendship rather than a transgression or that did not recognize a transgression took place were coded as *Friendship*.

*Filler Task.* A filler task was used half-way through the Ambiguous Situations Task in order to provide a distraction between the two versions of the situations (White perpetrator, Black perpetrator). The filler task consisted of asking children about their interest in various activities. The activities consisted of reading, riding a bicycle, eating pizza, drawing a picture, listening to music, and doing math problems. Each activity was represented on a card by a brightly colored illustration of the activity. Participants were asked to rate how much they like each activity on a Likert scale card depicting a big frown (1 = not at all), a small smile (2 = a little), and a big smile (3 = a lot). No analyses were conducted on responses to the filler task.

*Similarity Task.* In the Similarity Task participants were shown twelve 4½ x 6-inch illustrated pictures cards in pairs in sequential order (6 total pairings; see Appendix D for copies of cards used). The pairs of cards were presented side-by side, and the children depicted were in identical dress and expression. Their appearance differed only by natural variation (hair style). There were three race conditions: 1) same-race Black; 2) same-race White; and 3) different-race (Black/White), and two activity interests conditions: shared and unshared. Thus, the pairs included the following six conditions: same-race Black/shared activity; same-race Black/unshared activity; same-race White/shared activity; same-race White/unshared activity; different-race/shared activity; different-race/unshared activity. The sports activity that was either shared or unshared was represented by an icon at the bottom of each picture card. The three shared sports activities were tennis, volleyball, and soccer. To represent the shared activity, a tennis racket, a volleyball, or a soccer ball was pictured at the bottom of both paired picture cards. Participants were told that both children liked to play the

particular sport. The three unshared sports activities were basketball, golf, and softball/baseball. To represent the unshared activity, a basketball, a golf club, or a softball/baseball was pictured at the bottom of both paired picture cards. However, on one of the cards the icon had a red circle with a slash through it, indicating that the child does not like to play that particular sport. Participants were told that one of the children liked to play the particular sport but that the other child did not (see Table 2 for all pairings).

*Dependent Measures and Coding Categories for the Similarity Task.* Two dependent measures were used to assess similarity between the two children in each of the similarity pairings. The first assessment, *Rating of Similarity*, asked participants to rate the similarity of the two children depicted on a 6 point Likert scale (1 = not at all alike, 6 = very, very alike). Participants were asked, “How much alike are X and Y?” The Likert scale card depicted two identical apples at one end (6 = very, very alike) and an apple and a car at the other end (1 = not at all alike). Numbers were associated with descriptions along the scale (2 = not much alike, 3 = kind of alike, 4 = a lot alike, 5 = very alike). Participants were given practice questions to ensure proper use of the scale. The second assessment, *Similarity Reasons*, asked children to give reasons for why the two children are alike or different. Participants were asked, “Why do you think that X and Y are alike/not alike?” Responses were coded into three categories: 1 = *Physical Characteristics*; 2 = *Race/Skin Color*; and 3 = *Sports Interest*. *Physical Characteristics* consisted of non-racial physical attributes such as clothing, hairstyle, or shoes. Responses referring to similar or different skin color were coded as *Race/Skin Color*.

Responses referring to either the shared or unshared sports interests as a reason for similarity or dissimilarity were coded as *Sports Interest*.

The next two dependent measures in the Similarity Task assessed children's evaluations of friendship between the pairs of children. The first friendship assessment, *Friendship Potential*, asked participants if the two children were friends using a 4 point scale (1 = no way, 4 = definitely). Participants were asked, "Are X and Y friends?" The second friendship assessment, *Reason for Potential Friendship*, asked participants for their reasoning as to why the two children were or were not friends. Participants were asked, "Why do you think X and Y are/are not friends?" Reasons were coded into four categories: 1 = *Physical Characteristics*; 2 = *Race/Skin Color*; 3 = *Sports Interest*; and 4 = *Beyond Sports Interest*. *Physical Characteristics* referred to responses stating the two children either are or are not friends due to non-racial physical characteristics, such as having the same hairstyle or clothes. Reasons for or against friendship that appealed to similar or different skin color were coded as *Race/Skin Color*. Reasons that appealed to the shared or unshared sports interest mentioned in the scenario were coded as *Sports Interest*. Reasons that went beyond the sport mentioned in the scenario, suggesting that the two children could enjoy other activities together, were coded as *Beyond Sports Interest*.

*Intergroup Contact Assessment*. The third section of the interview was the Intergroup Contact Assessment, which measured how much contact participants had with African Americans. Participants were shown five different groups of people (see Appendix E for copies of cards used). The ethnic makeup of the group ranged from a group of six European Americans (Group 1), to a group of two African Americans and



four European Americans (Group 2), to a group of three African Americans and three European Americans (Group 3), to a group of four African Americans and two European Americans (Group 4), to a group of six African Americans (Group 5) (see Table 5 for descriptions). Participants were asked which group of people looked most like the people in their town, their neighborhood, their school, on their teams or clubs, in their friendships, and in their family. There were two sets of groups. One set consisted of children and adults for use in the town, neighborhood, and family questions (see Appendix E, Figure 1E), and one set consisted only of children for use in the school, teams, and friendship questions (see Appendix E, Figure 2E). Participants were asked to explain why they chose the group for the town and the school questions. In order to take into account intergroup contact participants experienced outside of their town, participants were also asked how often they traveled to a place where the people that live there are different from themselves. Participants were told that being different can mean having a different skin color or speaking a different language. They were then asked where they had traveled and how those people were different. Next, children were asked how often they see people who are different from themselves on television, how those people are different, and what they see those people doing.

*Dependent Measures and Coding Categories for the Intergroup Contact*

*Assessment.* The contact assessment, *Contact Amount*, asked participants about their extent of contact with African Americans in six contexts: 1) town, 2) neighborhood, 3) school, 4) clubs or teams, 5) friendships, and 6) family. Participants were asked, “Which group of people looks most like the people in your X?” Responses were coded: 1 = *No African Americans* (zero out of six people in the group were African American),

2 = *Not Many African Americans* (two out of six people in the group were African American), 3 = *Some African Americans* (three out of six people in the group were African American), 4 = *Many African Americans* (four out of six people in the group were African American), 5 = *All African Americans* (six out of six people in the group).

Participants were also asked about contact with others in two, more distance contexts: while traveling and on television. In order to assess the amount of exposure to different groups participants had while traveling (*How Often Traveled*), they were asked, “How often have you traveled somewhere where the people who live there are different from yourself?” Participants indicated how much they had traveled on a scale ranging from never to a lot. Responses were coded: 0 = Never, 1 = Hardly ever (once), 2 = Sometimes (2-3 times), 3 = A lot (4 or more times). Participants were then asked, “Where have you gone?” These responses were coded: 1 = Different city, 2 = Different State, 3 = Foreign country. Responses to the question, “How are the people there different from yourself?” (*How Different Where Traveled*) were coded: 1 = Physical appearance other than skin color, 2 = Language or ethnicity, 3 = Race/Skin Color, 4 = Think or do things differently. In order to assess the amount of exposure to different groups from television viewing (*How Often on Television*), participants were asked, “How often do you see people who are different from yourself on TV?” Participants indicated their responses on the scale used above. Responses were coded as: 0 = Never, 1 = Hardly Ever (once), 2 = Sometimes (2-3 times), 3 = A lot (4 or more times).

Coding for the question, “How are they different?” (*How Different on Television*) was as follows: 1 = Physical appearance other than skin color, 2 = Language or ethnicity, 3 = Race or skin color 4 = Think or do things differently. Participants were then asked,

“What do you see them doing?” (*Behavior on Television*). Responses were coded: 1 = Negative, 2 = Neutral, 3 = Positive. Only responses referring to people who were different in terms of ethnicity or race were coded for this question. In other words, if a participant stated that they see people who have different hair styles on television doing bad things, this was not coded and analyses were not conducted on this response for the last question.

### *Design*

A within-subjects design was used. Participants responded to all stimulus items. Story order was counterbalanced by race of the potential perpetrator in the Ambiguous Situations Task. Half of the participants responded to the Stealing situation with the White potential perpetrator first, and half responded to the Stealing situation with the Black potential perpetrator first. In each section of the Ambiguous Situations Task (before and after the Filler Task), two situations involved a White potential perpetrator and two situations involved a Black potential perpetrator. The same story orders were followed as in McGlothlin et al. (in press) in order to control for story effects (for descriptions of the orders, see Table 5). No order effects were found in the previous study. Gender and age were between-subjects variables.

### *Reliability Coding*

Reliability coding was calculated on 25% of the judgment and reasoning data for the Ambiguous Situations Task, Perceptions of Similarity Task, and the Intergroup Contact Assessment. Inter-rater agreement using Cohen’s kappa coefficient was .97 (percent agreement = .98) for *Interpretation* and *Subsequent Action Evaluation* in the Ambiguous Situations Task. For *Friendship Potential Reasoning* assessment in the

Ambiguous Situations Task, inter-rater reliability was .95 (percent agreement = .96). In the Perceptions of Similarity Task, inter-rater reliability for *Similarity Reasons* was .96 (percent agreement = .98) and .95 (percent agreement = .97) for *Reason for Potential Friendship*. In the Intergroup Contact Assessment, inter-rater reliability for *How Different Where Traveled* and *How Different on Television* was .94 (percent agreement = .95). Inter-rater reliability for *Behavior on Television* was .88 (percent agreement = .92).

## CHAPTER IV

### Results

Hypotheses were tested by conducting repeated measures ANOVAs and MANOVAs. A recent review of existing published studies revealed that ANOVA models, instead of log-linear analytic procedures, are appropriate for this type of data due to the within-subjects (repeated measures) design (see Wainryb, Shaw, Laupa, & Smith, 2001, footnote 4). All follow-up tests to examine interaction effects were t-tests. Dichotomous responses were coded 0 or 1. Justifications were proportions of responses for each respective coding category. The Likert scale for the Ambiguous Situations Task was converted from negative scaling (-4, -3, -2, -1, 0, +1, +2, +3, +4) to a positive scaling (1, 2, 3, 4, 5, 6, 7, 8, 9), with 1 = very, very good to 9 = very, very bad for purposes of analyses. All analyses included tests for order effects. Order effects were not found except where indicated.

#### *Ambiguous Situations Task*

##### *Biases in Interpreting Ambiguous Situations*

It was hypothesized that children would display bias in their interpretations of what happened in the ambiguous pictures; that is, children would interpret the behavior of the Black transgressor as more negative than the same behavior of the White transgressor. This bias was also predicted to be displayed with participants' ratings of the transgressors' actions and in their interpretations of what will happen next. In order to test these predictions, 2 (grade of participant) X 2 (gender of participant) X 2 (race of transgressor: White, Black) X 4 (context: Stealing, Not Sharing, Cheating, Pushing) MANOVAs with repeated measures on the last two factors were conducted on the

*Interpretation, Initial Action Evaluation, Subsequent Action Evaluation, and Subsequent Action Rating* assessments.

*Interpretation: "What happened in this picture?"* A main effect for context,  $F(3, 402) = 24.61, p < .001, \eta_p^2 = .16$ , was found. Regardless of the race of the transgressor, the Cheating situations ( $M = .79$ ) were interpreted as negative more often than the Stealing ( $M = .48$ ) and Not Sharing ( $M = .63$ ) situations,  $p < .001$ . The Pushing situations ( $M = .73$ ) was also interpreted more negatively than the Stealing and Not Sharing situations,  $p < .007$ . A main effect for race,  $F(1, 134) = 19.88, p < .001, \eta_p^2 = .13$ , confirmed hypotheses that children would interpret the situations differentially based on the race of the transgressor. Situations in which the protagonist was Black ( $M = .64$ ) were interpreted as negative more often than situations in which the protagonist was White ( $M = .58$ ). Although there were no interaction effects involving race, analysis of between-subjects effects revealed a main effect for grade,  $F(1, 134) = 4.42, p < .037$ . Overall, fourth-graders ( $M = .70$ ) interpreted the situations as negative more often than did first-graders ( $M = .62$ ).

*Initial Action Rating: "How good or bad is 'X' for doing that?"* Analyses of the *Initial Action Rating* assessment indicated a main effect for context,  $F(3, 402) = 27.77, p < .001, \eta_p^2 = .17$ . The Cheating situations ( $M = 7.09$ ) were rated as more negative than the Stealing ( $M = 5.29$ ), Not Sharing ( $M = 5.77$ ), and Pushing ( $M = 6.65$ ) situations,  $ps < .027$  (see Table 6 for all means). In addition, the Pushing situations were rated more negatively than the Stealing and Not Sharing situations,  $ps < .007$ . A context X grade interaction,  $F(3, 402) = 3.83, p < .010, \eta_p^2 = .03$ , revealed that fourth-graders rated the protagonists' behavior in the Not Sharing ( $M = 6.45$ ) and Cheating ( $M$

= 7.55) situations more negatively than did first-graders ( $M_s = 5.18, 6.70$ , for Not Sharing and Cheating, respectively),  $p_s < .002$ . Supporting the hypothesis that bias would be displayed in children's ratings of the characters' behaviors, a main effect for race,  $F(1, 134) = 19.72, p < .001, \eta_p^2 = .13$ , was found. The situations in which the protagonist was Black ( $M = 6.50$ ) were rated more negatively than the situations in which the protagonist was White ( $M = 5.90$ ). As in the *Interpretation* assessment, there was a main effect for grade in the between-subjects analysis,  $F(1, 134) = 6.05, p < .015$ , indicating that overall, fourth-graders ( $M = 6.49$ ) gave more negative ratings than did first-graders ( $M = 5.95$ ).

*Subsequent Action Evaluation: "What will 'X' do next?"* Participants responded that the protagonist would do something negative most often in the Cheating situations ( $M = .62$ ), as indicated by a main effect for context,  $F(3, 402) = 34.38, p < .001, \eta_p^2 = .20$ . The follow-up actions in the Pushing situations ( $M = .48$ ) were rated as negative more often than in the Stealing ( $M = .33$ ) and Not Sharing ( $M = .28$ ) situations,  $p_s < .001$ . As predicted, participants' judgments of what would happen next were also differentiated by the race of the protagonist,  $F(1, 134) = 17.16, p < .001, \eta_p^2 = .11$ . The situations involving a Black protagonist ( $M = .48$ ) were judged to be negative more often than those involving a White protagonist ( $M = .38$ ). In other words, the Black protagonists were predicted to continue to behave negatively more often than were the White protagonists. A context X race interaction,  $F(3, 402) = 4.05, p < .007, \eta_p^2 = .03$ , qualified the main effect for race. While participants judged the subsequent action of the Black protagonist to be more negative than the White protagonist in the Not Sharing ( $M_s = .37, .20$  for Black protagonist, White protagonist, respectively) and Pushing

situations ( $M_s = .57, .39$ ),  $p_s < .001$ , they did not differentiate between protagonists in the Stealing ( $M_s = .33, .33$ ) and Cheating ( $M_s = .59, .64$ ) situations. Thus, in some situations, Stealing and Cheating, children did not display bias in their judgment of what would happen next. Analysis of between-subjects effects revealed a main effect for gender,  $F(1, 134) = 5.15, p < .025$ . Overall, males ( $M = .48$ ) responded that the protagonists' next actions were more negative than did females ( $M = .38$ ).

*Subsequent Action Rating: "How good or bad is 'X' for doing that?"* Similar to analyses of *Subsequent Action Evaluation*, a main effect for context,  $F(3, 402) = 42.44, p < .001, \eta_p^2 = .24$ , was found in analyses of *Subsequent Action Rating*. Participants rated the protagonists' follow-up action more negatively in the Cheating situations ( $M = 6.04$ ) than in the Pushing ( $M = 4.85$ ), Stealing ( $M = 3.89$ ), and Not Sharing ( $M = 3.59$ ) situations,  $p_s < .001$  (see Table 7 for all ratings). In addition, the behavior in the Pushing situation was rated as more negative than the behavior in the Stealing and Not Sharing situations,  $p_s < .001$ . A main effect for race,  $F(1, 134) = 16.91, p < .001, \eta_p^2 = .11$ , revealed that children rated the behavior of Black protagonists ( $M = 5.03$ ) as more negative than the behavior of the White protagonists ( $M = 4.13$ ). A context X race interaction,  $F(3, 402) = 2.96, p < .036, \eta_p^2 = .02$ , qualified this main effect. European American children judged the action of the Black protagonist more negatively in the Not Sharing ( $M_s = 4.07, 3.12$  for Black protagonist and White protagonist, respectively) and Pushing ( $M_s = 5.41, 4.29$ ) situations,  $p_s < .001$ ; however, participants did not differentiate between protagonists in their ratings in the Stealing and Cheating situations (see Table 7).



*Evaluations of Cross-Race Friendships in the Ambiguous Situations*

Responses to the *Friendship Potential* question were recoded as a dichotomous variable (0 = No way, probably not friends, 1 = Definitely, probably are friends). In order to test hypotheses that children's racial biases would influence their decision-making about cross-race friendships, a 2 (grade of participant) X 2 (gender of participant) X 4 (context) X 2 (race of protagonist) MANOVA with repeated measures on the last two factors was conducted on the *Friendship Potential* assessment. A main effect for context,  $F(3, 402) = 9.81, p < .001, \eta_p^2 = .07$ , was found. The two characters were judged to be friends more often in the Not Sharing situations ( $M = .66$ ) than in the Cheating ( $M = .52$ ) and Pushing ( $M = .46$ ) situations,  $ps < .001$ . In addition, cross-race friendship was judged more likely in the Stealing situations ( $M = .60$ ) than in the Pushing situations,  $p < .001$ .

Supporting predictions that the race of the protagonist would influence children's decision-making about cross-race friendship, a main effect for race,  $F(1, 134) = 8.15, p < .005, \eta_p^2 = .06$ , was found. The two characters were judged to be friends more often when the protagonist was White ( $M = .60$ ) than when the protagonist was Black ( $M = .52$ ). A context X race interaction,  $F(3, 402) = 3.43, p < .017, \eta_p^2 = .03$ , however, qualified the main effect for race. As shown in Table 8, while children judged friendship as more likely when the protagonist was White in the Not Sharing ( $Ms = .73, .59$  for White and Black protagonists, respectively) and Pushing ( $Ms = .54, .38$ ) situations,  $ps < .031$ , children judged friendship as equally likely in the Stealing ( $Ms = .60, .59$ ) and Cheating ( $Ms = .52, .53$ ) situations. Analyses of between-subjects effects revealed a main effect for gender,  $F(1, 134) = 5.01, p < .027$ , and a main effect

for grade,  $F(1, 134) = 6.52, p < .012$ . Overall, females ( $M = .61$ ) judged friendship to be more likely than did males ( $M = .51$ ). First-graders ( $M = .61$ ), likewise, evaluated friendship as more likely than did fourth-graders ( $M = .50$ ).

*Reasons for Cross-Race Friendship Potential in the Ambiguous Situations*

Hypotheses regarding children's reasoning about friendship potential were tested by conducting 2 (grade of participant) X 2 (gender of participant) X 4 (context) X 2 (race of the protagonist) MANOVAs with repeated measures on the last two factors for each of the three reasoning categories (Transgression, Reconciliation, Friendship).

*Transgression.* Analyses of the use of Transgression as a reason for or against friendship revealed a main effect for context,  $F(3, 402) = 9.18, p < .001, \eta_p^2 = .06$ . Transgression was used more often in the Pushing situations ( $M = .53$ ) than in the Stealing ( $M = .40$ ) or Not Sharing ( $M = .34$ ) situations,  $ps < .001$ . Transgression was also used more often in the Cheating situations ( $M = .48$ ) than in the Stealing or Not Sharing situations,  $p < .001$ . A main effect for race,  $F(1, 134) = 9.54, p < .002, \eta_p^2 = .07$ , revealed that Transgression was used more often in situations involving the Black protagonists ( $M = .48$ ) than in situations involving the White protagonists ( $M = .40$ ). Again, a context X race interaction,  $F(3, 402) = 3.26, p < .022, \eta_p^2 = .02$ , qualified this main effect. Transgression was used more often for Black protagonists than for White protagonists in the Not Sharing ( $Ms = .41, .27$  for Black and White protagonists, respectively) and Pushing ( $Ms = .62, .45$ ) situations,  $ps < .003$ , but this reasoning category was used equally as often for the protagonists in the Stealing ( $Ms = .41, .40$ ) and Cheating ( $Ms = .47, .48$ ) situations. There were also two between-subjects effects. A gender main effect,  $F(1, 134) = 5.29, p < .023$ , indicated that overall, males ( $M =$

.49) used Transgression more often than did females ( $M = .39$ ). A grade main effect,  $F(1, 134) = 5.68, p < .019$ , revealed that fourth-graders ( $M = .49$ ) used Transgression more often than did first-graders ( $M = .39$ ).

