

The power of personalization:  
Using a personalized storybook depicting a cross-group friendship to improve White children's  
attitudes, feelings, and behaviors toward Black and Hispanic peers

by

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B.A., Buena Vista University, 2007  
M.S., University of Northern Iowa, 2009

AN ABSTRACT OF A DISSERTATION

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Department of Psychological Sciences  
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## **Abstract**

In the current study, 141 White third- and fourth-grade children were asked to provide their attitudes, feelings, and behaviors toward White, Black, and Hispanic peers several days before and after being read a personalized or non-personalized storybook that depicted the children, themselves (personalized) or an unfamiliar White character (non-personalized), in a cross- or same-race friendship with a target Black (cross-race) or White (same-race) storybook character. Further, children were asked to provide their attitudes, feelings, and behaviors toward the target Black or White storybook character immediately before and after being read the storybook, and report how much they felt imaginatively transported into the narrative of the story after being read the storybook. In general, and consistent with Harwood's (2010) two-dimensional framework of contact space, it was predicted that a personalized storybook that depicted the children, themselves, in a cross-race friendship with a Black storybook character would be more effective than a non-personalized version of the storybook at improving their ratings of the Black storybook character as well as their attitudes, feelings, and behaviors toward the Black and Hispanic peers. Although analyses of the data yielded several interesting findings, no support was found for the main predictions involving the potential impact of a personalized storybook on White children's ratings of the Black storybook character, Black peers, and Hispanic peers. In fact, the only significant effect of the personalization of the storybook that merits attention involved the children's imaginative transportation into the cross-race friendship story. Specifically, and consistent with prediction, children in the cross-race friendship storybook condition reported feeling more imaginatively transported into the narrative of the storybook when it was personalized than when it was not personalized. In sum, although personalization was indeed "powerful" in elevating White children's imaginative transportation into a storybook

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## Chapter 1 - Introduction

Racial prejudice continues to be a pervasive problem in American society. Although historically conceptualized as a deep-seated hostility or an antipathy toward a racial group or members of a racial group based on a person's faulty presuppositions and generalizations about the racial group (Allport, 1954), current perspectives on prejudice suggest that the expression of racial prejudice is much more subtle (McConahay, 1986), complex (Devine, 1989), and multidimensional in nature (Pfeifer, Brown, & Juvonen, 2007) than Allport (1954) originally conceived. For purposes of the current work, racial prejudice will be broadly defined as a negative evaluation or unfavorable reaction to a racial group or members of a racial group due to their membership in the group (Aboud, 1988; Crandall & Eshelman, 2003). Racial prejudice can be evidenced by an individual's expression of biased attitudes and negative affect, endorsement of stereotyped beliefs, and/or display of biased or discriminatory behavior toward a racial group or members of a racial group because of their membership in that group (Brown, 1995).

Although racial prejudice is a problem that exists across all age groups, it is especially concerning that children begin demonstrating an awareness of racial differences and biased perceptions concerning race at a very early age (Aboud, 1988). For instance, research demonstrates that many children begin to display intergroup biases by three or four years of age (Katz & Kofkin, 1997). Although the exact mechanisms by which prejudice originates is still an issue of debate (see Levy & Hughes, 2009 for review), it is now well understood that prejudice is the result of both cognitive and social factors that lead some children to (a) hold *essentialist* beliefs concerning racial outgroups (i.e., beliefs that members of a racial outgroup share important, inherent qualities; Gelman, 2003) and (b) demonstrate biased responses toward those identified as part of the racial outgroup (Aboud, 2003).

Despite an impressive volume of scholarship dedicated to reducing children's racial prejudice (see Paluck & Green, 2009 for review), there remains only a handful of theoretically based intervention techniques that demonstrate practical utility in reducing children's racial prejudice. Problematically, the intervention techniques that are most commonly employed (especially among educators) often demonstrate inconsistent effects (Banks, 1991; Bigler, 1999), and those techniques deemed to be effective by psychological theory and research are often the hardest to implement (Paluck & Green, 2009; Pfiefer et al., 2007). For instance, although educators commonly employ relatively passive techniques to reduce White children's racial prejudice toward minority groups (e.g., integrating multicultural material into their curricula so children can be exposed to and learn about racial minority groups; Banks, 2004), such passive techniques have been found to be largely ineffective at reducing White children's racial prejudice (Bigler, 1999; Pfiefer et al., 2007). In contrast, interventions in which children must actively interact with racial outgroup members to accomplish a shared goal, although highly effective in reducing prejudice (Paluck & Green, 2009), are not always practical, especially in areas or schools that are racially homogenous. Therefore, the present study was designed to examine a technique that (a) allows White children to vicariously interact with a racial outgroup member, regardless of whether the children live in racially heterogeneous or homogenous areas or schools, and (b) can be easily employed by educators and parents alike. More specifically, the present study examined whether reading a storybook to White children depicting the children, themselves, in a cross-group friendship with a Black storybook character will be effective in reducing their prejudice toward peers who are members of racial minority outgroups.



## **Development of Racial Prejudice**

Prior to discussing the various prejudice reduction strategies that have been created to reduce children's racial prejudice and the intervention strategy that was examined in the present study, there is a need to first discuss the origins of racial prejudice. The goals of this section are to (a) describe how some White children come to hold prejudiced attitudes toward various racial minority groups and (b) identify the age at which an intervention would presumably be most impactful in reducing White children's racial prejudice.

Although there have been many theories that have been proposed to explain the development of racial prejudice in children (see Levy & Hughes, 2009 for review), current perspectives almost uniformly suggest that children's racial prejudice is the result of both social and cognitive factors that lead them to socially categorize others into groups and endorse stereotyped beliefs concerning those groups (Aboud, 2005; Bigler & Hughes, 2009; Nesdale, 2008). For instance, current conceptualizations concerning the origins of children's racial prejudice suggest that young children naturally demonstrate essentialist thinking concerning salient visual characteristics of others (e.g., racial markers) due to age-related cognitive deficits (e.g., egocentrism; Aboud, 1988, 2009). Furthermore, racial group membership is believed to become especially salient to children because of socialization influences that either directly state (e.g., through explicit messages labeling groups) or indirectly imply (e.g., through implicit messages concerning group status) that race is a culturally meaningful social category that distinguishes among individuals (Bigler & Liben, 2007). The extent to which children's racial prejudice is influenced by both social and cognitive factors is perhaps most clearly demonstrated by Nesdale's (2001, 2004, 2008) Social Identity Development Theory, which not only provides an explanation of how children come to demonstrate racial prejudice, but also identifies when

children may be most likely to benefit from interventions attempting to reduce their racial prejudice.

### **Social Identity Development Theory and the Development of Racial Prejudice**

Borrowing heavily from Social Identity Theory (SIT: Turner, Brown, & Tajfel, 1979), Nesdale (1999, 2001) proposed that children's racial attitudes are greatly influenced by their inherent need to pursue a positive social identity. Like its adult counterpart (i.e., SIT), Social Identity Development Theory suggests that children come to identify with multiple social groups, and this identification is highly dependent on the social context. Although Nesdale's (1999, 2001, 2004) Social Identity Development Theory (SIDT) focuses on the pivotal role that context plays in eliciting a particular valued social identity, leading to a child's expression of prejudice, SIDT also contends that children experience age-related changes in their attitudes toward racial outgroup members due to cognitive development.

In summarizing decades of research, Nesdale (1999, 2001) proposes that children do not reliably categorize others according to race until they are approximately three years old. Although research indicates that infants appear to notice differences between racial groups as early as six months of age (Katz, 2003), any negative response to a specific racial outgroup member prior to three years of age is thought to be driven by a fear of the strange and unfamiliar, not by prejudice per se (Aboud, 1988; Katz, 2003). According to Nesdale (1999) and others (Aboud, 2005; Banaji, Baron, Dunham, & Olson, 2008; Bigler & Liben, 2007; Brown, 1995), children do not demonstrate an emerging and active awareness of race as a social category until they reach three or four. At this time, children begin to demonstrate the ability to identify and categorize others according to race, especially for those racial groups that have racial markers that are perceived to be most perceptually discriminable (e.g., skin tone and facial structure).

Although this undoubtedly occurs in part because of children's burgeoning abilities for classification (Aboud, 1988) and verbal communication (Katz, 2003), a popular theoretical view (e.g., Bigler & Liben, 2007) suggests that race, in particular, becomes a meaningful social category because racial group membership is commonly used within the child's culture (i.e., either through explicit labels or implicit messages) to distinguish among groups of people. It should be noted, however, that although children begin to accurately identify others by racial markers by around three or four years of age, they may not reach adult-like proficiency in categorizing individuals by race until seven or eight (Aboud, 1988; Bigler & Liben, 1993; Doyle & Aboud, 1995), especially with regard to racial groups that do not have perceptually discriminable racial markers.

Beyond learning how to categorize themselves and others as belonging to specific racial groups, three- to four-year-old children also come to identify with a racial ingroup, making the child's own racial group an integral part of his/her social self-concept or social identity (Nesdale, 2008). As suggested by SIDT, this subjective self-identification with their own racial group invariably leads children to demonstrate characteristic and pronounced biases in their thoughts and attitudes toward racial outgroups and racial outgroup members, typically by the time they reach five years of age. At this time in children's development, their subjective identification with a racial group or groups leads them to view themselves (and similar others) as interchangeable representatives of a larger racial group rather than as individuals, especially in intergroup contexts that emphasize group membership (Nesdale, 2008). Because children around the age of five are now identifying themselves according to a shared social identity from which they can derive social self-esteem (Nesdale & Flessner, 2001), they actively employ biased social comparisons that accentuate the differences between members of their racial ingroup and

members of a racial outgroup such that their racial ingroup is perceived in a more positive manner (Nesdale, 2008; Nesdale & Flesser, 2001). Therefore, Nesdale (2001, 2004, 2008) argues that five- to seven-year-old children's limited cognitive abilities, subjective identification with a racial ingroup, and inherent need for positive distinctiveness help to explain why they demonstrate pervasive ingroup favoritism in their social judgments and behaviors within intergroup contexts (Aboud, 1988; Katz, 2003; Nesdale, 2001, 2004, 2008).

By around seven or eight years of age, children's burgeoning cognitive abilities (e.g., increased ability for perspective taking and ability to classify others according to multiple characteristics; Aboud, 1988; Brown, 1995; Katz, 1976; Semaj, 1980) as well as their heightened social understanding and internalization of group norms (Abrams, Rutland, & Cameron, 2003; Brown & Bigler, 2004) cause them to display *decreased* levels of racial prejudice (Aboud, 2005; Brown, 1995; Katz, 2003; Levy & Killen, 2008; Nesdale, 1999, 2008; Raabe & Beelmann, 2011). By the time they are seven years of age (i.e., as they enter Piaget's concrete operational stage of cognitive development; Aboud, 1988; Piaget & Weil, 1951), children become less egocentric and are better able to view people as individuals. By seven or eight years of age, children also become aware of and begin to internalize social norms indicating that the display of racial prejudice is not socially appropriate behavior (Abrams et al., 2003; Brown & Bigler, 2004; Killen & Stangor, 2001; Rutland, 2004; Rutland, Cameron, Milne, & McGeorge, 2005). As a result, children tend to hold less essentialist beliefs concerning racial outgroups and begin to regulate their expression of particular attitudes and behaviors in accordance with their burgeoning awareness of social norms (Aloise-Young, 1993; Banerjee, 2002; Rutland et al., 2005). Consequently, children begin demonstrating much more adult-like expressions of prejudice once they reach seven or eight years of age because, just like adults (see Crandall &

Eshleman, 2003; Crandall, Eshleman, & O'Brien, 2002), they are beginning to be influenced by various social factors that act to either suppress or justify the expression of racial prejudice (Nesdale, 2007).

Although the extent to which children express racial prejudice characteristically declines after they reach seven or eight years of age (Raabe & Beelmann, 2011), some children continue to hold racially prejudiced attitudes well into their adult years (Katz, 2003; Nesdale, 2001). According to SIDT, the degree to which a child holds and demonstrates racially prejudiced attitudes after the age of seven or eight depends on various social factors within the child's environment. For instance, children's racial prejudice after seven or eight years of age is highly influenced by the degree to which the child identifies with his/her racial ingroup (Bennett, Lyons, Sani, & Barrett, 1998; Pfeifer et al., 2007), whether the child's ingroup holds racial prejudice as a norm or expectation (Nesdale, Durkin, Maass, & Griffiths, 2005; Rutland, 2004; Rutland et al., 2005), and the extent to which the child's ingroup believes that their group is threatened in some way by members of a racial outgroup (Nesdale et al., 2005). Accordingly, middle childhood (i.e., approximately 7 to 11 years old) is proposed by many researchers (e.g., Cameron, Alvarez, Ruble, & Fuligini, 2001; Granic & Patterson, 2006; Nesdale, 2008; Raabe & Beelman, 2011) to be a sensitive period for environmental influences on prejudice because children's social judgments are no longer pervasively limited by their cognitive development.

In sum, the research examining the development of children's racial prejudice (e.g., Aboud, 1988; Nesdale, 1999, 2001, 2004, 2007, 2008) suggests that children tend to demonstrate an age-related change in their expression of racial prejudice around seven years old. Although children in early childhood (i.e., approximately 3 to 6 years old) demonstrate marked and pervasive racial prejudice (Brown, 1995; Duckitt, Wall, & Pokroy, 1999), children in middle

childhood (i.e., approximately 7 to 11 years old) characteristically demonstrate considerably less racial prejudice (Doyle & Aboud, 1995; Raabe & Beelmann, 2011). Further, middle childhood is a time period during which children begin to display clear individual differences in their levels of racial prejudice (Raabe & Beelman, 2011), and these individual differences are more clearly associated with social than cognitive influences (Nesdale, 2008). Therefore, social interventions attempting to improve children's reactions to peers who are members of racial outgroups may be especially effective among children in middle childhood, a time period when children's racial prejudice is less pronounced than at an earlier age and when children are especially sensitive to social influences.

### **Intervention Strategies**

Considering that racial prejudice has historically been a pervasive societal problem in the United States, there exists a wide range of intervention techniques that have been proposed to reduce children's racial prejudice (see Paluck & Green, 2009 for review). Sadly, however, the most commonly used approaches appear to be the least effective and uninformed by current theoretical perspectives concerning racial prejudice in childhood (Crisp & Turner, 2012, 2013). Perhaps the best example of this disconnect is the use of multicultural curricula to reduce children's racial biases.

Derived from early theories concerning the origins of prejudice in children (e.g., ignorance and socialization; Allport, 1954), the use of multicultural curricula to reduce children's racial prejudice is based on the presumption that learning about different cultural groups will increase children's knowledge and understanding of diversity, therefore making them more racially tolerant (Barbarin & Odom, 2009; Bigler, 1999). Consequently, many educators add multicultural content, concepts, and themes via various forms of media (e.g., books and videos)

to their standard curriculum in the hope that exposing children to various minority groups and/or providing children with counter-stereotypic exemplars will reduce their racial bias.

Although the inclusion of multicultural materials in the standard curricula increases White children's multicultural competency and understanding of diversity (Banks, 2004; Camicia, 2007), those who have conducted systematic reviews of the research (e.g., Banks, 2004; Bigler, 1999; Paluck & Green, 2009; Pfiefer et al., 2007) conclude that interventions that simply add multicultural materials to the standard curricula produce less than optimal effects in meaningfully reducing White children's racial prejudice. More specifically, intervention studies using additive multicultural curriculum approaches to reduce White children's racial prejudice often produce inconsistent or even contradictory effects (Banks, 1991; Bigler, 1999; Paluck & Green, 2009). For instance, although incorporating multicultural materials into the curriculum has demonstrated some effectiveness in fostering multicultural sensitivity (Kim, Green, & Klein, 2006) and increasing White children's cultural awareness (Perkins & Mebert, 2005), such approaches have been found to have little effect in reducing White children's racial biases (e.g., Perkins & Mebert, 2005). Furthermore, because children tend to encode and remember stereotype relevant information and stimuli in a biased manner (Fyock & Stangor, 1994), interventions that present children with counter-stereotypical exemplars in the curricula (e.g., Bigler & Liben, 1993; London, Teirney, Buhin, Greco, & Cooper, 2002) have been found to increase, rather than decrease, the children's stereotyped beliefs concerning racial minority groups (Levy & Hughes, 2009).

Although it was once assumed that children acquire racial prejudice passively through socialization (i.e., as suggested by Allport, 1954), more contemporary theorizing about the origins of prejudice (e.g., Aboud et al., 2012; Bigler & Liben, 2006; Nesdale, 2001; Rutland &

Killen, 2015) suggests that children are active agents in the creation and maintenance of their racial prejudice. Consequently, it is not surprising that relatively passive prejudice reduction techniques focused solely on enhancing White children's cultural awareness (e.g., simply including multicultural materials within the standard school curricula) has been found to be largely ineffective at reducing children's racial prejudice (Bigler, 1999). In contrast, interventions focused on fostering White children's active interaction with racial outgroup members have demonstrated a propensity to change their racial prejudice toward the outgroup members (Aboud et al., 2012), especially when the interaction takes place in conditions that foster intergroup cooperation (Pfieffer et al., 2007).

Perhaps better known as the "jigsaw classroom" (Aronson, Blaney, Stephan, Sikes, & Snapp, 1978), cooperative learning techniques are engineered to require children in racially heterogeneous classrooms to actively teach and learn from one another to accomplish a shared goal, learning the material. A core component of this approach is to reduce individualism and competition within the group and enhance a more cohesive group identity by requiring and rewarding cooperation within the classroom (Pfieffer et al., 2007). For instance, in Slavin's (1979) classic study illustrating the utility of the cooperative learning technique, racially diverse seventh- and eighth-grade children were randomly assigned to either a traditional or cooperative learning classroom. Children in the traditional classroom studied a unit on grammar, punctuation, and English usage alone, and individual performance was recognized and rewarded. In contrast, children in the cooperative learning classroom were each provided with specific, but limited, information concerning material from the unit and, therefore, had to work together as a team to fully learn the material. Further, children in the cooperative learning classroom were recognized and rewarded for their group's performance in learning the material. Those in the



cooperative learning classroom, who had to actively work together, were found to demonstrate much less prejudice (as indicated by their self-reported number of cross-race friendships within the classroom) than those in the traditional learning classroom. Importantly, this study found that the positive effects of the cooperative learning intervention continued to be apparent nine months later, when Slavin (1979) conducted a follow-up investigation with a subset of the original sample.

Why are cooperative learning classrooms so effective at changing children's racial prejudice? Because people tend to believe that all members of a racial outgroup are the same (i.e., out-group homogeneity; Simon, 1992), Allport (1954) proposed that individuals who are perceived to be a member of a specific racial outgroup are often considered to be representative of the entire racial group. Therefore, interpersonal interactions with a member of a racial outgroup (i.e., intergroup contact), in conditions that foster intergroup cooperation, should be an extremely powerful means to reduce racial prejudice, especially if the contact is positive. Although Allport (1954) acknowledged that there are many conditions that may positively influence racial attitudes, he proposed that intergroup contact would have optimal effects if (a) it is supported by authority figures (like teachers and parents), (b) individuals in the contact scenario have equal status, and (c) the individuals in the contact scenario share a common goal that can only be attained through intergroup cooperation.

Provided that intergroup contact is now considered one of the most successful means to reduce racial prejudice among children and adults (Pettigrew & Tropp, 2006, 2008, 2011), it is perhaps no wonder that cooperative learning techniques, which were explicitly designed to meet Allport's (1954) optimal conditions for intergroup contact, yield consistently favorable outcomes. Systematic reviews of the intervention literature (e.g., Banks, 2004; Paluck & Green,

2009; Pettigrew, 2006; Pfeifer et al., 2007) have concluded that cooperative learning approaches result in more consistently positive effects on children's racial prejudice than multicultural curricula approaches across a wide range of racial prejudice measures (e.g., attitudinal, affective, and behavioral) among children seven years of age and older. Further, cooperative learning techniques are more impactful in the long-term than multicultural curricula approaches because of their focus on, and effectiveness in, fostering cross-race friendships (e.g., Slavin, 1979). An extensive literature examining Allport's (1954) contact hypothesis finds that cross-race friendships are an especially potent form of intergroup contact because they involve relatively intimate contact with an individual from a racial outgroup over time and across many situations, through which individuals develop a meaningful and personal relationship (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Pettigrew, 1997).

