

**The Friendship Factor: How Interracial Friendships  
Benefit Elementary School Students**

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This thesis is dedicated to everyone who has had the opportunity to learn from an interracial friendship...and to everyone who hasn't.

## Introduction

I grew up in a homogenous neighborhood in Pineview, Colorado, where every family on our street was white and diversity was limited to religion (Christian/Jewish) and sexual orientation (heterosexual/homosexual).<sup>1</sup> Although my parents sought out opportunities to meet people of other racial and ethnic backgrounds and I became life-long friends with two sisters from a Mexican American family, my peer group throughout elementary, middle, and high school was almost entirely white. During this time, due in part to the homogeneity of my environment, race was invisible to me. It was not until I came to Stanford as a freshman that I realized with dismay that I had never met anyone from India before and that my interracial interactions had been extremely limited.

My interest in issues of racial segregation, interracial friendships, and racial attitudes became better defined by a discussion in a seminar on interethnic communication that I took during my sophomore year at Stanford. The literature argued that it is impossible to teach tolerance through direct instruction and that the most effective—and perhaps the only—way to change racial attitudes is for people to establish interracial friendships. That left me wondering, “If interracial friendships are the best way to challenge racism, how can we encourage people to be friends?” Combining this question with my interest in education, which developed after a summer internship with the Office of Institutional Equity and Multicultural Education in the Pineview County School District, I decided to focus this thesis on the role schools play in fostering positive interracial interactions.

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<sup>1</sup> The names of the city and schools have been changed to protect the anonymity of the participants.

As I worked on this project, almost everyone I talked to about it immediately recalled and eagerly shared an experience they had with an interracial friendship at some point in their life. The vivid nature of these memories confirmed that interracial interactions have a profound impact on people's lives and that they are memorable because for most Americans they are the exception rather than the norm. Many children grow up in homogenous communities, like Pineview, and attend schools that replicate existing social hierarchies. They are rarely, if ever, given the opportunity to meet people of different racial and ethnic backgrounds because their schools and neighborhoods are segregated along racial lines.

Conducting this research has been both inspiring, as I realize how much potential there is for change, and frustrating, as I think about the distressing reality of American schools today. I hope that this thesis brings to light some of the issues related to homogenous schools and provokes critical thought about how schools shape students' understanding of race. I also hope to provide the participating schools and the Pineview County School District with an in-depth analysis of their school climates, which will serve as a tool to improve the effectiveness of their schools and classrooms in educating responsible world citizens. Moreover, it is my goal to inspire further research about the complex interactions between racial segregation, interracial friendships, and racial bias, in order to establish and maintain equal educational opportunities in elementary, middle, and high schools.

## **Literature Review**

In exploring the effects of interracial contact on friendship formation and racial bias among students in American public schools, this thesis draws on several fields of study, including contact theory, friendship formation, school organization, and theories of racial prejudice. Although extensive research has been done in these areas, providing an important framework for this thesis, most of the studies directly related to this topic were conducted between 1955 and 1985 when school desegregation and bussing were first introduced. The majority of these studies focus primarily on black-white interactions, neglecting to examine the effects of interracial contact among other ethnic minority groups. They also do not address the organizational and attitudinal changes in schools and society that have occurred over the past fifty years. Due to their outdated nature and limited scope, these studies are insufficient for analyzing racial interactions in schools today. In order to better understand the implications of interracial contact on friendship formation and racial prejudice in the 21<sup>st</sup> century, it is necessary to reevaluate the relevance of existing sociological and psychological theories in the context of the diverse student body of modern-day elementary schools.

### ***School Desegregation***

*“...in the field of public education the doctrine of ‘separate but equal’ has no place.” (347 U.S. 483 [1954])*

In order to understand the racial climate of American schools today, it is necessary to have a general understanding of the history of school desegregation in the

United States. In *School Desegregation: Past, Present & Future*, Stephan & Feagin (1980) provide a detailed history of school segregation in the United States through 1980, discussing the larger societal context of racial tensions, political and economic influences, and issues of social class. Stephan & Feagin (1980) also address the future of school desegregation, regarding de jure and de facto segregation, white flight, and bussing. Rossell, Armor, & Walberg (2002) provide a more modern history and interpretation of racial segregation in American schools in *School Desegregation in the 21st Century*. In addition to continuing the history of school desegregation through 2000, this book discusses the implications and effectiveness of school desegregation policies in terms of legal issues, demographic change, academic achievement, tracking, and intergroup relations since the turn of the century. Both of these texts provide important insights into the complexity and variation of racial desegregation throughout American history.