*Reconciliation.* A main effect for context,  $F(3, 399) = 9.91, p < .001, \eta_p^2 = .07$ , was found for use of Reconciliation in justifications for or against friendship. Reconciliation was used more often for the Cheating situations ( $M = .37$ ) than for the Stealing ( $M = .18$ ) or Pushing ( $M = .25$ ) situations,  $ps < .003$ . In addition, Reconciliation was used more often for the Not Sharing situations ( $M = .34$ ) than for the Stealing or Pushing situations,  $ps < .013$ . The Pushing situations also elicited more justifications of Reconciliation than the Stealing situations,  $p < .034$ . There were no main effect or interaction effects for race in the use of Reconciliation. There were two between-subjects effects, however. Females ( $M = .32$ ) used more Reconciliation than males ( $M = .25$ ), as indicated by a main effect for gender,  $F(1, 133) = 4.23, p < .042$ . A grade effect,  $F(1, 133) = 3.82, p < .053$ , revealed that overall, fourth-graders ( $M = .35$ ) used more reasoning based on Reconciliation than did first-graders ( $M = .20$ ).

*Friendship.* Analyses of the third reasoning category, Friendship, revealed a main effect for context,  $F(3, 399) = 18.47, p < .001, \eta_p^2 = .12$ . Friendship was used more often in the Stealing situations ( $M = .41$ ) than in the Not Sharing ( $M = .32$ ), Cheating ( $M = .15$ ), or Pushing ( $M = .22$ ) situations,  $ps < .020$ . The Not Sharing situations elicited more reasoning based on Friendship than did Cheating or Pushing,  $ps < .010$ , while the Pushing situations elicited more of this reasoning than did the Cheating situations,  $p < .039$ . A main effect for race,  $F(1, 133) = 10.30, p < .002, \eta_p^2 = .07$ , was also found. Children used Friendship more often to justify why the two

characters could be friends when the protagonist was White ( $M = .31$ ) than when the protagonist was Black ( $M = .24$ ). Overall, first-graders ( $M = .31$ ) used Friendship more often than did fourth-graders ( $M = .23$ ),  $F(1, 133) = 5.43, p < .012$ .

### *Perceptions of Similarity Task*

#### *Ratings of Similarity*

A 2 (grade of participant: 1<sup>st</sup>, 4<sup>th</sup>) X 2 (gender of participant: female, male) X 2 (activity: same, different) X 3 (race of peer dyad: cross-race, Black, White) MANOVA with repeated measures on the last two factors was conducted on the ratings of similarity. Supporting the hypothesis that children would focus on information other than race, a main effect for activity was found,  $F(1, 134) = 397.56, p < .001, \eta_p^2 = .75$  (see Table 9 for all ratings). Peer dyads with the same activity interests ( $M = 4.99$ ) were rated as more similar than peer dyads with different activity interests ( $M = 2.61$ ). An activity X grade interaction,  $F(1, 134) = 12.91, p < .001, \eta_p^2 = .09$ , further revealed that fourth-graders ( $M = 2.94$ ) rated the peer dyads with different interests as more alike than did first-graders ( $M = 2.33$ ),  $p < .001$ . Indicating that the racial makeup of the peer dyad also contributed to children's perceptions of similarity, a main effect for race was found,  $F(2, 268) = 18.02, p < .001, \eta_p^2 = .12$ . Children rated the Black peer dyads ( $M = 4.08$ ) as more alike than the White peer dyads ( $M = 3.72$ ) and the cross-race peer dyads ( $M = 3.61$ ),  $ps < .001$ . This finding supports the hypothesis that European American children would attribute homogeneity to the outgroup, in this case, African Americans. Interestingly, no difference was found between the ratings of the White peer dyads and the cross-race peer dyads. Thus, these children perceived as much difference between two White peers as between a cross-race pair of peers. In other words, European

American children focused on intragroup variability when judging the similarity of two ingroup members and focused on intragroup homogeneity when judging the similarity of two outgroup members.

A race X gender interaction,  $F(2, 268) = 9.16, p < .001, \eta_p^2 = .06$ , qualified the main effect for race. Females ( $M = 4.22$ ) rated the Black peer dyads as more similar than did males ( $M = 3.89$ ),  $p < .020$ . In addition, females ( $M = 3.58$ ) rated the White peer dyads as less alike than did males ( $M = 3.89$ ),  $p < .034$ . Thus, females were more likely than males to homogenize the outgroup, while attributing variability to the ingroup.

#### *Reasons for Ratings of Similarity*

In order to test hypotheses about the reasons used to justify the similarity ratings, 2 (grade of participant) X 2 (gender of participant) X 2 (activity) X 3 (race of peer dyad) MANOVAs with repeated measures on the last two factors were conducted on each of the three reasoning categories: Physical Characteristics, Race/Skin Color, and Sports Interest.

*Physical Characteristics.* An activity X race interaction was found,  $F(2, 268) = 5.82, p < .003, \eta_p^2 = .04$ , for the use of non-racial Physical Characteristics in the justifications of similarity ratings. As shown in Table 10, Physical Characteristics were used more often for the Black dyad with different interests ( $M = .33$ ) than for the cross-race dyad with different interests ( $M = .22$ ),  $p < .004$ . The Black dyad with different interests also elicited more reasoning based on Physical Characteristics than did the Black dyad with same interests ( $M = .22$ ),  $p < .002$ . An activity X race X gender interaction,  $F(2, 268) = 4.56, p < .013, \eta_p^2 = .03$ , further revealed that females ( $M =$

.39) used Physical Characteristics more often than did males ( $M = .25$ ) for the Black dyad with different interests,  $p < .031$ .

*Race/Skin Color.* Analyses on the use of Race/Skin Color revealed a main effect for race,  $F(2, 268) = 17.56, p < .001, \eta_p^2 = .12$ . Race/Skin Color was used more often for the cross-race peer dyads ( $M = .11$ ) and the Black peer dyads ( $M = .11$ ) than for the White peer dyads ( $M = .04$ ),  $ps < .001$ . A race X gender interaction,  $F(2, 268) = 3.72, p < .026, \eta_p^2 = .03$ , further revealed that females used Race/Skin Color more often for the cross-race dyads ( $M = .13$ ) and the Black dyads ( $M = .13$ ) than for the White dyads ( $M = .03$ ),  $ps < .001$ . However, males used Race/Skin Color more often only for the cross-race peer dyads ( $M = .10$ ) in comparison to the White dyads ( $M = .06$ ),  $p < .010$ . Males did not differ in their reasoning based on Race/Skin Color between the White dyads ( $M = .06$ ) and the Black dyads ( $M = .08$ ).

An activity X race interaction,  $F(2, 268) = 20.75, p < .001, \eta_p^2 = .13$ , further illuminates differences in the use of Race/Skin Color in the justifications for similarity ratings. Race/Skin Color was used more often for the cross-race dyad with different interests ( $M = .17$ ) than for all the other dyads,  $ps < .027$ . In addition, Race/Skin Color was used more often for the Black dyads ( $M = .13$ ) and White dyads ( $M = .06$ ) with same activity interests than for the Black dyads ( $M = .09$ ) and White dyads ( $M = .06$ ) with different activity interests,  $ps < .054$  and  $.001$ , respectively (see Table 11).

An order effect,  $F(1, 136) = 4.09, p < .045$ , was found for the use of Race/Skin Color reasoning for the White peer dyad with same activity interests. Participants receiving Order 1 ( $M = .09$ ), in which this dyad was viewed last, used Race/Skin Color more often than did participants receiving Order 2 ( $M = .04$ ), in which this dyad was

viewed first. This suggests that participants did not focus on skin color as a variable in their decision-making about similarity for the White dyad until this variable was made more salient in the cross-race and same-race Black dyads.

Additional gender differences were evidenced by an activity X race X gender interaction,  $F(2, 268) = 5.34, p < .006, \eta_p^2 = .04$ . Females ( $M = .17$ ) used Race/Skin Color more often than did males ( $M = .08$ ) for the Black dyad with the same activity interest,  $p < .010$ ; however, females ( $M = .04$ ) used this justification category less often than did males ( $M = .10$ ) for the White peer dyad with the same activity interest,  $p < .027$ . In other words, males did not differ in their use of Race/Skin Color between the Black dyads and White dyads, while females used Race/Skin Color more often for the Black dyads, particularly when they had the same activity interest.

*Sports Interest.* Analyses on the use of Sports Interest in the justifications for similarity ratings revealed a main effect for race,  $F(2, 268) = 4.01, p < .022, \eta_p^2 = .03$  (for all proportions, see Table 12). As predicted, Sports Interest was used more often for the White dyads ( $M = .69$ ) than for the Black dyads ( $M = .63$ ) or the cross-race dyads ( $M = .64$ ),  $ps < .015$ . There was no difference in use of Sports Interest between the Black dyads and the cross-race dyads. An activity X race interaction,  $F(2, 268) = 3.82, p < .031, \eta_p^2 = .03$ , was found; however, no significant differences were indicated by follow-up tests.

#### *Judgments of Friendship Potential*

Responses to the *Friendship Potential* question were recoded as a dichotomous variable (0 = No way, probably not friends, 1 = Definitely, probably are friends).

Hypotheses about children's judgments of friendship potential between the peer dyads

were tested by conducting a 2 (grade of participant) X 2 (gender of participant) X 2 (activity) X 3 (race of peer dyad) MANOVA with repeated measures on the last factor. As expected, a main effect for activity,  $F(1, 130) = 115.45, p < .001, \eta_p^2 = .47$ , was found. Participants judged friendship as more likely when the dyads shared activity interest ( $M = .96$ ) than when the dyads did not share activity interests ( $M = .65$ ). Also as predicted, a main effect for race,  $F(2, 260) = 11.08, p < .001, \eta_p^2 = .08$ , indicated that children judged the Black dyads ( $M = .88$ ) to be friends more often than the White dyads ( $M = .80$ ) and the cross-race dyads ( $M = .75$ ),  $ps < .005$ . Furthermore, White dyads were judged to be friends more often than the cross-race dyads,  $p < .050$ . The cross-race dyads, thus, were viewed as the least likely to be friends.

An activity X race interaction,  $F(2, 260) = 3.85, p < .022, \eta_p^2 = .03$ , however, qualified the main effect for race. As shown in Table 13, when the dyads shared an activity interest, the vast majority responded that the two children were friends ( $M_s = .99, .96, .94$ , for Black, White, and cross-race dyads, respectively). When the dyads did not share activity interests, the potential for friendship suffered, especially when the dyads did not also share skin color. The cross-race dyad that did not share activity interests ( $M = .55$ ) was less likely than the Black dyad ( $M = .77$ ) to be viewed as friends,  $p < .001$ . The White dyad ( $M = .64$ ) was judged as less likely to be friends than the Black dyad,  $p < .019$ . Interestingly, the potential for friendship between cross-race dyad and the White dyad was not significantly different. Again, European American children focused on the variability within their own ethnic group, while attributing homogeneity to the outgroup.



### *Reasons for Potential Friendship Judgments*

In order to test hypotheses regarding children's reasons for judgments of potential friendship, 2 (grade of participant) X 2 (gender of participant) X 2 (activity) X 3 (race of peer dyads) MANOVAs were conducted on each of the reasoning categories: Physical Characteristics, Race/Skin Color, Sports Interest, and Beyond Sports Interest.

*Physical Characteristics.* A main effect for activity,  $F(1, 133) = 19.67, p < .001, \eta_p^2 = .13$ , was found for the use of Physical Characteristics as a reason for or against friendship. Participants used Physical Characteristics more often when justifying friendship potential for the dyads with different interests ( $M = .22$ ) than in the dyads with the same interest ( $M = .13$ ). Participants also used Physical Characteristics more often for the Black dyads ( $M = .23$ ) than for the White dyads ( $M = .15$ ) or the cross-race dyads ( $M = .14$ ),  $ps < .004$ , as indicated by a main effect for race  $F(2, 266) = 6.19, p < .002, \eta_p^2 = .04$ . An activity X race interaction,  $F(2, 266) = 5.97, p < .003, \eta_p^2 = .04$ , further revealed that Physical Characteristics were used more often for the Black dyad with different interest ( $M = .31$ ) than in all other dyads,  $ps < .020$ , as shown in Table 14.

*Race/Skin Color.* Analysis of the use of Race/Skin Color in children's reasoning about friendship potential unveiled a main effect for race,  $F(2, 268) = 11.57, p < .001, \eta_p^2 = .08$ . Race/Skin Color was used more often to justify friendship potential for the cross-race dyads ( $M = .06$ ) than for the Black dyads ( $M = .06$ ) and the White dyads ( $M = .01$ ),  $ps < .001$ . A race X gender interaction,  $F(2, 268) = 4.21, p < .016, \eta_p^2 = .03$ , further revealed that for the cross-race dyads and Black dyads, females ( $M = .08, .09$ , respectively) used Race/Skin Color more often than males ( $M = .04, .01$ , respectively),

$p_s < .052$ . An activity X race interaction,  $F(2, 268) = 9.58, p < .001, \eta_p^2 = .07$ , was also found (see Table 15). Race/Skin Color was used more often for the cross-race dyad with different interests ( $M = .10$ ) than for the cross-race dyad with same interests ( $M = .02$ ),  $p < .001$ . On the contrary, for the Black dyads, Race/Skin Color was used more often with the dyad with same interests ( $M = .08$ ) than for the dyad with different interests ( $M = .04$ ),  $p < .019$ . Finally, a between-subjects effect for gender,  $F(1, 134) = 8.61, p < .004$ , was found. Overall, females ( $M = .37$ ) used Race/Skin Color more often than did males ( $M = .11$ ) in their justifications of why or the two children were or were not friends.

*Sports Interest.* Analysis of the use of Sports Interest in reasoning about friendship potential revealed a main effect for activity,  $F(1, 134) = 212.59, p < .001, \eta_p^2 = .61$  (see Table 16). Participants used Sports Interest more often for the dyads that shared interests ( $M = .77$ ) than for the dyads who did not share interests ( $M = .33$ ). A main effect for race,  $F(2, 268) = 4.37, p < .014, \eta_p^2 = .03$ , indicated that as predicted, Sports Interest was used more often for the White dyads ( $M = .59$ ) than for the Black dyads ( $M = .50$ ),  $p < .013$ .

*Beyond Sports Interest.* A main effect for activity,  $F(1, 134) = 133.72, p < .001, \eta_p^2 = .50$ , was found for use of Beyond Sports Interest (for all proportions, see Table 17). This category was used more often for the dyads with different interests ( $M = .39$ ) than for the dyads with shared interests ( $M = .06$ ). In addition, an activity X race X gender interaction,  $F(2, 268) = 3.91, p < .021, \eta_p^2 = .03$ , revealed that females ( $M = .09$ ) used Beyond Sports Interest more than did males ( $M = .00$ ) for the cross-race dyad with shared interests,  $p < .007$ .

*Intergroup Contact Assessment**Amount of Intergroup Contact*

In order to assess the amount of contact the European American participants experienced with African Americans, participants were presented with five groups of people ranging from all European American (Group 1) to all African American (Group 5) (see Table 3 for group descriptions). The participants were then asked which group looked most like the people in their town, neighborhood, school, clubs or teams, friendships, and family. Overall, as predicted, intergroup contact was low, as shown in Table 18. The vast majority of children (78% - 96%) reported that there were “none” (Group 1) to “not many” (Group 2) African Americans in these six contexts. The most frequent choice for the town context was Group 1, with 46% of children selecting that group. Thirty-eight percent of participants chose Group 2. A between-subjects effect for grade was found for the town context,  $F(1, 101) = 6.50, p < .012$ . Fourth-graders ( $M = 1.88$ ) chose the group with two African Americans (Group 2) to describe their town more often than did first-graders ( $M = 1.64$ ).

Neighborhoods were considered homogeneous (i.e., all European American) by 68% of the participants. An additional 23% of participants described their neighborhood as being most like Group 2, while 7% picked Group 3 as reflective of their neighborhood. Children rated school as the most diverse context. Twenty-five percent of children selected Group 1 to describe their school, while 53% of participants selected Group 2. Nineteen percent of children selected the group with equal number of African Americans and European American (Group 3) for the school context. A majority of participants (65%) chose Group 1 to describe their clubs and teams, and

25% of children chose Group 2. Twenty-one percent of children did not belong to any clubs or teams and were omitted from analyses. Most children (57%) described their friendships as same-race. A significant number of participants (35%), however, chose Group 2 to describe their friendships. As expected, the context of family elicited the most homogeneous responses. Ninety-five percent of children selected the all European American group to describe their family.

Participants were asked to explain why they picked the chosen group for the town context and the school context. Responses were coded dichotomously (0 = not skin color, 1 = skin color). Overall, skin color was given as the explanation for choosing the group that represents the town context by 53% of the participants. For example, a first-grader explained his reason for choosing Group 1, “We don’t have any dark people in our town.” A fourth-grader who chose Group 2 stated, “Not everyone in our town is the same color.” Reasons not based on skin color were similar to this response by a first-grade male to explain his choice of Group 1, “Because they look the same age and have the same hair color.” For the school context, the majority (57%) of participants used skin color in their justifications. For example, a fourth-grade male explained why he chose Group 2, “Because we have mixed colors but not a lot of mixed colors. We have a lot of White and not that much of dark skinned.” A first-grade male justified his choice of Group 3 by explaining, “Because in the all-purpose room, there are mostly all White and Black people.” A fourth-grade female did not use skin color but instead explained, “Because there are tall and short people, and people with different colors of hair.”

Next, participants were asked how often they traveled to places where the people who live there act or look differently. Forty percent of children responded that they have never traveled, 23% responded that they have hardly ever traveled, 22% responded that they have sometimes traveled, and 16% responded that they have traveled a lot. There was a main effect for gender,  $F(1, 134) = 4.30, p < .040$ , in the amount of travel. Males ( $M = 1.34$ ) reported traveling more often than did females ( $M = .97$ ). Of the 83 children that had traveled to a place where the people who live there act or look differently, 13% traveled to a different city, 65% traveled to a different state, and 22% traveled to a different country. When asked how the people who lived there were different, 47% of participants mentioned that they spoke a different language or performed different cultural activities. A main effect for grade,  $F(1, 134) = 6.12, p < .015$ , indicated that fourth-graders ( $M = .32$ ) reported traveling to places where people spoke a different language or had different customs more often than did first-graders ( $M = .17$ ). Eighteen percent of participants responded that the people were of a different race or had a different skin color. The remaining participants responded that the people were different due to non-racial physical characteristics (e.g., “They have different hair color from me.”) or that they thought or did things differently (e.g., “They have bigger houses.”).