Despite their effectiveness in mitigating children's racial prejudice, cooperative learning techniques suffer from rather substantial practical limitations. Not only are they difficult to implement in the classroom (especially in the American education system that emphasizes individual achievement; Pfeifer et al., 2007), but they are only applicable to children who attend a school that is racially diverse. Unfortunately, although the United States is continually becoming more diverse (Shrestha & Heisler, 2011), school systems within the United States often remain highly racially segregated (Roshstein, 2013; Stroub & Richards, 2013). Therefore, there is a need to develop theory-based intervention strategies that can overcome the practical limitations of attempting to employ cooperative learning techniques within schools. Fortunately, the sizeable literature on intergroup contact provides the foundation for such a theory-based intervention.

## *Intergroup Contact*

Intergroup contact is perhaps the most well-established approach to prejudice reduction in social psychology (Aboud et al., 2012; Cameron & Turner, 2010; Paluck & Green, 2009; Pettigrew & Tropp, 2011). Results of hundreds of publications find that contact with members of a racial outgroup produce generalized effects in mitigating both children's and adults' prejudice toward the racial outgroup (Hodson & Hewstone, 2013). Although the optimal conditions that Allport (1954) originally proposed (e.g., equal status and cooperation) are ideal, at least initially (Pettigrew, 1998), increased contact alone appears to be sufficient to produce reduced prejudice in both children and adults as well as for minority and majority group members alike (Pettigrew, 1998; Pettigrew & Tropp, 2006). However, cross-race or "cross-group" friendships appear to be an especially potent form of intergroup contact (Pettigrew, 1998; Pettigrew & Tropp, 2006), particularly among children (Aboud & Brown, 2013). Although other forms of contact may be associated with a reduction in prejudice, cross-group friendships optimally characterize positive and intimate contact that occurs repeatedly and frequently across time (Pettigrew, 1998; Pettigrew & Tropp, 2006, 2008, 2011). They foster the development of strong affective ties (Tropp & Pettigrew, 2005) and often lead children to consider the outgroup member in the cross-group friendship to be cognitively included in the self-concept, creating a shared social identity that subsumes racial group boundaries (Davies, Wright, Aron, & Comeau, 2013; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997).

There are many processes that have been proposed to explain how or why intergroup contact and cross-group friendships promote more positive racial attitudes. For instance, Pettigrew (1998) originally proposed that optimal intergroup contact produces long-term changes in racial prejudice concerning the outgroup for three reasons. First, the contact allows an

individual to actively learn about the outgroup through first-hand experience. Second, the contact facilitates the reappraisal of the ingroup and ingroup norms concerning intergroup contact with members of the outgroup. Finally, and most importantly, continued contact promotes the creation of affective ties with the outgroup (e.g., an increase in intergroup empathy and perspective taking, and a decrease in perceived intergroup threat and anxiety), which in turn may encourage more positive behaviors toward the outgroup and lead to the creation of multiple cross-group friendships. Although meta-analytic summaries of the intergroup contact literature (e.g., Pettigrew & Tropp, 2008, 2011) suggest that *affective ties* derived through contact (e.g., increased empathy and decreased intergroup anxiety) explain contact effects on racial attitudes more so than the proposed cognitive mechanisms (e.g., increased outgroup knowledge and ingroup reappraisal; Hodson, Hewstone, & Swart, 2013; Tropp & Pettigrew, 2005), there are a number of mechanisms that have yet to be fully vetted. For instance, some studies have suggested that intergroup contact, and especially cross-group friendships, cause an individual to incorporate the qualities and characteristics of an outgroup friend within the self-concept (Aaron, Aaron, Tuder, & Nelson, 1991; Page-Gould & Mendoza-Denton, 2011), creating a shared social identity. Through friendship, this self-other overlap or shared identity is then extended to the friend's outgroup generally (Page-Gould & Mendoza-Denton, 2011), leading the individual in the cross-group friendship to experience more positive emotions and attitudes in response to the outgroup as a whole (Davies et al., 2013).

Intergroup contact theory and research have primarily focused on determining when, how, and why contact elicits a primary transfer effect in which an individual's attitude toward the outgroup member in the contact scenario generalizes to the outgroup as a whole (Pettigrew, 1998, 2009). However, some studies demonstrate that intergroup contact may also produce a

secondary transfer effect in which positive changes in attitudes toward one (i.e., primary) group may spread to a different (i.e., secondary) group (Pettigrew, 2009; Tausche et al., 2010).

Provided that secondary transfer effects have now been demonstrated in adult samples with correlational data (Pettigrew, 2009; Tausch et al., 2010), field experiments (Van Laar, Levin, Sinclair, & Sidanius, 2005), and longitudinal designs (Eller & Abrams, 2004), the evidence is mounting that the positive effects of intergroup contact may extend beyond isolated attitude change to broader intergroup tolerance, acceptance, and harmony (Harwood, Paolini, Joyce, Rubin, & Arroyo, 2011).

Current conceptualizations of how intergroup contact may produce a secondary transfer effect surmise that it is most likely occurring through attitude generalization in which a positive change in attitudes toward the primary outgroup generalizes to other, secondary, outgroups (Pettigrew, 2009). Although other hypotheses have been proposed to explain how the secondary transfer effect occurs (e.g., the deprovincialization hypothesis; Pettigrew, 1997), there exists considerable evidence to support the attitude generalization hypothesis, at least in the adult literature (see Lolliot et al., 2013 for review). For instance, Pettigrew (2009) found that adults' attitudes toward immigrants mediated the relationship between having more immigrant friends and improved attitudes toward two other outgroups (i.e., homosexuals and the homeless). Al Ramiah (2009) found similar mediation in a longitudinal field study with Malay and Chinese adult respondents. Their contact with members from the other group mitigated their negative attitudes toward a secondary group (i.e., Indians), and this effect was fully mediated by their attitudes toward the primary group. Further, Tausch et al. (2010) found similar findings in three cross-sectional studies using various national groups (e.g., in Northern Ireland, North America,

and Cyprus) even after controlling for the adult-participants' quality and quantity of direct contact with primary and secondary groups.

Although direct, or face-to-face, contact and friendships have been found to be extremely effective in changing both children's and adults' intergroup attitudes toward the primary group (Pettigrew & Tropp, 2011) and toward a secondary group or groups (Lolliot et al., 2013), the benefits of direct intergroup contact come with a caveat: intergroup contact can only reduce prejudice when members of different social groups are afforded the opportunity to engage in contact (Turner, Hewstone, & Voci, 2007; Turner, Hewstone, Voci, & Vonofakou, 2008). Unfortunately, many individuals are not afforded such an opportunity. For instance, a White child from rural Iowa may have very few opportunities to interact with someone of another race because very few people from racial minority groups live in the child's surrounding area. Further, even if the child has an opportunity to interact with someone of another race, the contact (a) may be so superficial that it has little impact on his/her racial prejudice or (b) could result in increased prejudice if contextual factors do not meet the right conditions (e.g., if there is intergroup competition rather than cooperation; Nesdale, Durkin, Mass, & Griffiths, 2004; Nesdale et al., 2005). Such concerns motivated the development of studies to explore the potential positive effects of more indirect forms of contact on children's and adults' prejudice toward various socially marginalized groups. The two most frequently studied forms of indirect contact, at least in the intervention literature with children, are those that either (a) ask children to imagine an instance of intergroup contact (i.e., imagined intergroup contact; Crisp & Turner, 2009) or (b) provide children with storybooks that depict cross-group friendships between ingroup and outgroup peers (i.e., media-mediated extended contact; Cameron & Rutland, 2006). The research concerning these two types of indirect contact will now be discussed in turn.

### *Imagined Intergroup Contact*

Relatively recent research finds that imagining a positive social interaction with members of an out-group (i.e., imagined intergroup contact) can produce marked effects in mitigating children's negative attitudes, emotions, and behavioral intentions toward a wide range of social groups (Miles & Crisp, 2014; Stathi, Cameron, Hartley, & Bradford, 2014). In one of the first child studies on the topic, Cameron, Rutland, Turner, Holman-Nicolas, and Powell (2011b) presented five- to eleven-year-old non-disabled children with a picture of a same-sex disabled child and asked the children to imagine that they were in a park "having lots and lots of fun" with the disabled child in the picture (p. 710). After asking the participating children to imagine this scenario for a duration of three minutes, the researchers asked them to describe the activities they were imagining and then had the children complete various measures assessing their attitudes and intended behaviors toward disabled children. Results indicated that compared to those in the control (i.e., no imagined contact) condition, children in the imagined contact condition demonstrated less negative attitudes toward, and more favorable anticipated responses to, disabled children immediately after imagining that they were playing with a disabled child in a park.

Research examining the efficacy of using imagined intergroup contact to mitigate children's negative intergroup attitudes demonstrates that imagined intergroup contact can produce positive changes in children's intergroup attitudes and anticipated responses assessed weeks later (Stathi et al., 2014). For instance, Vezzali, Capozza, Giovannini, and Stathi (2011) found that fifth-grade Italian children who took part in a three-week intervention requiring them to imagine having a pleasant interaction with a recent immigrant to the country for 30 minutes once a week had more positive attitudes toward, and anticipated responding more favorably to,

immigrants one week after the intervention than children who were randomly assigned to a control condition.

Although Vezzali and colleagues' (2011) study and others like it (e.g., Stathi et al., 2014) demonstrate that imagined intergroup contact can produce a primary transfer effect in mitigating young children's negative attitudes and anticipated responses to members of the primary outgroup, research has yet to determine whether imagined contact can also produce a secondary transfer effect in mitigating children's negative attitudes and responses to other outgroups that are not included in the imaginary simulation. However, research with adult samples suggests that such secondary transfer effects may be possible via imagined intergroup contact. For instance, Harwood and colleagues (2011) demonstrated that college undergraduates who imagined positive contact with illegal immigrants not only reported having more favorable attitudes toward illegal immigrants than those in a control condition, they also reported having more favorable attitudes toward members of other outgroups (e.g., Mexican-Americans, Asian-Americans, and legal immigrants).

### *Media-Mediated Extended Contact*

If simply imagining positive social interaction with a racial-outgroup member can mitigate children's racial prejudice, it seems reasonable that reading about such an interaction may also reduce children's racial prejudice. Decades of research on the inclusion of multicultural curricula within the elementary school classroom (see Banks, 2004 for review) has focused on examining the effectiveness of using storybooks to change children's intergroup attitudes. As described previously, incorporating multicultural materials in curricula is a popular strategy among educators (Bigler, 1999). Although research examining the effectiveness of adding multicultural materials to the curricula indicates that simply reading children stories about



different cultures has little impact on reducing their racial prejudice (Banks, 2004; Bigler, 1999; Pfiefer et al., 2007), studies on media-mediated extended contact have demonstrated that storybooks that depict cross-group friendships between ingroup and outgroup peers are generally effective in mitigating young children's negative intergroup attitudes (Aboud & Brown, 2013; Paluck & Green, 2009). In one investigation, for example, Cameron and Rutland (2006) read books to 253 five- to eleven-year-old non-disabled children once a week over a period of a month that depicted cross-group friendships between disabled and non-disabled children. Results indicated that children who were read storybooks that depicted cross-group friendships between disabled and non-disabled characters anticipated responding more favorably to disabled children, and they had more positive attitudes toward them one week after the intervention, than children in a control condition.

Why was Cameron and Rutland's (2006) study and other similar studies (e.g., Cameron, Rutland, & Brown, 2007; Cameron, Rutland, Brown, & Douch, 2006; Cameron, Rutland, Hossain, & Petley, 2011a; Martinez & Carspecken, 2006; Vezzali, Stathi, & Giovannini, 2012) successful when decades of research on reading books to children (or showing videos about those from a different culture) have been relatively ineffective (e.g., Katz & Zalk, 1978; Kowalksi, 1998; Wham, Barnhart, & Cook, 1996; see Bigler, 1999 for review)? It is argued by some (e.g., Aboud & Brown, 2013; Paluck & Green, 2009) that prior studies in which children read multicultural materials depicting racial outgroup members failed to include an ingroup peer with whom children could identify. In contrast, books that depict cross-group friendships between ingroup members and outgroup members allow children to vicariously experience a cross-group friendship "through the eyes of an ingroup peer" (Aboud & Brown, 2013, p. 184).

Cameron and colleagues (e.g., Cameron & Turner, 2010; Cameron et al., 2011a) propose that in contexts in which one's social group membership is salient (e.g., when reading a story about an ingroup peer who is in a cross-group friendship), children are motivated to consider the fellow ingroup member as a cognitive representation of the self, spurring feelings of closeness and eliciting a sense of self-other overlap with the ingroup peer. Similarly, according to propositions from Wright et al.'s (1997) extended contact hypothesis, if a child becomes aware of (or observes) an ingroup member's cross-group friendship with a member of a social outgroup, the child experiences a form of extended contact whereby the outgroup member becomes included in the child's cognitive representation of the self. Further, this extended intergroup contact is purported to reduce prejudice via various other mechanisms that influence the children's social perceptions concerning intergroup contact such as (1) providing an ingroup role model to emulate concerning intergroup relations, (2) changing children's perceptions of ingroup norms concerning intergroup contact and cross-group friendships, and (3) fostering affective ties with the outgroup (Wright et al., 1997).

A review of the intervention literature concerning prejudice (Paluck & Green, 2009) finds overwhelming support for the supposition that children's racial prejudice can be subverted through targeted interventions in which children are read storybooks that depict cross-group friendships between ingroup and outgroup peers. Such media-mediated extended contact (i.e., extended contact through various forms of media, such as storybooks) has demonstrated profound effects in reducing children's negative intergroup attitudes and behaviors toward a wide range of groups, categorized by race (Cameron et al., 2011a), nationality (Cameron et al., 2007), and disability (Cameron & Rutland, 2006; Martinez & Carspecken, 2006).

Consistent with the extended contact hypothesis (Wright et al., 1997), media-mediated extended contact has been found to enhance closeness or self-other overlap with the outgroup (Cameron et al., 2006, 2007) and change children's perceptions of ingroup norms concerning intergroup contact (Cameron et al., 2011a). Further, media-mediated extended contact interventions have been found to reduce children's anxiety concerning intergroup contact (Cameron et al., 2011a), ostensibly because the media-mediated extended contact depicts close, intimate, and non-threatening friendships between ingroup and outgroup peers. However, it should be noted that not all studies find positive effects of media-mediated extended contact. For instance, due to age-related cognitive deficiencies resulting in pronounced egocentrism, many children under the age of five have difficulty taking another's cognitive and affective perspective and therefore are unaffected by interventions that use media-mediated extended contact (Aboud & Brown, 2013).

It is now well-documented that interventions providing seven- to eleven-year-old children with media-mediated extended contact are effective in producing a primary transfer effect in which children's change in attitude toward the outgroup member in the cross-group friendship transfers to the outgroup generally (Aboud et al., 2012). However, research has only recently begun to demonstrate that media-mediated extended contact interventions may also produce a secondary transfer effect in which children's change in attitude toward the primary outgroup transfers to other outgroups not depicted in the media-mediated contact. For instance, a series of studies by Vezzali, Stathi, Giovannini, Capozza, and Trifiletti (2014) demonstrated that fifth-grade students who read selected segments of a popular children's book (i.e., *Harry Potter*) depicting intergroup friendships between fictional social groups (i.e., wizards and "muggles") significantly reduced the children's negative attitudes toward a wide range of other groups (e.g.,

immigrants, homosexuals, and refugees), and these secondary transfer effects were mediated by the children's identification with the main story character (i.e., Harry Potter).

### **Variation in Contact Effects**

Regardless of whether it is direct or indirect, intergroup contact has been found to be a highly effective means of reducing prejudice among children and adults (Aboud & Brown, 2013; Pettigrew & Tropp, 2011). In its varying forms, intergroup contact has been demonstrated to reduce both minority and majority group members' negative attitudes toward and responses to a wide range of outgroups, whether the outgroup is categorized by race, nationality, disability, or even sexual orientation (Miller & Crisp, 2014; Paluck & Green, 2009; Pettigrew & Tropp, 2006, 2008, 2011). Although direct or face-to-face intergroup contact is generally more effective than contact that is experienced via indirect means (e.g., extended contact; Feddes, Noack, & Rutland, 2009), indirect forms of intergroup contact continue to provide promising results, especially among those who have little opportunity for direct contact with outgroup members (Aboud & Brown, 2013). Although indirect forms of contact may reduce children's racial prejudice, there remains considerable variation concerning the effectiveness of various types of indirect contact (Harwood, 2010). In attempting to provide a framework for understanding the processes that might explain the variation in effects in the contact literature, Harwood (2010) proposed a two dimensional framework of *contact space* to explain why direct contact may be more effective than indirect contact, and why there may be variation in the effectiveness of the various forms of indirect contact that have been a focus of study in the last ten years (e.g., imagined, media-mediated contact, and media-mediated extended contact).

Harwood (2010) proposed that the various forms of intergroup contact tend to differ in the degree to which the self is involved in the contact (i.e., how much the self is immediately

involved and participating in the contact) and the extent to which the contact provides a rich experience for the individual (i.e., how complex and detailed one's experience is with an outgroup member). Harwood (2010) surmised that contact that has a high degree of self-involvement and provides a rich experience for the individual will be more impactful in changing prejudiced attitudes and behaviors than other forms of contact that have a low degree of self-involvement and/or provide little richness in experience. For instance, cross-group friendships, which are considered to be the pinnacle of intergroup contact (Pettigrew, 1998; Pettigrew & Tropp, 2006, 2008, 2011), inherently involve a high degree of self-involvement and richness (Harwood, 2010). However, simple knowledge of an unfamiliar ingroup member's intergroup contact (i.e., extended contact; Wright et al., 1997) provides a low degree of self-involvement and richness. Therefore, Harwood's (2010) conceptualization helps to explain why cross-group friendships, for instance, are much more effective in reducing children's intergroup prejudice than are more indirect forms, such as the most basic form of extended contact (i.e., a simple awareness of cross-group friendships between ingroup and outgroup members). Further, this conceptualization helps to explain why one form of indirect contact may be less effective in reducing children's intergroup prejudice than another form of indirect contact. For instance, Harwood's (2010) framework may help to explain why observing a cross-group friendship may be more impactful than simply being aware of a cross-group friendship between an unfamiliar ingroup member and an outgroup member. Additionally, this framework would propose that witnessing a friend's favorable experiences with an outgroup member will be more impactful than witnessing a stranger's similar experiences.

Not only does Harwood's (2010) two-dimensional contact space provide a useful framework for explaining differences in the effectiveness among various types of intergroup

contact, it also provides a useful framework for interpreting the varying effectiveness of manipulations within interventions using the same type of indirect contact. For instance, the framework explains why imagined contact interventions generally produce heightened effect sizes when participants are provided with extensive contextual details concerning the contact situation (e.g., elaborate stories describing the contact with supporting pictures; see Miller & Crisp, 2014 for review). Additionally, this framework may help to explain why media-mediated contact is more effective when the media depicts cross-group friendships than when the media does not depict cross-group friendships. Because children tend to identify with a fellow ingroup peer (e.g., Turner et al., 2008; Vezzali et al., 2014), especially in contexts in which group membership is salient (Nesdale, 2001, 2008; Turner et al., 1979), media depicting an ingroup member who is in a cross-group friendship provides children with a greater degree of self-involvement than media that does not depict such cross-group friendships. Also, due to the nature of a storyline and illustrations depicting a cross-group friendship, children are presented with a richness of experiences with a outgroup member that they can vicariously experience (e.g., Cameron & Rutland, 2006).

Although imagined contact interventions and media-mediated extended contact interventions have both been successful in reducing prejudice in children (Aboud & Brown, 2013), Harwood's (2010) framework suggests that the effectiveness of the two intervention techniques could be improved. Although imagined contact interventions involve a high degree of self-involvement (Harwood, 2010), they do not provide children with a high degree of richness of experience, at least without the use of elaborate instructions to guide the children's mental imagery (Miller & Crisp, 2014). In comparison, media-mediated extended contact interventions provide a high degree of richness of experience (Harwood, 2010), but may be

limited in the degree to which they elicit self-involvement in the contact scenario because self-involvement in such interventions is achieved through a child's identification with an unfamiliar ingroup member. Considering these apparent limitations, Harwood's (2010) two-dimensional framework of contact space suggests the need to create an intervention technique that combines the self-involvement provided by imagined intergroup contact interventions and the richness of experience provided by media-mediated extended contact interventions. The present study examined just such an intervention technique by making use of a personalized storybook in which a child, himself or herself, is depicted as participating in a cross-race friendship with a Black storybook character.