School desegregation reforms began on May 17, 1954, when Chief Justice Warren to the Supreme Court of the United States of America delivered the ruling *Brown v. the Board of Education*, which overturned the *Plessy v. Ferguson* (1896) “separate but equal” legislation and declared racial segregation in public schools unconstitutional. The goals of this ruling were two-fold: to provide equal educational opportunities for racial minorities and to promote interracial interaction and positive racial attitudes. *Brown v. the Board of Education* placed the responsibility of desegregation on state governments and required them to comply “with all deliberate speed” (347 U.S. 483 [1954]). However, the specific conditions for desegregation were poorly defined by the court decision, and change was slow to occur.

Because ninety-nine percent of black school children were still attending racially segregated schools ten years after *Brown v. the Board of Education*, the federal government intervened with *The Elementary and Secondary Education Act* in 1965, threatening to cut funding to schools that did not comply with desegregation laws. Resentment among the white population toward forced racial integration led to “white flight,” the migration of whites out of the city centers into the suburbs. This residential segregation resulted in de facto segregation in neighborhood schools through the late 1960’s. In order to circumvent neighborhood segregation, school districts began bussing minority students to the suburbs to achieve racially balanced schools in the 1960’s; however, this effort was abandoned in the 1970’s due to opposition among whites.

It was not until 1991 that U.S. courts offered a legal definition of successful school desegregation. In *The Board of Education of Oklahoma City v. Dowell*, the Supreme Court ordered that schools successfully address racial desegregation in terms of “Green factors,” which included student assignments, faculty, staff, transportation, extracurricular activities, and facilities. After adequately fulfilling these conditions for several years, school districts were released from federal control and allowed to return to the traditional neighborhood school model. Little progress has been made in the past fifteen years toward continued desegregation, and the majority of schools in the United States remain highly segregated along racial lines.

According to statistics from John R. Logan’s 2004 *The Continuing Legacy of the Brown Decision: Court Action and School Segregation, 1960-2000*, in 1968 the average school district’s Index of Dissimilarity, which indicates how many black or white students would have to change schools in order to achieve racial balance, was

approximately 80 (maximum 100). In 1990, the average school district's Index of Dissimilarity had dropped to 50. However, significant changes have not occurred in classrooms. In 1968, eighty-six percent of the average white student's classmates were white, while four percent were black. In 2000, those percentages had changed minimally to seventy-nine percent and nine percent. Although progress has been made toward desegregating districts, segregation persists in schools and classrooms, creating unequal educational opportunities and limiting interracial contact.

In order to understand the significance of interracial contact in achieving the goals of *Brown v. the Board of Education*, it is necessary to conduct an in-depth analysis of the relationship between interracial contact, friendship formation, and racial prejudice.

### ***Contact Theory***

*“...close contact between members of different races promotes positive racial attitudes...” (Sigelman, p. 781)*

The theoretical foundation for examining interracial interactions originated in Gordon Allport's 1954 book, *The Nature of Prejudice*. The primary contribution of this book, which introduces a basic psychological framework for the study of prejudice, is the establishment of “contact theory,” a means of reducing racial prejudice through interracial interaction. Allport proposes that the most effective means of reducing prejudice involves bringing people of different racial and ethnic backgrounds together under a specific set of ideal conditions. These conditions include equal status, intergroup collaboration, shared goals, and support from authorities, law, or custom. Contact theory,

as introduced by Allport in 1954, has guided research on intergroup relations throughout the past half-century.

Although contact theory has been extremely influential in the study of prejudice, subsequent studies have produced inconsistent results. Some show interracial contact to be extremely effective in reducing racial prejudice, while others indicate mixed or negative results. In cases where data does not support interracial contact as an effective means of reducing prejudice, researchers often refer to Allport's ideal conditions as the source of this failure (Bennett 1980, Bennett, 1981, Damico et al 1982, Hallinan & Teixeira 1987). They claim that the four ideal conditions—equal status, intergroup collaboration, shared goals, and support of authorities, law, or custom—are vital to the success of contact theory and warn that interracial contact without these conditions will not achieve the desired results.

Recently, further research has attempted to resolve discrepancies in previous data and reevaluate the relevance of contact theory with particular attention to the role of the ideal conditions. In *The Contact Hypothesis Revisited, Black-White Interaction and Positive Racial Attitudes*, Lee Sigelman and Susan Welch (1993) conducted a nationwide telephone survey of black and white adults in the United States regarding the frequency of their interracial contact and their perceptions of racial hostility. Sigelman and Welch (1993) concluded that although interracial contact tends to decrease racial hostility among blacks and whites, the connection between interracial contact and decreased racial prejudice is fairly weak. In *Intergroup Contact: Theory, Research, and New Perspectives*, Thomas Pettigrew (2004) found a significant connection between interracial contact and decreases in racial bias. Using a meta-analysis to review over five

hundred previous studies of contact theory, Pettigrew concluded that although the ideal conditions may increase the effectiveness of interracial contact, they are not necessary for influencing racial attitudes. According to these studies, interracial contact, regardless of the conditions, has a positive effect on reducing prejudice.