Participants were also asked how often they see people on television who are different from themselves. Ten percent of children responded never, 26% responded hardly ever, 28% responded sometimes, and 36% responded a lot. A main effect for grade was found,  $F(1, 134) = 4.64, p < .033$ , which indicated that fourth-graders ( $M = 2.09$ ) reported seeing people on television who are different more often than did first-

graders ( $M = 1.72$ ). When asked how the people on television are different, 37% of participants reported that the people speak a different language or have different cultural practices. A main effect for grade was found,  $F(1, 134) = 22.76, p < .001$ , which indicated that fourth-graders ( $M = .55$ ) reported seeing more people who spoke a different language or had different cultural practices than did first-graders ( $M = .20$ ). Twenty-one percent of participants stated that the people had a different skin color, with females ( $M = .28$ ) reporting seeing people of different races more often than did males ( $M = .14$ ), as suggested by a main effect for gender,  $F(1, 134) = 4.85, p < .029$ . The remaining participants referred to non-racial physical characteristics or to behaviors unrelated to race or ethnicity. Participants were then asked what they see the people doing on television. Responses were coded as negative, neutral, or positive. Only responses from children who had reported language, ethnic, or racial differences were analyzed. Of those children, 23% reported the behavior as negative, 62% reported the behavior as neutral, and 14% reported the behavior as positive. A main effect for grade was found for children's positive responses,  $F(1, 134) = 8.92, p < .003$ . Fourth-graders ( $M = .14$ ) reported more positive behaviors than did first-graders ( $M = .01$ ).

#### *Influence of Intergroup Contact on Dependent Measures*

It was hypothesized that the amount of intergroup contact would be associated with bias on the Ambiguous Situations Task, ratings of similarity on the Perceptions of Similarity Task, and decisions about friendship potential on both tasks. In order to test these hypotheses, participants were divided into two groups based on their reported amount of intergroup contact. The Low contact group consisted of participants whose summed contact scores were below 15. The High contact group consisted of

participants whose summed contact scores were equal to or above 15. The maximum summation of scores possible was 36. The largest summed score of the sample was 25. Ninety-six percent of participants had scores below 18. The mean of the summed scores was 12.07 ( $SD = 3.08$ ). Due to the low overall level of intergroup contact for the participants, the High contact group consisted of only 17% of participants.

Furthermore, the participants in the “High” contact group did not experience an extensive amount of intergroup contact. Nonetheless, contact group was entered as a between subjects variable for *Initial Action Rating*, *Subsequent Action Rating*, and *Friendship Potential* in the Ambiguous Situations Task. Results showed that children’s responses did not differ based on their contact group. Next, contact group was entered as a between subjects variable for *Rating of Similarity* and *Friendship Potential* in the Perceptions of Similarity Task. Contact group was a significant factor in the similarity ratings for the cross-race dyads,  $F(1, 131) = 4.65, p < .033, \eta_p^2 = .03$ , and the same-race Black dyads,  $F(1, 131) = 4.72, p < .032, \eta_p^2 = .04$ . As predicted, the High contact group ( $M = 3.93$ ) rated the different-race dyads as more similar than did the Low contact group ( $M = 3.52$ ). The hypothesis that higher intergroup contact would be associated with lower ratings of outgroup homogeneity was also supported. European American children in the High contact group ( $M = 3.74$ ) rated the same-race Black dyads as less similar than did the European American children in the Low contact group ( $M = 4.15$ ). Contact group, however, did not influence judgment of friendship potential between the dyads. Thus, hypotheses regarding the influence of intergroup contact on responses to the Ambiguous Situations Task were not supported and hypotheses regarding contact and the Perceptions of Similarity Task were partially supported.

## CHAPTER V

## Discussion

There is an extensive body of research that documents a preference for same-race peers over cross-race peers throughout childhood (Aboud et al., 2003; Graham & Cohen, 1997; Hallinan & Teixeira, 1987; Hartup, 1983; Howes & Wu, 1990; Kupersmidt et al., 1995; Ramsey & Myers, 1990; Rubin et al., 1998; Shrum et al., 1988). Research has further shown that cross-race friendships decline with age from middle childhood through adolescence (Aboud et al., 1993; Epstein, 1986; Graham & Cohen, 1997; Hallinan & Teixeira, 1987; Hartup, 1983; Shrum et al., 1988). Although less is known about the trajectory of cross-race friendships in early childhood, children as young as five years old have shown preference for same-race peers for friendship as well as in interactions (Finkelstein & Haskins, 1983; Howes & Wu, 1990; Ramsey & Myers, 1990). Very little is known, however, about children's reasoning about cross-race peer interactions and friendships and why these friendships are so infrequent. The present study examined three factors proposed to influence children's decision-making about cross-race friendships. Those factors were racial attitudes, perceptions of similarity, and intergroup contact.

*Children's Racial Attitudes*

One goal in the present study was to expand our understanding of European American children's racial biases by examining European American children's interpretations of ambiguous situations involving White and Black peers. Consistent with findings from previous studies on implicit bias in children (Lawrence, 1991; Sagar & Schofield, 1980), the European American children in the present study displayed bias



by attributing more negative behaviors to the Black characters than to the White characters. Participants also displayed bias in their predictions of what the potential transgressor would do next (e.g., Would he/she redeem the transgression or continue to act negatively?). Again, these European American children attributed negative intent to the Black characters more often than to the White characters; however, for this question, bias was displayed only in the Not Sharing context and Pushing context. Why bias continued to be displayed in the Not Sharing and Pushing contexts but not in the Stealing and Cheating contexts is unclear. A previous study (Lawrence, 1991) used similar ambiguous situations and found greater bias displayed in a pushing scenario. A suggested explanation for this finding was that aggression is a prevalent stereotype about African Americans (Lawrence, 1991). This explanation does not explain why bias was also persistent in the Not Sharing context. A closer examination of the interplay of stereotypes and children's biases is needed to explain this finding.

While the conclusions in the present study are comparable to those from studies using similar measures of implicit bias (i.e., Lawrence, 1991; Sagar & Schofield, 1980), the present findings of bias differ from previous studies using the same methodology (Margie et al., 2004; McGlothlin et al., in press), which found no evidence of bias in the evaluations of ambiguous encounters. The sample in the Margie et al. (2004) study consisted of African American, Hispanic American, and Asian American children, which may account for the disparity in findings with the present study. It is possible that the low level of intergroup contact experienced by the European American children in the present study as opposed to the high level of intergroup contact available to the European American sample in the McGlothlin et al. (in press) study, as well as to the

ethnic minority sample in the Margie et al. (2004) study, accounts for the discrepancy between findings. This possibility and the importance of intergroup contact will be discussed in greater detail below.

The present findings that both younger and older European American children displayed bias run counter to what would be predicted based on the PRAM and MRA findings that prejudice declines with age (Doyle & Aboud, 1995). Although it was hypothesized that older children would display more bias than younger children, no age differences were found in the ratings of the Black transgressors and White transgressors. An overall effect for grade was found, with older children rating both the White and Black characters as more negative than the younger children, but this did not vary by race of the transgressor. The finding that younger and older European American children displayed implicit bias in their interpretations of ambiguous interracial encounters supports previous findings by Lawrence (1991) and Sagar and Schofield (1980) that implicit biases are present beyond the age of eight years - the age at which trait assignment techniques document a decrease in bias. It also suggests that social desirability, which may fuel the decline in prejudice scores on the PRAM and MRA, was not a factor in children's interpretations of ambiguous situations.

Thus, the present findings suggest that the assessment of racial attitudes in children should not be limited to trait assignment procedures. While the PRAM and MRA are useful tools in understanding some aspects of children's explicit bias, indirect measures, such as the Ambiguous Situations Task, are important in that they assess implicit biases. These measures are less susceptible to social desirability bias and are capable of tapping attitudes that operate at a subconscious level. The findings of bias in

the present study also add to an extensive literature on the existence of implicit biases in adults (Dovidio & Gaertner, 1996, 1998; Dovidio, Kawakami, & Gaertner, 2002; Gaertner & Dovidio, 1986; Hodson, Dovidio, & Gaertner, 2002) and to a very limited literature on implicit biases in children. Furthermore, the findings that European American children interpret behavior differently based on the actor's race suggest that racial attitudes reach far beyond associating negative traits with outgroup members. Attributing negative intentions in ambiguous encounters to outgroup members appears to, in fact, have very direct consequences on peer relationships.

#### *Children's Racial Biases and Decision-Making about Friendship*

In the present study, it was proposed that children's racial biases are one factor influencing the low frequency of cross-race friendships. Accordingly, racial bias, as displayed in the interpretations of ambiguous situations, was predicted to influence children's decision-making about the potential for friendship between the two characters. This hypothesis was supported but only with regard to bias displayed in the prediction of what the transgressor would do next. Participants evaluated friendship as less likely when the transgressor was Black in the Not Sharing and Pushing contexts, the same contexts in which the Black transgressors were predicted to continue to act more negatively than the White transgressors. Thus, the follow-up action to the transgression was more important in influencing friendship potential than was the initial transgression. Bias displayed in the prediction of what the protagonist would do next resulted in bias against friendship in those contexts.

In McGlothlin et al. (in press), European American males were found to be biased in their judgments of friendship potential in the Stealing scenario when the

transgressor was Black. European American females, however, were more likely overall than males to deem friendship as possible. That is, across all contexts and transgressors, females judged cross-race friendship as more likely than did males. The present study found male and female European American children to be biased against friendship when the transgressor was Black in the Not Sharing and Pushing contexts. As in the McGlothlin et al. (in press) study, though, females judged cross-race friendship to be more likely overall than did males. This finding is also consistent with findings from Killen et al. (2002) that females were more sensitive than males to issues involving racial exclusion. Thus, the gender findings in the present study add to growing evidence that females are more sensitive than males to issues of exclusion and more positive toward interracial friendships. The present finding that females, like males, displayed bias regarding cross-race friendship in some contexts, however, suggests that these differences cannot be reduced to a simple interpretation based on gender alone. The influence of intergroup contact may be one contributing factor to the differences across studies. This topic will be addressed in a following section.

Consistent with findings from McGlothlin et al. (in press) and Killen et al. (2002), older European American children in the present study judged friendship between the White and Black characters as less likely overall than did younger European American children. This finding also coincides with research showing a decline with age in cross-race friendships (Aboud et al., 2003; Graham & Cohen, 1997; Hallinan & Teixeira, 1987; Shrum et al., 1988). Although this previous research has predominantly focused on middle childhood and adolescence, the present finding suggests this decline may begin earlier than middle childhood and warrants further

investigation of the trajectory of cross-race friendships in early childhood. A future study should examine how children of preschool age evaluate the potential for cross-race friendship.

Neither age nor gender was found to be a factor in children's bias, however, which leaves the interpretation of the above findings relatively open. That is, because bias was not found to differ between males and females or between younger and older children, it cannot explain the age and gender differences in the judgments of friendship potential. Age related differences in children's reasoning about conflict resolution are one possible explanation of the findings. In other words, younger children may be more optimistic than older children about the chances of reconciliation. Results of the friendship reasoning data do not support this interpretation, however. Older children used reasoning based on reconciliation more often than did younger children.

Differences in reasoning about conflict resolution may, though, be an explanation of the finding that females evaluated friendship as more likely than did males. In this case, females did use reasoning focusing on reconciliation more often than did males. It is also feasible that the judgments of friendship potential tapped bias that was not elicited by these particular ambiguous situations. Further research is needed to investigate this possibility.

Overall, children's decisions about friendship, as well as their biases, were reflected in their reasoning. The European American children focused on the transgression that had taken place more often when the protagonist was Black in the Not Sharing and Pushing contexts. In contrast, the European American children focused on the friendship and not the transgression more often in the situations involving the White

protagonists than in those involving the Black protagonists. Research on children's attributions of negative behavior to personal factors or to situational factors and how this is affected by the race of the protagonist would further understanding of this phenomenon (see Duncan, 1976).

#### *Children's Perceptions of Similarity*

The Perceptions of Similarity Task expanded previously used measures to include a non-racial factor (sports interest) that was systematically varied with the racial makeup of the dyad. Participants' ratings reflected the activity information in that dyads which shared a sports interest were rated as more similar than the dyads which did not share a sports interest. The racial makeup of the dyad was, however, also a factor in the similarity ratings. As expected, European American children rated the same-race Black dyads as more similar than the same-race White dyads. This finding is evidence of the outgroup homogeneity effect, which has been documented in studies with adults and linked to stereotyping (Ostrom & Sedikides, 1991; Park et al., 1992; Quattrone & Jones, 1980). Attributing homogeneity to the outgroup by European American children was also documented in the McGlothlin et al. (in press) study but only in the ratings of the same-race Black dyad who did not share a sports interest. The European American children in the present study attributed homogeneity to the Black dyads in both activity conditions. The perceptions of greater similarity between outgroup members in the present study may be attributable to the relative low amount of experience these European American children had with African Americans as compared to the European American children in the McGlothlin et al. (in press) study.

The tendency towards attributions of outgroup homogeneity was also more pronounced in the present sample in relation to the ratings of similarity for the same-race White dyads. The children in the present study focused on variability when judging their own ethnic group, so much so that the two White characters in the same-race dyads were rated as no more similar to one another as the Black child and White child were to one another in the different-race dyads. In other words, these European American children did not focus on shared skin color when evaluating their ingroup but did focus on shared skin color when evaluating the outgroup. This finding supports previous accounts of outgroup homogeneity in children (Doyle & Aboud, 1995; McGlothlin et al., in press) and suggests that attributions of homogeneity to the outgroup begin at an early age. As of yet, little work has closely examined the underlying processes and developmental trajectory of the outgroup homogeneity effect (for exceptions, see Bigler et al., 1997); however, understanding this phenomenon is critical in efforts to reduce stereotyping and prejudice.

An unexpected gender difference was found in children's ratings of similarity. Females rated the same-race Black dyads as more similar than did males. Females, in addition, rated the same-race White dyads as less alike than did males. In other words, females attributed more homogeneity to the outgroup (i.e., African Americans) and more variability to their ingroup than did their male counterparts. This is a surprising finding because outgroup homogeneity is linked to stereotyping and prejudice and previous studies have found females to be more sensitive than males to issues involving race (Killen et al., 2002; Killen & Stangor, 2001; McGlothlin et al., in press). Again,

this indicates that gender alone is not a sufficient indicator of racial attitudes and that additional work in this area is needed.

While the lack of age differences in attributions of outgroup homogeneity are consistent with McGlothlin et al. (in press), Doyle and Aboud (1995) found an increase with age in attributions of outgroup homogeneity. In addition, the present study and the McGlothlin et al. (in press) study did not find an increase with age in similarity ratings for the different-race dyads, while an increase was found in the Doyle and Aboud (1995) study. These discrepant findings may be due to the addition of non-racial information in the present methodology. It may also be due to the more objective Likert-typed scale used in the present study and McGlothlin et al. (in press). Because outgroup homogeneity and perceptions of intergroup similarity are important factors in stereotyping and prejudice, further research is needed in order to understand these differences in age related findings.

The relative importance of shared race versus shared activity interest in perceptions of similarity was of particular interest in the design of the Similarity Task. The findings suggest that children weigh information about activity interests more heavily than information about race when making similarity judgments. This is consistent with previous findings (Margie, et al., 2004; McGlothlin et al., in press; Katz, 1973) and provides encouraging news. These findings suggest that European American children, even those who experience very little intergroup contact, do not focus solely on differences in skin color when making judgments about others. Children do attend to other pieces of information about individuals. When children learn that outgroup



members share similar interests, the current findings suggest that perceptions of similarity will reflect the shared interests and not the unshared factor of skin color.

Assessing children's justifications of similarity was an additional expansion of previously used measures that investigated children's perceptions of similarity, which only inferred race was the basis of similarity evaluations (e.g., Doyle & Aboud, 1995; Katz, 1973; Katz et al., 1975). In the present study, European American children predominantly referred to the shared or unshared sports interest as the basis of their similarity ratings. Justifications for similarity ratings of the same-race Black dyads and the different-race dyads more often referenced race or skin color than justifications for similarity ratings of the same-race White dyads. But even for the same-race Black dyads and different-race dyads, it was a small number of European American children who justified their evaluations of similarity on skin color. These results support similar findings from McGlothlin et al. (in press) and further corroborate the proposition that children weigh multiple sources of information, not just skin color, when making similarity judgments.

Again, however, an unexpected gender difference emerged. Females used skin color more often for the same-race Black dyads and the different-race dyads than for the White dyads. Males, in contrast, used reasoning based on skin color more often only for the different-race dyad in comparison to the White dyads. Males did not differ in their use of skin color between the White dyads and the Black dyads. Females, then, focused on skin color for the Black dyads more than did males. This is an interesting finding that would not be predicted based on the finding from the Ambiguous Situations Task that females displayed less bias regarding cross-race friendship potential, as well

as from previous findings that showed females were more likely than males to condemn exclusion based on skin color (Killen et al., 2002). This finding is also discrepant from McGlothlin et al. (in press), which found that younger children used skin color more often than did older children, but found no difference between males and females in their use of skin color. Again, discrepancies in gender and age findings between the present study and the McGlothlin et al. (in press) study warrant further research.

*Children's Perceptions of Similarity and Decision-Making about Friendship*

Children's friendships are marked by similarity on a variety of dimensions, including race (Aboud & Mendelson, 1996; Rubin et al., 1998). Previous studies have not, however, compared children's perceptions of similarity regarding race with their judgments of friendship potential. Likewise, little is known about the relative importance of shared race versus shared activity interests in children's decisions about friendship. One goal of the present study was to advance our understanding of the relationship between perceptions of similarity and decision-making about friendship by asking European American participants to weigh non-racial factors (shared or unshared activity interests) and race (same-race or different-race) when deciding about friendship.

The present study found that dyads sharing activity interests were evaluated as more likely to be friends than dyads not sharing activity interests, independent of the racial composition of the dyads. The potential for friendship was also judged to be higher overall for same-race dyads than for different-race dyads. This finding held only in the unshared activity condition, however. In this condition, friendship was evaluated as most likely between the same-race Black dyad with unshared interests. Friendship potential between both the different-race dyad and the same race White dyad with

unshared interests were evaluated similarly. That is, different colors of skin did not “subtract from” the likelihood of friendship, which is an encouraging finding. The same color of skin, furthermore, did not “add to” the likelihood of friendship when the dyad was of the participants’ ethnic group. However, shared skin color did increase the likelihood of friendship when the dyad consisted of members of the outgroup, again indicating a tendency towards homogenization of the outgroup. These findings are inconsistent with Margie et al. (2004) and McGlothlin et al. (in press) which found that the vast majority of participants evaluated friendship as likely between all dyads, regardless of race or activity condition. As will be discussed below, this difference may be explained by the differential amounts of intergroup contact between the two samples.

Consistent with previous studies (Margie et al., 2004; McGlothlin et al., in press) was the finding that most children evaluated friendship as likely regardless of race when the dyad shared activity interests. In other words, shared activity interests were more important than shared skin color in determining the likelihood of friendship. Supporting previous work examining children’s reasoning about friendship and race (Killen et al., 2002), this finding suggests that children do not view race alone as a sufficient reason to preclude friendship. An important area for further research is the influence of stereotypes on children’s automatic perceptions of similarity. It is clear that similarity is an important factor in children’s decision-making about friendships. While the present study provides evidence that children do not attribute greater importance to shared skin color over shared activity interests, stereotypes about outgroup members may influence children’s perceptions of similarity when little is known about possible shared interests. Determining the specific criteria used by

children when forming racial or ethnic categories would also inform our understanding of this topic. Although a complex task given the biological, cultural, historical, sociological, and political factors that contribute to how cultures define racial and ethnic categories (see Graves, 2001; Hirschfeld, 1995; Fisher et al., 1998), more research is needed to understand children's notions of race and ethnicity and how these notions impact their decision-making about friendship.

European American children's judgments of friendship potential were reflected in their reasoning. Race or skin color was referenced more often for the same-race Black dyads (as a reason for friendship) and the different-race dyads (as a reason against friendship) than for the same-race White dyads. While race or skin color was not frequently used by these participants (the highest usage was 10% for different-race, unshared interest), virtually none of the participants in Margie et al. (2004) and McGlothlin et al. (in press) cited race or skin color in their justifications for friendship potential. Thus, for the present sample of European American children with little intergroup contact, race did appear to be more salient and factor into decision-making about friendship more often.

#### *Children's Intergroup Contact*

Overall, as expected, the amount of intergroup contact for this sample was low. United States census data and school district records further documented the lack of ethnic diversity in the area from which the participants were sampled. The populations of the towns and schools were between 86% and 94% European American, with African American populations below five percent. Nonetheless, several hypotheses regarding intergroup contact were supported.