### **Personalized Storybooks**

Recent advancements in technology have created a new market in children's literature that has become very popular among parents and children alike: personalized children's books. Personalized children's books are specifically written and customized to include the child-reader in the storyline (Kucirkova, Messer, & Whitelock, 2013), often by embedding the child's name into the narrative and/or through the inclusion of the child's picture in the illustrations of a particular storybook. Although personalized reading materials are not necessarily a new concept (see Bracken, 1981; DeMoulin, 2001), recent advancements in technology have made personalized storybooks more readily available to parents and children (Kurcierkova, Messer, & Whitlock, 2010). For instance, parents can now visit any number of websites where they can order their choice of personalized storybooks for around \$20 (e.g., [www.putmeinthehistory.com](http://www.putmeinthehistory.com), [www.iseeme.com](http://www.iseeme.com), and [www.simplypersonalized.com](http://www.simplypersonalized.com)).

Research examining children's responses to personalized reading materials compared to those that are not personalized finds that personalized materials are more engaging (Bracken,

1981; Kucirkova et al., 2013) and elicit more imaginative imagery than those that are not personalized (Bracken, 1982; DeMoulin, 1998, 2003). Further, because of their involvement in the storyline, children like personalized stories more, and they remember more information from personalized stories than those that are not personalized (Bracken, 1982). Interestingly, even subtle manipulations of narrative perspective taking (e.g., changing the pronoun “I” to “you” in a written story) yield dramatic changes in the extent to which people experience and remember a narrative (Brunyé, Ditman, Mahoney, Augustyn, & Taylor, 2009). For example, Brunyé, Ditman, Mahoney, and Taylor (2011) found that adults developed a richer mental experience and a greater internalization of emotional events in a narrative after reading a narrative using the pronoun “you” to describe a protagonist than an identical narrative using the pronoun “I.”

In sum, research on personalized reading materials and narrative perspective taking suggests that reading materials that encourage mental simulations from a first-person narrative perspective not only increase self-involvement in the narrative, but also yield a more comprehensive and vivid narrative experience. However, it should be noted that (1) there is not a lot of research on this topic that involves children (especially in middle childhood), and (2) no one, to date, has examined whether personalized storybooks can be used to improve children’s intergroup reactions to outgroup members.

## **The Current Study**

### **Overview of Method**

In the current study, White third- and fourth-grade children, recruited from two schools in the Midwest, were asked to take part in three separate data collection sessions (i.e., two large group sessions, and one individual session) that were conducted over a period of approximately



one to two weeks.<sup>1</sup> The first data collection (i.e., the Time 1 large group) session was conducted in large groups, either within the children's regular classroom or in their school library. During this initial large group session, the children were asked to complete a measure of social desirability (ostensibly described as a personality measure) as well as measures of their attitudes toward White, Black, and Hispanic peers and anticipated affective and behavioral responses to interacting with White, Black, and Hispanic peers. It is important to note that children were led to believe that their participation in the Time 1 (and Time 2) large group sessions was part of a school visitation program, and their ratings of the three groups of peers would help administrators of the program determine if their classroom would be a good fit for individual students to visit (see Method for additional details).

The second data collection session (i.e., the storybook session) was conducted individually, several days after the children had participated in the initial (Time 1) large group session.<sup>2</sup> The participating children were led to believe that this individual storybook session was part of a separate study that was focused on examining children's reactions to a storybook that was created to help third- and fourth-grade children become better readers. During the individual storybook session, each participating child was read a personalized or non-personalized storybook that either depicted the child, him/herself (personalized), or an unfamiliar White character (non-personalized), in a cross- or same-race friendship with a target Black

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<sup>1</sup> The number of days between the two large group sessions (i.e., the Time 1 and the Time 2 large group sessions) ranged from 5 to 17 ( $M = 12.44$  days,  $SD = 2.47$  days, Mode = 11 days).

<sup>2</sup> The number of days between the children participating in the Time 1 large group session and being read the storybook ranged from 0 to 12 ( $M = 4.32$  days,  $SD = 3.04$  days, Mode = 1 days).

(cross-race) or White (same-race) storybook character.<sup>3</sup> Immediately before and after being read the storybook, each child was asked to complete measures that assessed their attitude toward the target Black or White storybook character and their anticipated affective and behavioral responses to interacting with the target Black or White storybook character.

After being read the storybook, and providing their ratings of the target Black or White storybook character for a second time, the children were asked to complete an additional measure that assessed their enjoyment of the storybook<sup>4</sup> and feelings of imaginative transportation into the narrative of the storybook. Conceptualized as a mechanism by which narratives affect attitudes (Green & Brock, 2000), imaginative transportation has been defined as “an experience of cognitive, emotional, and imagery *involvement* in a narrative” (Green, Brock, & Kaufman, 2004, p. 311). According to research with both adult and child samples, imaginative transportation allows an individual to feel as if he or she is participating in the action of a narrative (Jensen, Imboden, & Ivic, 2011; Polichak & Gerrig, 2002; Webster & Saucier, 2011). Consequently, imaginative transportation was included in the current study to assess individual differences in the extent to which children felt cognitively and emotionally *self-involved* in the narrative of the storybook.<sup>5</sup>

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<sup>3</sup> The gender of the characters in the storybook was matched to the participant such that boys read a storybook that depicted male characters and girls read a storybook that depicted female characters.

<sup>4</sup> An assessment of the children's enjoyment of the storybook was included in the study primarily to add credibility to the cover story. Although no specific predictions were made concerning the children's enjoyment of the storybook, this variable was included in some exploratory analyses that will be discussed in the Results section.

<sup>5</sup> Each child was asked to respond to two manipulate check items at the end of the individual storybook session. The items assessed (a) whether he/she was one of the characters in the storybook and (b) the race of the target character in the storybook.

The third, and final, data collection (i.e., Time 2 large group) session was conducted several days after all of the participating children were individually read the storybook.<sup>6</sup> Just like the initial (i.e., Time 1) large group session, children participated in the Time 2 large group session in their regular classroom or in their school library. During this Time 2 large group session, children were again asked to provide their ratings of the White, Black, and Hispanic peers using the same procedure as the Time 1 large group session.<sup>7</sup> After providing their ratings of the three groups of peers, the children were debriefed and thanked for their time.

### **Major Purposes and Predictions**

Although prior research suggests that media-mediated extended contact interventions, such as Cameron and Rutland's (2006) storybook intervention, are relatively effective at reducing children's racial prejudice, Harwood's (2010) two-dimensional framework of contact space suggests that media-mediated extended contact interventions could be improved by increasing children's *self-involvement* in the media-mediated contact. Consequently, the current study was designed to determine whether reading White children a personalized storybook that depicted the children, themselves, in a cross-race friendship with a Black storybook character is more effective than a non-personalized version of the same storybook at improving their ratings of the (a) Black storybook character immediately after being read the storybook and (b) Black and Hispanic peers approximately one week after being read the storybook (thereby demonstrating a primary and a secondary transfer effect, respectively). A model depicting the

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<sup>6</sup> The number of days between children being read the storybook and participating in the Time 2 large group session ranged from 2 to 14 ( $M = 8.14$  days,  $SD = 3.09$  days, Mode = 10 days).

<sup>7</sup> At the end of the Time 2 large group session, children were asked to complete a final set of manipulation check items that assessed whether they could correctly identify the race/ethnicity of each group of peers.

presumed relations among the personalized cross-race friendship storybook, heightened imaginative transportation, and relatively favorable ratings of the Black storybook character, Black peers, and Hispanic peers is presented in Figure 1.

The major predictions of the current study are organized into two sections. The first section includes all of the predictions concerning the children's ratings of the target Black or White storybook character and feelings of imaginative transportation. The second section includes all of the predictions concerning the children's ratings of the White, Black, and Hispanic peers one week before and after being read the storybook.

***Children's Ratings of the Target Black or White Storybook Character and  
Feelings of Imaginative Transportation***

***Children's Ratings of the Target Black or White Storybook Character Before Being Read the Storybook.*** Consistent with prior research demonstrating that White eight- to ten-year-old children tend to devalue, derogate, or otherwise avoid racial outgroup members (Katz, 2003; Nesdale, 2001, 2008; Raabe & Beelmann, 2011), it was expected that children would initially (i.e., before being read the storybook) demonstrate a racial bias in their ratings of the target Black storybook character. More specifically, it was predicted that children would initially rate the target storybook character less favorably when he/she was presented as Black (i.e., in the cross-race condition) than when he/she was presented as White (i.e., in the same-race condition).

***Children's Feelings of Imaginative Transportation After Being Read the Storybook.*** Provided that personalized reading materials tend to elicit more imaginative imagery than those that are not personalized (Bracken, 1982; DeMoulin, 1998, 2003), it was predicted that children would report feeling more imaginatively transported into the narrative of the personalized

storybook than the non-personalized storybook in both the same-race and cross-race storybook conditions.

***Children's Ratings of the Target Black or White Storybook Character After Being Read the Storybook.*** Given the favorable manner in which the target storybook character is presented in the storybook, it was predicted that the children would rate the target storybook character more favorably after than before being read the storybook when averaging across the four storybook conditions (i.e., personalized cross-race, non-personalized cross-race, personalized same-race, non-personalized same-race). However, it was expected that (a) there would be more room for the children's ratings to improve in the cross-race friendship condition than the same-race friendship condition (because the children were expected to initially rate the Black target storybook character in a less favorable manner than the White storybook character), and (b) through the process of imaginative transportation, personalization of the storybook would encourage children to feel more cognitively and emotionally self-involved in the friendship depicted in the storybook. Consequently, although it was expected that children's ratings of the (Black or White) target storybook character would generally be more favorable after than before being read the storybook, it was predicted that children in the cross-race friendship storybook condition who were read a personalized version of the storybook would demonstrate the *greatest* improvement in their ratings of the target character as a result of having been read the storybook. Further, as depicted in Figure 1, it was expected that, for children in the cross-race friendship condition, the greater effectiveness of the personalized storybook than the non-personalized storybook in improving the children's ratings of the target Black storybook character would be mediated by the extent to which the personalized storybook enhanced the children's feelings of imaginative transportation into the narrative of the story.

### *Children's Ratings of the White, Black, and Hispanic Peers*

***Before Being Read the Storybook.*** Consistent with prior research demonstrating that White eight- to ten-year-old children tend to devalue, derogate, or otherwise avoid racial/ethnic outgroup members (Katz, 2003; Nesdale, 2001, 2008; Raabe & Beelmann, 2011), it was predicted that, before being read the storybook (i.e., during the Time 1 large group session), the children would rate the White group of peers in a more favorable manner than the Black and Hispanic peers (for whom ratings were not expected to significantly differ).<sup>8</sup>

***After Being Read the Storybook.*** Considering that children were expected to initially rate the White peers in a highly favorable manner at the onset of the study (i.e., during the Time 1 large group session), it was predicted that the children's ratings of the White peers would be unaffected by being read the storybook, regardless of whether it depicted a cross- or same-race friendship and regardless of whether it was personalized or not. Further, because children in the same-race friendship storybook condition did not have an opportunity to observe (in the non-personalized condition) or experience (in the personalized condition) a positive instance of *intergroup* contact that could potentially produce generalized effects in improving their intergroup reactions to racial/ethnic outgroup members, it was predicted that the children's ratings concerning the Black and Hispanic peers in the same-race friendship storybook condition

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<sup>8</sup> Unfortunately, there is a paucity of research examining whether White children are more (or less) prejudiced toward Black peers than Hispanic peers. However, considering that research with adult samples tends to find few differences in adults' attitudes toward Black and Hispanic individuals (Dixon & Rosenbaum, 2004; White & Sedlacek, 1987; Wilson, 1996), there is no reason to suspect that the children in the current study would initially rate the Black peers in a more (or less) favorable manner than the Hispanic peers.

would be unaffected by being read the storybook, regardless of whether or not it was personalized.

In contrast, and consistent with intergroup contact theory (Pettigrew, 1998, 2009) and research (e.g., Cameron & Rutland, 2006; Vezzali et al., 2014), it was expected that children in the cross-race friendship storybook condition, who were provided with an opportunity to observe or experience a positive instance of intergroup contact with a Black outgroup member, would provide more favorable ratings of the Black and Hispanic peers after having been read the storybook (thereby demonstrating a primary and secondary transfer effect, respectively), and especially when the children had been read a personalized version of the storybook. Provided that intergroup contact theory suggests that primary and secondary transfer effects occur through a specific sequence of attitude generalizations (see Pettigrew, 1998, 2009 for review), the processes that are hypothesized to explain each of the predicted transfer effects in the current study are depicted in Figure 1 and will now be discussed in turn.

In regard to the primary transfer effect that was expected to emerge in the current study, it was predicted that the children's improved attitude toward the target Black storybook character after having been read a storybook that depicts a cross-race friendship between a White character and the target Black storybook character would produce a generalized effect in improving their ratings of the Black peers. Considering that a personalized storybook that depicted the children, themselves, in a cross-race friendship with the Black storybook character was expected to be especially effective at improving their ratings of the Black storybook character (via the children's enhanced feelings of imaginative transportation into the narrative of the personalized storybook; see Figure 1), it was predicted that this personalized storybook would also be especially effective (i.e., compared to a non-personalized version of the same storybook) at

improving the children's ratings concerning the Black peers. Consequently, it was predicted that children in the cross-race friendship condition who were read a personalized version of the storybook would demonstrate a greater improvement in their ratings of the Black peers after having been read the storybook than children who had been read a non-personalized version of the same storybook. Further, because this primary transfer effect was expected to occur through a process of attitude generalization from the outgroup member to the primary outgroup as a whole (Pettigrew, 1998; 2009), it was predicted that, for children in the cross-race friendship condition, the greater effectiveness of the personalized storybook than the non-personalized storybook in improving the children's ratings of the Black peers would be mediated by the degree to which personalization of the storybook was effective at improving the children's ratings of the Black storybook character (see Figure 1).

In regard to the secondary transfer effect that was expected to emerge in the current study, it was predicted that the children's improved attitude toward the Black peers after having been read a storybook that depicted a cross-race friendship between a White character and a Black character would produce a generalized effect in improving the children's ratings of the Hispanic peers. Given that a personalized storybook that depicted the children, themselves in a cross-race friendship with the Black storybook character was expected to be especially effective at improving their ratings of the Black peers, it was predicted that this storybook would also be especially effective (i.e., compared to a non-personalized version of the same storybook) at improving the children's ratings of the Hispanic peers. Further, because this secondary transfer effect was expected to occur through a process of attitude generalization from the primary outgroup to the secondary outgroup (Pettigrew, 2009), it was predicted that, for children in the cross-race friendship condition, the greater effectiveness of the personalized storybook than the



non-personalized storybook in improving the children's ratings of the Hispanic peers would be mediated by the degree to which personalization of the storybook was effective at improving the children's ratings of the Black peers (see Figure 1).

## Chapter 2 - Method

### Participants

A total of 141 White<sup>9</sup> third- and fourth-grade students (70 girls and 71 boys) who ranged in age from 8.33 to 10.92 years ( $M = 8.96$ ,  $SD = 0.74$ ; see Appendix A for the Student Information Form completed by participants) were recruited from two public elementary schools in the Midwest to participate in the current study. However, the data from 22 of these students were excluded from analyses because they did not participate in all three data collection sessions of the study. Consequently, the final sample consisted of 119 White third- and fourth-grade students (62 girls and 57 boys) who ranged in age from 8.33 to 10.67 years ( $M = 9.03$ ,  $SD = 0.72$ ). All of the participating children had the written permission of a parent or legal guardian (see Appendix B) and provided their own written assent prior to each of the three data collection sessions of the study (see Appendices C, D, and E).

Although an attempt was made to recruit children from relatively racially homogenous schools, demographic information provided by the administrators at the two public elementary schools indicated that one of the schools was relatively more racially diverse than the other. As

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<sup>9</sup> Although an additional 29 students (19 girls and 10 boys) participated in the current study, these students' data were excluded from analyses because they self-identified as Black/African American ( $n = 7$ ), Hispanic American or Latino/a ( $n = 6$ ), Asian or Pacific Islander ( $n = 10$ ), American Indian ( $n = 1$ ), or "other" ( $n = 5$ ).

seen in Table 1, the school in northeast Kansas was more racially heterogeneous than the school in northeast Iowa.

## **Materials**

### **Stimuli**

#### *Racial Groups*

Three PowerPoint slides were created for this study to present children with age-matched peers representing three racial/ethnic groups: White, Black, and Hispanic (see Appendix F). Each slide presented children with facial images of four boys and four girls that represented the respective racial/ethnic group (i.e., White children, Black children, and Hispanic children).<sup>10</sup>

#### *Description of the Target Storybook Character*

A picture and short description of a target storybook character was created for the current study (see Appendix G). The target character's gender was matched to the gender of the participant, such that the boys were presented with a picture and short description of either a Black boy (i.e., Jamal) or White boy (i.e., Andy), and the girls were presented with a picture and short description of either a Black girl (i.e., Jada) or White girl (i.e., Annie). Although the target storybook character's body was illustrated, a photo image of a real Black or White child's face was superimposed onto the character's illustrated body. The description that was associated with

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<sup>10</sup> A pilot study was conducted with 11 racially diverse third-grade children ( $M_{\text{age}} = 8.18$  years,  $SD = 0.41$  years; 3 girls and 8 boys) from a racially heterogeneous elementary school in Kansas. All 11 children were able to correctly identify the race of the White peers and Black peers. Although two children incorrectly identified the Hispanic group as "American Indian," the remaining nine children correctly identified the Hispanic peers as "Hispanic American or Latino/a."

the picture introduced the target Black or White character (“This is Jamal [Jada]” or “This is Andy [Annie]”) and then described the character as a “pretty typical boy (girl)” who likes to ride his (her) bicycle and play games with his (her) friends. The description concluded by stating that the Black or White target character’s favorite animal is the penguin.

### ***Storybook Characters***

An illustrated storybook was created for the present study that depicted two characters that go to summer camp and become friends<sup>11</sup> (see Appendix H). However, the storybooks were systematically manipulated to depict the child, himself or herself, or an unfamiliar White child in either a cross-race friendship with a Black target storybook character or a same-race friendship with a White target storybook character. The gender of all of the storybook characters was matched to the gender of the child-participant. Consistent with the initial picture and description of the target storybook character, the unfamiliar White child in the storybook (i.e., in the non-personalized versions of the storybook) was depicted as having an illustrated body with a real White child’s face superimposed onto the character’s body. In the conditions in which a child was read a storybook about himself or herself befriending the target storybook character (i.e., in the personalized versions of the storybook), a photo image of the child’s own face was superimposed onto an illustration of a White character’s body.<sup>12</sup>

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<sup>11</sup> The storyline for the book was inspired by Marla Frazee’s (2008) Caldecott Honor-winning book, *A Couple of Boys Have the Best Week Ever*, which describes two boys, James and Eamon, who go to nature camp for a week during summer vacation. However, the storyline was significantly modified, and the pictures in the storybook were specifically created for use in the current study.

<sup>12</sup> The White storybook character’s body was the same across personalized and non-personalized conditions.

## Measures

Unless otherwise specified, all of the items on the following measures were rated on a 4-point Likert scale ranging from 1 (*Disagree a lot*) to 4 (*Agree a lot*).

### *Social Desirability*

A modified,<sup>13</sup> 10-item ( $\alpha = .79$ ) version of the Children's Social Desirability-Short (CSD-S; Miller et al., 2014) scale assessed the children's tendency to give socially desirable responses to statements rather than their true views, opinions, or feelings (see Appendix I). Children were asked to respond to each statement by circling either "no" (scored as 0) or "yes" (scored as 1). Scores on the 10-item scale were summed after reverse-scoring the six negatively-keyed items. Therefore, children's possible scores on this scale ranged from 0 to 10, with higher scores reflecting a greater tendency to provide socially desirable responses.

### *Racial Attitudes*

A shortened, 12-item version of the Multiresponse Racial Attitudes (MRA) Measure (Aboud, 2003; Doyle & Aboud, 1995) was used to assess the child-participants' racial attitudes (see Appendix J). The measure consisted of six positive and six negative evaluative statements. The children's responses to the 12 statements were averaged (after reverse-scoring children's responses to the six negative evaluative statements) to provide an index of their ingroup attitude toward the White peers and indices of their outgroup attitude toward the Black and Hispanic peers. Children's responses were coded so that higher mean scores reflected a more favorable

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<sup>13</sup> The 14-item CSD-S scale was modified so that scale items would be easily understood by third- and fourth-grade children. Four of the original 14 items on the scale were omitted due to their relatively complex or colloquial wording (e.g., "Do you sometimes wish you could just play around instead of having to go to school?").

attitude toward the respective racial group (i.e., White, Black, and Hispanic peers; see Table 2 for the Cronbach's  $\alpha$ s associated with the children's attitude ratings).