Although many studies confirm the relevance of contact theory post-1990, the majority examine the effects of interracial contact on a societal level. It is unclear from these studies whether their results also apply to specific contexts, such as school environments. In order to assess the relevance of contact theory in public schools, it is necessary to understand the effects of school organization on interracial contact.

### ***School Organization***

*“Organizational decisions to create opportunities that bring diverse students together or that keep them apart will affect the selection and influence of friends.”*  
(Epstein & Karweit, p. 253)

Epstein & Karweit’s *Friends in School: Patterns of Selection and Influence in Secondary Schools* is a foundational text in the study of the influence of organizational structures of schools on friendship formation. In arguing that the structure of schools directly impacts patterns of interpersonal contact, Epstein & Karweit (1983) introduce a model that divides school organization into four distinct categories: demographic conditions, physical conditions, instructional conditions, and psychological conditions. Each of these plays a distinct role in shaping contact between students and influencing their choice of friends in school.

Demographic conditions include factors such as the composition of the school's student population and the diversity of the classroom. According to Epstein & Karweit (1983), the demographics of a school establish how heterogeneous or homogenous the student body is, how much racial diversity students come into contact with, and whom they select as friends. In *Organizational Effects on Race Relations in School*, Khmelkov & Hallinan (1999) further examine the effects of school demographics on friendship formation and argue that a desegregated school should reflect the racial composition of the general population. By increasing the racial heterogeneity of the student body, schools statistically increase the likelihood of intergroup contact and consequently facilitate interracial friendship formation.

The physical conditions of schools, such as school size, class size, and seating charts, also influence patterns of interracial contact. Epstein & Karweit (1983) cite school size as a central indicator of students' participation in school life, with students at smaller schools participating more than students at larger schools. This participation enhances the visibility of students' shared interests and may increase the reciprocation and strength of their friendships (Epstein & Karweit, 1983). In *Students' Interracial Friendships: Individual Characteristics, Structural Effects, and Racial Differences*, Hallinan & Teixeira (1987) conclude that in larger classes, students are more likely to find sufficient same-race friends and participate less frequently in interracial contact. Seating arrangements also strongly affect students' selection of playtime friends (Epstein & Karweit, 1983). All of these physical conditions directly impact interpersonal contact and friendship formation in school.

Instructional methods also strongly influence students' interracial contact. These include the grouping of students during instruction, such as ability grouping and curricular tracking. Such groups are intended to minimize classroom management and discipline problems during instruction and enable teachers to pace curriculum according to students' needs. Although tracking is intended to reflect students' academic ability, it is more strongly correlated with socioeconomic status, reflecting teachers' prejudices (Khmelkov & Hallinan, 1999). Instead of operating as a useful pedagogical tool, tracking plays a central role in dividing students along racial lines. Epstein & Karweit (1983) cite tracking as the source of physical and psychological boundaries that limit students' social relations. They argue that tracking conveys different statuses on students, further inhibiting intergroup interactions. Khmelkov & Hallinan (1999) corroborate that argument by demonstrating that students in homogenous groups make more racist comments and have more negative interracial relations than students in heterogeneous groups. In addition, Hallinan & Teixeira (1987) found that students in heterogeneous group, where instructional methods explicitly acknowledge the equal status of racial groups and highlight similarities between students, are much more likely to establish interracial friendships.

The psychological conditions identified by Epstein & Karweit (1983) refer to the atmosphere of the school and the attitudes of the students, teachers, and administrators in regard to race and ethnicity. Damico, Green, & Bell-Nathaniel (1982) found that the primary indicator of the number of cross-race friendships among sixth to eighth graders was the belief that interracial interactions were viewed positively in their school. Teachers play an important role in communicating these values to students. By assigning

diverse groups of students to work together, teachers explicitly encourage interracial interaction (Epstein & Karweit, 1983). In addition to communicating social norms through grouping techniques, teachers also influence racial attitudes through the establishment of competitive and collaborative learning environments. According to Khmelkov & Hallinan (1999), an emphasis on grades and test scores is correlated with more same-race friendships, while more collaborative work promotes interracial friendships. Thus, the attitudes communicated by teachers and administrators through grouping and instructional philosophies influence students' friendship formation.

Although research indicates that the demographic, physical, instructional, and psychological conditions of schools affect patterns of interpersonal interaction, many of these studies focus on secondary schools; very few examine the impact of elementary school organization. Former studies fail to extend the connection between school organization and friendship formation to include their impact on racial attitudes. Thus, further research is necessary to understand how these theories apply to elementary schools and how they shape friendship formation and racial prejudice.

### ***Friendship Formation***

*“...over time, students increasingly choose friends who are similar to themselves in characteristics...”*  
(Epstein & Karweit, p. 43)

In addition to evaluating the effects of school structure on interracial interaction, it is important to understand how social development affects students' friendship formation. Epstein & Karweit (1983) synthesize differences in childhood and adult friendships, highlighting factors such as proximity, reciprocity, status, and exchange.