As described earlier, intergroup contact theory predicts that contact with outgroup members increases positive attitudes towards members of that group when the contact situation meets four conditions: equal status, authority sanction, common goals, and no competition between groups (Caspi, 1984; Cook, 1984; Desforges et al., 1991; Herek & Capitiano, 1996; Pettigrew & Tropp, 2000; Wagner et al., 1989). In the present study, hypotheses concerning intergroup contact and bias in the Ambiguous situations Task were not supported. Higher levels of intergroup contact were not related to less bias or to more positive judgments of cross-race friendship potential. This may be due to the fact that the overall contact level of the sample was very low. The European American children even in the high contact group experienced minimal amounts of contact with African Americans. Moreover, it is unknown whether the contact situations experienced by these children met the four conditions listed above that have been shown to improve attitudes. This is a limitation of the Intergroup Contact Assessment which should be investigated further. Another important way to advance understanding of the relationship between intergroup contact and attitudes is an examination of how much contact is needed in order for attitudes to be improved when the contact situation meets the necessary conditions of equal status, authority sanction, common goals, and no competition. It is possible that the contact with African American individuals experienced by the European American children in this study was positive but just was not common enough to influence racial attitudes.

Interestingly and importantly, there was evidence that the amount of intergroup contact experienced impacted European American children's perceptions of similarity. Higher intergroup contact was related to higher ratings of similarity for the different-

race dyads. That is, European American children who experienced greater amounts of contact with African American individuals rated a White child and a Black child as more similar to one another than did European American children who experienced lesser amounts of contact. The amount of intergroup contact was also related to outgroup homogeneity. European American children who experienced greater amounts of intergroup contact rated the same-race Black dyads as less alike than European American children who had less contact; that is, the children with more intergroup contact experience were less likely to attribute homogeneity to the outgroup.

These findings provide some support for Pettigrew's (1998) theory that intergroup contact promotes positive effects through four processes: 1) learning about the outgroup, 2) ingroup reappraisal, 3) changing behavior, and 4) generating affective ties. The present finding that higher amounts of intergroup contact were associated with greater perceived similarity between a Black child and a White child provides evidence that contact with outgroup members encourages the individual to realize that similarities exist between the ingroup and outgroup that were previously unrecognized. The finding that higher amounts of contact were associated with less outgroup homogeneity further supports Pettigrew's contention that intergroup contact promotes new learning about the outgroup and a recognition that outgroup members are not all the same. Intergroup contact was not related, however, to differences in perceptions of similarity regarding the ingroup or to evaluations of friendship potential. This suggests that repeated contact with outgroup members may be necessary in order for changes in ingroup attitudes and increases in affective ties with the outgroup to occur (see Brewer & Brown, 1998;

Zajonc, 1968). Again, further research into how much contact is necessary to promote positive attitudes is needed.

Although an assessment of intergroup contact was not administered in the McGlothlin et al. (in press) study, the available demographic information on the sample indicated that the opportunity for intergroup contact was very high. Thus, a possible explanation for differences in findings between that study and the present study is the amount of intergroup contact experienced by the sample. Because no bias was displayed by European American children in the McGlothlin et al. (in press) study, this explanation would provide evidence that repeated contact is necessary in order to change attitudes about outgroup members. Given the unexpected gender related differences in the present study, the possible differential influence of intergroup contact for males and females is another important research area to pursue. Although there were no differences between females and males in the reported amount of intergroup contact, previous studies have found that males have more cross-race friends and acquaintances than their female counterparts (Graham et al., 1998; Hallinan & Kubitschek, 1990; Hallinan & Teixeira, 1987). The Intergroup Contact Assessment used in the present study may not be as accurate in measuring experience with outgroup members as a more direct assessment would be.

Examining the explicit and implicit messages children receive from parents regarding intergroup contact would provide additional information regarding the factors that contribute to the amount of intergroup contact experienced. Family variables, such as the selection of neighborhoods and schools based on their racial composition, may be related not only to the amount of intergroup contact but also to the opportunity for

intergroup contact and the quality of those interactions. Clearly, more systematic research needs to be done on this important topic of intergroup contact.

### *Limitations*

The present study has several limitations which should be noted. First of all, the construct validity of the measures used has not been established. Although findings were consistent with hypotheses, comparisons with other measures of racial bias have not been conducted. One contributing factor to the lack of tested construct validity is the fact that previous measures of bias, as discussed previously, are limited and problematic. Thus, these measures would not provide adequate comparison properties to validate the measures used in the present study. Moreover, because racial attitudes are multi-faceted, bias may manifest in various ways depending on the aspect of prejudice being examined. For instance, the present study investigated how bias is reflected in children's interpretations of behavior. This display of bias may not correlate highly with measures of bias revealed in judgments about trait possession, for example. The lack of proven construct validity of the current measures, nonetheless, is a limitation in the present study.

The small effect sizes associated with manipulations of race in the measures should also be noted. Although race was a significant factor in the interpretations of ambiguous behavior and in the evaluations of similarity, the effect of race on these responses was not large. This suggests that the differences in interpretations elicited by the White transgressors and the Black transgressors in the Ambiguous Situations Task and by the racial makeup of the dyads in the Similarity Task were subtle. Although



even small differences can influence behavior and reflect bias, the findings should be interpreted somewhat cautiously given the small effect sizes.

### *Conclusions*

Overall, the findings of the present study provide evidence for a multifaceted and complex view of racial attitudes in European American children. The findings of implicit bias in European American first and fourth-graders' interpretations of ambiguous interracial encounters support findings from previous studies using similar methodologies (Lawrence, 1991; Sagar & Schofield, 1980) as well as findings from studies using adult samples (see Dovidio et al., 2001). The current findings are, however, inconsistent with a previous study using the same methodology (McGlothlin et al., in press). Nonetheless, the present findings suggest that trait assignment techniques alone are not adequate assessments of racial bias in children, especially in terms of the relationship between attitudes and decision-making about cross-race friendship.

The methodology used in this study was designed to expand previously used measures of implicit bias by including evaluations of cross-race friendship potential. While a relationship was found between children's bias and their judgments of friendship potential, additional measures should be designed to examine this relationship more closely. One promising area to explore is that of children's interpretations of transgressions which are more conventional in nature. The Ambiguous Situations Task involved moral transgressions; how children evaluate interracial encounters involving potential violations of social norms and etiquette may further illuminate the complexity of intergroup attitudes and relationships in children.

Another modification to the Ambiguous Situations Task that would enhance the assessment of attitudes would be to ask European American children to imagine that they are the White character in the situations. This technique has been utilized by researchers investigating how children of varying social status (e.g., aggressive/rejected children) interpret ambiguous behavior (Lemerise, 2004). The addition of this technique may increase the display of bias by making the situation more realistic and personal in nature.

Another needed line of research is the investigation of racial attitudes and decision-making about cross-race friendship in older age groups as well as in preschool-aged children. The present study filled a gap in the literature by examining younger European American children's evaluations of friendship potential. However, the lack of age-related differences in findings between these first and fourth-graders warrants further research and age comparisons in order to fully understand the developmental trajectory of both intergroup attitudes and cross-race friendships. Including children from both younger and older age groups would provide useful information regarding the developmental changes in the decision-making process about cross-race friendships.

The findings regarding European American children's perceptions of similarity provide support for the notion that children attend to multiple indices of information when making judgments of similarity. Although similarity in skin color was influential in some cases, similarity in activity interests was more influential in children's ratings of similarity and friendship potential. This methodology should be expanded to examine other sources of similarity, such as shared personality traits as well as other aspects of intergroup differences (e.g., language or dress). Again, due to the lack of age

related findings, an important extension of this study would be to examine younger and older age groups. Very little is known about the developmental trajectory of the outgroup homogeneity effect and other phenomena associated with perceptions of similarity.

The difference in findings between the assessment of implicit bias and the assessment of perceptions of similarity warrants mention. Biases were displayed both in attributions of intent and in friendship judgments in the Ambiguous Situations Task. In contrast, in the Similarity Task, ratings of similarity and friendship judgments tended to be driven less by race, though this was not without exception. These differences suggest that attitudes regarding race are not uni-dimensional. Attitudes evoked by potential moral transgressions may be more affectively charged and hence, more exaggerated reflections of prejudice than attitudes evoked by pairs of illustrated children. Coordinating information about similarity requires cognitive processes that may elicit attitudes more stereotypic in nature than prejudiced. Social-cognitive domain theory provides a useful framework to further explore this comparison by altering the nature of the potential transgression as well as the aspects of similarity. This framework could be particularly instructive in examining the developmental trajectory of attitudes regarding race.

Finally, the assessment of intergroup contact in the present study allowed for a more direct analysis of the impact of such contact on attitudes and decision-making than in previous studies (Margie et al., 2004; McGlothlin et al., in press). Although the European American children in the sample experienced low overall amounts of contact with African Americans, relationships were found between higher levels of contact and

lower attributions of outgroup homogeneity as well as perceptions of greater intergroup similarity. The amount of intergroup contact was not related, however, to measures of implicit bias or cross-race friendship potential. A plausible explanation for the limited relationship between these measures is the low overall amount of intergroup contact. Very few participants could be classified as experiencing even moderate levels of contact with outgroup members. Future studies should directly examine the relationship between intergroup contact, bias, and cross-race friendships in samples with high levels of contact. The quality and amount of contact with outgroup members needed to transform attitudes is also an important area that warrants further research.

In sum, the present study illustrates the complexity of children's decision-making about cross-race friendship. As the findings suggest, the potential for interracial friendship is influenced by racial attitudes and perceptions of similarity. At times, children made behavioral attributions that reflected racial bias, and these attributions consequently discouraged friendship. At other times, children overlooked differences in skin color and promoted friendships based on similar interests. Certainly, there are other variables not examined in the present study which also impact children's decision-making about cross-race friendships. For instance, authority figures influence the formation and maintenance of cross-race friendships. Parents can be more or less encouraging of interracial friendships. Children's classrooms can also be more or less supportive of cross-race relationships. Moreover, the opportunities for cross-race friendship must exist in order for these important relationships to form and flourish. Cross-race friendships depend upon interaction with outgroup members. This study and many others suggest that intergroup contact does make a difference in children's

attitudes and relationships. As many neighborhoods and school systems move away from integration and as policies on desegregation are reformed (Orfield, 2001), it is more important than ever that the benefits of cross-race friendships and intergroup contact in general be more thoroughly examined and discussed.

Table 1

*Descriptions of Scenarios in the Ambiguous Situations Task*

Scenario	Description
Stealing	Two children are standing outside on a playground. One child has his pockets pulled out with a distressed expression on his face. A dollar bill is on the ground behind him. The other child is bending down picking up a dollar bill with a neutral expression on his face.
Not Sharing	Two children are sitting beside each other at a table in a classroom. One child has several toys in front of him; the other child has no toys on his side of the table. Both children have neutral facial expressions.
Cheating	Two children are sitting beside each other at a table in a classroom. Both children have sheets of paper in front of them and pencils in their hands. One child is looking at his paper which has " $2 + 2 = 4$ " written on it. The other child's paper has " $2 + 2 = \_$ " written on it. He is looking in the direction of the first child's paper. Both children have neutral facial expressions.
Pushing	Two children are outside on a playground. One child is sitting on the ground in front of a swing with an expression of pain on his face. The other child is standing behind the swing with a neutral expression on his face.

Note. The gender of characters in the ambiguous situations is matched to the gender of the participant.

Table 2

*Description of Pairings in the Similarity Task*


---

Pairing	Description
<i>Same-race Black</i>	
Same Activity	
Girl Version	Traci and Sally both like to play tennis.
Boy Version	Robert and Troy both like to play tennis.
Different Activity	
Girl Version	Heather likes to play softball. Emma doesn't like to play softball.
Boy Version	Jeff likes to play baseball. Paul doesn't like to play baseball.
<i>Same-race White</i>	
Same Activity	
Girl Version	Tammy and Kristen both like to play soccer.
Boy Version	Rick and Tom both like to play soccer.
Different Activity	
Girl Version	Wendy likes to play basketball. Emily doesn't like to play basketball.
Boy Version	Jay likes to play basketball. Joe doesn't like to play basketball.
<i>Different-race dyad</i>	
Same Activity	
Girl Version	Katrina and Hannah both like to play volleyball.
Boy Version	Anthony and Mark both like to play volleyball.
Different Activity	
Girl Version	Meredith likes to play golf. Julie doesn't like to play golf.
Boy Version	Nathan likes to play golf. John doesn't like to play golf.

---

Table 3

*Descriptions of Groups in the Intergroup Contact Assessment*

Group	Description
Group 1: <i>No African Americans</i>	All six individuals are European American.
Group 2: <i>Not many African Americans</i>	Four out of six individuals are European American and two out of six individuals are African American.
Group 3: <i>Some African Americans</i>	Three out of six individuals are European American and three out of six individuals are African American.
Group 4: <i>Many African Americans</i>	Two out of six individuals are European American and four out of six individuals are African American.
Group 5: <i>All African Americans</i>	All six individuals are African American.

Note. Two separate versions were used. One version consisted of adults and children and was used for the town, neighborhood, and family contexts. One version consisted of children only and was used for the school, clubs or teams, and friendship contexts.



Table 4

*Summary of Hypotheses*Ambiguous Situations Task*Interpretation and Initial Action Rating Assessments*

1. The behavior of the Black perpetrators will be judged as negative more often than the same behavior of the White perpetrators.
2. The behavior of the Black perpetrators will be rated as more negative than the same behavior of the White perpetrators.
3. Older children will judge and rate the behavior of the Black perpetrators more negatively than will younger children.

*Subsequent Action Evaluation and Rating*

4. The subsequent action of the Black perpetrator will be evaluated as negative more often than the subsequent action of the White perpetrator.
5. The subsequent action of the Black perpetrator will be rated more negatively than the subsequent action of the White perpetrator.
6. Older children will evaluate and rate the subsequent action of the Black perpetrator more negatively than will younger children.

*Friendship Potential and Reasoning*

7. The potential for friendship will be judged as lower for the situations involving a Black perpetrator.
8. Older children will judge friendship as less likely than will younger children.
9. Females will judge the potential for friendship as higher than will males.
10. Reasoning based on Transgression will be used more often to justify friendship potential in the Black perpetrator situations than in the White perpetrator situations.
11. Reasoning based on Reconciliation and Friendship will be used more often to justify friendship potential in the White perpetrator situations than in the Black perpetrator situations.

---

(Table 4 continues)

(Table 4 continued)

*Summary of Hypotheses*

---

Similarity Task

*Rating of Similarity*

12. Peer dyads in the same-race condition will be rated as more similar than peer dyads in the different-race condition.
13. Peer dyads who share the same activity interest will be rated as more similar than peer dyads who do not share the same activity interest.
14. Same-race Black peer dyads will be rated as more similar than same-race White peer dyads (outgroup homogeneity).

*Similarity Reasons*

15. Physical Characteristics will be used to justify similarity ratings more often for same-race Black peer dyads than for same-race White peer dyads.
16. Race/Skin Color will be used more often to justify similarity ratings for the different-race peer dyads and for the same-race Black peer dyads than for the same-race White peer dyads.
17. Sports Interests will be used more often to justify similarity ratings for the same-race White peer dyad than for the same-race Black peer dyads and the different-race peer dyads.
18. Younger children will use Physical Characteristics and Race/Skin Color more often than will older children.

*Friendship Potential and Reason for Friendship Potential*

19. The potential for friendship will be judged as higher in the shared activity condition than in the unshared activity condition.
20. The potential for friendship will be higher in the same-race condition than in the different-race condition.
21. The different-race/unshared interest peer dyad will be judged to have the lowest potential for friendship.

---

(Table 4 continues)

(Table 4 continued)

*Summary of Hypotheses*

---

22. Older children will judge friendship as more unlikely in the different-race condition than will younger children.
23. Reasoning based on Sports Interest will be used more often to justify friendship potential in the same-race White peer dyad than the same-race Black and the different-race peer dyads.
24. Younger children will focus on Physical Characteristics and Race/Skin Color when justifying friendship potential for same-race Black peer dyads and different-race peer dyads.

Intergroup Contact Assessment

*Amount of Contact*

25. Overall, the amount of intergroup contact will be low.
  26. Higher amounts of intergroup contact will be associated with less bias in the Ambiguous Situations Task.
  27. Higher amounts of intergroup contact will be associated with higher ratings of similarity for the different-race peer dyads in the Similarity Task.
  28. Higher amounts of intergroup contact will be associated with lower ratings of similarity for the same-race Black peer dyads in the Similarity Task.
  29. Higher amounts of intergroup contact will be associated with a higher possibility of interracial friendship.
-

Table 5

*Story Orders*Order 1*Ambiguous Situations Task*

Stealing – Black transgressor  
 Not Sharing – White transgressor  
 Cheating – White transgressor  
 Pushing – Black transgressor

*Filler Task**Ambiguous Situations Task*

Stealing – White transgressor  
 Not Sharing – Black transgressor  
 Cheating – White transgressor  
 Pushing – Black transgressor

*Similarity Task*

Same-race White dyad – Unshared activity interest  
 Different-race dyad – Unshared activity interest  
 Same-race Black dyad – Shared activity interest  
 Same-race Black dyad – Unshared activity interest  
 Different-race dyad – Shared activity interest  
 Same-race White dyad – Shared activity interest

Order 2*Ambiguous Situations Task*

Stealing – White transgressor  
 Not Sharing – Black transgressor  
 Cheating – White transgressor  
 Pushing – Black transgressor

*Filler Task**Ambiguous Situations Task*

Stealing – Black transgressor  
 Not Sharing – White transgressor  
 Cheating – White transgressor  
 Pushing – Black transgressor

*Similarity Task*

Same-race Black dyad – Unshared activity interest  
 Different-race dyad – Shared activity interest  
 Same-race White dyad – Shared activity interest  
 Same-race White dyad – Unshared activity interest  
 Different-race dyad – Unshared activity interest  
 Same-race Black dyad – Shared activity interest

Table 6

*Means for Initial Action Ratings in the Ambiguous Situations Task*

Grade By Gender		Ambiguous Situations by Race								
		Stealing Black	Stealing White	Not Sharing Black	Not Sharing White	Cheating Black	Cheating White	Pushing Black	Pushing White	
Female	1 <sup>st</sup>	<i>M</i>	6.12	5.35	5.55	4.97	6.65	6.47	6.13	6.43
		<i>SD</i>	(2.68)	(3.02)	(3.08)	(3.09)	(2.21)	(2.05)	(3.14)	(2.82)
	4 <sup>th</sup>	<i>M</i>	4.97	5.00	6.83	6.22	7.97	7.22	7.14	6.42
		<i>SD</i>	(2.49)	(2.62)	(2.16)	(2.54)	(1.40)	(2.18)	(2.19)	(2.81)
Male	1 <sup>st</sup>	<i>M</i>	4.91	4.91	6.03	4.15	7.38	6.32	7.71	6.09
		<i>SD</i>	(2.93)	(3.04)	(2.80)	(2.89)	(1.91)	(2.61)	(1.17)	(2.68)
	4 <sup>th</sup>	<i>M</i>	5.64	5.36	6.32	6.39	7.61	7.36	7.43	6.04
		<i>SD</i>	(2.86)	(2.79)	(2.39)	(2.13)	(2.10)	(2.21)	(2.04)	(3.16)
Group Totals		<i>M</i>	5.43	5.15	6.16	5.38	7.37	6.81	7.04	6.26
		<i>SD</i>	(2.75)	(2.85)	(2.67)	(2.85)	(1.97)	(2.28)	(2.36)	(2.83)

*Note:*  $N = 138$ . Black = Potential Black transgressor in story; White = Potential White transgressor in story. *M* = Mean; *SD* = Standard deviation. 1 = very, very good; 9 = very, very bad.