A parallel version of this measure was created to assess the children's attitude toward the target Black (i.e., Jamal or Jada) or White (i.e., Andy or Annie) storybook character (see Appendix K for the Jamal version of this measure). Again, the children's scores on the 12-item measure were averaged so that higher mean scores reflected a more favorable attitude toward the target Black or White storybook character (see Table 3 for the Cronbach's  $\alpha$ s associated with the children's attitude ratings).

### *Anticipated Affective Response*

An eight-item anticipated affective response measure was created for the current study to assess children's anticipated affect response to interacting with the White, Black, and Hispanic peers in the future (see Appendix L). Items were derived from Laurent et al.'s (1999) child version of the Positive and Negative Affect Schedule (i.e., the PANAS-C). Children's responses to the eight items were averaged (after reverse-scoring six negatively-keyed items) to provide indices of the child-participants' anticipated positive affective response to interacting with the White, Black, and Hispanic peers (see Table 2 for the Cronbach's  $\alpha$ s associated with the children's anticipated affective response ratings).

A parallel version of this measure was created to assess the children's anticipated affective response to interacting with the target Black (i.e., Jamal or Jada) or White (i.e., Andy or Annie) storybook character (see Appendix M for the Jamal version of this measure). Again, children's scores were computed so that higher scores reflected more positive anticipated affective responses to interacting with the target Black or White storybook character (see Table 3 for the Cronbach's  $\alpha$ s associated with the children's anticipated affective response ratings).

### *Anticipated Behavioral Response*

An eight-item anticipated behavioral response measure was created to assess children's anticipated behavioral responses to interacting with the White, Black, and Hispanic peers (see Appendix N). Items were adapted from prior research (e.g., Cameron & Rutland, 2006; Cameron et al., 2007; Cameron et al., 2011a; Wadian, Barnett, & Sonnentag, 2017) and were written to assess how the child-participants would anticipate responding to the White, Black, and Hispanic children if they were to join the child-participants' classroom in the future. Scores on the eight-item measure were averaged (after reverse-scoring the two negatively-keyed statements), with higher scores reflecting a more favorable anticipated behavioral response to interacting with the respective racial group (see Table 2 for scale the Cronbach's  $\alpha$ s associated with the children's anticipated behavioral response ratings).

A parallel version of the measure was created to assess the children's anticipated behavioral response to interacting with the target Black (i.e., Jamal or Jada) or White (i.e., Andy or Annie) storybook character (see Appendix O for the Jamal version of this measure). Again, children's scores were averaged (after reverse-scoring the two negatively-keyed statements), with a higher mean score reflecting a more favorable anticipated behavioral response to interacting with the target Black or White storybook character (see Table 3 for the Cronbach's  $\alpha$ s associated with the children's anticipated behavioral response ratings).

### *Imaginative Transportation*

A six-item ( $\alpha = .72$ ) Imaginative Transportation Scale was created to assess the extent to which the children transported themselves imaginatively into the feelings and actions of the characters in the story (see Appendix P). The statements on this scale were modeled after those found in Green and Brock's (2000) Transportation scale. Ratings on the six items were averaged

(after reverse-scoring one negatively-keyed item), with higher scores indicating more imaginative transportation into the feelings and actions of the characters in the storybook.

### ***Enjoyment of the Storybook***

Five items ( $\alpha = .81$ ) were created to assess the children's enjoyment of the storybook (see Appendix Q). Ratings on the five items were averaged, with higher scores indicating more enjoyment of the storybook.

### **Manipulation Checks**

#### ***Personalization of Storybook and Race of Target Storybook Character***

Two items were created as manipulation checks to determine if each child correctly understood (1) whether he or she was, or was not, one of the characters depicted in the storybook, and (2) the target storybook character's race (i.e., Black or White; see Appendix R for the Jamal version of this item).

#### ***Race/Ethnicity of the White, Black, and Hispanic Peers***

Three items were created as manipulation checks to determine if children correctly understood the race/ethnicity of the White, Black, and Hispanic peers (see Appendix S).

### **Procedure**

University IRB approval was obtained prior to conducting the current study. After gaining approval from the elementary principals and classroom teachers, the parents/legal guardians of the third- and fourth-grade children were provided with an informed consent document (see Appendix B).

## **Time 1 – Large Group Session**

An initial (Time 1) large group session was conducted by a male experimenter in either the children’s regular classroom or in their school library. At the beginning of the session, the experimenter led the participating children to believe that they were taking part in two separate studies over the span of two weeks. The male experimenter then explained that he is working with his advisor for a program that assigns students from various schools around the state to visit other schools for a couple of weeks as a learning experience. The experimenter explained to the children that their classroom was selected as one that students from other schools may enjoy visiting and, therefore, he is there to examine their feelings and attitudes toward some of the students participating in this potential school visitation program. The children were informed that the experimenter is going to assess their attitudes and anticipated responses to students from participating classrooms today and then again in a couple of weeks. The experimenter also explained to the children that if some students are selected to join their classroom next year, it may help the visiting students to see photos of the children in the class. Therefore, the children were informed that, with their parent’s permission, the experimenter will also be taking a picture of each of them as part of the student visitation program.

After explaining the “first” study, the experimenter then explained the purpose of the “second” study. The experimenter stated that the second study is his own study, and he is interested in determining how much children like a storybook character and a storybook that was created to help third- and fourth-grade children become better readers. The experimenter then explained to the child-participants that they will be read a storybook individually sometime in the next week or two, and they will be asked to rate how much they like the storybook and a character in the storybook. After providing this preliminary information about the two



“separate” studies and answering the child-participants’ questions, the experimenter then asked the children to provide their assent to participate in the two studies (see Appendix C).

After acquiring child assent, the experimenter asked the children to complete a brief Student Information Form (see Appendix A) and the modified CSD-S Scale (see Appendix I). Children were led to believe that the CSD-S scale was a personality measure that would help the researchers associated with the program know more about them. After the participating children completed the modified CSD-S Scale, the experimenter explained the 4-point rating scale that would be used throughout the remainder of the study and gave the child-participants practice using the scale. After the children were comfortable using the scale, the experimenter restated that he is interested in knowing how the children feel about and would anticipate responding to various students from other schools that may join the children’s class the following year. The experimenter then explained to the children that he was going to use an overhead projector to present them with photos of students from other schools in the state that may join their class the following year. The children were told that there are three slides, each with photos of students in their grade level that are from another school in the state. For instance, the children in a third-grade class were told that the first slide will present all the students from a third-grade class at one specific school, the second slide will present all the students from another third-grade class at a different school, and the third slide will present all the students from a third-grade class at yet another school. Children were informed that although only one or two children may come join their class, they will be asked to rate the students on each slide as a group.

After having their questions about the procedure answered, the experimenter presented the children with three slides in a random order, each depicting eight children (four boys and four girls) that represented peers from White, Black, or Hispanic racial/ethnic groups (see

Appendix F). For each slide, the experimenter introduced four of the children by their alleged names and reminded the participating children to rate the children on the slide as a group, not as individuals. While showing a slide, the experimenter pointed out two boys and two girls whose names were either stereotypically White (i.e., Brett, Jeff, Jessica, Emily), Black (i.e., Darnell, Jayden, Ebony, Shanice), or Hispanic (i.e., Alejandro, Juan Esteban, Guadalupe, Margarita), consistent with the racial/ethnic group being presented.<sup>14</sup> Children then completed the racial attitudes measure (i.e., the modified MRA; see Appendix J), the measure of their anticipated affective response (see Appendix L), and the measure of their anticipated behavioral response (see Appendix N) for each group of children. For the racial attitudes measure, the experimenter asked participating children to indicate how much they disagreed or agreed that “these children (pointing to the students’ images on the slide) are [trait]” (see Appendix J for the list of traits). For the measure of the children’s anticipated affective response, the experimenter asked the children to imagine that some of these students (again, pointing to the students’ images on the slide) joined their class. After imagining this scenario, the children then rated how much they disagreed or agreed that they would feel each emotion (see Appendix L for the list of emotions). For the measure of the children’s anticipated behavioral response, the experimenter asked the children to imagine that some of these students (pointing to the students’ images) joined their class. Again, after imagining this scenario, the children rated how much they disagreed or agreed that they would engage in each behavior (see Appendix N for the list of behaviors).

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<sup>14</sup> Names were selected from the top 100 most popular White, Black, and Hispanic baby names of 2010 from babycenter.com and were included to increase the likelihood that the children would correctly infer the race/ethnicity of the peers on each PowerPoint slide.

After the children completed their ratings of the three groups of “potential visiting classmates,” the experimenter took each participating child’s photo individually (for later insertion in the storybook for participants randomly assigned to the read the personalized version of the Jamal/Jada or Andy/Annie storybook). After taking their pictures, the experimenter thanked the children for their time, and reminded them that he would be returning to the their school once again in a couple of weeks to assess their attitudes, anticipated feelings, and anticipated behavioral responses to the students from the other schools. Before leaving the classroom, the experimenter also reminded the students that he will be coming back to their school to ask them to help with the other study (i.e., “his” storybook study) that was designed to determine how much children like a storybook character and a storybook that was created to help children become better readers.

### **Individual Storybook Sessions**

During the next several days, the experimenter met with the participating children individually to read them a storybook. At the beginning of the storybook session, the experimenter reminded the child of the purpose of this (second) study. The experimenter then explained to the child that he/she will be asked to rate how he/she feels about, and how he/she would respond to, a character in the storybook before and after reading the storybook. The child was informed that he/she will also be asked to rate how much he/she likes the storybook after reading it. The experimenter then answered any questions that the child had about this “second” study.

After completing the assent form to participate in the “second” study (see Appendix D), each child was presented with a picture and a short description of either a Black character (i.e., Jamal or Jada) or a White character (i.e., Andy or Annie) who will appear in the storybook (see

Appendix G). The gender of the storybook character was matched to the gender of the participant. After describing the storybook character to the child, the experimenter then asked the child to complete three measures regarding his or her (a) racial attitudes toward the target storybook character (i.e., the modified MRA; see Appendix K), (b) anticipated affective response to contact with the storybook character (see Appendix M), and (c) anticipated behavioral response to contact with the storybook character (see Appendix O). For the racial attitudes measure, the experimenter informed the child that he/she would be asked to rate how much he/she disagrees or agrees with twelve statements concerning various trait attributions about the Jamal/Jada (Andy/Annie) character. The experimenter then read each statement to the child, and asked the child to indicate how much he/she disagrees or agrees with the statement. For the anticipated affective response measure, each child was asked to imagine that the character will be moving in next door to him/her. The experimenter then asked the child to rate how much he/she disagrees or agrees that he/she would feel each of eight emotions. Again, the experimenter read the full sentence for each emotion, and answered any questions the child had. For the measure of the children's anticipated behavioral response to the Black or White storybook character, the experimenter asked each child to imagine that he/she saw the character at the park. The experimenter then asked the child to indicate how much he/she disagrees or agrees that he/she would engage in each of eight behaviors.

After the child completed the initial racial attitudes, anticipated affective response, and anticipated behavioral response measures, the experimenter read a storybook to the child that described the Black (i.e., in the cross-race condition) or White (i.e., in the same-race condition) storybook character's experience at a summer camp and eventual friendship with another character (see Appendix H). The identity of the other character in the story was manipulated

such that children read about the Black or White storybook character's friendship with (a) another White character (i.e., in the non-personalized condition) or (b) the child himself or herself (i.e., in the personalized condition).

After reading the storybook, the experimenter again asked the child to complete the racial attitudes measure (see Appendix K), anticipated affective response measure (see Appendix M), and anticipated behavioral response measure (see Appendix O) concerning the target Black or White storybook character. The child then completed the Imaginative Transportation Scale (see Appendix P) as well as a short questionnaire assessing his/her enjoyment of the storybook (see Appendix Q). Finally, the child completed two manipulation check items assessing (a) whether he/she was one of the characters in the storybook and (b) the race of the target character in the storybook (see Appendix R). After completing these two manipulation check items, the child was thanked and instructed to return to his/her classroom.

## **Time 2 – Large Group Session**

Several days after reading the storybook to all of the participating children, the experimenter returned to the child-participants' school and again assessed their racial attitudes toward (see Appendix J), anticipated affective response to (see Appendix L), and anticipated behavioral response to (see Appendix N) the White, Black, and Hispanic peers (see Appendix F) who, presumably, may join the children's classroom the following academic year as part of a school visitation program. The experimenter reminded the students of the purpose of "the first" study, what they will be asked to do, and then asked them if they had any questions. After answering the children's questions, the experimenter asked the children to (again) provide their assent to participate (see Appendix E) and then followed the same procedure from the first (i.e., Time 1) group assessment (see above). After the children finished rating their attitudes,

anticipated affective response, and anticipated behavioral response to the White, Black, and Hispanic students, the children were asked to indicate the race of each group of children (see Appendix S).<sup>15</sup> The children were then debriefed and thanked for their participation in the two studies.

## **Chapter 3 - Results**

The results of the current study (including preliminary analyses) are organized into two major sections examining the children's responses during (1) the individual storybook sessions and (2) the two large group sessions conducted approximately one week before and one week after they participated in the individual storybook sessions. Therefore, the first portion of the Results section includes all of the preliminary and major analyses examining the immediate effects of the storybook on children's (a) feelings of imaginative transportation into the storybook, (b) enjoyment of the storybook, and (c) ratings of the target Black or White storybook character before and after reading the storybook. The second portion of the Results section includes all the preliminary and major analyses examining children's ratings of the White, Black, and Hispanic peers one week before and after being read the storybook.

### **Immediate Effects of the Storybook**

#### **Preliminary Analyses**

##### *Manipulations Checks*

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<sup>15</sup> These manipulation check items were included during the Time 2 session, but not the Time 1 session, to reduce the likelihood that the children would be aware of the true purposes of the present study before being read the storybook.

***Race of Storybook Character.*** Frequencies were computed to examine the percentage of children who correctly identified the race of the target storybook character immediately after being read a storybook that either depicted a cross-race friendship between a White character and a Black character (i.e., when the target storybook character was Black) or a same-race friendship between two White storybook characters (i.e., when the target storybook character was White). Results indicated that 100% of children in the cross-race friendship and same-race friendship conditions correctly identified the race of the target Black or White storybook character.

***Personalization of Storybook.*** Frequencies were computed to examine the percentage of children who correctly identified if they, themselves, were depicted in the storybook immediately after being read either a personalized storybook (i.e., when a child, himself/herself, was depicted in the storybook) or non-personalized storybook (i.e., when an unfamiliar White character was depicted in the storybook). Results indicated that 100% of children in the personalized and non-personalized storybook conditions got this manipulation check correct.

#### ***Ratings of the Target White or Black Storybook Character***

Preliminary correlational analyses were conducted on the children's composite ratings concerning their attitude, anticipated affective response, and anticipated behavioral response to the target Black or White storybook character immediately before and after being read the storybook. Because the race of the target storybook character differed between storybook conditions, the series of correlations were conducted separately for those children who were randomly assigned to the cross-race friendship storybook condition (i.e., when the target storybook character was Black;  $n = 58$ ) and those children who were randomly assigned to the same-race friendship storybook condition (i.e., when the target storybook character was White;  $n = 61$ ).

The children's aggregate ratings concerning their attitude, anticipated affective response, and anticipated behavioral response toward the target Black or White storybook character were expected to be positively related at both time points (Breckler, 1984; Brown, 1995). However, as seen in Table 4, children's attitude, anticipated affective response, and anticipated behavioral response ratings of the target Black or White storybook character were not consistently, significantly intercorrelated at both time points. Therefore, the children's attitude, anticipated affective response, and anticipated behavioral response ratings concerning the target Black or White storybook character were not aggregated, but considered as independent indices of their attitude toward (subsequently labeled Attitude), anticipated affective response to (subsequently labeled Affective Response), and anticipated behavioral response to (subsequently labeled Behavioral Response) the target storybook character before and after being read the storybook, respectively.

### *Identifying Potential Covariates*

A preliminary series of correlations were conducted to examine the extent to which (1) children's gender (coded as female = 0, male = 1), (2) age (in months), (3) their scores on the social desirability scale, and (4) school from which children were recruited (coded as Iowa = 0, Kansas = 1) were related to their ratings of the target Black or White storybook character. Again, because the race of the target storybook character differed between storybook conditions, the series of correlations were conducted separately for those children who were randomly assigned to the cross-race friendship storybook condition (i.e., when the target storybook character was Black) and those children who were randomly assigned to the same-race friendship storybook condition (i.e., when the target storybook character was White).



***Gender and Age.*** As seen in Table 5, the children's gender and age were not related to their Attitude, Affective Response, and Behavioral Response ratings of the target Black storybook character immediately before or after being read the storybook. As seen in Table 6, the children's gender and age were also not related to their Attitude, Affective Response, and Behavioral Response ratings of the target White storybook character immediately before or after reading the storybook. As such, children's gender and age were not included as potential covariates in later analyses examining children's ratings of the target White or Black storybook character.

***Social Desirability.*** As with adults, eight- to ten-year-old children's willingness to acknowledge or display their racial prejudice tends to be muted by their awareness of social norms against the expression of prejudice (Nesdale, 2008; Rutland et al., 2005). Therefore, it was expected that children's social desirability scores would be positively related to their Attitude, Affective Response, and Behavioral Response ratings of the target Black storybook character. Contrary to expectations, correlational analyses indicated that social desirability was not significantly related to any of the children's ratings of the target Black storybook character (see Table 5). However, children's social desirability scores were positively related to three (out of six) of their ratings of the target White storybook character. Specifically, as seen in Table 6, those children who tended to provide more socially desirable responses indicated that they had a more favorable attitude toward the target White storybook character immediately before being read the storybook. Further, these children also had more favorable Behavioral Response ratings of the target White storybook character immediately before and after being read the storybook. As such, Social Desirability was retained as a potential covariate in later analyses examining children's ratings of the target Black or White storybook character.

***School.*** As seen in Tables 5 and 6, the school from which children were recruited was not significantly related to their Attitude, Affective Response, and Behavioral Response ratings of the target Black or White storybook character immediately before or after being read the storybook. As such, school was not included as a potential covariate in later analyses examining children's Attitude, Affective Response, and Behavioral Response to the target Black or White storybook character.

### ***Imaginative Transportation and Personalization of the Storybook***

A series of preliminary correlations were conducted to examine whether children's imaginative transportation scores and personalization of the storybook (coded as non-personalized = 0, personalized = 1) were associated with changes in their Attitude, Affective Response, and Behavioral Response ratings of the target storybook character. In computing the change scores, the children's ratings of the target storybook character before being read the storybook were subtracted from their ratings of the storybook character after being read the storybook. Again, because the race of the target storybook character differed between storybook conditions, this series of correlations was conducted separately for those children who were randomly assigned to the cross-race friendship storybook condition and those children who were randomly assigned to the same-race friendship storybook condition.

***Imaginative Transportation.*** As seen in Table 7, children's self-reported feelings of imaginative transportation into the storybook were not associated with changes in their Attitude, Affective Response, or Behavioral Response scores concerning the target Black or White storybook character.

***Personalization of the Storybook.*** As seen in Table 7, personalization of the storybook was not associated with changes in the children's Attitude, Affective Response, or Behavioral Response scores to the target Black or White storybook character.

It should be noted that the degree to which children's imaginative transportation scores were related to personalization of the storybook depended on the race of the target storybook character. Specifically, although personalization of the storybook was unrelated to children's imaginative transportation scale scores when the target storybook character was depicted as White (i.e., among children in the same-race friendship condition), there was a significant positive relationship between the two variables when the target storybook character was depicted as Black (i.e., among children in the cross-race friendship condition). For children in the cross-race friendship condition, those who were read a personalized version of the storybook reported feeling more imaginatively transported into the story than those children who were read a non-personalized version of the same storybook.

#### ***Baseline (Time 1) Ratings of the Target White or Black Storybook Character***

A one-way between-subjects MANCOVA controlling for social desirability was conducted on children's Attitude, Affective Response, and Behavioral Response ratings of the target storybook character to examine whether children's initial ratings of the character differed depending on whether the target character was depicted as Black or White. Results indicated that, after controlling for social desirability, the race of the target storybook character did not influence children's initial ratings of the character, Wilks'  $\lambda = .99$ ,  $F(3, 114) = 0.48$ ,  $p = .70$ . As seen in Figure 2, children initially rated the target storybook character in a highly favorable manner (over 3.5 on the 4-point scale) on all three indices regardless of whether he/she was presented as Black or White.