Hallinan & Teixeira (1987) and Khmelkov & Hallinan (1999) provide additional models for studying children's friendships, regarding theories of interpersonal attraction and social psychological perspectives on race relations. The primary contribution of this literature to the study of interracial friends in school is the discussion of similarity and proximity in friendship selection.

According to theories of propinquity, proximity is a necessary condition for friendship formation, because individuals cannot become friends without some form of interaction (Khmelkov & Hallinan, 1999). The more frequently individuals come into contact, the more familiar they become with one another and the more likely they are to establish a friendship. This model of propinquity corresponds directly to contact theory, proposing that interpersonal contact will increase the likelihood that individuals will become friends. However, theories of interpersonal attraction also state that proximity alone is not sufficient for friendship formation. The structure of social interactions and the characteristics of the individuals also influence whether they will become friends.

One of the strongest predictors of interpersonal attraction is similarity. Same-gender, same-age, and same-race friendships are more common than social interactions across gender, age, or racial categories. Individuals often seek out friends of equal or higher social status, who have similar backgrounds, attitudes, and interests. As they grow older, the importance of these factors shifts. In childhood, gender and age are the most vital factors in friendship formation, decreasing in significance as individuals reach adolescence and adulthood. Race, on the other hand, becomes increasingly important with age, and older individuals are much less likely than children to initiate cross-race relations.

Although psychological theories of interpersonal relations provide an important framework for understanding friendship formation, they fail to address the relative importance of proximity and similarity. It is unclear from these studies at what age and at what degree proximity might override the importance of similarity. This question has not been directly addressed in previous research and is important in determining the effects of interracial contact on cross-race friendship formation.

### ***Racial Attitudes***

*“Racial prejudice [is] a predisposition to respond in an unfavorable manner to members of a racial group...”*  
(Doyle & Aboud, p. 209)

In examining contact theory in terms of the effects of interracial friendships on racial attitudes, it is necessary to have a firm understanding of the definition and origins of racial prejudice. In *Reducing Prejudice and Stereotyping in Schools*, Walter Stephan defines prejudice as “a negative attitude toward a social group” (Stephan, p. 24). According to Stephan (1999), biased attitudes are typically rigid, irrational, over-generalized, and unjust evaluations of an out-group, which enable individuals to maintain a positive self-image, justify the status quo, and simplify social categories. In exploring the nature of prejudice, Stephan provides an in-depth examination of the social-cognitive development of prejudice in childhood, which is corroborated by Doyle & Aboud in their 1995 article, *A Longitudinal Study of White Children’s Racial Prejudice as a Social-Cognitive Development*.

According to Stephan (1999) and Doyle & Aboud (1995), racial prejudice develops gradually over a lifetime. Starting at age three, children begin to distinguish

broad categorical groups, and by age five, they can correctly identify their own race and the races of others. At age seven, children are typically highly ethnocentric, and they maintain their in-group preferences as they grow older. By age ten, racial bias begins to be offset by counterbias, positive views of out-groups. Although adolescents express increasing levels of counterbias, they may still continue to exhibit discriminatory behaviors, such as establishing predominantly same-race friendships (Allport, 1954). In fact, many adults exhibit increased levels of ethnocentrism and discriminatory behavior, while maintaining the ability to articulate egalitarian, politically correct viewpoints.

This research on the effects of socio-cognitive development on prejudice provides an important framework for understanding the formation of racial bias in children. It is important to consider the developmental stages of racial prejudice in adapting these psychological theories for elementary school students.

### ***Research Questions***

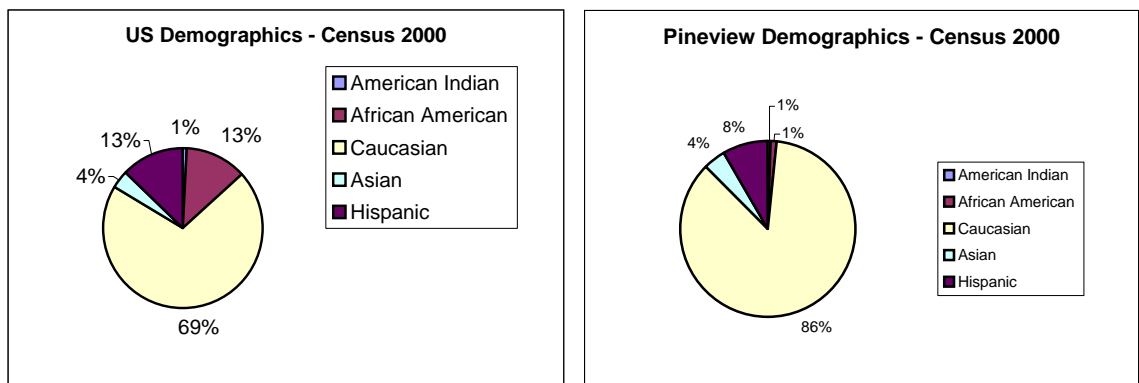
Based on past research, this thesis examines the relevance of contact theory in modern-day elementary schools. Through an in-depth examination of the demographic, physical, instructional, and psychological aspects of elementary school organization, an evaluation of the interaction between proximity and similarity in interracial friendship formation, and an assessment of students' racial bias, this study will attempt to answer two major questions:

1. To what extent do elementary schools limit or promote interracial friendship formation?
2. How does interracial contact influence students' racial attitudes?