Table 7

*Means for Subsequent Action Ratings in the Ambiguous Situations Task*

Grade By Gender		Ambiguous Situations by Race								
		Stealing Black	Stealing White	Not Sharing Black	Not Sharing White	Cheating Black	Cheating White	Pushing Black	Pushing White	
Female	1 <sup>st</sup>	<i>M</i>	3.83	3.77	3.55	2.68	5.10	4.90	4.80	4.18
		<i>SD</i>	(3.42)	(3.50)	(3.04)	(2.62)	(3.18)	(3.18)	(3.50)	(3.50)
	4 <sup>th</sup>	<i>M</i>	4.03	4.03	3.92	3.06	6.67	5.94	4.83	4.28
		<i>SD</i>	(3.12)	(3.21)	(2.92)	(2.39)	(2.89)	(3.04)	(3.58)	(3.20)
Male	1 <sup>st</sup>	<i>M</i>	3.62	3.74	4.65	2.76	6.24	5.68	5.91	4.59
		<i>SD</i>	(2.98)	(3.14)	(2.89)	(2.66)	(2.87)	(3.17)	(3.01)	(3.50)
	4 <sup>th</sup>	<i>M</i>	4.21	4.04	4.32	4.26	7.39	7.21	6.39	4.11
		<i>SD</i>	(3.13)	(3.46)	(2.87)	(3.18)	(2.53)	(2.35)	(2.73)	(3.42)
Group	Totals	<i>M</i>	3.91	3.88	4.07	3.12	6.25	5.83	5.41	4.29
		<i>SD</i>	(3.15)	(3.30)	(2.94)	(2.73)	(2.99)	(3.07)	(3.30)	(3.38)

*Note:*  $N = 138$ . Black = Potential Black transgressor in story; White = Potential White transgressor in story. *M* = Mean; *SD* = Standard deviation. 1 = very, very good; 9 = very, very bad.

Table 8

*Judgments of Friendship Potential in the Ambiguous Situations Task*

Gender by Grade		Ambiguous Situations by Race								
		Stealing Black	Stealing White	Not Sharing Black	Not Sharing White	Cheating Black	Cheating White	Pushing Black	Pushing White	
Female	1 <sup>st</sup>	<i>M</i>	.63	.63	.63	.85	.68	.68	.48	.60
		<i>SD</i>	(.49)	(.49)	(.49)	(.36)	(.47)	(.47)	(.51)	(.50)
	4 <sup>th</sup>	<i>M</i>	.61	.53	.58	.75	.53	.50	.47	.53
		<i>SD</i>	(.49)	(.51)	(.50)	(.44)	(.51)	(.51)	(.51)	(.51)
Male	1 <sup>st</sup>	<i>M</i>	.65	.71	.56	.76	.56	.53	.32	.53
		<i>SD</i>	(.49)	(.46)	(.50)	(.43)	(.50)	(.51)	(.47)	(.51)
	4 <sup>th</sup>	<i>M</i>	.46	.54	.57	.50	.29	.29	.21	.50
		<i>SD</i>	(.51)	(.51)	(.51)	(.51)	(.46)	(.46)	(.42)	(.51)
Group	Totals	<i>M</i>	.59	.60	.59	.73	.53	.52	.38	.54
		<i>SD</i>	(.49)	(.49)	(.49)	(.44)	(.50)	(.50)	(.49)	(.50)

*Note:*  $N = 138$ . Black = Potential Black transgressor in story; White = Potential White transgressor in story. *M* = Mean; *SD* = Standard deviation. 0 = No; 1 = Yes.

Table 9

*Means for Ratings of Similarity in the Similarity Task*

Gender By Grade		Peer Dyads by Activity Type						
		Black Dyad Different Activities	Black Dyad Same Activities	White Dyad Different Activities	White Dyad Same Activities	Cross-Race Dyad Different Activities	Cross-Race Dyad Same Activities	
Female	1 <sup>st</sup>	<i>M</i>	2.63	5.42	1.98	4.80	2.00	4.90
		<i>SD</i>	(1.29)	(.90)	(1.10)	(1.57)	(1.13)	(1.39)
	4 <sup>th</sup>	<i>M</i>	3.61	5.28	2.78	4.81	2.44	4.75
		<i>SD</i>	(1.13)	(.57)	(.93)	(.92)	(1.00)	(1.08)
Male	1 <sup>st</sup>	<i>M</i>	2.44	5.09	2.56	5.26	2.44	5.12
		<i>SD</i>	(1.48)	(1.33)	(1.48)	(.83)	(1.28)	(1.15)
	4 <sup>th</sup>	<i>M</i>	3.18	4.93	2.89	4.82	2.75	4.57
		<i>SD</i>	(1.25)	(.90)	(.99)	(1.06)	(1.27)	(1.10)
Group	Totals	<i>M</i>	2.95	5.20	2.51	4.92	2.38	4.85
		<i>SD</i>	(1.36)	(.97)	(1.19)	(1.16)	(1.19)	(1.20)

*Note:*  $N = 138$ .  $M$  = Mean;  $SD$  = Standard deviation. 1 = not at all alike; 6 = very, very alike.



Table 10

*Proportions of Non-Racial Physical Characteristics used in the Similarity Ratings*

Gender By Grade		Peer Dyads by Activity Type						
		Black Dyad Different Activities	Black Dyad Same Activities	White Dyad Different Activities	White Dyad Same Activities	Cross-Race Dyad Different Activities	Cross-Race Dyad Same Activities	
Female	1 <sup>st</sup>	<i>M</i>	.34	.20	.25	.32	.19	.29
		<i>SD</i>	(.36)	(.27)	(.27)	(.37)	(.32)	(.37)
	4 <sup>th</sup>	<i>M</i>	.44	.22	.31	.24	.19	.27
		<i>SD</i>	(.39)	(.23)	(.34)	(.34)	(.21)	(.24)
Male	1 <sup>st</sup>	<i>M</i>	.27	.26	.20	.26	.28	.29
		<i>SD</i>	(.39)	(.25)	(.27)	(.29)	(.31)	(.30)
	4 <sup>th</sup>	<i>M</i>	.23	.21	.27	.23	.23	.22
		<i>SD</i>	(.30)	(.28)	(.31)	(.24)	(.26)	(.23)
Group	Totals	<i>M</i>	.33	.22	.26	.27	.22	.27
		<i>SD</i>	(.37)	(.25)	(.30)	(.32)	(.28)	(.29)

*Note:*  $N = 138$ .  $M$  = Mean;  $SD$  = Standard deviation.

Table 11

*Proportions of Race/Skin Color used in the Similarity Ratings*

Gender By Grade		Peer Dyads by Activity Type						
		Black Dyad Different Activities	Black Dyad Same Activities	White Dyad Different Activities	White Dyad Same Activities	Cross-Race Dyad Different Activities	Cross-Race Dyad Same Activities	
Female	1 <sup>st</sup>	<i>M</i>	.06	.17	.02	.03	.17	.04
		<i>SD</i>	(.15)	(.21)	(.09)	(.12)	(.22)	(.12)
	4 <sup>th</sup>	<i>M</i>	.11	.16	.02	.04	.23	.07
		<i>SD</i>	(.20)	(.21)	(.08)	(.12)	(.25)	(.16)
Male	1 <sup>st</sup>	<i>M</i>	.09	.04	.10	.09	.12	.07
		<i>SD</i>	(.26)	(.14)	(.06)	(.16)	(.19)	(.17)
	4 <sup>th</sup>	<i>M</i>	.09	.12	.02	.11	.15	.06
		<i>SD</i>	(.16)	(.21)	(.09)	(.19)	(.20)	(.13)
Group	Totals	<i>M</i>	.09	.13	.02	.06	.17	.06
		<i>SD</i>	(.20)	(.20)	(.08)	(.15)	(.22)	(.14)

*Note:*  $N = 138$ .  $M$  = Mean;  $SD$  = Standard deviation.

Table 12

*Proportions of Sports Interests used in the Similarity Ratings*

Gender By Grade		Peer Dyads by Activity Type						
		Black Dyad Different Activities	Black Dyad Same Activities	White Dyad Different Activities	White Dyad Same Activities	Cross-Race Dyad Different Activities	Cross-Race Dyad Same Activities	
Female	1 <sup>st</sup>	<i>M</i>	.60	.63	.73	.65	.67	.67
		<i>SD</i>	(.41)	(.34)	(.30)	(.40)	(.35)	(.40)
	4 <sup>th</sup>	<i>M</i>	.53	.62	.67	.71	.58	.66
		<i>SD</i>	(.58)	(.31)	(.35)	(.36)	(.31)	(.32)
Male	1 <sup>st</sup>	<i>M</i>	.64	.69	.79	.65	.60	.64
		<i>SD</i>	(.42)	(.33)	(.29)	(.37)	(.35)	(.36)
	4 <sup>th</sup>	<i>M</i>	.68	.66	.70	.66	.62	.72
		<i>SD</i>	(.37)	(.35)	(.33)	(.38)	(.36)	(.29)
Group	Totals	<i>M</i>	.61	.65	.72	.67	.62	.67
		<i>SD</i>	(.45)	(.33)	(.32)	(.37)	(.34)	(.35)

Note:  $N = 138$ .  $M$  = Mean;  $SD$  = Standard deviation.

Table 13

*Judgments of Friendship Potential in the Similarity Task*

Gender By Grade		Peer Dyads by Activity Type						
		Black Dyad Different Activities	Black Dyad Same Activities	White Dyad Different Activities	White Dyad Same Activities	Cross-Race Dyad Different Activities	Cross-Race Dyad Same Activities	
Female	1 <sup>st</sup>	<i>M</i>	.75	.95	.68	.90	.55	.95
		<i>SD</i>	(.44)	(.22)	(.44)	(.22)	(.50)	(.22)
	4 <sup>th</sup>	<i>M</i>	.83	1.00	.69	.97	.44	.92
		<i>SD</i>	(.38)	(.00)	(.47)	(.17)	(.50)	(.28)
Male	1 <sup>st</sup>	<i>M</i>	.76	1.00	.68	.97	.65	.97
		<i>SD</i>	(.43)	(.00)	(.47)	(.17)	(.49)	(.17)
	4 <sup>th</sup>	<i>M</i>	.71	1.00	.50	1.00	.57	.93
		<i>SD</i>	(.46)	(.00)	(.51)	(.00)	(.50)	(.26)
Group	Totals	<i>M</i>	.77	.99	.64	.96	.55	.94
		<i>SD</i>	(.42)	(.12)	(.48)	(.20)	(.50)	(.23)

*Note:*  $N = 138$ .  $M$  = Mean;  $SD$  = Standard deviation. 0 = No; 1 = Yes.

Table 14

*Proportions of Non-Racial Physical Characteristics used in Reasoning about Friendship Potential in the Similarity Task*

Gender By Grade		Peer Dyads by Activity Type						
		Black Dyad Different Activities	Black Dyad Same Activities	White Dyad Different Activities	White Dyad Same Activities	Cross-Race Dyad Different Activities	Cross-Race Dyad Same Activities	
Female	1 <sup>st</sup>	<i>M</i>	.31	.16	.26	.15	.17	.16
		<i>SD</i>	(.42)	(.35)	(.44)	(.32)	(.36)	(.33)
	4 <sup>th</sup>	<i>M</i>	.36	.12	.22	.10	.11	.10
		<i>SD</i>	(.42)	(.24)	(.39)	(.23)	(.26)	(.23)
Male	1 <sup>st</sup>	<i>M</i>	.31	.15	.28	.07	.13	.13
		<i>SD</i>	(.46)	(.34)	(.45)	(.22)	(.31)	(.31)
	4 <sup>th</sup>	<i>M</i>	.23	.14	.05	.02	.17	.20
		<i>SD</i>	(.42)	(.29)	(.21)	(.09)	(.36)	(.34)
Group	Totals	<i>M</i>	.31	.14	.21	.09	.14	.14
		<i>SD</i>	(.43)	(.31)	(.40)	(.24)	(.32)	(.30)

*Note:*  $N = 138$ .  $M$  = Mean;  $SD$  = Standard deviation.

Table 15

*Proportions of Race/Skin Color used in Reasoning about Friendship Potential in the Similarity Task*

Gender By Grade		Peer Dyads by Activity Type						
			Black Dyad Different Activities	Black Dyad Same Activities	White Dyad Different Activities	White Dyad Same Activities	Cross-Race Dyad Different Activities	Cross-Race Dyad Same Activities
Female	1 <sup>st</sup>	<i>M</i>	.05	.13	.00	.00	.08	.00
		<i>SD</i>	(.15)	(.27)	(.0)	(.00)	(.27)	(.00)
	4 <sup>th</sup>	<i>M</i>	.07	.12	.00	.04	.19	.07
		<i>SD</i>	(.21)	(.27)	(.00)	(.17)	(.34)	(.21)
Male	1 <sup>st</sup>	<i>M</i>	.01	.01	.01	.00	.04	.01
		<i>SD</i>	(.09)	(.09)	(.09)	(.00)	(.14)	(.09)
	4 <sup>th</sup>	<i>M</i>	.00	.03	.00	.00	.10	.00
		<i>SD</i>	(.00)	(.11)	(.00)	(.00)	(.23)	(.00)
Group	Totals	<i>M</i>	.04	.08	.004	.01	.10	.02
		<i>SD</i>	(.14)	(.22)	(.04)	(.09)	(.26)	(.12)

*Note:*  $N = 138$ .  $M$  = Mean;  $SD$  = Standard deviation.

Table 16

*Proportions of Sports Interests used in Reasoning about Friendship Potential in the Similarity Task*

Gender By Grade		Peer Dyads by Activity Type						
		Black Dyad Different Activities	Black Dyad Same Activities	White Dyad Different Activities	White Dyad Same Activities	Cross-Race Dyad Different Activities	Cross-Race Dyad Same Activities	
Female	1 <sup>st</sup>	<i>M</i>	.30	.66	.33	.78	.31	.74
		<i>SD</i>	(.45)	(.43)	(.47)	(.39)	(.46)	(.41)
	4 <sup>th</sup>	<i>M</i>	.21	.75	.25	.81	.32	.75
		<i>SD</i>	(.40)	(.34)	(.44)	(.36)	(.43)	(.39)
Male	1 <sup>st</sup>	<i>M</i>	.29	.78	.44	.84	.38	.85
		<i>SD</i>	(.46)	(.39)	(.50)	(.34)	(.49)	(.34)
	4 <sup>th</sup>	<i>M</i>	.29	.74	.54	.84	.33	.80
		<i>SD</i>	(.46)	(.40)	(.51)	(.36)	(.45)	(.34)
Group	Totals	<i>M</i>	.27	.73	.38	.81	.33	.78
		<i>SD</i>	(.44)	(.39)	(.49)	(.36)	(.46)	(.37)

*Note:*  $N = 138$ .  $M$  = Mean;  $SD$  = Standard deviation.

Table 17

*Proportions of Beyond Sports Interests used in Reasoning about Friendship Potential in the Similarity Task*

Gender By Grade		Peer Dyads by Activity Type						
		Black Dyad Different Activities	Black Dyad Same Activities	White Dyad Different Activities	White Dyad Same Activities	Cross-Race Dyad Different Activities	Cross-Race Dyad Same Activities	
Female	1 <sup>st</sup>	<i>M</i>	.33	.05	.41	.08	.41	.10
		<i>SD</i>	(.46)	(.22)	(.49)	(.27)	(.49)	(.30)
	4 <sup>th</sup>	<i>M</i>	.36	.00	.53	.06	.38	.08
		<i>SD</i>	(.44)	(.00)	(.48)	(.24)	(.46)	(.28)
Male	1 <sup>st</sup>	<i>M</i>	.38	.06	.26	.09	.44	.00
		<i>SD</i>	(.49)	(.24)	(.45)	(.29)	(.50)	(.00)
	4 <sup>th</sup>	<i>M</i>	.48	.09	.41	.14	.34	.00
		<i>SD</i>	(.50)	(.27)	(.49)	(.36)	(.47)	(.00)
Group	Totals	<i>M</i>	.38	.05	.41	.09	.40	.05
		<i>SD</i>	(.47)	(.21)	(.48)	(.28)	(.48)	(.22)

*Note:*  $N = 138$ .  $M$  = Mean;  $SD$  = Standard deviation.



Table 18

*Percentage of Responses in the Intergroup Contact Assessment*

Context		Group				
		Group 1 No African Americans	Group 2 Not many African Americans	Group 3 Some African Americans	Group 4 A lot of African Americans	Group 5 All African Americans
Town	%	46	38	13	2	1
Neighborhood	%	68	23	7	1	1
School	%	25	53	19	1	2
Clubs or Teams	%	65	25	7	0	3
Friendships	%	57	35	6	1	1
Family	%	95	2	1	1	1

*Note:*  $N = 138$ . % = Percentage of participants that chose each group. For Clubs or Teams, 21% of participants did not belong to any clubs or teams and were omitted from analyses.

## APPENDIX A

## Parental Consent Form

<i>Project title</i>	Children's Decision-Making about Social Relationships
<i>Parental Consent for a minor</i>	I agree to allow my child to participate in a program of research being conducted by Professor Melanie Killen, Department of Human Development, University of Maryland, College Park.
<i>Purpose</i>	The purpose of the research is to understand how children use information about physical characteristics and activity interests when making judgments about friendships.
<i>Procedures</i>	The procedure involves a one-time, audiotape-recorded interview session lasting approximately 30 minutes. My child will be taken out of class and individually interviewed in a quiet setting in the school by a trained research assistant from the University of Maryland. Pairs of illustrations of children will be presented with information about their interests and hobbies. My child will be asked to make judgments about the similarity of the children in the photos and about the possibility of friendship between the children. My child will also be shown eight picture cards depicting situations potentially involving conflict (e.g., not sharing, cheating, stealing, and pushing). My child will be asked to interpret the situations, make judgments about the two children's actions, and to decide if the two children can be friends. In addition, my child will be asked to describe the types of children involved in his/her various peer group activities and settings.
<i>Confidentiality</i>	All information collected in the study is confidential. My child's name will not be identified after the initial interview. Non-identifiable ID numbers will be assigned and all interview tapes will be destroyed at the end of the study.
<i>Risks</i>	There are no foreseeable risks involved in the participation of this study.
<i>Benefits: Freedom to Withdraw and Ask Questions</i>	My child's participation in this study is completely voluntary. I am free to ask any questions or withdraw my child from participant at any time without penalty. My child will be told that he/she may stop participating if he/she chooses.

*Name, Address  
and Phone Number  
of Faculty Advisor*      Professor Melanie Killen  
Dept. of Human Development  
3304 Benjamin Building  
College Park, MD 20742-1131  
Off. 301.405.3176

\_\_\_\_\_  
Name of Child

\_\_\_\_\_  
Date of Birth

\_\_\_\_\_  
Signature of Parent/Guardian

\_\_\_\_\_  
Date

## APPENDIX B

## Complete Version of the Interview

Date of Interview: \_\_\_\_\_

Interviewer's Initials: \_\_\_\_\_

Participant Number: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Gender:        M                F

School: \_\_\_\_\_

**INTRODUCTION:**

I am going to show you some cards of kids doing different things and then I will ask you some questions about the kids in the cards. I am interested in finding out what children your age think about things kids do. There are no right or wrong answers. This is not a test. No one will see your answers. So just tell me what you think. Do you have any questions?

We are going to tape-record this interview to help me remember what we talked about. So, before we start, let's make sure this tape-recorder works.

[Tape-Recorder Check]: "This is (Name of Interviewer) and I'm talking with (Name of Interviewee). (Interviewee's name's) birth date is \_\_\_\_\_. Today's date is \_\_\_\_\_.

[Rewind and check tape-recording]

Notes:

**Ambiguous Situations Task**

**Stealing**

**Q1MB.** {Pointing to Debra} This is Debra and {pointing to Renee} this is Renee. Tell me what you think happened in this picture.