### *Imaginative Transportation*

An initial 2 (Personalization of Storybook: Non-Personalized vs. Personalized)  $\times$  2 (Race of Target Storybook Character: White vs. Black) ANOVA was conducted on children's imaginative transportation scores to determine whether their reported feelings of imaginative transportation were influenced by being read a particular storybook.<sup>16</sup> Although the main effect of Race of Target Storybook Character was not significant,  $F(1, 115) = 1.63, p = .20, \eta_p^2 = .01$ , the main effect of Personalization of Storybook was significant,  $F(1, 115) = 4.25, p = .04, \eta_p^2 = .04$ . Children who were read a personalized version of the storybook reported feeling more imaginatively transported into the story ( $M = 3.34, SD = 0.52$ ) than those children who were read a non-personalized version of the storybook ( $M = 3.15, SD = 0.57$ ). However, the main effect of Personalization of the Storybook was qualified by a significant two-way interaction of Personalization of Storybook  $\times$  Race of Target Storybook Character,  $F(1, 115) = 4.83, p = .03, \eta_p^2 = .04$ . As seen in Figure 3, children who were read a personalized version of the cross-race friendship storybook reported feeling more imaginatively transported into the narrative of the story than those who were read a non-personalized version of the same storybook,  $F(1, 115) = 8.84, p = .004$  (see Figure 3). In contrast, children in the same-race friendship condition reported feeling a high degree of imaginative transportation regardless of whether the storybook was personalized or not,  $F(1, 115) = 0.01, p = .92$ .<sup>17</sup>

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<sup>16</sup> Social desirability was not included as a covariate in this analysis because a preliminary series of correlations revealed that, as expected, the children's social desirability scores were unrelated to their imaginative transportation scale scores in all four storybook conditions ( $ps > .42$ ).

<sup>17</sup> An exploratory one-way between-subjects ANOVA was conducted on the children's imaginative transportation scale scores to examine the extent to which the children's scores differed among the four storybook conditions. The main effect of Storybook Condition was significant,  $F(3, 115) = 3.35, p = .02$ . Post hoc analyses revealed that the

### *Enjoyment of the Storybook*

Although not a primary variable of interest, a preliminary 2 (Personalization of Storybook: Non-Personalized vs. Personalized)  $\times$  2 (Race of Target Storybook Character: White vs. Black) ANOVA was conducted on children's enjoyment of the storybook for exploratory purposes.<sup>18</sup> The main effect of Personalization of Storybook was not significant,  $F(1, 115) = .57$ ,  $p = .45$ ,  $\eta_p^2 = .001$ , nor was the main effect of Race of Target Storybook Character,  $F(1, 115) = 2.80$ ,  $p = .10$ ,  $\eta_p^2 = .02$ . However, the two-way interaction of Personalization of Storybook  $\times$  Race of Target Storybook Character was significant,  $F(1, 115) = 4.74$ ,  $p = .03$ ,  $\eta_p^2 = .04$ . As seen in Figure 4, simple effects tests revealed that, for children in the cross-race friendship condition, those who were read a personalized version of the story reported that they enjoyed the storybook just as much as those who were read a non-personalized version of the story,  $F(1, 115) = .89$ ,  $p = .35$ . In contrast, for children in the same-race friendship condition, those who were read a personalized version of the story reported that they enjoyed the storybook *less* than those who were read non-personalized version of the story,  $F(1, 115) = 4.881$ ,  $p = .03$ .

### **Major Analyses**

#### *Children's Ratings of the Target Storybook Character*

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children's mean imaginative transportation scale score in the non-personalized cross-race friendship storybook condition was significantly smaller than the means in the three other storybook conditions,  $ps < .02$ . The children's mean imaginative transportation scale scores in the other three storybook conditions, however, did not significantly differ from one another,  $ps > .50$ .

<sup>18</sup> Social desirability was not included as a covariate in this analysis because a preliminary series of correlations revealed that, as expected, the children's social desirability scores were unrelated to their enjoyment of the storybook scores in all four storybook conditions ( $ps > .34$ ).

An omnibus 2 (Time: Before Being Read the Storybook vs. After Being Read the Storybook)  $\times$  2 (Personalization of Storybook: Non-Personalized vs. Personalized)  $\times$  2 (Race of Target Storybook Character: White vs. Black) mixed MANCOVA controlling for the children's social desirability scores was conducted on the children's Attitude, Affective Response, and Behavioral Response ratings of the target White or Black storybook character. Box's test for homogeneity of variance-covariance matrices was significant (Box's  $M = 128.70, p < .001$ ), indicating that the assumption of homoscedasticity was violated. As such, Pillai's Trace was used instead of Wilks'  $\lambda$  because it is more robust to the violation of this assumption than Wilks'  $\lambda$  (Tabachnick & Fidell, 2007). As seen in Table 8, the predicted omnibus multivariate three-way interaction of Time  $\times$  Personalization of Storybook  $\times$  Race of Target Storybook Character was not significant. The multivariate two-way interactions of Time  $\times$  Personalization of Storybook and Time  $\times$  Race of Target Storybook Character were also not significant. However, the multivariate main effect of Time was significant. As seen in Table 9, follow-up univariate ANCOVAs controlling for social desirability indicated that the children's Attitude, Affective Response, and Behavioral Response ratings of the target storybook character were more favorable after being read the storybook than before being read the storybook, regardless of the target storybook character's race or personalization of the storybook.

### ***Imaginative Transportation as a Mediator***

It was expected that children's scores on the imaginative transportation scale would mediate the effectiveness of the personalized storybook (i.e., as compared to the non-personalized storybook) in increasing children's favorable ratings of the target Black storybook character (see Figure 1). However, results of the omnibus MANCOVA (see above) indicated that although children generally had more favorable ratings of the target storybook character

after being read the storybook than before being read the storybook, personalization of the storybook had no impact on the children's ratings of the target character, regardless of whether the character was depicted as Black or White. Therefore, analyses examining whether imaginative transportation served as a mediator in increasing children's favorable responses to the target Black storybook character were not conducted.

## **Children's Ratings of the White, Black, and Hispanic Peers**

### **Preliminary Analyses**

#### *Manipulations Checks*

Frequencies were computed to examine the percentage of children who correctly identified the race/ethnicity of the White, Black, and Hispanic peers immediately after rating the three groups of peers during the second (i.e., Time 2) group session. Although all (i.e., 100%) of the 119 White third- and fourth-grade children who participated in the entire study correctly identified the White group of peers as "White/European American" and the Black group of peers as "Black/African American," only 75 (i.e., 63%) of the 119 children correctly identified the Hispanic group of peers as "Hispanic American or Latino/a." Interestingly, all 44 children who failed this manipulation check identified the Hispanic group of peers as "American Indian."<sup>19</sup>

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<sup>19</sup> An exploratory series of t-tests (using a Bonferroni correction for family-wise error) were conducted to examine whether children's ratings of the Hispanic peers during the two large group sessions differed depending on their ability to correctly identify the ethnicity of the Hispanic peers. Results indicated that children's Attitude, Affective Response, and Behavioral Response ratings of the Hispanic group of peers at Time 1 (before being read

### *Relations Among Children's Various Ratings of the White, Black, and Hispanic Peers*

A series of correlations was conducted on the children's ratings of their attitudes toward each racial group of students, anticipated affective response to interacting with each racial group of students, and anticipated behavioral response to interacting with each racial group of students before being read the storybook (i.e., at Time 1) and after being read the storybook (i.e., Time 2). As seen in Table 10, children's attitude, anticipated affective response, and anticipated behavioral response ratings regarding each racial group were significantly intercorrelated at Time 1 and at Time 2. Therefore, children's aggregate ratings concerning their attitude, anticipated affective response, and anticipated behavioral response were averaged to create composite indices of their Attitude, Feelings, and Behaviors toward White peers (subsequently labeled AFB toward Whites), Black peers (subsequently labeled AFB toward Blacks), and Hispanic peers (subsequently labeled AFB toward Hispanics) at Time 1 and Time 2.<sup>20</sup>

### *Identifying Potential Covariates*

A preliminary series of correlations were conducted to examine the extent to which the children's (1) gender (coded as female = 0, male = 1), (2) age (in months), (3) scores on the social desirability scale, and (4) school location (coded as Iowa = 0, Kansas = 1) were related to their composite AFB toward Whites, Blacks, and Hispanics scores at Time 1 and Time 2.

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the storybook) and at Time 2 (after being read the storybook) were unaffected by their ability to correctly identify the ethnicity of this group.

<sup>20</sup> Multivariate analyses of the children's ratings of the White, Black, and Hispanic peers using separate dependent measures (i.e., Attitude, Anticipated Affective Response, Anticipated Behavioral Response) yielded results that were similar to those using the aggregated indices of the children's AFB toward each racial group. Therefore, analyses treating these measures as separate indices will not be discussed further.



***Gender and Age.*** Consistent with prior research (e.g., Cameron & Rutland, 2006; Cameron et al., 2007), the children's gender and age were not related to their AFB toward the White, Black, or Hispanic peers at Time 1 or at Time 2 (see Table 11). Therefore, the children's gender and age were not included as potential covariates in later analyses examining children's composite AFB scores concerning the three racial groups.

***Social Desirability.*** Provided that 8- to 11-year-old children's racial prejudice is found to be muted by their awareness of social norms against the expression of prejudice (Nesdale, 2008; Rutland et al., 2005), children's social desirability scores were expected to be positively related to the composite AFB toward Blacks and AFB toward Hispanics scores at Time 1 and Time 2, respectively. As seen in Table 11, the children's social desirability scores were positively related with their aggregate AFB scores concerning the Black and Hispanic peers at both time points, as well as their composite AFB scores toward the White peers at Time 1. As such, Social Desirability was retained as a potential covariate in later analyses examining the children's AFB scores toward the three groups of peers at Time 1 and Time 2.

***School.*** Considering that children from more racially diverse schools tend to be more accepting of racial minority groups (Katz, 2003), it was expected that children recruited from the relatively racially heterogeneous elementary school in Kansas would have more favorable attitudes, feelings, and behaviors toward the Black and Hispanic peers than children recruited from the relatively racially homogeneous elementary school in rural Iowa. As seen in Table 11, children recruited from the elementary school in Kansas had more favorable AFB toward the Black peers at Time 1 and Time 2 than those recruited from the elementary school in rural Iowa. Although no relation was found between the location of the children's school and their AFB

scores concerning the Hispanic peers at Time 1 or Time 2, school was retained as a potential covariate in later analyses examining children's AFB toward the three groups of peers.

### ***Imaginative Transportation and Personalization***

A series of preliminary correlations were conducted to examine whether children's Imaginative Transportation scores and personalization of the storybook (coded as non-personalized = 0, personalized = 1) were related to changes in their AFB toward the White, Black, and Hispanic peers as a result of being read a storybook that depicted either a cross-race friendship between a White character and a Black character (i.e., when the target storybook character was Black) or a same-race friendship between two White characters (i.e., when the target storybook character was White). Change scores were computed by subtracting children's composite AFB scores at Time 1 (before being read the storybook) from their composite AFB scores at Time 2 (after being read the storybook). Correlations were conducted separately for those children who were randomly assigned to the cross-race friendship storybook condition ( $n = 58$ ) and those children who were randomly assigned to the same-race friendship storybook condition ( $n = 61$ ).

***Imaginative Transportation.*** As seen in Table 12, children's imaginative transportation scores were not significantly correlated with changes in their AFB toward Whites, Blacks, or Hispanics scores after they were read the storybook, regardless of whether the storybook depicted a cross-race friendship between a White character and a Black character or a same-race friendship between two White characters.

***Personalization of Storybook.*** As seen in Table 12, personalization of the storybook was not significantly related to changes in children's AFB toward the White, Black, or Hispanic peers after being read the storybook, regardless of whether the storybook depicted a cross-race

friendship between a White character and a Black character or a same-race friendship between two White characters.

### ***Baseline (Time 1) Ratings of the White, Black, and Hispanic Peers***

A repeated measures one-way ANCOVA controlling for School and Social Desirability was conducted on children's composite AFB scores concerning the White, Black, and Hispanic peers at Time 1. A significant main effect of Racial Group, <sup>21</sup>  $F(2, 232) = 4.50, p = .01, \eta_p^2 = .04$  was qualified by a significant interaction between Racial Group and the covariate, School,  $F(2, 232) = 9.43, p < .001$ . Therefore, the ANCOVA was conducted again, including School as a between-subjects factor. Results of this 2 (School: Iowa vs. Kansas)  $\times$  3 (Racial Group: White vs. Black vs. Hispanic) mixed-ANCOVA indicated that the main effect of School was not significant after controlling for the children's tendency to provide socially desirable responses,  $F(1, 116) = 1.92, p = .17, \eta_p^2 = .02$ , nor was the main effect of Racial Group,  $F(2, 232) = 1.05, p = .35, \eta_p^2 = .01$ . However, the two-way interaction of Racial Group  $\times$  School was significant,  $F(2, 232) = 9.43, p < .001, \eta_p^2 = .08$ . As seen in Figure 5, simple effects tests indicated that although children recruited from the racially heterogeneous elementary school in Kansas had similar AFB toward the White, Black, and Hispanic peers at Time 1,  $F(2, 232) = 1.12, p = .33$ , those children recruited from the racially homogeneous elementary school in Iowa demonstrated preferential AFB toward at least one of the racial groups at Time 1,  $F(2, 232) = 4.51, p = .01$ . Post hoc tests using Bonferroni correction for family-wise error indicated that children recruited

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<sup>21</sup> For exploratory purposes, post hoc analyses using Bonferroni correction for family-wise error were conducted on the main effect of Racial Group from this initial analysis. Interestingly, despite being significant as a main effect, post hoc analyses indicated that children initially rated the White ( $M = 3.53, SD = .33$ ), Black ( $M = 3.48, SD = .44$ ), and Hispanic peers ( $M = 3.52, SD = .47$ ) in an equally favorable manner,  $ps > .42$ .

from the relatively racially homogeneous school in Iowa reported that they had more favorable AFB toward the White and the Hispanic peers (for whom ratings did not differ) than the Black peers during this initial (Time 1) large group session.

### **Major Analyses**

An initial omnibus  $2$  (Time: Time 1 vs. Time 2)  $\times$   $3$  (Racial Group: White vs. Black vs. Hispanic)  $\times$   $2$  (Personalization of Storybook: Non-Personalized vs. Personalized)  $\times$   $2$  (Race of Target Storybook Character: White vs. Black)  $\times$   $2$  (School: Iowa vs. Kansas) mixed ANCOVA controlling for social desirability was conducted on the children's mean aggregate AFB scores to determine if reading any of the storybooks significantly improved their ratings of the White, Black, and Hispanic peers one week after they read the storybook. Because the children's initial AFB toward Blacks scores were influenced by the school from which the children were recruited, school was initially included as a between-subjects factor in this analysis. Although results were expected to yield a significant four-way interaction of Time  $\times$  Racial Group  $\times$  Personalization of Storybook  $\times$  Race of Target Storybook Character, this interaction was not significant (see Table 13). Because this initial ANCOVA may have been underpowered due to overfitting the model (Maxwell, 2004; Tabachnick & Fidell, 2007), the omnibus ANCOVA was conducted again excluding School as a between-subjects factor. However, as seen in Table 14, the results of this  $2$  (Time: Time 1 vs. Time 2)  $\times$   $3$  (Racial Group: White vs. Black vs. Hispanic  $\times$   $2$  (Personalization of Storybook: Non-Personalized vs. Personalized)  $\times$   $2$  (Race of Target Storybook Character: White vs. Black)) mixed ANCOVA controlling for social desirability yielded a similar pattern of results. Again, the four-way interaction of Time  $\times$  Racial Group  $\times$  Personalization of Storybook  $\times$  Race of Target Storybook Character was not significant, nor were any of the resulting two- or three-way interactions including Time. Because no significant

effects emerged from these omnibus ANCOVAs, additional analyses exploring the predicted primary and secondary transfer effects (and mediation of these predicted effects; see Figure 1) were not conducted.

### **Exploratory Analyses**

Several alternative approaches to analyzing the data were explored to determine whether the storybook intervention produced any significant effects in improving the White children's ratings of the Black target storybook character, the Black peers, or the Hispanic peers (see Table 15). However, none of these approaches yielded any meaningful findings and, consequently, they will not be discussed further.

## **Chapter 4 – Discussion**

Prior research has demonstrated that media-mediated extended contact interventions, such as Cameron and Rutland's (2006) storybook intervention, are relatively effective at improving children's intergroup reactions. However, building on Harwood's (2010) two-dimensional framework of contact space, the current study explored whether such storybook interventions could be improved by increasing children's self-involvement in and, consequently, their imaginative transportation into, the storybook. More specifically, the present study tested the hypothesis that reading White children a personalized storybook depicting the children, themselves, in a cross-race friendship with a Black storybook character would be more effective than a non-personalized version of the storybook at improving their attitude, feelings, and behaviors toward the Black storybook character as well as Black peers generally (via a primary transfer effect; Pettigrew, 1998, 2009). Furthermore, given that media-mediated intergroup contact via storybooks has also been found to mitigate children's negative reactions toward

outgroups not depicted in the storybooks (i.e., a secondary transfer effect; Vezzali et al., 2014), it was hypothesized that reading White children a personalized storybook depicting the children, themselves, in a cross-race friendship with a Black storybook character would be more effective than a non-personalized version of the same storybook at improving their attitude, feelings, and behaviors toward Hispanic peers.

Although analyses of the children's data yielded three significant and interesting patterns of findings, the results of the current study were generally disappointing. Unfortunately, no support was found for the main predictions involving the potential impact of a personalized storybook on White children's ratings of a Black storybook character, Black peers, and Hispanic peers. In fact, the only significant effect of personalization of the storybook that merits attention involved the children's imaginative transportation in the cross-race friendship condition.

Although analyses revealed two other results that merit attention, neither of these findings involved personalization of the storybook. In the sections below, the disappointing pattern of results and the three significant and interesting patterns of findings will be discussed in turn and, in doing so, the limitations of the present study and directions for future research will be addressed.

### **Personalization and Children's Ratings of the Black Storybook Character, the Black Peers, and the Hispanic Peers in the Cross-Race Friendship Condition**

As noted above, no support was found for the main predictions of the present study. Although any attempt to explain these null effects must be considered highly speculative, it is

important to attempt to gain some insight into (1) what went wrong in the present study and (2) how future research might address the limitations of the present study.

One of the biggest issues that may have subverted the potential impact of the present prejudice-reduction intervention is the overwhelmingly favorable manner in which the children responded to the Black (and White) target storybook character, the Black peers, and the Hispanic peers at the onset of the study. Although the children were found to rate the target storybook character in a more favorable manner after than before being read the storybook (collapsing across the cross-race vs. same-race friendship storybook conditions as well as the personalized vs. non-personalized storybook conditions), the initial ratings approached a ceiling effect that made it very difficult to statistically demonstrate any significant improvement in the White children's ratings of the Black and Hispanic peers in the personalized cross-race friendship condition. Although it is unclear what might have contributed to this issue, two contrasting possibilities will be considered.

The first possibility is that the children who participated in the study may genuinely have had very low levels of prejudice toward Black and Hispanic individuals. If the children in the present study were generally highly accepting of racial outgroup members prior to the start of the study, then they could not have feasibly benefitted from the present prejudice-reduction intervention.<sup>22</sup> If this explanation is correct, then the lesson for future researchers interested in examining the immediate and long-term effects of media-mediated contact on children's

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<sup>22</sup> It should be noted that despite numerous attempts to identify children who might be "prejudiced enough" to potentially benefit from being read the storybook in the personalized cross-race friendship condition (see Table 15), none of the attempts were found to be successful.

intergroup reactions is to actively seek to identify, through various prescreening techniques, children who are racially prejudiced and in need of intervention. By initially identifying racially prejudiced children who vary in the severity of their prejudice, future research could help to determine the extent to which the positive effects of a media-mediated contact intervention on the children's intergroup reactions are moderated by the children's initial level of prejudice. For example, future research may demonstrate that whereas indirect experiences of intergroup contact through various media (e.g., storybooks) are sufficient to improve moderately prejudiced children's intergroup reactions, such indirect experiences have little or no effect on those children who are highly prejudiced. In a similar vein, whereas a single reading of a personalized storybook depicting a cross-race friendship may be sufficient to reduce the negative attitude of a child with a moderate level of racial prejudice, a highly prejudiced child may require several indirect (as well as direct) experiences of intergroup contact, coupled with extensive discussion with a teacher or parent of such cross-race contacts, to yield any beneficial effects (for a related discussion, see Cameron et al., 2011a).