## Methodology

Data was collected from fifth graders at two public elementary schools in Pineview, Colorado. This region was selected for its racial demographics and residential segregation. The city of Pineview has a predominantly Caucasian population—86% white, strikingly more homogenous than the 69% national average, 8% Hispanic, 4% Asian, 1% African American, and 1% American Indian (see Chart 1). In addition to comprising such a small percentage of the population, the ethnic minorities who live in Pineview are segregated in specific neighborhoods. The Index of Dissimilarity with whites in Pineview is 45 for Hispanics, 41 for American Indians, 37 for African Americans, and 34 for Asians, which means that almost half of each ethnic group would have to move to another neighborhood in order for racial minorities to be evenly distributed across the city (US Census 2000, CensusScope). The racial demographics and the high level of residential segregation in Pineview severely limit interracial contact, making race a more salient feature of social interactions.

**Chart 1: United States and Pineview Demographics**

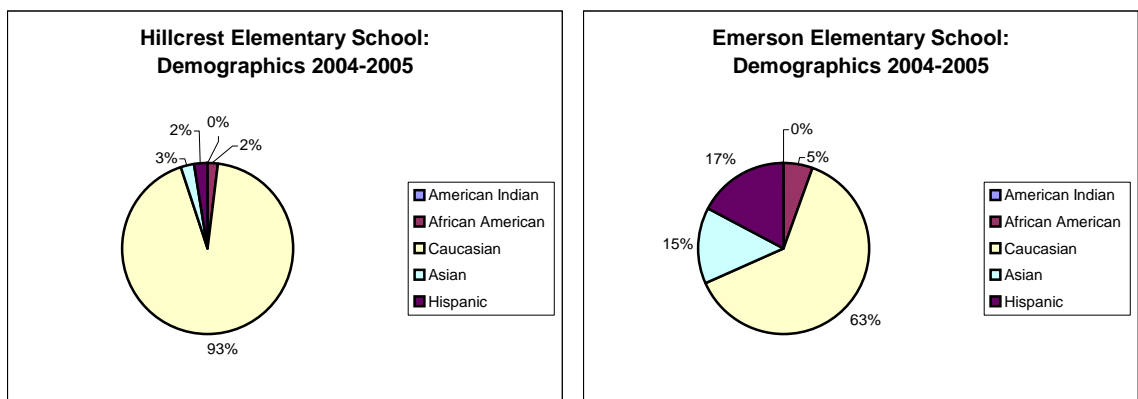


Notes: U.S. Census Bureau. Census 2000. American FactFinder.

Two public elementary schools (grades K-5) in the Pineview County School District participated in this study. The schools were selected for their contrasting racial demographics (see Chart 2). Hillcrest Elementary School has a population of 430 students that are 94% white, 2% Hispanic, 2% Asian, 1% African American, and 0% American Indian. In contrast, the student body at Emerson Elementary School is composed of 303 students that are 63% white, 17% Hispanic, 15% Asian, 5% African American, and 0% American Indian. For the purposes of this study, the predominantly white student body at Hillcrest is considered “homogenous,” while the student body at Emerson is considered “diverse.”

Fifth graders, ages ten and eleven, were selected as the subjects for this study because many have had the opportunity to attend the same school for several years (average N=3.95 years) and establish stable friendships. In addition, as they enter adolescence, fifth graders establish increasingly selective criteria for their close friendships, with race becoming an increasingly salient factor (Epstein & Karweit, 1983).

**Chart 2: Hillcrest and Emerson Demographics**



Notes: Hillcrest Elementary School Website. Emerson Elementary School Website.

Yet, fifth graders still have a wide range of potential friends in school because they are not separated into academic tracks, a common organizational feature of middle and high schools that segregate students according to academic ability and also along racial lines.

With the consent of their principals and classroom teachers, all fifth graders at both schools were invited to participate in the study (see Appendix A). Sixty-eight percent of students returned parental consent forms and were included in the study (N=82). These students completed two written questionnaires regarding their racial/ethnic identity and their friendships (see Appendix B). The students received oral instructions and then responded to the questionnaires individually, asking for clarification as needed. The first questionnaire collected information, such as name, age, gender, race, number of siblings, languages spoken at home, participation in English as a Second Language programs, number of years attending the school, and self-reported popularity in the class. It also included a measure of sociometric status (i.e., level of social connectedness). The second questionnaire inquired in detail about students' best friends. After naming their top three friends, students answered questions about where they met each friend, how long they had been friends, how often they get together outside of school, how much their parents like each friend, how similar their personalities are, how similar their hobbies are, how similar their families are, and how popular they perceive each friend to be.