---

**Q2MB.** What do you think Debra did?

---

**Q3MB.** How good/bad is Debra for doing that?

-4	-3	-2	-1	0	1	2	3	4
								GOOD
BAD								

**Q4MB.** What do you think Debra is going to do next?

---

**Q5MB.** How good/bad is Debra for doing that?

-4	-3	-2	-1	0	1	2	3	4
								GOOD
BAD								

**Q6MB.** How likely is it that they are friends? **No Way** **Prob/not** **Prob** **Yes**

**Q7MB.** Why?

---

**Not Sharing**

**Q1TW.** {Pointing to Tara} This is Tara and {pointing to Nicole} this is Nicole. Tell me what you think happened in this picture.

---

**Q2TW.** What do you think Tara did?

---

**Q3TW.** How good/bad is Tara for doing that?

-4	-3	-2	-1	0	1	2	3	4
								GOOD
BAD								

**Q4TW.** What do you think Tara is going to do next?

---

**Q5TW.** How good/bad is Tara for doing that?

-4	-3	-2	-1	0	1	2	3	4
								GOOD
BAD								

**Q6TW.** How likely is it that they are friends? **No Way** **Prob/not** **Prob** **Yes**

**Q7TW.** Why?

---



**Self-Interest Task**

Now I want to ask you some questions about yourself and the things you like to do. You can use this scale to tell me how much you like to do the things I show you.

Tell me if you like to do these things not at all [point to -1]; a little [point to 0]; or a lot [point to 1]. Do you understand?

Q1. How much do you like to read books?

-1	0	1
not at all	a little	a lot

Q2. How much do you like to draw or paint?

-1	0	1
not at all	a little	a lot

Q3. How much do you like to eat pizza?

-1	0	1
not at all	a little	a lot

Q4. How much do you like to play or listen to music?

-1	0	1
not at all	a little	a lot

Q5. How much do you like to ride a bicycle?

-1	0	1
not at all	a little	a lot

Q6. How much do you like to do math problems?

-1	0	1
not at all	a little	a lot

**Ambiguous Situations Task**

**Stealing**

**Q1MW.** {Pointing to Elise} This is Elise and {pointing to Melody} this is Melody. Tell me what you think happened in this picture.

---

**Q2MW.** What do you think Elise did?

---

**Q3MW.** How good/bad is Elise for doing that?

-4	-3	-2	-1	0	1	2	3	4
BAD								GOOD

**Q4MW.** What do you think Elise is going to do next?

---

**Q5MW.** How good/bad is Elise for doing that?

-4	-3	-2	-1	0	1	2	3	4
BAD								GOOD

**Q6MW.** How likely is it that they are friends? **No Way** **Prob/not** **Prob** **Yes**

**Q7MW.** Why?

---

**Not Sharing**

**Q1TB.** {Pointing to Jenny} This is Jenny and {pointing to Stacy} this is Stacy. Tell me what you think happened in this picture.

---

**Q2TB.** What do you think Jenny did?

---

**Q3TB.** How good/bad is Jenny for doing that?

-4	-3	-2	-1	0	1	2	3	4
BAD								GOOD

**Q4TB.** What do you think Jenny is going to do next?

---

**Q5TB.** How good/bad is Jenny for doing that?

-4	-3	-2	-1	0	1	2	3	4
BAD								GOOD

**Q6TB.** How likely is it that they are friends? **No Way** **Prob/not** **Prob** **Yes**

**Q7TB.** Why?

---



**Cheating**

**Q1AB.** {Pointing to Sue} This is Sue and {pointing to Laura} this is Laura. Tell me what you think happened in this picture.

---

**Q2AB.** What do you think Sue did?

---

**Q3AB.** How good/bad is Sue for doing that?  
 -4 -3 -2 -1 0 1 2 3 4  
 BAD GOOD

**Q4AB.** What do you think Sue is going to do next?

---

**Q5AB.** How good/bad is Sue for doing that?  
 -4 -3 -2 -1 0 1 2 3 4  
 BAD GOOD

**Q6AB.** How likely is it that they are friends? **No Way Prob/not Prob Yes**

**Q7AB.** Why?

---

**Pushing**

**Q1SW.** {Pointing to Carrie} This is Carrie and {pointing to Abby} this is Abby. Tell me what you think happened in this picture.

---

**Q2SW.** What do you think Carrie did?

---

**Q3SW.** How good/bad is Carrie for doing that?  
 -4 -3 -2 -1 0 1 2 3 4  
 BAD GOOD

**Q4SW.** What do you think Carrie is going to do next?

---

**Q5SW.** How good/bad is Carrie for doing that?  
 -4 -3 -2 -1 0 1 2 3 4  
 BAD GOOD

**Q6SW.** How likely is it that they are friends? **No Way Prob/not Prob Yes**

**Q7SW.** Why?

---





### Intergroup Contact Assessment

Please look closely at these pictures and answer the following questions as best you can. Which group of people looks most like the people in your:

**1. town?**

NO AF-AM <b>1</b>	NOT MANY AF-AM (2 out of 6) <b>2</b>	SOME AF-AM (3 out of 6) <b>3</b>	A LOT AF-AM (4 out of 6) <b>4</b>	ALL AF-AM <b>5</b>
-------------------------	--	--	---	--------------------------

How are they alike?

---

**2. neighborhood?**

NO AF-AM <b>1</b>	NOT MANY AF-AM (2 out of 6) <b>2</b>	SOME AF-AM (3 out of 6) <b>3</b>	A LOT AF-AM (4 out of 6) <b>4</b>	ALL AF-AM <b>5</b>
-------------------------	--	--	---	--------------------------

**3. school?**

NO AF-AM <b>1</b>	NOT MANY AF-AM (2 out of 6) <b>2</b>	SOME AF-AM (3 out of 6) <b>3</b>	A LOT AF-AM (4 out of 6) <b>4</b>	ALL AF-AM <b>5</b>
-------------------------	--	--	---	--------------------------

How are they alike?

---

**4. clubs or teams?**

NO AF-AM <b>1</b>	NOT MANY AF-AM (2 out of 6) <b>2</b>	SOME AF-AM (3 out of 6) <b>3</b>	A LOT AF-AM (4 out of 6) <b>4</b>	ALL AF-AM <b>5</b>
-------------------------	--	--	---	--------------------------

**5. friendships?**

NO AF-AM <b>1</b>	NOT MANY AF-AM (2 out of 6) <b>2</b>	SOME AF-AM (3 out of 6) <b>3</b>	A LOT AF-AM (4 out of 6) <b>4</b>	ALL AF-AM <b>5</b>
-------------------------	--	--	---	--------------------------

**6. family?**

NO AF-AM <b>1</b>	NOT MANY AF-AM (2 out of 6) <b>2</b>	SOME AF-AM (3 out of 6) <b>3</b>	A LOT AF-AM (4 out of 6) <b>4</b>	ALL AF-AM <b>5</b>
-------------------------	--	--	---	--------------------------

7. How often have you traveled to another place where people who live there are different from yourself – they look different from you or speak a different language?

NEVER <b>0</b>	HARDLY EVER (Once) <b>1</b>	OCCASIONALLY (2-3 times) <b>2</b>	A LOT (more than 4) <b>3</b>
-------------------	-----------------------------------	---	------------------------------------

8. If yes, where did you travel? How were they different?

---

9. How often do you see people who are different from yourself on TV?

NEVER <b>0</b>	HARDLY EVER <b>1</b>	SOMETIMES <b>2</b>	A LOT <b>3</b>
-------------------	-------------------------	-----------------------	-------------------

10. How are they different? What do you see them doing on TV?

---

## APPENDIX C

## Ambiguous Situations Task Picture Cards

## Figure Captions

*Figure 1C.* White transgressor and Black transgressor versions of the Stealing context for male participants.

*Figure 2C.* White transgressor and Black transgressor versions of the Not Sharing context for male participants.

*Figure 3C.* White transgressor and Black transgressor versions of the Cheating context for male participants.

*Figure 4C.* White transgressor and Black transgressor versions of the Pushing context for male participants.

*Figure 5C.* White transgressor and Black transgressor versions of the Stealing context for female participants.

*Figure 6C.* White transgressor and Black transgressor versions of the Not Sharing context for female participants.

*Figure 7C.* White transgressor and Black transgressor versions of the Cheating context for female participants.

*Figure 8C.* White transgressor and Black transgressor versions of the Pushing context for female participants.

Figure 1C.

Stealing – White transgressor (Male)

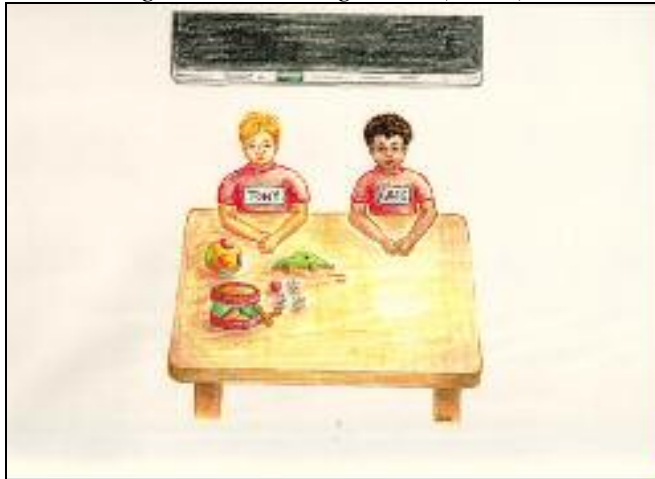


Stealing – Black transgressor (Male)



Figure 2C.

Not Sharing – White transgressor (Male)



Not Sharing – Black transgressor (Male)



Figure 3C.

*Cheating – White transgressor (Male)*



*Cheating – Black transgressor (Male)*

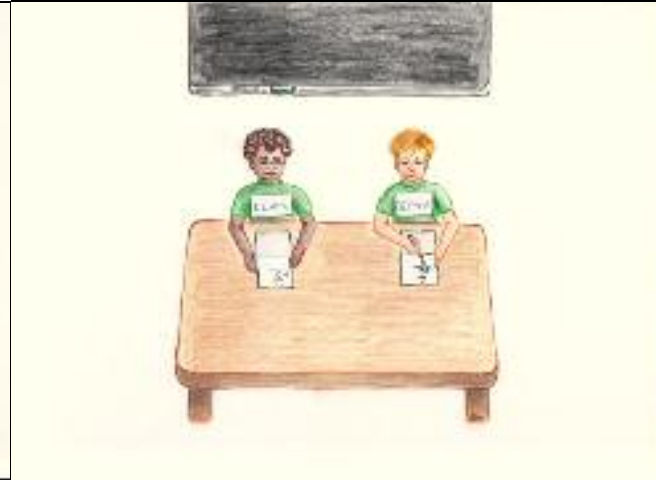


Figure 4C.

*Pushing – White transgressor (Male)*



*Pushing – Black transgressor (Male)*



Figure 5C.

Stealing – White transgressor (Female)



Stealing – Black transgressor (Female)



Figure 6C.

Not Sharing – White transgressor (Female)



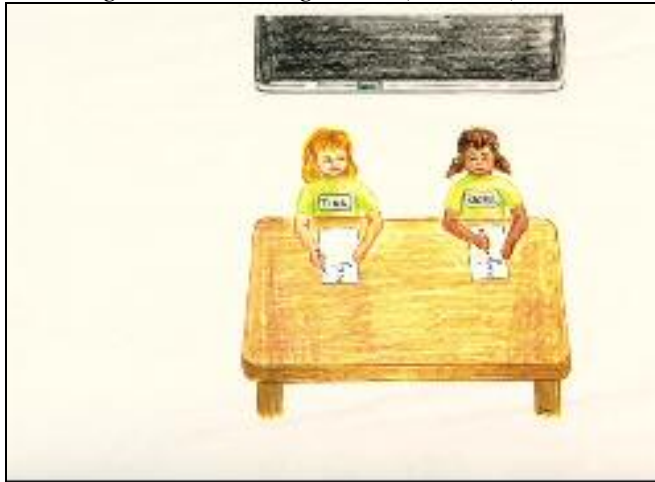
Not Sharing – Black transgressor (Female)





Figure 7C.

*Cheating – White transgressor (Female)*



*Cheating – Black transgressor (Female)*



Figure 8C.

*Pushing – White transgressor (Female)*



*Pushing – Black transgressor (Female)*



## APPENDIX D

## Similarity Task Picture Cards

## Figure Captions

*Figure 1D.* Female different-race dyad with unshared activity interests.

*Figure 2D.* Female same-race Black dyad with unshared activity interests.

*Figure 3D.* Female same-race White dyad with unshared activity interests.

*Figure 4D.* Female different-race dyad with shared activity interests.

*Figure 5D.* Female same-race Black dyad with shared activity interests.

*Figure 6D.* Female same-race White dyad with shared activity interests.

*Figure 7D.* Male different-race dyad with unshared activity interests.

*Figure 8D.* Male same race Black dyad with unshared activity interests.

*Figure 9D.* Male same race White dyad with unshared activity interests.

*Figure 10D.* Male different-race dyad with shared activity interests.

*Figure 11D.* Male same race Black dyad with shared activity interests.

*Figure 12D.* Male same race White dyad with shared activity interests.