The other possible explanation for the children's generally favorable ratings of the Black and Hispanic peers involves the explicit way in which the children's attitudes and anticipated responses were measured. More specifically, the children who participated in the present study may have been prejudiced toward Black and Hispanic individuals to various degrees, but they may have chosen not to display their true attitudes in their responses to the experimenter. Although the use of overt measures of racial prejudice are common within the intergroup contact literature (Hewstone & Swart, 2011; Levy & Hughes, 2009), especially in studies that examine the effect of media-mediated extended contact interventions on young children's racial attitudes (e.g., Aronson et al., 2016; Cameron & Rutland, 2006; Cameron et al., 2006; 2007; 2011a), the



use of such measures in the present study may have inadvertently enabled the children to distort their genuine attitudes and respond to the Black and Hispanic peers, as well as the Black target storybook character, in a consistently favorable manner. As mentioned in the Introduction, eight- to ten-year-old children, like their adult counterparts, are often motivated to suppress their explicit expressions of prejudice (Hughes, Alo, Krieger, & O’Leary, 2016), especially when they are aware that the expression of prejudice is socially devalued (Rutland et al., 2005). Because the present study only made use of rather explicit measures of racial prejudice, it is possible that the children’s ratings of the Black and Hispanic peers (and the target Black storybook character) before and after being read the storybook did not reflect their true attitudes and anticipated responses but, instead, their motivation to respond without prejudice. Given that it is extremely difficult to separate children’s genuine attitudes from their motivational influences using explicit measures (Olson, 2009), it may be necessary for future research to examine the effect of media-mediated extended contact (such as personalized cross-race friendship storybooks) when prejudice is assessed via indirect and subtle techniques, such as teacher’s reports, projective measures (e.g., the Ambiguous Pictures Task; McGlothlin, Killen, & Edmonds, 2005), and/or the Implicit Association Test (Rutland et al., 2005).

Although these two contrasting explanations for the highly favorable manner in which children rated the Black and Hispanic peers highlight important theoretical and practical issues for future research, it is important to note that the explanations provided above are not exhaustive. In fact, there could be any number of other explanations for the observed ceiling effects in the present study. For instance, the ceiling effects in the children’s ratings of the Black and Hispanic peers could reflect a tendency for children to rate images of relatively attractive White, Black, and Hispanic peers in a highly favorable manner. In a similar vein, it is possible

that children in the present study rated the White, Black, and Hispanic peers in a highly favorable manner because the peers all appeared to be happy and friendly in the images that were presented to the children. Further, it is possible that the children's highly favorable ratings of the three groups of peers could reflect a social norm (e.g., a hospitality norm) to be accepting of and courteous to individuals who may join their classroom in the future.

### **Personalization and Children's Feelings of Imaginative Transportation**

As noted earlier, the only significant finding that emerged as a result of personalizing the storybook involved the children's imaginative transportation scores in the cross-race friendship storybook condition. Children who were read a personalized version of the cross-race friendship storybook reported feeling more imaginatively transported into the narrative of the storybook than children who were read a non-personalized version of the same storybook (see Figure 3). However, it is important to note that (a) children who were read a storybook that depicted a same-race friendship felt highly imaginatively transported into the narrative of the storybook regardless of whether it was personalized or not (see Figure 3), (b) children who were read a non-personalized version of the cross-race friendship storybook reported feeling less imaginatively transported into the storybook than children in the same-race friendship storybook conditions (see Footnote 17), and (c) children who were read a personalized version of the cross-race friendship storybook reported feeling just as imaginatively transported as those who were read a non-personalized or personalized version of the same-race friendship storybook (see Footnote 17). Consequently, this pattern of results highlights two important observations concerning the ease with which the White children in the current study felt imaginatively transported into the cross-race storybook. First, it appears that children in the non-personalized condition experienced considerable difficulty seeing themselves as actively participating in the

narrative of the cross-race storybook. Second, it appears that personalization of the cross-race storybook was, indeed, successful at elevating the children's feelings of imaginative transportation into the narrative of the storybook. Taken together, these findings suggest that personalization of the storybook was successful at attenuating the apparent difficulty the participating children encountered in feeling imaginatively transported into the narrative of the cross-race storybook.

Unfortunately, it is unclear why children in the cross-race, but not the same-race, friendship condition encountered difficulty feeling highly imaginatively transported into the narrative of a non-personalized storybook. However, considering that elementary children in the United States tend to have more experience and are more comfortable with same-race friendships than cross-race friendships (Al Ramiah, Schmid, Hewstone, & Floe, 2015; Graham & Cohen, 1997; Schneider, Dixon, & Udvari, 2007), it is speculated that children in the same-race friendship storybook condition did not need the storybook to be personalized in order to perceive themselves as involved in the activities (hence the relatively high imaginative transportation scores among children in the personalized *and* non-personalized same-race friendship storybook conditions depicted in Figure 3). In contrast, it is speculated that, due to a relative lack of experience with such friendships, children in the cross-race friendship condition had difficulty perceiving themselves as involved in the activities with a new Black friend as depicted in the story (hence the relatively low imaginative transportation scores in the non-personalized cross-race friendship condition presented in Figure 3). Therefore, unlike children in the same-race friendship condition, children in the cross-race friendship condition may have needed to be personally depicted as the other character in the storybook in order to experience the friendship with the Black character as genuine and to feel transported into the narrative of the storybook

(hence the significant effect of Personalization of the Storybook on the children's transportation scores in the cross-race friendship condition).

Although this explanation for the contrasting effects of personalization of the storybook on children's imaginative transportation scores in the cross- and same-race friendship conditions is speculative, the results of the current study suggests that future research should continue to explore the role that personalization may play in increasing children's feelings of imaginative transportation into multicultural storybooks that depict cross-race friendships. Although personalization of the storybook was not powerful enough to influence the children's ratings of the Black storybook character (or the Black and Hispanic peers) as predicted, the finding that personalization did heighten their feelings of imaginative transportation into the cross-race friendship storybook is encouraging. If a parent or teacher wants a young child to get transported into, and emotionally involved in, a story depicting a cross-race friendship, then personalizing the storybook appears as a reasonable first step in addressing (and, perhaps, altering) the young child's attitudes toward peers from other racial and ethnic groups. For instance, a parent or teacher could take advantage of a child's heightened transportation into a personalized storybook depicting a cross-race friendship to encourage the child to immediately discuss (a) his/her feelings of involvement and connection with his/her "friend" in the story, (b) his/her own interactions with real peers from other racial and ethnic groups, and (c) other issues relevant to diversity and multiculturalism (e.g., the importance of multicultural sensitivity and inclusion). In addition, future research could examine whether children's heightened transportation into a personalized (vs. a non-personalized) storybook depicting a cross-race friendship results in them being more responsive, at a later time, to discussing their own experiences with, and feelings toward, individuals from other racial and ethnic groups. Finally,

future research could examine whether a child's heightened experience of transportation into a personalized (vs. a non-personalized) storybook depicting the child, him/herself, in a cross-race friendship with a racial outgroup member results in the child being more motivated to read (or be read) additional personalized storybooks that depict him/her involved in other cross-race friendships.

### **Two Additional Findings (Unrelated to the Personalization of the Storybook)**

As noted earlier, analyses of the children's data revealed two additional findings that merit attention, even though they are tangential to the main purpose of the present study.

#### **Children's Improved Ratings of the Target Storybook Character**

Analyses examining the children's Attitude, Affective Response, and Behavioral Response ratings of the target Black or White storybook character revealed that the children tended to rate the target storybook character more favorably after than before being read the storybook *regardless* of whether the storybook (a) depicted a same-race friendship (with a White target storybook character) or a cross-race friendship (with a Black target storybook character) and (b) was personalized or not personalized (see Table 9). The children's ratings of the target storybook character may have improved as a result of depicting the character in a favorable manner that involved his/her growing acceptance by, and friendship with, another character in the storybook. In a related finding (Wadian et al., 2017), second- through fourth-grade children's reactions to an obese storybook character were found to be improved as a result of the storybook character being befriended by a "typical" (non-obese) storybook character. It should be noted, however, that the improvement in the children's attitude toward the obese storybook character occurred when the other's reason for the association with the obese storybook character was

presented as internally motivated (i.e., curiosity or sympathy) but not when the reason for association was presented as externally motivated (i.e., instructed by the teacher) or when no reason was provided. In the present study, the friendship between the storybook characters was depicted as genuine and internally motivated, which presumably contributed to the children's improved ratings of the target story character regardless of the character's race or the personalization of the storybook.

When the children's ratings of the target storybook character in the present study are considered in light of the findings reported by Wadian et al. (2017), some interesting questions emerge that should be addressed in future research. For instance, if the other storybook character's reason for associating with and befriending the target storybook character in the present study had not been presented as internally motivated, would this have reduced or, perhaps, eliminated the children's tendency to rate the target storybook character in a more favorable manner after than before being read the storybook? Would describing the other storybook character's reason for associating with and befriending the target storybook character as externally motivated (e.g., instructed by a camp counselor) have a different impact on the children's ratings of the target storybook character (a) in the cross-race friendship storybook condition than the same-race friendship storybook condition and (b) in the personalized storybook condition than the non-personalized storybook condition? Clearly, the results of the current study, coupled with the findings from Wadian et al. (2017), provide exciting directions for future research.

## **Relationship Between the Relative Racial Homogeneity of the Public Elementary Schools and the Children's Ratings of the Black Peers**

Children who were recruited from a school (in northeast Iowa) that was relatively racially homogeneous (i.e., approximately 92% of the students enrolled in the school are White) had less favorable AFB toward the Black peers prior to reading the storybook (i.e., at Time 1) and after reading the storybook (i.e., at Time 2) than children who were recruited from a school (in northeast Kansas) that was, comparatively, more racially diverse (i.e., approximately 72% of the students enrolled in the school are White).<sup>23</sup> In a related finding, the children recruited from the relatively racially homogeneous school in Iowa reported that, during the initial (i.e., Time 1) large group session, they had less favorable AFB toward the Black peers than the White or Hispanic peers (for whom ratings did not differ from one another). In contrast, the children recruited from the relatively more racially diverse school in Kansas reported that they had AFB ratings of the Black, White, and Hispanic peers during the initial (i.e., Time 1) large group session that did not differ from one another.

Despite the generally favorable ratings of the Black peers by the child participants in the present study, this pattern of results does hint at a semblance of racial prejudice toward the Black peers among the children who attended the Iowa school. Although not explicitly addressed in this study, the observation that the children who attended the Iowa school (a) had relatively few Black schoolmates with whom they could interact and (b) had relatively negative AFB toward the Black peers provides indirect support for the notion that a lack of intergroup contact

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<sup>23</sup> The relative racial homogeneity of the two public elementary schools was found to be unrelated to the children's AFB toward the White and Hispanic peers at Time 1 and Time 2 (see Table 11).

contributes to the devaluation of individuals from racial outgroups (e.g., Allport, 1954; Pettigrew, 1998). Further, it should be noted that any hint of racial prejudice in the Iowa subsample appears to have been directed toward the Black, rather than the Hispanic, peers. The extent to which this distinction reflects some children's (a) greater prejudice toward Black than Hispanic peers and/or (b) difficulty in accurately identifying Hispanic peers as Hispanic (observed during both pilot testing and the present study) cannot be determined.

### **Limitations and Future Directions**

The present study examined how personalized storybooks may be used to improve White children's attitudes, feelings, and behaviors toward racial minority groups. The discussion below focuses on the methodological and theoretical limitations (as well as contributions) of the present study that provide important directions for future research.

Unlike Cameron and colleagues' (2006, 2007, 2011a) past work where children were read multiple storybooks depicting cross-group friendships over a period of a month, children who participated in the present study were only read one storybook during a single "individual storybook session." Unfortunately, it is unclear how much this particular methodological divergence from Cameron and colleagues' past work contributed to the rather disappointing patterns of findings in the present study. Although Turner and Cameron (2016) recently surmised that media-mediated extended contact interventions that expose children to multiple storybooks across several sessions tend to be more successful than those that only expose children to a single reading of a storybook, researchers have not yet empirically examined this claim. Consequently, future research should systematically examine the extent to which children's frequency of exposure to the critical cross-group friendship manipulation in a given media-mediated extended contact intervention contributes to the intervention's success.



Similarly, it would be beneficial for future research to examine the role that personalization may play in reducing the time it takes such interventions to produce a desired primary (and/or secondary) transfer effect. Considering that the results of the present study suggest that personalization plays an important role in enabling White children to feel highly imaginatively transported into a storybook that depicts a cross-race friendship, children who are exposed to personalized storybooks might require fewer readings to produce a desired primary (or secondary) transfer effect than those who are exposed to identical storybooks that are not personalized.

Another way in which the methodology of the present study diverged from that of Cameron and colleagues' (2006, 2007, 2011a) past work involves the absence of a targeted, post-story discussion. In Cameron and colleagues' studies, children participated in a group discussion immediately after each storybook session to "encourage the children to focus on positive aspects of the cross-group friendship" described in the story (Turner & Cameron, 2016, p. 226). Although Cameron and others (e.g., Aboud & Brown, 2013; Turner & Cameron, 2016) have argued that guided post-story discussions are important to include in a media-mediated extended contact intervention, they have yet to systematically examine the role that such discussions play in improving children's intergroup reactions. Considering that the discussions, and not necessarily the cross-group friendships described in the storybooks, could have caused children to respond to outgroup peers in a more favorable manner, it is currently unclear whether the apparent success of many of the interventions cited in the media-mediated extended contact literature (see Paluck & Green, 2009 for review) can be attributed to the media-mediated extended contact itself or the targeted discussions that followed. Future researchers interested in using media-mediated extended contact procedures should systematically examine the extent to

which the stories of cross-group friendships and/or the post-story discussions influence children's positive intergroup reactions.

Despite differences between the present work and that of Cameron and colleagues (2006, 2007, 2011a), it is important to note that neither the current study nor any study cited in this document have examined the extent to which media-mediated extended contact can improve children's actual behaviors toward their peers. Consequently, future research should examine the extent to which imagined contact or media-mediated extended contact produces a meaningful change in children's actual behaviors toward racial minority peers. Although an impressive volume of scholarship suggests that a person's self-reported attitudes and behavioral intentions are predictive of their actual behavior (Ajzen & Fishbein, 1977; 2005), there exists an equally impressive volume of scholarship that demonstrates that such self-reports can conflict with how people actually behave in a real situation (e.g., Batson et al., 1997; Kawakami, Dunn, Karmali, & Dovidio, 2009; Swim & Hyer, 1999). Consequently, research confirming the positive effects of media-mediated extended contact (as well as imagined contact; e.g., Cameron et al., 2007, 2011a, 2011b) on children's behavior in intergroup contexts is needed.

### **Concluding Comment Concerning “The Power of Personalization”**

Admittedly, the title of this dissertation highlighting "the power of personalization" is an overstatement at this time. Although, consistent with prediction, children in the cross-race friendship storybook condition generally felt more imaginatively transported into the narrative of the storybook when it was personalized than when it was not, personalization of the storybook failed to be associated with improving the children's ratings of the target Black storybook character, the Black peers, or the Hispanic peers. As noted earlier, the significant finding concerning personalization is encouraging in that it represents a good first step in addressing

(and, perhaps, improving) children's attitudes, feelings, and behaviors toward peers from other racial and ethnic groups. For example, a prejudiced White child who is transported into, and emotionally invested in, a story depicting his/her friendship with a Black child, may have a heightened willingness to dwell upon and discuss the friendship with a parent or teacher. Ultimately, the personalized experience of a cross-race friendship may encourage the White child to approach and, ideally, befriend a Black (or Hispanic) child in order to extend his/her imagined experience into the real world. It is this author's sincere hope that future research will reveal the power of personalized storybooks as a first step in improving children's attitudes and behaviors toward peers from other racial and ethnic groups.<sup>24</sup>

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<sup>24</sup>Although it is beyond the scope of the present study, personalized storybooks might also be useful in improving children's attitudes and behaviors toward peers with various "undesirable characteristics," such as being extremely overweight (e.g., Wadian et al., 2017).

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**Table 1 – Total Number of Students Enrolled at Each Participating School (Grades K through 6) and Reported Racial/Ethnic Demographics Provided by School Administrators**

Location of School	Number of Enrolled Students (Grades K through 6)	<u>Percentage of Children Identified as...</u>					<u>Total</u>
		White	Black	Hispanic	Two or More	Other	Non-White
Iowa	694	92%	1%	3%	3%	1%	8%
Kansas	563	72%	5%	13%	9%	1%	28%

**Table 2 - Cronbach's  $\alpha$ s and Mean Scores (Standard Deviations) for the Children's Attitude, Anticipated Affective Response, and Anticipated Behavioral Response Ratings for the White, Black, and Hispanic Peers Before (Time 1) and After (Time 2) Being Read the Storybook**

Racial Group	Measure	Time 1		Time 2	
		$\alpha$	Mean (SD)	$\alpha$	Mean (SD)
	Attitude	.82	3.50 (.42)	.90	3.63 (.42)
	Anticipated Affective Response	.74	3.59 (.43)	.83	3.67 (.47)
	Anticipated Behavioral Response	.82	3.50 (.45)	.83	3.48 (.50)
	Attitude	.88	3.49 (.47)	.86	3.61 (.39)
	Anticipated Affective Response	.84	3.58 (.53)	.85	3.65 (.50)
	Anticipated Behavioral Response	.85	3.37 (.53)	.84	3.43 (.50)
	Attitude	.90	3.51 (.50)	.94	3.57 (.54)
	Anticipated Affective Response	.91	3.63 (.55)	.90	3.63 (.55)
	Anticipated Behavioral Response	.88	3.42 (.55)	.89	3.37 (.59)



**Table 3 – Cronbach’s  $\alpha$ s and Mean Scores (Standard Deviations) for the Children’s Attitude, Anticipated Affective Response, and Anticipated Behavioral Response Ratings for the Black or White Target Storybook Character Immediately Before and After Being Read the Storybook**

Race of Target Storybook Character	Measure	Before		After	
		$\alpha$	Mean (SD)	$\alpha$	Mean (SD)
	Attitude	.71	3.66 (.30)	.69	3.84 (.18)
	Anticipated Affective Response	.72	3.75 (.30)	.75	3.85 (.26)
	Anticipated Behavioral Response	.74	3.55 (.34)	.75	3.76 (.25)
	Attitude	.74	3.70 (.28)	.70	3.85 (.20)
	Anticipated Affective Response	.67	3.75 (.27)	.71	3.87 (.23)
	Anticipated Behavioral Response	.74	3.61 (.35)	.71	3.79 (.29)

**Table 4 – Correlations Among the Children’s Attitude, Anticipated Affective Response, and Anticipated Behavioral Response Ratings for the Target Black or White Storybook Character Before Being Read the Storybook (Above Diagonal) and After Being Read the Storybook (Below Diagonal)**

Measure	Black Target Storybook Character			White Target Storybook Character		
	1	2	3	1	2	3
1 Attitude	--	.48**	.28*	--	.44**	.39**
2 Anticipated Affective Response	.42**	--	.33*	.14	--	.41**
3 Anticipated Behavioral Response	.28*	.11	--	.30*	.23	--

\* $p < .05$ , \*\* $p < .001$

**Table 5– Correlations of the Children’s Age, Gender, Social Desirability Score, and School with Their Attitude, Anticipated Affective Response, and Anticipated Behavioral Response Ratings for the Black Storybook Character Immediately Before and After Being Read the Storybook**

		<i>Before Being Read the Storybook</i>						<i>After Being Read the Storybook</i>			
		1	2	3	4	5	6	7	8	9	10
1	Gender of Participant	--	.16	-.08	.11	-.11	-.07	-.17	-.11	-.02	-.18
2	Age (in months)		--	-.03	.17	.07	-.02	-.02	-.03	-.07	.12
3	Social Desirability			--	.04	.10	.04	.03	.15	.15	.09
4	School (i.e., Racial Diversity)				--	.08	.07	-.05	-.08	.17	-.08
<i>Before Being Read the Storybook</i>											
5	Attitude					--	.48**	.28*	.44*	.35*	.23
6	Affective Response						--	.33*	.54**	.63**	.20
7	Behavioral Response							--	.37*	.14	.67**
<i>After Being Read the Storybook</i>											
8	Attitude								--	.42*	.28*
9	Affective Response									--	.11
10	Behavioral Response										--

\* $p < .05$ , \*\* $p < .001$

**Table 6 – Correlations of the Children’s Age, Gender, Social Desirability Score, and School with Their Attitude, Anticipated Affective Response, and Anticipated Behavioral Response Ratings for the White Storybook Character Immediately Before and After Being Read the Storybook**