In addition to the questionnaires, students completed a modified Multiple-Response Racial Attitudes measure (MRA), which calculated positive and racial attitudes (Doyle & Aboud, 1995). The MRA is one of the only assessments of children's racial attitudes that has published both test-retest validity and solid evidence of validity. In the

modified MRA, students were asked to attribute twenty evaluative adjectives to pictures of children from different ethnic backgrounds. At Emerson, students completed the activity individually with the experimenter. They were introduced to three 8 x 11 inch hand-drawings of faces of students from different ethnic backgrounds (i.e., White, Hispanic, and Asian), which differed only in skin color and hair texture (see Appendix C). A female set was used for female students, while a male set was used for male students. Then, students were presented with twenty positive or negative adjectives in a randomized order (i.e., clean, friendly, good, happy, healthy, helpful, kind, nice, smart, wonderful, bad, cruel, dirty, mean, naughty, sad, selfish, sick, stupid, and unfriendly). For each adjective, students were handed a set of three identical cards printed with the word and instructed to place the cards next to the pictures of the children they thought the word described. They had the option to use the word to describe zero, one, two, or three of the pictures.

At Hillcrest, students completed a written version of the modified Multiple-Response Racial Attitudes measure. The same pictures and adjectives were presented to the children; however, instead of distributing cards to boxes, the students were given a randomized list of the adjectives and asked to check the boxes of the pictures they thought could be described by each word. Seven of the students at Emerson were retested with the written MRA and none of their scores were significantly different. Thus, the oral and written variations of the MRA will be considered equivalent for the purposes of this study.

The numbers of positive and negative adjectives that students indicated for each picture were tallied, creating six scores (i.e., positive Asian, negative Asian, positive

Hispanic, negative Hispanic, positive White, negative White). These were combined to produce a bias score (i.e., negative out-group score plus positive in-group score) and a counterbias score (i.e., positive out-group score plus negative in-group score) for each out-group. An overall bias and counterbias score were derived from the averages of the students' out-group scores (e.g., a white student's overall bias equals the average of the Asian and Hispanic bias scores). An overall prejudice score, ranging from -20 to 20, was found by subtracting the counterbias from the bias score. Based on this overall rating, students were categorized as either "highly prejudiced" ( $MRA > 0$ ) or "not prejudiced" ( $MRA \leq 0$ ).

In addition to the questionnaire data provided by the students, demographic information was collected in order to better understand the environment of the school. The school district website provided information about the geographic boundaries defining the enrollment zones for Hillcrest and Emerson, and the racial demographics of those neighborhoods were found in the 2000 United States Census. School administrators provided current racial demographics of the schools' student bodies, as well as the individual ethnic codes of the fifth graders reported by their parents upon enrollment, which were used to verify the students' self-reported racial identities. Classroom teachers supplied seating charts of their classes, as well as information about their instructional groupings for math and language arts instruction, which were included in the analysis.

The data was analyzed using T-tests to examine differences in the average number of interracial friends across various groups, including school, gender, and race. T-tests were also used to examine differences in the qualities of same-race and cross-race

friendships, such as reciprocity, length of acquaintance, frequency of contact, parental approval, and similarity in personality, hobbies, and family. Further T-test analysis explored statistical differences in level of bias, counterbias, and prejudice across grouping variables, such as school, gender, race, and number of interracial friends.

Although this study provides an in-depth analysis of interracial friendships and racial prejudice, it is limited in terms of its scope. Data was collected from two schools in a specific geographic region and the sample size at each of the schools is relatively small. Due to these factors, the findings of this study have limited generalizability and further research is necessary in order to fully understand the implications of school organization on interracial friendships and racial attitudes.

## **School Profiles**

### ***The District***

Both Hillcrest Elementary School and Emerson Elementary School are mid-sized elementary schools in the Pineview County School District in Pineview, Colorado. The Pineview County School District, guarantees enrollment in students' designated district neighborhood school based on their home address. Because Pineview neighborhoods are highly segregated by race, this pattern is reflected in neighborhood school demographics.

Racial segregation in Pineview schools is intensified by the open enrollment option available to parents who choose to apply for admission to another neighborhood school, focus school (i.e., a school with an alternative curriculum or philosophy), or charter school (i.e., an independent school). Although open enrollment is available to all students as long as there is sufficient programming, staff, and space at the requested school, it is mainly white parents who take advantage of the open enrollment option. White parents often cite specialized curriculum or higher academic performance as the reason for their choice to open enroll; however, these variables mask the fact that the focus and charter schools that parents select as replacements for their more diverse neighborhood schools have predominantly white student bodies. The white flight produced by open enrollment typically leaves a concentration of minority students at neighborhood schools.