Figure 1D. Different-race dyad with unshared interests



Figure 2D. Same-race Black dyad with unshared interests

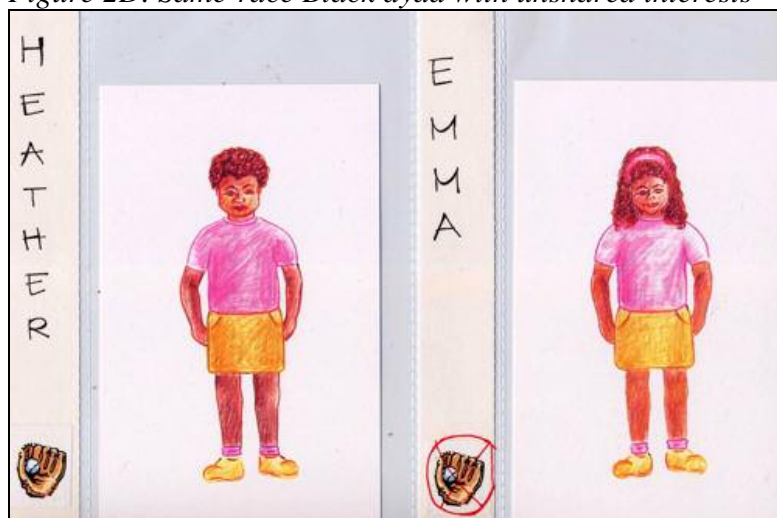


Figure 3D. Same-race White dyad with unshared interests

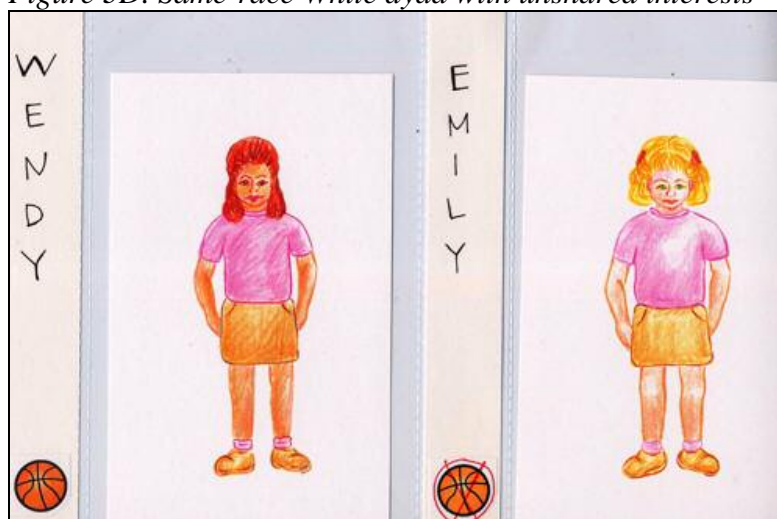


Figure 4D. Different-race dyad with shared interests

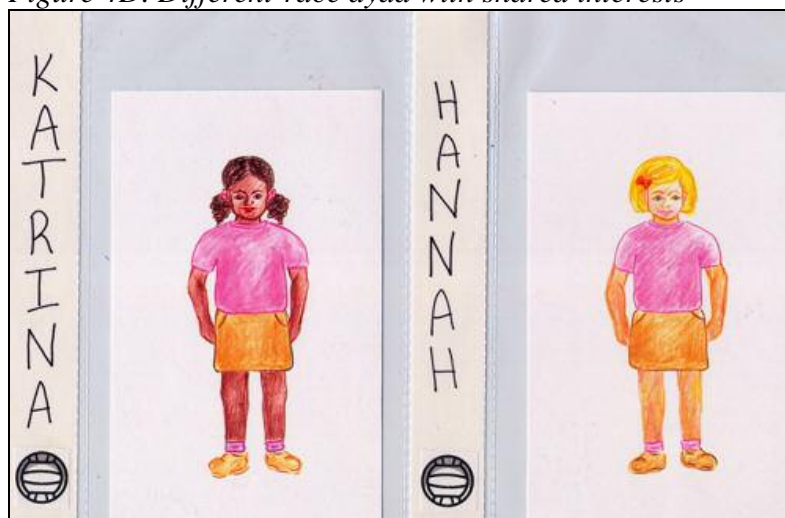


Figure 5D. Same-race Black dyad with shared interests

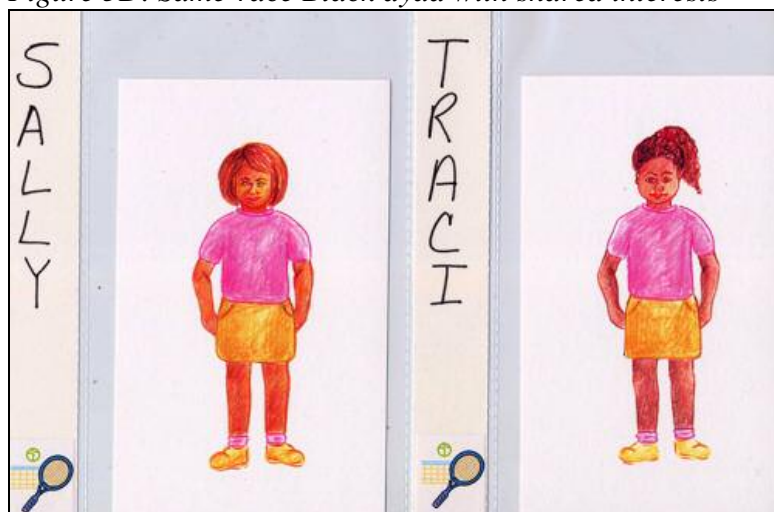


Figure 6D. Same-race White dyad with shared interests

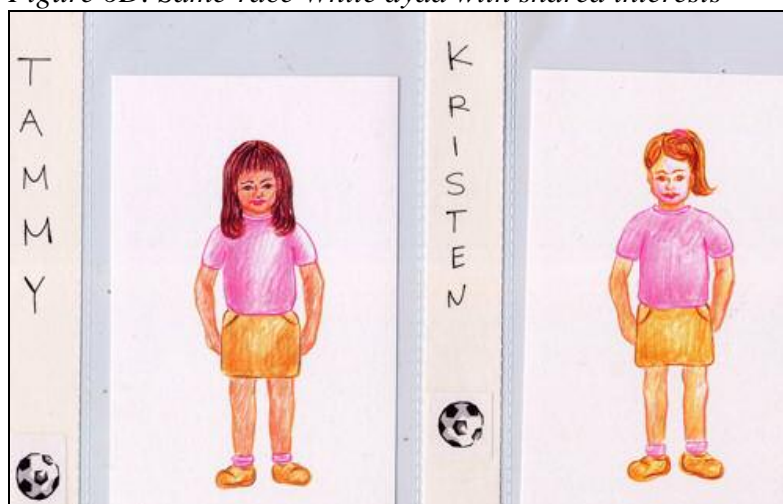


Figure 7D. Different-race dyad with unshared interests

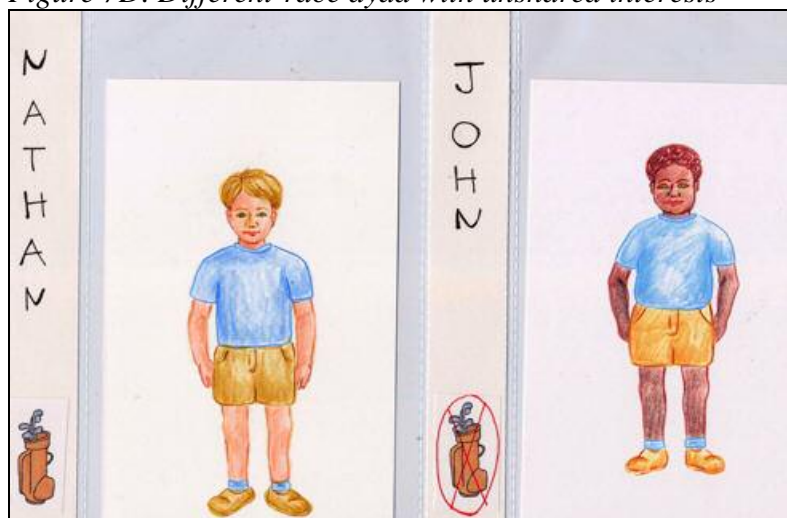


Figure 8D. Same-race Black dyad with unshared interests



Figure 9D. Same-race White dyad with unshared interests

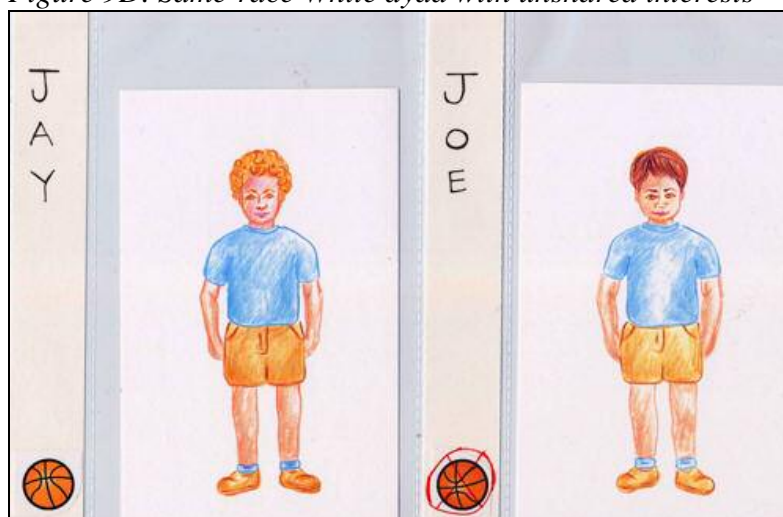


Figure 10D. Different-race dyad with shared interests



Figure 11D. Same-race dyad with shared interests

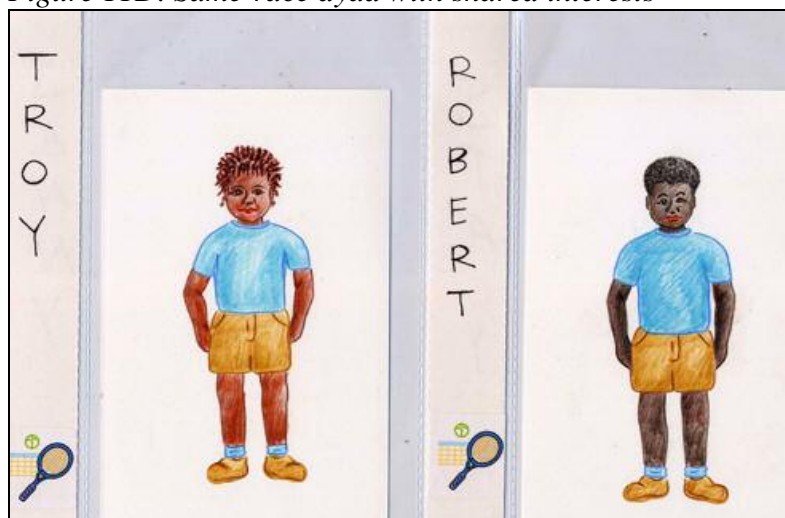
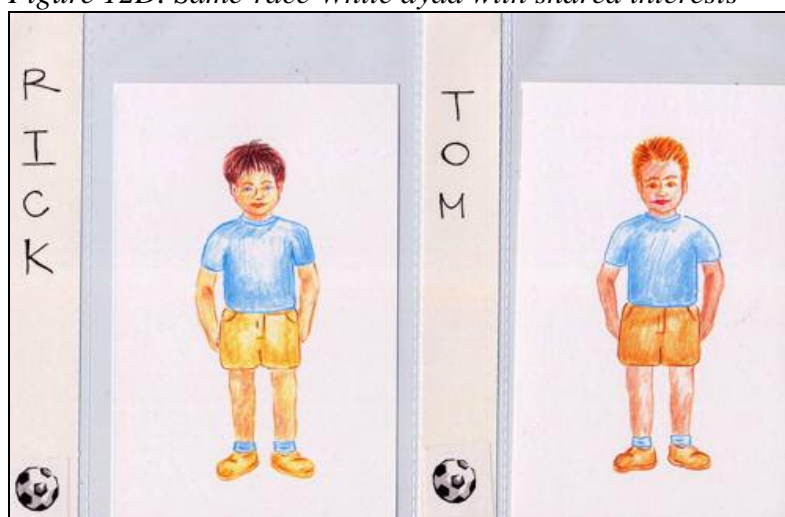


Figure 12D. Same-race White dyad with shared interests



## APPENDIX E

## Intergroup Contact Assessment Picture Cards

## Figure Captions

*Figure 1E.* Groups for the town, neighborhood, and family questions of the Intergroup Contact Assessment.

*Figure 2E.* Groups for the school, friendship, and clubs or teams questions of the Intergroup Contact Assessment.

Figure 1E.

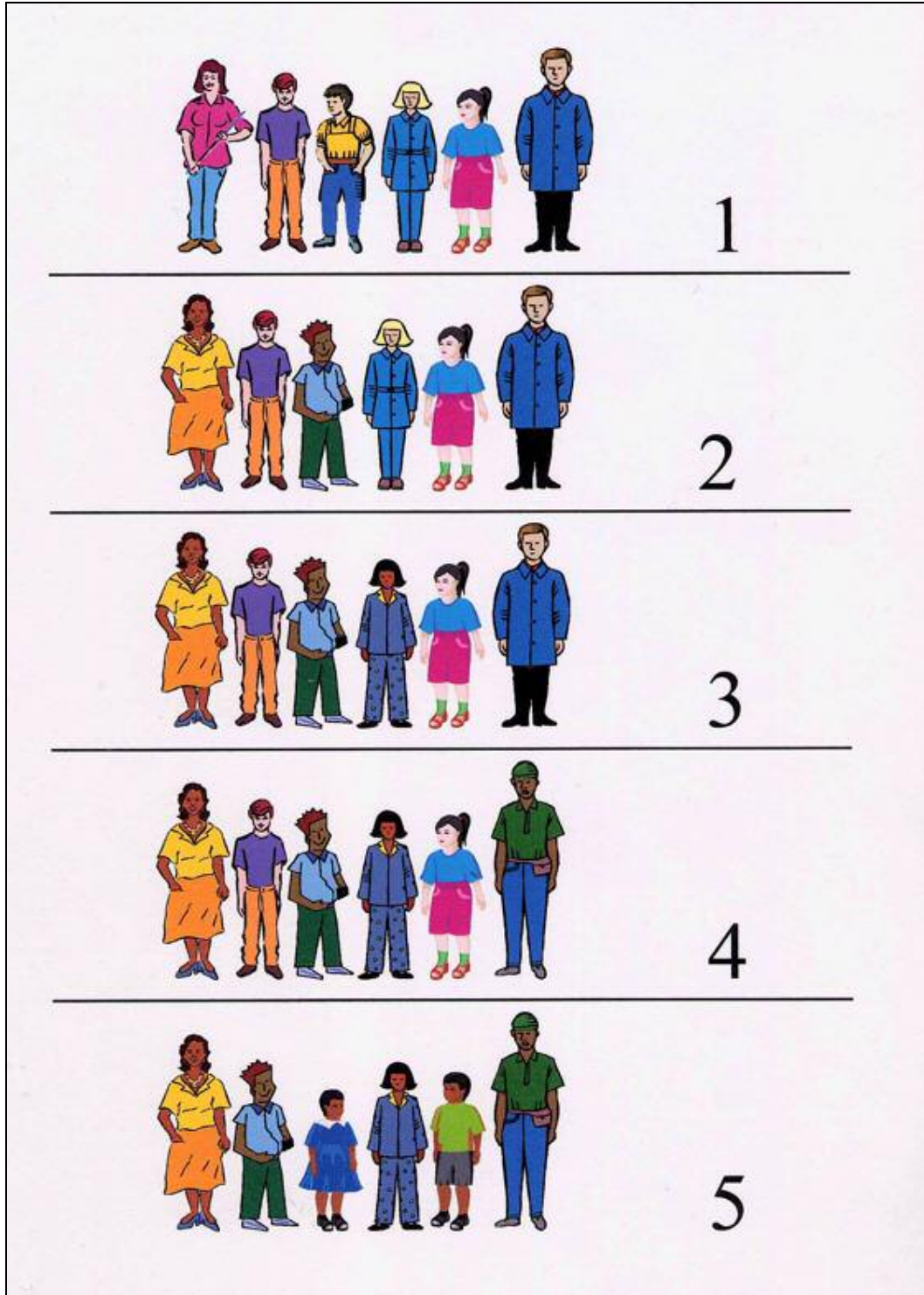
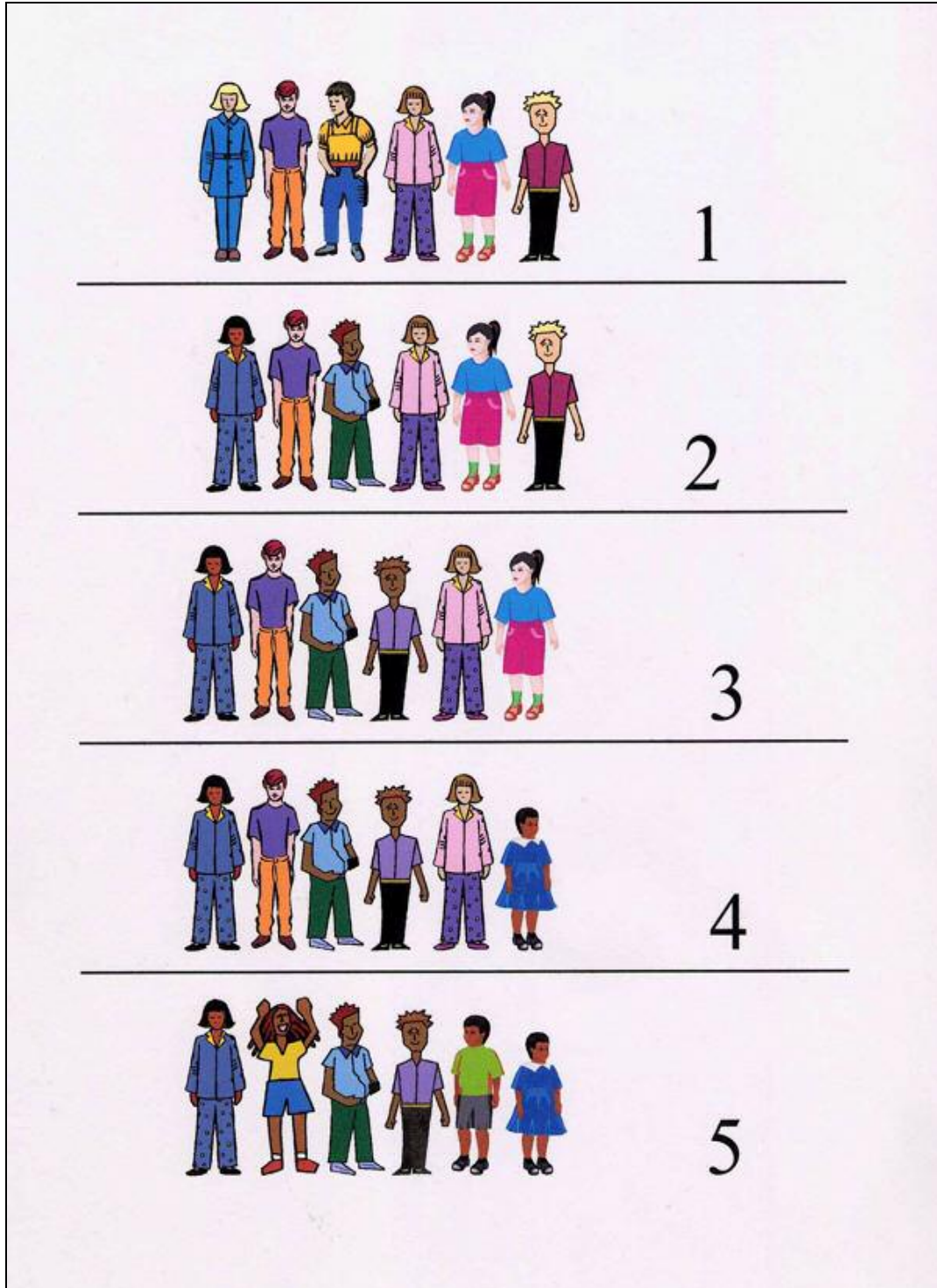




Figure 2E.



## REFERENCES

- Aboud, F. E. (1988). *Children and prejudice*. New York: Basil Blackwell.
- Aboud, F. E. (1992). Conflict and group relations. In C. U. Shantz & W. W. Hartup (Eds.), *Conflict in child and adolescent development* (pp. 356-379). Cambridge: Cambridge University Press.
- Aboud, F. E. (2003). The formation of in-group favoritism and out-group prejudice in young children: Are they distinct attitudes? *Developmental Psychology*, *39*, 48-60.
- Aboud, F. E., & Amato, M. (2001). Developmental and socialization influences on intergroup bias. In R. Brown & S. Gaertner (Eds.), *Blackwell handbook of social psychology: Intergroup processes* (pp. 65-85). Malden, MA: Blackwell.
- Aboud, F. E., & Doyle, A. B. (1996). Parental and peer influences on children's racial attitudes. *International Journal for Intercultural Relations*, *20*, 371-383.
- Aboud, F. E., & Levy, S. R. (2000). Interventions to reduce prejudice and discrimination in children and adolescents. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 269-293). Mahwah, NJ: Lawrence Erlbaum.
- Aboud, F. E., & Mendelson, M. J. (1996). Determinants of friendship selection and quality: Developmental perspectives. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 87-112). New York: Cambridge University Press.
- Aboud, F. E., Mendelson, M. J., & Purdy, P. (2003). Cross-race peer relations and friendship quality. *International Journal of Behavioral Development*.
- Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.

- Aronson, E., & Patnoe, S. (1997). *The jigsaw classroom*. New York: Longman.
- Astin, A. (1982). *Minorities in American education*. San Francisco, CA: Jossey-Bass.
- Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Mitchener, E. C., Bednar, L. L., et al. (1997). Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group? *Journal of Personality and Social Psychology*, *72*, 105-118.
- Bigler, R. S. (1995). The role of classification skill in moderating environmental influences on children's gender stereotyping. *Child Development*, *66*, 1072-1087.
- Bigler, R. S., Jones, L. C., & Lobliner, D. B. (1997). Social categorization and the formation of intergroup attitudes in children. *Child Development*, *68*, 530-543.
- Bigler, R. S., & Liben, L. S. (1993). A cognitive-developmental approach to racial stereotyping and reconstructive memory in Euro-American children. *Child Development*, *64*, 1507-1518.
- Black-Gutman, D., & Hickson, F. (1996). The relationship between racial attitudes and social-cognitive development in children: An Australian study. *Developmental Psychology*, *32*, 448-456.
- Braddock, J. H., & McPartland, J. M. (1989). Social-psychological processes that perpetuate racial segregation: The relationship between school and employment desegregation. *Journal of Black Studies*, *19*, 267-289.
- Brewer, M. B. (2001). Ingroup identification and intergroup conflict: When does ingroup love become outgroup hate? In R. D. Ashmore, L. Jussim, & D. Wilder

- (Eds.), *Social identity, intergroup conflict, and conflict resolution* (pp. 17-41).  
New York: Oxford University Press.
- Brewer, M. B., & Brown, R. J. (1998). Intergroup relations. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, pp. 554-594). New York: McGraw-Hill.
- Brewer, M. B., & Miller, N. (1984). Beyond the contact hypothesis: Theoretical perspectives on desegregation. In N. Miller & M. B. Brewer (Eds.), *Groups in contact: The psychology of desegregation* (pp. 281-302). Orlando, FL: Academic Press.
- Bukowski, W. M., Hoza, B., & Boivin, M. (1994). Measuring friendship quality during pre- and early adolescence: The development and psychometric properties of the Friendship Qualities Scale. *Journal of Social and Personal Relationships, 11*, 471-484.
- Buhrmester, D. (1990). Intimacy of friendship, interpersonal competence, and adjustment during preadolescence and adolescence. *Child Development, 61*, 1101-1111.
- Byrne, D. (1971). *The attraction paradigm*. New York: Academic.
- Byrne, D., & Griffitt, W. (1973). Interpersonal attraction. *Annual Review of Psychology, 24*, 317-336.
- Cameron, J. A., Alvarez, J. M., Ruble, D. N., & Fuligni, A. J. (2001). Children's lay theories about in-groups and out-groups: Reconceptualizing research on prejudice. *Personality and Social Psychology Review, 5*, 118-128.

- Caspi, A. (1984). Contact hypothesis and inter-age attitudes: A field study of cross-age contact. *Social Psychology Quarterly*, *47*, 74-80.
- Clark, A., Hocevar, D., & Dembo, D. (1980). The role of cognitive development in children's explanations and preferences for skin color. *Developmental Psychology*, *16*, 332-339.
- Clark, M. L., & Ayers, M. (1988). The role of reciprocity and proximity in junior high school friendships. *Journal of Youth and Adolescence*, *17*, 403-411.
- Clark, M. L., & Ayers, M. (1992). Friendship similarity during early adolescence: Gender and racial patterns. *The Journal of Psychology*, *126*, 393-405.
- Cook, S. W. (1984). Cooperative interaction in multiethnic contexts. In N. Miller & M. B. Brewer (Eds.), *Groups in contact: The psychology of desegregation* (pp. 155-185). Orlando, FL: Academic.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin*, *115*, 74-101.
- Crosby, F., Bromley, S., & Saxe, L. (1980). Recent unobtrusive studies of black and white discrimination and prejudice: A literature review. *Psychological Bulletin*, *87*, 546-563.
- Desforges, D. M., Lord, C. G., Ramsey, S. L., Mason, J. A., Van Leeuwen, M. D., West, S. C., & Lepper, M. R. (1991). Effects of structured cooperative contact on changing negative attitudes towards stigmatized groups. *Journal of Personality and Social Psychology*, *60*, 531-544.

- Devine, P., & Elliot, A. (1995). Are racial stereotypes really fading? The Princeton trilogy revisited. *Personality and Social Psychology Bulletin*, *21*, 1139-1150.
- Deutsch, F. M., & Mackesy, M. E. (1985). Friendship and the development of self-schemas: The effects of talking about others. *Personality and Social Psychology Bulletin*, *11*, 399-408.
- Dovidio, J. F., Brigham, J., Johnson, B. T., & Gaertner, S. L. (1996). Stereotyping, prejudice and discrimination. In N. Macrae, C. Stangor, & M. Hewstone (Eds.), *Stereotypes and stereotyping* (pp. 276-319). New York: Guilford.
- Dovidio, J. F., & Gaertner, S. L. (1996). Affirmative action, unintentional racial biases, and intergroup relations. *Journal of Social Issues*, *52*, 51-75.
- Dovidio, J. F., & Gaertner, S. L. (1998). On the nature of contemporary prejudice: The causes, consequences, and challenges of aversive racism. In J. Eberhardt & S. T. Fiske (Eds.), *Confronting racism: The problem and the response* (pp. 3-32). Newbury Park, CA: Sage.
- Dovidio, J. F., Gaertner, S. L., & Kawakami, K. (2003). Intergroup contact: The past, present, and the future. *Group Processes & Intergroup Relations*, *6*, 5-21.
- Dovidio, J. F., Kawakami, K. & Beach, K. (2001). Implicit and explicit attitudes: Examination of the relationship between measures of intergroup bias. In R. Brown & S. L. Gaertner (Eds.), *Blackwell handbook of social psychology: Vol. 4. Intergroup relations* (pp. 175-197). Oxford, England: Blackwell.
- Dovidio, J. F., Kawakami, K., & Gaertner, S. L. (2002). Implicit and explicit prejudice and interracial interaction. *Journal of Personality and Social Psychology*, *82*, 62-68.