		<i>Before Being Read the Storybook</i>						<i>After Being Read the Storybook</i>			
		1	2	3	4	5	6	7	8	9	10
1	Gender of Participant	--	.10	-.26*	.06	-.05	-.07	-.17	-.03	-.11	-.12
2	Age (in months)		--	-.19	.06	-.04	-.02	-.22	.02	.06	-.23
3	Social Desirability			--	-.03	.33*	-.05	.29*	.13	-.21	.27*
4	School (i.e., Racial Diversity)				--	.08	.19	.04	-.07	.13	-.06
<i>Before Being Read the Storybook</i>											
5	Attitude					--	.44**	.39**	.45**	.15	.17
6	Affective Response						--	.41*	.09	.73**	.19
7	Behavioral Response							--	.34*	.31*	.82**
<i>After Being Read the Storybook</i>											
8	Attitude								--	.14	.30*
9	Affective Response									--	.23
10	Behavioral Response										--

\* $p < .05$ , \*\* $p < .001$

**Table 7 – Correlations of Imaginative Transportation Scores and Personalization of the Storybook with Changes in the Children’s Attitude, Affective Response, and Behavioral Response Ratings for the Target Storybook Character in the Cross-Race Storybook Condition (Above Diagonal) and Same-Race Storybook Condition (Below Diagonal)**

		1	2	3	4	5
1	Imaginative Transportation	--	.39*	-.13	-.22	-.15
2	Personalization of Storybook	-.01	--	.23	-.06	-.04
3	Change in Attitude	.12	.15	--	.09	.02
4	Change in Affective Response	.20	.10	.51**	--	.21
5	Change in Behavioral Response	.03	.05	.33*	.36*	--

\* $p < .05$ , \*\* $p < .001$

**Table 8 – Multivariate Effects from the Omnibus 2 (Time) × 2 (Personalization of Storybook) × 2 (Race of Target Storybook Character) mixed MANCOVA Conducted on the Children’s Attitude, Affective Response, and Behavioral Response Ratings of the Target Storybook Character**

Effect	Pillai’s Trace	F(3, 112)
<i>Between-Subjects Effects</i>		
Social Desirability	.08	3.31*
Personalization of Storybook	.02	0.59
Race of Target Storybook Character	.01	0.40
Personalization of Storybook × Race of Target Storybook Character	.06	2.52
<i>Within-Subjects Effects</i>		
Time	.26	13.26**
Time × Social Desirability	.02	0.71
Time × Personalization of Storybook	.04	1.48
Time × Race of Target Storybook Character	.01	0.42
Time × Personalization of Storybook × Race of Target Storybook Character	.01	0.46

\* $p < .05$ , \*\* $p < .001$

**Table 9 – Means (Standard Deviations) of the Children’s Attitude, Affective Response, and Behavioral Response Ratings of the Target Storybook Character Before and After Being Read the Storybook**

	Before Being Read the Storybook	After Being Read the Storybook	<i>F</i> (1,114)	$\eta_p^2$
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )		
Attitude	3.68 (.29)	3.85 (.19)	22.88**	.17
Affective Response	3.75 (.28)	3.86 (.24)	9.38*	.08
Behavioral Response	3.58 (.35)	3.77 (.27)	23.03**	.17

\**p* < .05, \*\**p* < .001

**Table 10 – Correlations Among the Children’s Attitude, Anticipated Affective Response, and Anticipated Behavioral Response Ratings of the White, Black, and Hispanic Peers at Time 1 (Above Diagonal) and Time 2 (Below Diagonal)**

Measure	White Peers			Black Peers			Hispanic Peers		
	1	2	3	1	2	3	1	2	3
1 Attitude	--	.20*	.35**	--	.60**	.66**	--	.62**	.68**
2 Affective Response	.52**	--	.54**	.55**	--	.71**	.71**	--	.75**
3 Behavioral Response	.60**	.63**	--	.71**	.65**	--	.76**	.71**	--

\* $p < .05$ , \*\*  $p < .001$



**Table 11 – Correlations of the Children’s Gender, Age, Social Desirability Score, and School with Their (Aggregate) AFB Toward the White, Black, and Hispanic Peers One Week Before (Time 1) and After (Time 2) Being Read the Storybook**

		<i>Time 1 – Large Group</i>					<i>Time 2 – Large Group</i>				
		1	2	3	4	5	6	7	8	9	10
1	Gender of Participant	--	.12	-.18	.08	-.12	-.03	-.15	-.09	.01	-.17
2	Age (in months)		--	-.11	.11	.02	.17	-.01	-.14	.02	-.14
3	Social Desirability			--	.00	.24*	.25*	.26*	.17	.18*	.24*
4	School (i.e., Racial Diversity)				--	-.01	.34**	.04	-.09	.26*	-.03
<i>Time 1 – Large Group</i>											
5	AFB toward Whites					--	.51**	.47**	.59**	.45**	.44**
6	AFB toward Blacks						--	.51**	.17	.64**	.26*
7	AFB toward Hispanics							--	.23*	.37**	.53**
<i>Time 2- Large Group</i>											
8	AFB toward Whites								--	.42**	.66**
9	AFB toward Blacks									--	.45**
10	AFB toward Hispanics										--

\* $p < .05$ , \*\* $p < .001$

**Table 12 – Correlations of Imaginative Transportation Scores and Personalization of Storybook with Changes in the Children’s (Aggregate) AFB Toward the White, Black, and Hispanic Peers After Being Read the Cross-Race Friendship Storybook (Above Diagonal) or the Same-Race Friendship Storybook (Below Diagonal)**

		1	2	3	4	5
1	Imaginative Transportation	--	.39*	-.15	.05	-.09
2	Personalization of Storybook	-.01	--	.12	.10	.14
3	Change in AFB toward Whites	.04	-.01	--	.45**	.54**
4	Change in AFB toward Blacks	.13	-.07	.42**	--	.32*
5	Change in AFB toward Hispanics	.17	.18	.61**	.54*	--

\* $p < .05$ , \*\* $p < .001$

**Table 13 - Multivariate Effects from the Initial Omnibus 2 (Time) × 3 (Racial Group × 2 (Personalization of Storybook) × 2 (Race of Target Storybook Character) × 2 (School)) Mixed ANCOVA on the Children's Mean Aggregate AFB Scores for the White, Black, and Hispanic Peers**

	<i>F</i>	<i>df</i> <sub>Effect</sub>	<i>df</i> <sub>Error</sub>	$\eta_p^2$
<i>Between-Subjects Effects</i>				
Social Desirability	11.34*	1	110	.09
School	1.68	1	110	.02
Personalization	0.53	1	110	.01
Intergroup Friendship	0.03	1	110	.00
School × Personalization	0.37	1	110	.00
School × Race of Target Storybook Character	0.48	1	110	.00
Personalization × Race of Target Storybook Character	2.03	1	110	.02
School × Personalization × Race of Target Storybook Character	0.30	1	110	.00
<i>Within-Subjects Effects</i>				
Time	2.14	1	110	.02
Time × Social Desirability	0.45	1	110	.00
Time × School	1.54	1	110	.01
Time × Personalization	1.10	1	110	.01
Time × Race of Target Storybook Character	0.12	1	110	.00
Time × School × Personalization	2.50	1	110	.02
Time × School × Race of Target Storybook Character	0.46	1	110	.00
Time × Personalization × Race of Target Storybook Character	0.40	1	110	.00
Time × School × Personalization × Race of Target Storybook Character	0.09	1	110	.00
Racial Group	1.92	2	220	.02
Racial Group × Social Desirability	1.16	2	220	.01
Racial Group × School	10.81**	2	220	.09
Racial Group × Personalization	0.03	2	220	.00
Racial Group × Race of Target Storybook Character	0.29	2	220	.00
Racial Group × School × Personalization	0.72	2	220	.01
Racial Group × School × Intergroup Friendship	0.07	2	220	.00
Racial Group × Personalization × Race of Target Storybook Character	0.02	2	220	.00
Racial Group × School × Personalization × Race of Target Storybook Character	0.03	2	220	.00
Time × Racial Group	1.63	2	220	.02
Time × Racial Group × Social Desirability	0.46	2	220	.00
Time × Racial Group × School	0.17	2	220	.00
Time × Racial Group × Personalization	2.02	2	220	.02
Time × Racial Group × Intergroup Friendship	0.57	2	220	.01
Time × Racial Group × School × Personalization	0.78	2	220	.01
Time × Racial Group × School × Race of Target Storybook Character	0.66	2	220	.01
Time × Racial Group × Personalization × Race of Target Storybook Character	0.23	2	220	.00
Time × Racial Group × School × Personalization × Race of Target Storybook Character	0.89	2	220	.01

\* $p < .05$ , \*\* $p < .001$

**Table 14 - Multivariate Effects from the Omnibus 2 (Time) × 3 (Racial Group) × 2 (Personalization of Storybook) × 2 (Race of Target Storybook Character) Mixed ANCOVA on the Children’s Mean Aggregate AFB Scores to the White, Black, and Hispanic Peers**

	<i>F</i>	<i>df</i> <sub>Effect</sub>	<i>df</i> <sub>Error</sub>	$\eta_p^2$
<i>Between-Subjects Effects</i>				
Social Desirability	11.39*	1	114	.09
Personalization	0.61	1	114	.01
Intergroup Friendship	0.00	1	114	.00
Personalization × Race of Target Storybook Character	1.87	1	114	.02
<i>Within-Subjects Effects</i>				
Time	1.77	1	114	.02
Time × Social Desirability	0.33	1	114	.00
Time × Personalization	1.23	1	114	.01
Time × Race of Target Storybook Character	0.09	1	114	.00
Time × Personalization × Race of Target Storybook Character	0.38	1	114	.00
Racial Group	1.76	2	228	.02
Racial Group × Social Desirability	1.09	2	228	.01
Racial Group × Personalization	0.02	2	228	.00
Racial Group × Race of Target Storybook Character	0.26	2	228	.00
Racial Group × Personalization × Race of Target Storybook Character	0.01	2	228	.00
Time × Racial Group	1.93	2	228	.02
Time × Racial Group × Social Desirability	0.53	2	228	.01
Time × Racial Group × Personalization	1.79	2	228	.02
Time × Racial Group × Race of Target Storybook Character	0.50	2	228	.00
Time × Racial Group × Personalization × Race of Target Storybook Character	0.34	2	228	.00

\**p* < .05

**Table 15 –Alternative Approaches to Data Analysis that were Explored to Determine Whether the Storybook Intervention Produced Any Significant Effects in Improving the White Children’s Ratings of the Black Target Storybook Character, the Black Peers, or the Hispanic Peers**

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**Nonparametric tests**

**Examining the number of children who “maxed-out” the scale**

Children were categorized according to whether or not they “maxed-out” the scale on their ratings of the Black and Hispanic peers (collectively and individually) or target storybook character at each time point (i.e., before and after being read the storybook). A series of nonparametric tests and frequency analyses were then conducted to determine whether Personalization of Storybook and/or Race of Target Storybook Character were associated with an increase in the number of children who “maxed-out” the scale on their ratings of the Black and Hispanic peers (collectively and individually) or target storybook character as a result of being read the storybook.

**Examining the number of children whose score(s) increased**

Children were categorized according to whether or not they demonstrated some positive change in their ratings (or aggregated reaction score) of the Black and Hispanic peers (collectively and individually) or target storybook character as a result of being read the storybook. A series of nonparametric tests and frequency analyses were then conducted to determine whether Personalization of Storybook and/or Race of Target Storybook Character were associated with an increase in the number of children who had a positive change in their score(s) as a result of being read the storybook.

**Examining specific subsamples**

**Excluding children who responded favorably to the Black and Hispanic peers at Time 1**

Targeted analyses were systematically conducted on children’s ratings of the target (Black or White) storybook character excluding those children who initially rated the Black and/or Hispanic peers especially favorably (i.e., in the highest 10%, 25%, 33%, or 50% of the distribution).

**Examining only the most “prejudiced” children**

Targeted analyses were systematically conducted on children’s ratings of the target (Black or White) storybook character among those children who initially rated the Black and/or Hispanic peers especially unfavorably (i.e., in the lowest 10%, 25%, 33%, or 50% of the distribution).

**Examining only those children who demonstrated an “in-group bias”**

Children were categorized according to whether or not they rated the White peers more favorably than the Black [and/or the Hispanic] peers at Time 1. Targeted analyses were then conducted including only those children who were categorized as having an in-group bias in their initial ratings. Analyses were also conducted using the categorical variable, “in-group bias,” as an independent variable.

**Examining only those children who reported a high degree of Imaginative Transportation**

Targeted analyses were systematically conducted including only those children who reported feeling a relatively high degree of imaginative transportation into the narrative of the storybook (i.e., those who scored in the top 33%, 50%, or 75% of the distribution).

**Examining only those children from Iowa**

Considering that children recruited from a relatively racially homogeneous school in Iowa rated the Black peers less favorably than the White or Hispanic peers at Time 1, analyses examining the major predictions of the current study were conducted only on those children recruited from the racially homogeneous school in Iowa.

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**Applying an alternative operational definition of “prejudice” toward the Black (or Hispanic) Peers**

Children’s ratings of (or aggregated reaction score to) the Black (or the Hispanic) peers were subtracted from their ratings of (or aggregated reaction score to) the White peers at each time point (i.e., Time 1 and Time 2) to create indices (or an index) of in-group bias before and after the children were read the storybook. Two types of analyses were then employed:

**GLM analyses**

Omnibus (M)ANOVAS, (M)ANCOVAS, and a series of targeted *t*-tests were then conducted on children’s indices (or index) of in-group bias before and after they were read the storybook.

**Nonparametric tests**

Children were categorized according to whether or not they demonstrated an in-group bias before and after they were read the storybook. A series of nonparametric tests and frequency analyses were then conducted to determine whether Personalization of Storybook and/or Race of Target Storybook Character were associated with a decrease in the number of children who demonstrated an in-group bias as a result of being read the storybook.

**Examining “change” scores**

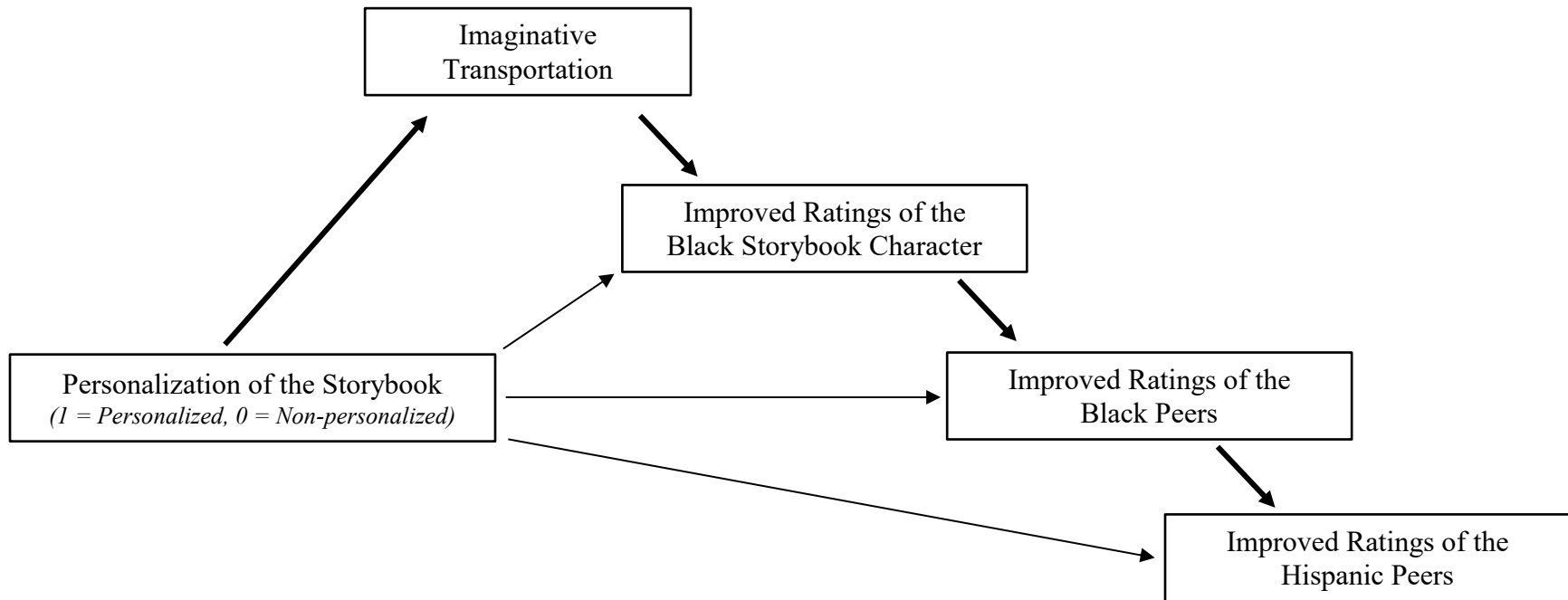
Children’s rating of (or aggregated reaction score to) the White, Black, and Hispanic peers at Time 1 were subtracted from their rating of (or aggregated reaction score to) the White, Black, and Hispanic peers at Time 2. A series of analyses were then conducted on the children’s change scores. These analyses were also conducted on children’s ratings of (or aggregated reaction score to) the target storybook character.

**Using Children’s Imaginative Transportation and Enjoyment scores as independent variables**

Using median splits, children’s imaginative transportation and enjoyment of the storybook scores were dichotomized. Various analyses were then conducted to determine whether these variables produced any interactive effects in improving children’s ratings of (or aggregated reaction scores to) the White, Black, and Hispanic peers, as well as the target storybook character.

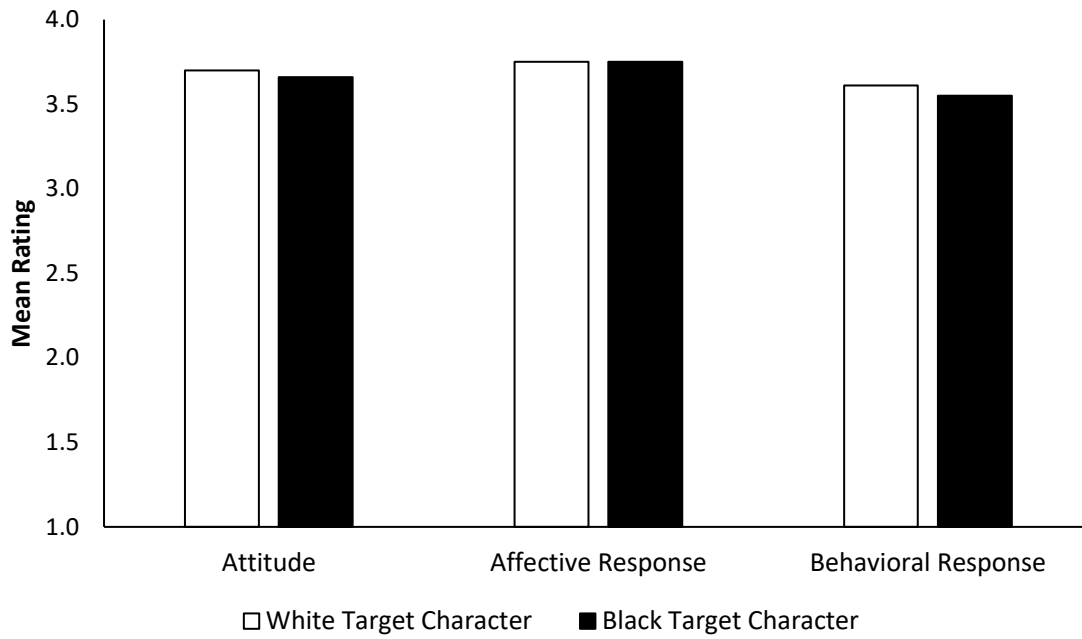
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*Note.* All of the alternative approaches to data analysis listed above were employed on the children’s aggregated “AFB” scores as well as their separate Attitude, Anticipated Affective Response, and Anticipated Behavioral Response ratings.