## *The Schools*

In order to counteract the racial segregation created by open enrollment, many of the Pineview neighborhood schools establish special programs to retain white students. The Pineview Daily News 2004 School Choice Guide cites Emerson Elementary School as an example of a well-integrated neighborhood school, drawing students to the International Baccalaureate Primary Years Program (IB Program). This program provides a challenging academic curriculum, while simultaneously cultivating internationalism and a respect for other cultures (International Baccalaureate Organization Website). This program draws on the rich cultural resources of students of color and also provides white parents with an academic incentive to stay at Emerson.

The Emerson enrollment area is split into several geographic chunks, which include the predominantly white neighborhood directly surrounding the school, trailer parks several miles from the school that house a large Hispanic population, and married-student housing at the nearby university which is composed of many Asian and other international students. Although Emerson students live in segregated neighborhoods, the school classrooms integrate the diversity of the student body, which is 63% white, 17% Hispanic, 15% Asian, 5% African American, and 0% American Indian.

Ethnic diversity and internationalism are a central focus at Emerson and are celebrated by the students, teachers, and staff in school publications, in the classrooms and hallways, at school-wide events, and in the academic curriculum. The front page of the Emerson website prominently displays the message, “Welcome to Emerson Elementary School where the world meets in the heart of Pineview. Presently attended by children from 29 different countries, speaking 19 different languages.” The main

hallway of the school is decorated with a large world map, sprinkled with pictures of students who hail from countries other than the United States. The wall near the office is adorned with welcome signs in multiple languages and a series of clocks that display the time of day in countries around the world.

The emphasis on diversity extends beyond decorations and is a central focus of school-wide functions such as their annual Heritage Night, an evening event where Emerson families celebrate their diverse heritages by sharing food, drink, and displays about their home countries. This year the school is also putting together an International Cookbook, which will include recipes, artwork, and stories that reflect the diversity of the Emerson community.

In addition to school-wide celebrations of diversity, Emerson provides many important resources for its racial minority students. English language learners benefit from an English as a Second Language Program, which provides them with extra English language instruction, and Hispanic students are invited to participate in the Families And Schools Together, a national program empowering parents to get involved in their child's education. The International Baccalaureate Program integrates racial diversity into the academic curriculum at Emerson. Many instructional units are designed to address issues of culture, and the IB curriculum also incorporates the study of French, emphasizing the importance of bilingualism for communication and world citizenship. By integrating diversity into its decorations, activities, and curriculum, Emerson makes issues of race and ethnicity visible to its students and communicates support for intergroup interaction and learning.

In contrast, Hillcrest Elementary School is located in a predominantly white, upper-middle class neighborhood. The enrollment area consists of the neighborhood directly surrounding the school, and the student body at Hillcrest reflects the demographic of that geographic area, which is 94% White, 2% Hispanic, 2% Asian, 1% African American, and 0% American Indian. In the entire fifth grade there are only five students of color. This lack of diversity is a product of the geographic boundaries drawn by the public school system and the residential segregation of American society.

Because of the homogeneity of the student body, racial diversity is not a central focus at Hillcrest. Instead, the school promotes specialized academic programs, such as a Talented and Gifted program that tailors instruction to the students' needs. The hallways at Hillcrest are lined with posters urging students to "Read to Achieve" and the school library offers a wealth of technological resources. School publications focus on parental involvement in the classroom, Parent Teacher Association fundraisers, and academic standards. It is clear that the school is dedicated to meeting the needs of the students and improving their academic achievement.

Because there are so few students who have limited English proficiency, Hillcrest does not support an English as a Second Language program and neither does it directly address racial diversity in school-wide programs or curricula. Due to the absence of racial diversity among students, Hillcrest does not have the opportunity to address race, ethnicity, and culture on a personal level and these issues become invisible at the school.

## *The Classes*

At Emerson, fifty 5th graders comprise two classes, which are located in the basement of the school building, where they occupy two spacious classrooms. Each classroom is filled with clusters of couches and tables that seat four to six students, forming a loose semi-circle oriented toward the blackboard. The walls are lined with bookshelves and covered with student artwork and posters in both English and French (the official IB language). The teachers' desks are pushed up against the wall, serving primarily as storage space for homework and other materials.

The students are co-taught by two veteran teachers and two student teachers from the nearby university. Although students typically begin the day in their homeroom, the classes merge several times a day for various activities and lessons. For math instruction, they also form smaller groups of approximately five students, which draw together students from both classes. The boundaries between the classes are fluid, with students moving freely between classes and to and from pull-out programs such as English as a Second Language, special education, and speech therapy. Because they have the opportunity to work with so many different large and small groups, the fifth graders at Emerson know all their classmates by name and seem comfortable interacting with all of their peers.