- Dovidio, J. F., Kawakami, K., Johnson, C., Johnson, B., & Howard, A. (1997). The nature of prejudice: Automatic and controlled processes. *Journal of Experimental Social Psychology, 33*, 510-540.
- Doyle, A. B., & Aboud, F. E. (1995). A longitudinal study of white children's racial prejudice as a social-cognitive development. *Merrill-Palmer Quarterly, 41*, 209-228.
- Doyle, A. B., Beaudet, J., & Aboud, F. E. (1988). Developmental changes in the flexibility of children's ethnic attitudes. *Journal of Cross-Cultural Psychology, 19*, 3-18.
- DuBois, D. L., & Hirsch, B. J. (1990). School and neighborhood friendship patterns of Blacks and Whites in early adolescence. *Child Development, 61*, 524-536.
- Duncan, B. L. (1976). Differential social perception and attribution of intergroup violence: Testing the lower limits of stereotyping of Blacks. *Journal of Personality and Social Psychology, 34*, 590-598.
- Epstein, J. L. (1985). After the bus arrives: Resegregation in desegregated schools. *Journal of Social Issues, 41*, 23-43.
- Epstein, J. L. (1986). Friendship selection: Developmental and environmental influences. In E. C. Mueller & C. R. Cooper (Eds.), *Process and outcome in peer relationships* (pp. 129-160). New York: Academic Press.
- Ellison, C. G., & Powers, D. A. (1994). The contact hypothesis and racial attitudes among Black Americans. *Social Science Quarterly, 75*, 385-400.
- Finkelstein, N. W., & Haskins, R. (1983). Kindergarten children prefer same-color peers. *Child Development, 54*, 502-508.

- Fisher, C. B., Jackson, J. F., & Villarruel, F. A. (1998). The study of African American and Latin American children and youth. In S. Damon (Ed.), *Handbook of child psychology* (Vol. 1, 5<sup>th</sup> ed.), & R. Lerner (Vol. Ed.), *Theoretical models of human development*. New York: Wiley.
- Frankenberg, E., Lee, C., & Orfield, G. (2003). *A multiracial society with segregated schools: Are we losing the dream?* Retrieved from Harvard University, The Civil Rights Project web site:  
<http://www.civilrightsproject.harvard.edu/research/reseg03/resegregation03.php>
- Gaertner, S. L., & Dovidio, J. F. (1986). The aversive form of racism. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 61-89). Orlando, FL: Academic Press.
- Glaeser, E. L., & Vigdor, J. L. (2001). *Racial segregation in the 2000 census: Promising news*. Washington, DC: The Brookings Institution.
- Gottman, J. M. (1983). How children become friends. *Monographs of the Society for Research in Child Development*, 48(3, Serial No. 201).
- Graham, J. A., & Cohen, R. (1997). Race and sex factors in children's sociometric ratings and friendship choices. *Social Development*, 6, 355-372.
- Graham, J. A., Cohen, R., Zbikowski, S. M., & Secrist, M. E. (1998). A longitudinal investigation of race and sex as factors in children's classroom friendship selection. *Child Study Journal*, 28, 245-266.
- Graves, J. L. (2001). *The emperor's new clothes: Biological theories of race at the millennium*. New Brunswick, NJ: Rutgers University Press.



- Greenfield, P., & Cocking, R. (1994). *The cross-cultural roots of minority child development*. Mahwah, NJ: Erlbaum.
- Hallinan, M. T., & Kubitschek, W. N. (1990). Sex and race effects of the response to intransitive sentiment relations. *Social Psychology Quarterly*, *53*, 252-263.
- Hallinan, M. T., & Teixeira, R. A. (1987). Students' interracial friendships: Individual characteristics, structural effects and racial differences. *American Journal of Education*, *95*, 563-583.
- Hallinan, M. T., & Smith, S. S. (1985). The effects of classroom racial composition on students' interracial friendliness. *Social Psychology Quarterly*, *48*, 3-16.
- Hallinan, M. T., & Sorensen, A. B. (1985). Ability grouping and student friendships. *American Educational Research Journal*, *22*, 485-499.
- Hallinan, M. T., & Williams, R. A. (1987). The stability of students' interracial friendships. *American Sociological Review*, *52*, 653-664.
- Hallinan, M. T., & Williams, R. A. (1989). Interracial friendship choice in secondary schools. *American Sociological Review*, *54*, 67-78.
- Hamm, J. V. (2000). Do birds of a feather flock together? The variable bases for African American, Asian American, and European American adolescents' selection of similar friends. *Developmental Psychology*, *36*, 209-219.
- Hartup, W. W. (1983). Peer relations. In E. M. Hetherington (Ed.) & P.H. Mussen (Series Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (pp. 103-196). New York: Wiley.
- Hartup, W. W. (1993). Adolescents and their friends. In B. Laursen (Ed.), *Close friendships in adolescence* (pp. 3-22). San Francisco: Jossey Bass.

- Herek, G. M., & Capitano, J. P. (1996). "Some of my best friends": Intergroup contact, concealable stigma, and heterosexuals' attitudes toward gay men and lesbians. *Personality and Social Psychology Bulletin*, 22, 412-424.
- Hill, C., & Stull, D. E. (1981). Sex differences in effects of social and value similarity in same-sex friendship. *Journal of Personality and Social Psychology*, 41, 488-502.
- Hirschfeld, L. A. (1995). Do children have a theory of race? *Cognition*, 54, 209-252.
- Hodson, G., Dovidio, J. F., & Gaertner, S. L. (2002). The processes in racial discrimination: Differential weighting of conflicting information. *Personality and Social Psychology Bulletin*, 28, 460-471.
- Howes, C., & Wu, F. (1990). Peer interactions and friendships in an ethnically diverse school setting. *Child Development*, 61, 537-541.
- Jackman, M. R., & Crane, M. (1986). "Some of my best friends are Black...": Interracial friendship and White's racial attitudes. *Public Opinion Quarterly*, 50, 459-486.
- Johnson, D. J. (1992). Racial preference and biculturality in biracial preschoolers. *Merrill-Palmer Quarterly*, 38, 233-244.
- Kandel, D. B. (1978). Similarity in real-life adolescent friendship pairs. *Journal of Personality and Social Psychology*, 36, 306-312.
- Katz, P. A. (1973). Stimulus predifferentiation and modification of children's racial attitudes. *Child Development*, 44, 232-237.

- Katz, P. A. (1982). Development of children's racial awareness and intergroup attitudes. In L. G. Katz (Ed.), *Current Topics in Early Childhood Education* (Vol. 4, pp. 17-54). Norwood, NJ: Ablex Publishing Corporation.
- Katz, P. A., & Kofkin, J. A. (1997). Race, gender, and young children. In S. S. Luthar, J. A. Burack, D. Cicchetti, & J. Weisz (Eds.), *Developmental psychopathology: Perspectives on adjustment, risk, and disorder* (pp. 51-74). New York: Cambridge University Press.
- Katz, P. A., Sohn, M., & Zalk, S. R. (1975). Perceptual concomitants of racial attitudes in urban grade-school children. *Developmental Psychology, 11*, 135-144.
- Kerner, M., & Aboud, F. E. (1998). The importance of friendship qualities and reciprocity in a multiracial school. *The Canadian Journal of Research in Early Childhood Education, 7*, 117-125.
- Khmelkov, V. T., & Hallinan, M. T. (1999). Organizational effects on race relations in schools. *Journal of Social Issues, 55*, 627-645.
- Killen, M., Lee-Kim, J., McGlothlin, H., & Stangor, C. (2002). How children and adolescents evaluate gender and racial exclusion. *Monographs of the Society for Research in Child Development 67*(4, Serial No. 271). Oxford, England: Blackwell Publishing.
- Killen, M., & Stangor, C. (2001). Children's reasoning about social inclusion and exclusion in gender and race peer group contexts. *Child Development, 72*, 174-186.
- Kubitschek, W. N., & Hallinan, M. T. (1998). Tracking and students' friendships. *Social Psychology Quarterly, 61*, 1-15.

- Kupersmidt, J. B., DeRosier, M. E., & Patterson, C. P. (1995). Similarity as the basis for children's friendships: The roles of sociometric status, aggressive and withdrawn behavior, academic achievement, and demographic characteristics. *Journal of Social and Personal Relationships, 12*, 439-452.
- Lawrence, V. W. (1991). Effect of socially ambiguous information on White and Black children's behavioral and trait perceptions. *Merrill-Palmer Quarterly, 37*, 619-630.
- Lea, M., & Duck, S. (1982). A model for the role of similarity of values in friendship development. *British Journal of Social Psychology, 21*, 301-310.
- Lemerise, E. (2004, April). Emotion and social information processing. Paper presented at the Center for Children, Relationships, and Culture, University of Maryland, College Park, MD.
- Levin, S., van Laar, C., & Sidanius, J. (2003). The effects of ingroup and outgroup friendships on ethnic attitudes in college: A longitudinal study. *Group Processes & Intergroup Relations, 6*, 76-92.
- Livesley, W. J., & Bromley, D. B. (1973). *Person perception in childhood and adolescence*. New York: Wiley.
- Margie, N., Killen, M., Sinno, S., & McGlothlin, H. (2004). *Minority children's intergroup attitudes about peer relationships*. Unpublished manuscript, University of Maryland.
- McGlothlin, H., Killen, M., & Edmonds, C. (in press). European-American children's intergroup attitudes about peer relationships. *British Journal of Developmental Psychology*.

- Mackie, D. M., Hamilton, D. L., Susskind, J., & Rosselli, F. (1996). Social psychological foundations of stereotype formation. In C. N. Macrae, C. Stangor, & M. Hewstone (Eds.), *Stereotypes and stereotyping* (pp. 41-78). New York: Guilford Press.
- Mullen, B., & Hu, L. (1989). Perceptions of ingroup and outgroup variability: A meta-analysis integration. *Basic and Applied Psychology, 10*, 233-252.
- Newcomb, T. M. (1961). *The acquaintance process*. New York: Holt, Rinehart and Winston.
- Ogbu, J. (1994). From cultural differences to differences in cultural frame of reference. In P. Greenfield & R. Cocking (Eds.), *Cross-cultural roots of minority child development* (pp. 365-391). Mahwah, NJ: Erlbaum.
- Oliner, S. P., & Oliner, P. M. (1988). *The altruistic personality: Rescuers of Jews in Nazi Europe*. New York: Free Press.
- Orfield, G. (2001). *Schools more separate: Consequences of a decade of resegregation*. Retrieved from Harvard University, The Civil Rights Project Web site: [http://www.civilrightsproject.harvard.edu/research/deseg/separate\\_schools01.php](http://www.civilrightsproject.harvard.edu/research/deseg/separate_schools01.php)
- Ostrom, T. M., & Sedikides, C. (1992). Out-group homogeneity effects in natural and minimal groups. *Psychological Bulletin, 112*, 536-552.
- Park, B., Ryan, C. S., & Judd, C. M. (1992). The role of meaningful subgroups in explaining differences in perceived variability for in-groups and out-groups. *Journal of Personality and Social Psychology, 63*, 553-567.

- Parker, J.G., & Asher, S. R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin*, 102, 357-389.
- Patchen, M. (1982). *Black-White contact in schools: Its social and academic effects*. West Lafayette, IN: Purdue University Press.
- Patchen, M. (1983). Student's own racial attitudes and those of peers of both races, as related to interracial behavior. *Sociology and Social Research*, 68, 59-77.
- Pettigrew, T. F. (1971). *Racially separate or together?* New York: McGraw-Hill.
- Pettigrew, T. F. (1997a). Generalized intergroup contact effects on prejudice. *Personality and Social Psychological Bulletin*, 23, 173-185.
- Pettigrew, T. F. (1997b). The affective component of prejudice: Empirical support for the new view. In S. A. Tuch & J. K. Martin (Eds.), *Racial attitudes in the 1990's: Continuity and change* (pp. 76-90). Westport, CT: Praeger.
- Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49, 65-85.
- Pettigrew, T. F., & Meertens, R. W. (1995). Subtle and blatant prejudice in western Europe. *European Journal of Social Psychology*, 25, 57-75.
- Pettigrew, T. F., & Tropp, L. R. (2000). Does intergroup contact reduce prejudice? Recent meta-analytic findings. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 93-112). Mahwah, NJ: Lawrence Erlbaum.
- Powers, D. A., & Ellison, C. G. (1995). Interracial contact and black racial attitudes: The contact hypothesis and selectivity bias. *Social Forces*, 74, 205-226.

- Putallaz, M., & Wasserman, A. (1990). Children's entry behavior. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 60-89). Cambridge, MA: Harvard University Press.
- Quattrone, G. A. (1986). On the perception of group's variability. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 25-48). Chicago: Nelson-Hall.
- Quattrone, G. A., & Jones, E. E. (1980). The perception of variability within ingroups and outgroups: Implications for the law of small numbers. *Journal of Personality and Social Psychology*, *38*, 141-152.
- Ramsey, P. G., & Myers, L. C. (1990). Salience of race in young children's cognitive, affective, and behavioral responses to social environments. *Journal of Applied Developmental Psychology*, *11*, 49-67.
- Reich, C., & Purbhoo, M. (1975). The effect of cross-cultural contact. *Canadian Journal of Behavioural Science*, *7*, 313-327.
- Rholes, W. S., Ruble, D. N. (1984). Children's understanding of the dispositional characteristics of others. *Child Development*, *55*, 550-560.
- Rotenberg, K. J. (1980). Children's use of intentionality in judgments of character and disposition. *Child Development*, *51*, 282-284.
- Rothbart, M., & John, O. P. (1985). Social categorization and behavioral episodes: A cognitive analysis of the effects of intergroup contact. *Journal of Social Issues*, *41*, 81-104.
- Rubin, Z. (1980). *Children's friendships*. Cambridge, MA: Harvard University.

- Rubin, K. H., Bukowski, W., & Parker, J. (1998). Peer interactions, relationships and groups. In W. Damon (Series Ed.), *Handbook of Child Psychology: Vol 3. Socialization*,(pp. 619-700) (N. Eisenberg, Vol. Ed). New York: Wiley.
- Sagar, H. A., & Schofield, J. W. (1980). Racial and behavioral cues in Black and White children's perceptions of ambiguously aggressive acts. *Journal of Personality and Social Psychology*, *39*, 590-598.
- Schofield, J. W. (1989). *Black and White in school: Trust, tension or tolerance?* New York: Teachers College Press.
- Schofield, J. W. (1991). School desegregation and intergroup relations: A review of the literature. In G. Grant (Ed.), *Review of research in education* (Vol. 17, pp. 335-409). Washington, DC: American Educational Research Association.
- Schofield, J. W. (1995a). Improving intergroup relations among students. In J. A. Banks & C. A. McGee Banks (Eds.), *Handbook of research on multicultural education* (pp. 635-646). New York: Macmillan.
- Schofield, J. W. (1995b). Review of research on school desegregation's impact on elementary and secondary school students. In J. A. Banks & C. A. McGee Banks (Eds.), *Handbook of research on multicultural education* (pp. 597-616). New York: Macmillan.
- Schofield, J. W., & Eurich-Fulcer, R. (2001). When and how school desegregation improves intergroup relations. In R. Brown & S. Gaertner (Eds.), *Blackwell's handbook of social psychology: Intergroup processes* (pp. 475-494). Malden, MA: Blackwell.



- Schofield, J. W., & Francis, W. D. (1982). An observational study of peer interaction in racially-mixed "accelerated" classrooms. *The Journal of Educational Psychology, 74*, 722-732.
- Schofield, J. W., & Sagar, H. A. (1977). Peer interaction patterns in an integrated middle school. *Sociometry, 40*, 130-138.
- Schofield, J. W., & Whitley, B. E. (1983). Peer nominations vs. rating scale measurement of children's peer preferences. *Social Psychology Quarterly, 46*, 242-251.
- Schuman, H., Steeh, C., Bobo, L., & Kryson, M. (1997). *Racial attitudes in America: Trends and interpretation*. Cambridge, MA: Harvard University Press.
- Shrum, W., Cheek, N. H., & Hunter, S. M. (1988). Friendship in school: Gender & racial homophily. *Sociology of Education, 61*, 227-239.
- Slavin, R. W., & Cooper, R. (1999). Improving intergroup relations: Lessons learned from cooperative learning programs. *Journal of Social Issues, 55*, 647-663.
- Slavin, R. W., & Madden, N. A. (1979). School practices that improve race relations. *American Educational Research Journal, 16*, 169-180.
- Smetana, J. G. (1995). Morality in context: Abstractions, ambiguities and applications. In R. Vasta (Ed.), *Annals of Child Development* (Vol. 10). London: Jessica Kingsley.
- Smetana, J. G. (1997). Parenting and the development of social knowledge reconceptualized: A social domain analysis. In J. E. Grusec & L. Kuczynski (Eds.), *Parenting and children's internalization of values* (pp. 162-192). New York: Wiley.

- St. John, N. H. (1975). *School desegregation: Outcomes for children*. New York: Wiley.
- Stephan, W. G., & Stephan, C. W. (1984). The role of ignorance in intergroup relations. In N. Miller & M. B. Brewer (Eds.), *Groups in contact: The psychology of desegregation* (pp. 229-255). Orlando, FL: Academic Press.
- Stephan, W. G., & Stephan, C. W. (1996). *Intergroup relations*. Boulder, CO: Westview Press.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Tisak, M. (1995). Domains of social reasoning and beyond. In R. Vasta (Ed.), *Annals of Child Development* (Vol. 11). London: Jessica Kingsley.
- Turiel, E. (1983). *The development of social knowledge: Morality and convention*. Cambridge, England: Cambridge University Press.
- Turiel, E. (1998). The development of morality. In W. Damon (Series Ed.) & N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5<sup>th</sup> ed., pp.863-932). New York: Wiley.
- Turiel, E., Killen, M., & Helwig, C. C. (1987). Morality: Its structure, functions, and vagaries. In J. Kagan & S. Lamb (Eds.), *The emergence of morality in young children* (pp.155-242). Chicago: University of Chicago Press.
- United States Census Bureau. (2000). Retrieved from <http://www.census.gov>.
- Wagner, U., Hewstone, M., & Machleit, U. (1989). Contact and prejudice between Germans and Turks. *Human Relations*, 42, 561-574.

- Wainryb, C., Shaw, L. A., Laupa, M., & Smith, K. R. (2001). Children's, adolescents', and young adults' thinking about different types of disagreements. *Developmental Psychology, 37*, 373-386.
- Werner, C., & Parmelee, P. (1979). Similarity of activity preferences among friends: Those who play together stay together. *Social Psychology Quarterly, 42*, 62-66.
- Wilder, D. A., & Thompson, J. E. (1980). Intergroup contact with independent manipulations of in-group and out-group interaction. *Journal of Personality and Social Psychology, 38*, 589-603.
- Williams, J. E., Best, D. L., Boswell, D. A., Mattson, L. A., & Graves, D. J. (1975). Preschool racial attitude measure II. *Educational and Psychological Measurement, 35*, 3-18.
- Williams, R. M., Jr. (1947). *The reduction of intergroup tensions*. New York: Social Science Research Council.
- Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology, 73*, 73-90.
- Yee, M. D., & Brown, R. (1992). Self-evaluation and intergroup attitudes in children aged three to nine. *Child Development, 63*, 619-629.
- Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology, 9*, 1-27.