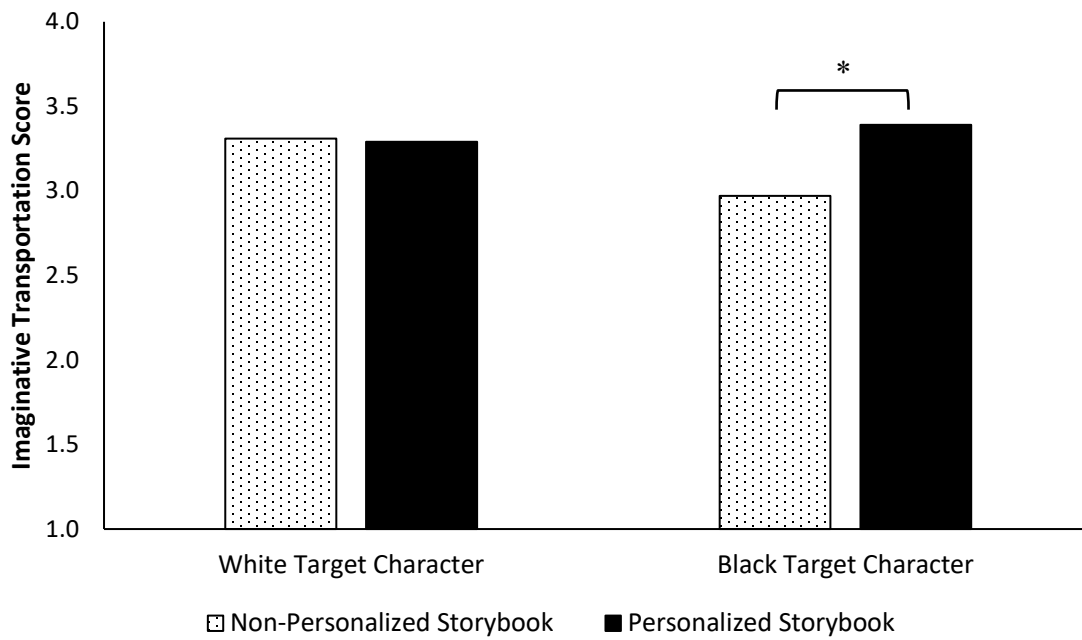
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**Figure 1 - Theoretical model illustrating the processes (including the sequence of predicted effects) that were hypothesized to explain how a personalized storybook that depicts a cross-race friendship would be especially effective at improving the children’s ratings of the target Black storybook character, Black peers, and Hispanic peers. Bold directional paths highlight the specific sequence in which the various effects are expected to occur.**

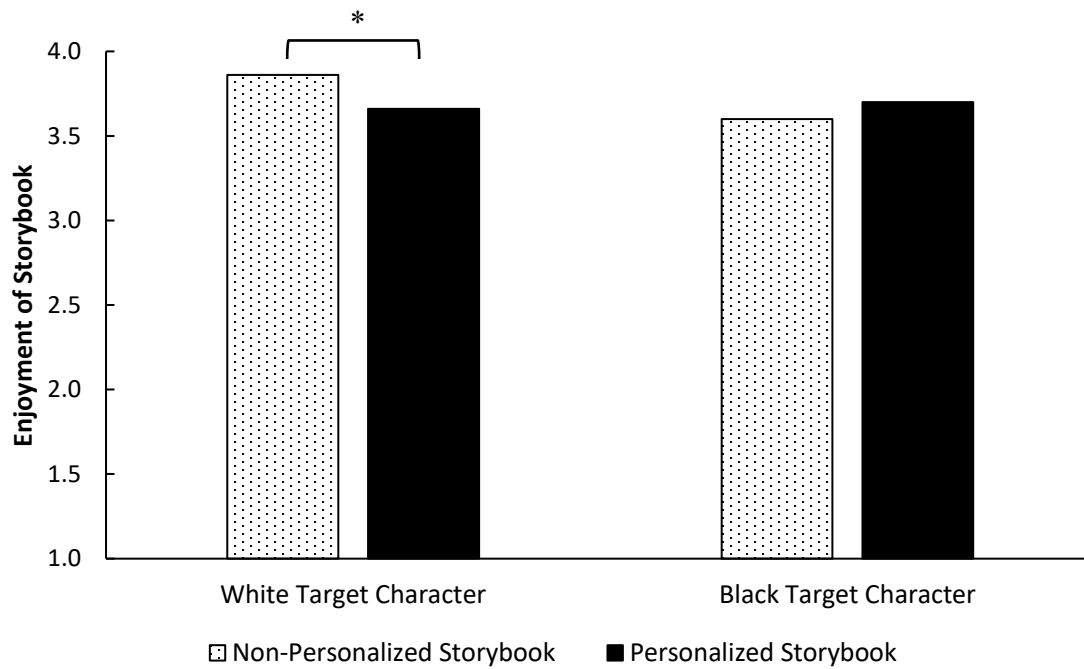


**Figure 2 – Children’s initial attitude, affective response, and behavioral response ratings of the target storybook character as a function of the race of the target storybook character.**

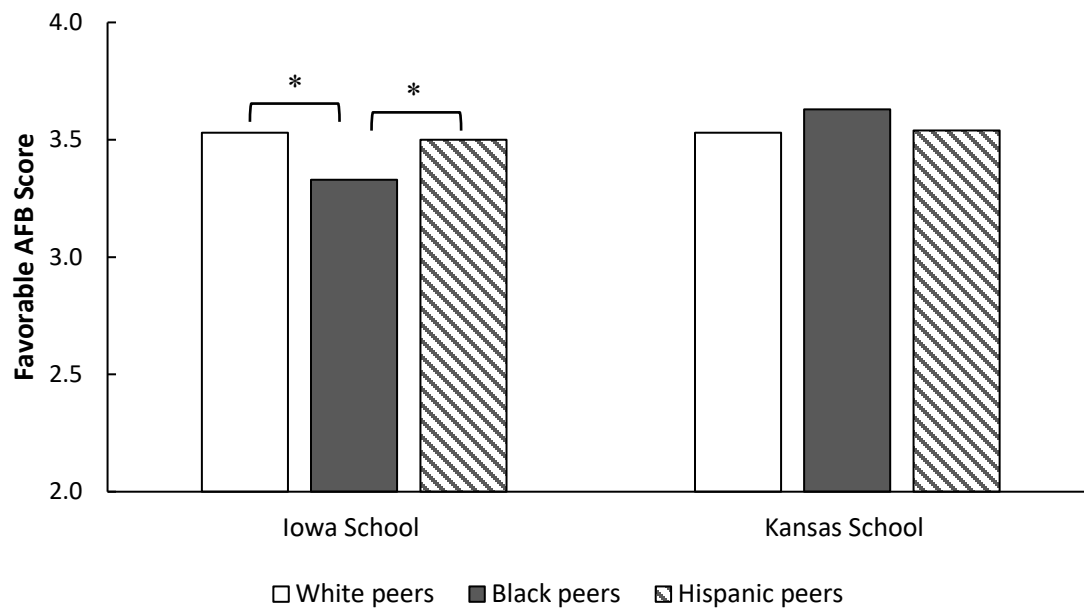




**Figure 3 – Children’s mean imaginative transportation scores as a function of the race of the target character depicted in the storybook and personalization of the storybook. Asterisks denote significant differences.**



**Figure 4 – Children’s enjoyment of the storybook as a function of the race of the target character depicted in the storybook and personalization of the storybook. Asterisks denote significant differences.**



**Figure 5 – The children’s mean aggregate AFB scores for the three groups of peers at Time 1 as a function of the location of the school. Asterisks denote significant differences.**



## Appendix B – Parental or Legal Guardian Consent Letter

My name is Taylor Wadian, and I am currently pursuing a doctorate degree from the Department of Psychological Sciences at Kansas State University. This letter describes the research project I am planning to conduct, which will serve as the basis for my degree. The general purpose of this research is to examine whether a personalized storybook depicting third- and fourth-grade children, themselves, interacting with a Black storybook character will substantially improve their attitudes and anticipated responses to hypothetical Black and Hispanic peers. I am hoping that, after you read this letter, you will allow your child to take part in this study.

The children who participate in this study will be led to believe that they are taking part in two separate studies conducted by two experimenters that will span a period of approximately three weeks. The "first study" involves assessing the children's reactions to a character presented within one of the storybooks. The "second study" involves assessing their attitudes toward and anticipated responses to hypothetical White, Black, and Hispanic peers on two occasions: prior to being read the storybook and after being read the storybook.

More specifically, in the "first study," each participating child will be read a storybook (individually, during a 20-25 minute session) about a child who goes to a summer camp and becomes friends with either a White or Black peer. The identity of the main storybook character, however, will be systematically manipulated (i.e., in text and in the illustrations) so that each participating child will be read a storybook that depicts either (a) the child, himself or herself, interacting with the White or Black storybook character, (b) an unfamiliar White child interacting with the White or Black storybook character, or (c) an unfamiliar Black child interacting with the Black storybook character. Before and, again, immediately after reading the storybook, each participating child will be asked to rate the extent to which he/she agrees with several statements concerning his/her attitudes toward, and anticipated responses to, the White or Black storybook character. After having been read the storybook and rating his/her attitudes and anticipated responses to the storybook character, each child will be asked to rate the extent to which he/she agrees with a few statements tapping his/her enjoyment of the storybook and the extent to which he/she felt personally involved in (i.e., "transported into") the storybook.

In the "second study," the children will be asked to rate the extent to which they agree with several statements tapping their attitudes toward, and anticipated responses to, hypothetical White, Black, and Hispanic peers who ostensibly "may join their classroom in the next year." The children will make their ratings in their regular classroom during two 25-minute group sessions: the first will be conducted one week before the children will be read the storybook and the second will be conducted one week after the children have been read the storybook. During the first group session, each child who has obtained parental permission will also be asked to have his/her picture taken so that his/her face can be incorporated in a personalized storybook (i.e., for those children who will be randomly assigned to this condition).

The research involves no foreseeable risks and places no stress on the students. Our experience with similar studies in the past would suggest that the children will enjoy participating in this research and having the storybook read to them. Further, by participating in this study and having their questions answered by the experimenter after data collection is complete, the children will learn about the process of conducting research. Please know that the children's responses will be kept confidential and their pictures will be deleted from our digital files upon completion of the study. Before taking part in the studies, the children will be informed that their participation is voluntary and that they may stop at any time. The children will also be told that they may choose, for whatever reason, to not respond to one or more of the statements on any of the questionnaires.

If you have any questions or concerns about this study, please feel free to call my major advisor, Dr. Mark Barnett, at (785) 532-0603 (Professor, Department of Psychological Sciences, 422 Bluemont Hall, KSU). If you have any concerns about participants' rights or the manner in which this research is conducted, please contact Dr. Rick Scheidt at (785) 532-3224 (Chairman, Committee on Research Involving Human Subjects, 203 Fairchild Hall, KSU).

Please indicate on the form below whether you will or will not allow your child to take part in this study and have your child return the signed permission slip to his/her classroom teacher. Students with parental permission will, of course, be free to withdraw from this study at any time if they so desire. Refusal to participate or discontinuing participation will involve no penalty or loss of benefits to the student. Thank you very much for your help with this study.

Sincerely,

Taylor W. Wadian

Permission Slip

\_\_\_\_\_ I will allow my child,  
\_\_\_\_\_, to participate in the study  
outlined above.

(print child's name)

\_\_\_\_\_ I will not allow my child,

\_\_\_\_\_

(signature of parent or legal guardian)

If you would like to receive a summary of the results of this study, please print your full name below with either an email or full postal address:

\_\_\_\_\_

\_\_\_\_\_

## Appendix C – Child Assent Form for the “First” Study (Time 1)

### (Large Group: Time 1)

1. I understand that I will be taking part in two studies. **In the first study**, I will be asked to rate how I feel about various children from another school who may or may not be joining my class in the future. I understand that I will make my ratings today and a few weeks from today. Also, I understand that I will have my picture taken as part of this first study. **In the second study**, I will be read a storybook created to help children become better readers. I understand that I will be asked to rate how much I enjoyed the storybook and how I feel about one of the characters in the story. I understand that the second study will take place next week.
2. I understand that only the researchers from Kansas State University will see my ratings for both studies.
3. I understand that taking part in both studies is my own choice and that I may stop at any time without penalty.

If you agree to participate in these studies, please print your full name neatly on the first line below and put today’s date on the second line. (If you do not agree to participate in this study, do not print your name below.) Thank you.

---

Please print your full name

---

Today’s date

## Appendix D - Child Assent Form for the “Second” Study

### (Individual Storybook Session)

1. I understand that I will be read a storybook created to help children become better readers. I understand that I will be asked to rate how much I enjoyed the storybook and how I feel about one of the characters in the story.
2. I understand that only the researchers from Kansas State University will see my ratings.
3. I understand that taking part in this study is my own choice and that I may stop at any time without penalty.

If you agree to participate in this study today, please print your full name neatly on the first line below and put today’s date on the second line. (If you do not agree to participate in this study, do not print your name below.) Thank you.

---

Please print your full name

---

Today’s date



## Appendix E - Child Assent Form for the “First” Study (Time 2)

### (Large Group: Time 2)

1. I understand that I will be asked to rate how I feel about various children from another school who may or may not be joining my class in the future.
2. I understand that only the researchers from Kansas State University will see my ratings.
3. I understand that taking part in this study is my own choice and that I may stop at any time without penalty.

If you agree to participate in my study today, please print your full name neatly on the first line below and put today’s date on the second line. (If you do not agree to participate in this study, do not print your name below.) Thank you.

---

Please print your full name

---

Today’s date

## Appendix F - Racial Group Stimuli

White Children



Black Children



Hispanic Children



# Appendix G - Description of the Target Storybook Character

## Descriptions of the Target Black Storybook Character

---

Jamal

This is Jamal.

He is a pretty typical boy.

He really likes to ride his bicycle and play games with his friends.

His favorite animal is the penguin.



*(a) Presented to Male Participants*

Jada

This is Jada.

She is a pretty typical girl.

She really likes to ride her bicycle and play games with her friends.

Her favorite animal is the penguin.



*(b) Presented to Female Participants*

## Descriptions of the target storybook character

---

Andy

This is Andy.

He is a pretty typical boy.

He really likes to ride his bicycle and play games with his friends.

His favorite animal is the penguin.



*(c) Presented to Male Participants*

Annie

This is Annie.

She is a pretty typical girl.

She really likes to ride her bicycle and play games with her friends.

Her favorite animal is the penguin.



*(d) Presented to Female Participants*

# Appendix H – Storybook

## Example Storybook

### (Personalized Cross-Group Friendship Condition – Male Participant)



It is a hot summer day, and you are riding in the car on your way to a summer camp for a week full of fun and activities.

Although you are very excited for a fun week of activities, you are also a little nervous. You don't know anybody else that is going to be there. This makes you feel like you have butterflies in your stomach.

---



When you finally get to the camp, you find out that you are not only going to spend the entire week in a tent, but that you will also be sharing the tent with another camper who has yet to arrive.

---



After waiting for what seems like forever for your new tent-mate to arrive, you hear someone walking up to the tent.

You open the tent door to see a boy standing there, with just a couple of his belongings.



The boy introduces himself as Jamal and asks you what your favorite animal is.

Jamal says that his favorite animal is the penguin. He then starts walking around like a penguin.

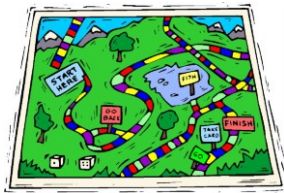
You think Jamal is kind of silly.



You wonder how this week is going to go sharing a tent with Jamal.

---

Throughout the week, you and Jamal take part in all the camp activities. You and Jamal make birdfeeders out of pinecones and peanut butter, play board games, and learn about nature.



However, both of you soon realize that the best part of the day is after camp activities are over. This is when you and Jamal do all sorts of fun things together.





You and Jamal go swimming during the day.



You and Jamal tell ghost stories at night.

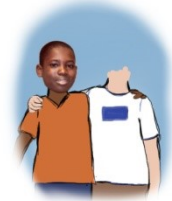


You and Jamal go hiking together through the woods.



You and Jamal watch movies together in the bunkhouse.

Before long, you and Jamal are doing everything together.



You and Jamal even pretend to be penguins together.

You two have so much fun together...

that you are now calling each other the penguin pals.



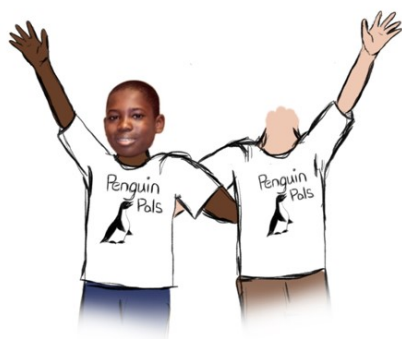


At the end of the week, the camp has a three-legged race among campers.  
The winners get a large trophy.  
You and Jamal decide to enter the race.

---

Race day comes.

You and Jamal try your hardest to win the race.



mazingly, you and Jamal win the race!

The two of you hold up the trophy to let everybody know that the penguin pals have won the three-legged race!



This was really the best week ever.

---

Note. An image of the participants face is not included the illustrations provided above.

# Appendix I - Modified Child Social Desirability-Short (CSD-S) Scale

## Personality Questionnaire

1. **Have you ever felt like saying unkind things to another person?**

No

Yes

2. Are you always careful about keeping your room clean?

No

Yes

3. **Do you sometimes feel like staying home from school, even when you are not sick?**

No

Yes

4. **Do you ever say something that makes somebody else feel bad?**

No

Yes

5. Are you always polite, even to people who are mean?

No

Yes

6. **Do you sometimes do things you have been told not to do?**

No

Yes

7. Do you always listen to your parents?

No

Yes

8. **Have you ever broken a rule?**

No

Yes

9. **Do you sometimes feel like making fun of other people?**

No

Yes

10. Do you always do the right thing?

No

Yes

Note. Bold statements are negatively-keyed.



## Appendix J - Multiresponse Racial Attitudes (MRA) Measure – Racial Groups

Use the scale below to indicate how much you disagree or agree with each of the following statements about the children.

Disagree A LOT 1	Disagree <i>a little</i> 2	Agree <i>a little</i> 3	Agree A LOT 4
------------------------	----------------------------------	-------------------------------	---------------------

- |  |   |   |   |   |
|--|---|---|---|---|
| 1. These children are clean. <sup>(p)</sup>      | 1 | 2 | 3 | 4 |
| 2. These children are unfriendly. <sup>(n)</sup> | 1 | 2 | 3 | 4 |
| 3. These children are smart. <sup>(p)</sup>      | 1 | 2 | 3 | 4 |
| 4. These children are mean. <sup>(n)</sup>       | 1 | 2 | 3 | 4 |
| 5. These children are helpful. <sup>(p)</sup>    | 1 | 2 | 3 | 4 |
| 6. These children are friendly. <sup>(p)</sup>   | 1 | 2 | 3 | 4 |
| 7. These children are stupid. <sup>(n)</sup>     | 1 | 2 | 3 | 4 |
| 8. These children are dirty. <sup>(n)</sup>      | 1 | 2 | 3 | 4 |
| 9. These children are good. <sup>(p)</sup>       | 1 | 2 | 3 | 4 |
| 10. These children are selfish. <sup>(n)</sup>   | 1 | 2 | 3 | 4 |
| 11. These children are bad. <sup>(n)</sup>       | 1 | 2 | 3 | 4 |
| 12. These children are nice. <sup>(p)</sup>      | 1 | 2 | 3 | 4 |

Note. <sup>(p)</sup> indicates a positive evaluative statement; <sup>(n)</sup> indicates a negative evaluative statement







## Appendix N - Anticipated Behavioral Response – Racial Group

Imagine that these children joined your class. Use the scale below to indicate how much you disagree or agree with each of the following statements about what you would do if these children joined your class.

Disagree <b>A LOT</b> 1	Disagree <i>a little</i> 2	Agree <i>a little</i> 3	Agree <b>A LOT</b> 4
-------------------------------	----------------------------------	-------------------------------	----------------------------

1. I would play with them.

1                      2                      3                      4

2. **I would ignore them.**

1                      2                      3                      4

3. I would be friends with them.

1                      2                      3                      4

4. I would invite them over to my house to play.

1                      2                      3                      4

5. I would talk to them.

1                      2                      3                      4

6. **I would tease and make fun of them.**

1                      2                      3                      4

7. I would help them if they needed help.

1                      2                      3                      4

8. I would ask them to be my friend.

1                      2                      3                      4

Note. Bolded statements are negatively-keyed.









## Appendix R – Manipulation Checks – Storybook

Were you one of the characters in the storybook? *(please circle)*

Yes

No

If you had to guess, what race do you think Jamal is? *(please circle)*

White/ European American

Black/African American

American Indian

Asian or Pacific Islander

Hispanic American or Latino

## **Appendix S – Manipulation Checks – Racial Groups**

### **Group 1**

If you had to guess, what race do you think these children are?

White/ European American

Black/African American

American Indian

Asian or Pacific Islander

Hispanic American or Latino

---

### **Group 2**

If you had to guess, what race do you think these children are?

White/ European American

Black/African American

American Indian

Asian or Pacific Islander

Hispanic American or Latino

---

### **Group 3**

If you had to guess, what race do you think these children are?

White/ European American

Black/African American

American Indian

Asian or Pacific Islander

Hispanic American or Latino