The atmosphere in the fifth grade classes at Emerson is casual and energetic. Students address teachers by their first names and demonstrate a high comfort level interacting with adults in the school. Generally, there is a considerable amount of motion and noise in the classroom, with students engaged in small group work, talking with one another and gathering resources from around the classroom as needed. This movement

makes the classroom warm, so the windows and doors are often open. What might be chaotic in some situations is quite orderly in the fifth grade classes at Emerson because the students take a great deal of responsibility for their work, collaborating with each other and requesting help from the teachers as needed.

At Hillcrest, the sixty 5th graders are divided into three classes, which occupy adjacent classrooms in the north wing of the school. Each classroom is arranged with clusters of four to six desks, which form a semi-circle facing the blackboard. An overhead projector sits on a table close to the blackboard, serving as a podium for the teacher. In one back corner of the classroom there is a reading area equipped with a carpet and armchair for the teacher, while the other back corner is occupied by a large teacher's desk. The walls are covered with student artwork and posters promoting respect and responsibility. The classrooms each have a door to the playground, which is the primary entrance for students, opening to let the students in after recess and remaining closed during instruction.

Each fifth grade class at Hillcrest is taught by a young female teacher. The boundaries between classrooms are firm, except in the afternoons when one of the classes is split and the students are distributed to the other two classes. At lunch and recess all three classes have the opportunity to mix and interact freely on the playground. Throughout the day, students do whole-class activities, pair-work, and individual activities, with a few students leaving the classroom periodically for special education and speech therapy classes. Overall, the classrooms are fairly structured and students are expected to remain in their seats unless otherwise instructed. Although students know the four or five other students at their table, it was obvious when students did not recognize

all of their classmates' names on the questionnaires, that the structure of the classrooms limits the students' interaction with one another.

The atmosphere of the fifth grade classes at Hillcrest is formal and orderly. Students address teachers as "Ms." and seemed slightly wary of me as a new adult in their classroom. The students are clearly familiar with the routines of the class, going directly to their seats when they enter the classroom, lining up to get pieces of paper from the bookshelf, gathering on the carpet for story time, and listening quietly after their teacher rang a small bell to get their attention. For the most part, the classes at Hillcrest are teacher-centered, with students responding to the teacher, rather than each other, and working quietly and diligently as instructed.

## Results

Table 1 displays the average number of interracial friendships by school. Best friends (average N=2.77) are those identified by students as “best friends” on Questionnaire 1. Friends (average N=6.99) include both best friends and those identified by students as “good friends” on Questionnaire 1. An interracial friendship is defined as a friendship between students of different ethnic backgrounds (e.g., Asian/non-Asian). The number of interracial friends under the broad definition is almost identical to the number of friendships between white and minority students, therefore majority/minority distinctions are not emphasized in this data. Overall, students at Hillcrest and Emerson have similar numbers of best friends (N=2.77); however, students at Hillcrest have significantly larger friendship circles (N=7.95) than students at Emerson (N=5.98, p=0.03). Despite their smaller friendship groups, students at Emerson indicate higher numbers of interracial friends than students at Hillcrest, both among their best friends

**Table 1: Average Number of Interracial Friendships by School**

	Best Friends		Friends	
	<i>Hillcrest</i>	<i>Emerson</i>	<i>Hillcrest</i>	<i>Emerson</i>
Overall	0.26**	1.05**	1.21*	3.08*
Males	0.33**	1.48**	1.60*	3.43*
Females	0.22	0.58	1.00*	2.68*
Whites	0.08	0.44	0.46**	1.40**
Males	0.14**	0.75**	0.57**	1.92**
Females	0.04	0.15	0.40	0.92
Minorities <sup>†</sup>	2.67	2.07	11.00*	5.87*

Notes:

\*\* p < 0.05, \* p < 0.10

+ N < 10

and in their broader friendship groups. This is not just the result of a higher percentage of minority students at Emerson, whose large numbers of interracial friends increase the overall average. The trend is also significant among white students, who report more interracial friends at Emerson compared with their white peers at Hillcrest. Minority students show the opposite trend, with minorities at Hillcrest reporting more interracial friends than minorities at Emerson. However, the number of minority students at Hillcrest is small and statistics that report data for this group should be read cautiously in terms of their reliability and generalizability. Males at Emerson have more interracial best friends than males at Hillcrest, and the trend is present, although not statistically significant, in their larger friendship circles ( $p=0.16$ ). Females at both schools report similar numbers of interracial best friends, but females at Emerson report more interracial friends in their broader friendship groups than females at Hillcrest. This gender discrepancy is particularly striking among white students, with white males at Emerson reporting more interracial friends and best friends, while their female counterparts show little variation in either category.

Table 2 displays the average number of interracial friendships by race. Because of the small number of racial minorities in each ethnic group, these categories were collapsed into a “minority” variable, which includes African American, Asian, Hispanic, American Indian, and white international (e.g., Bosnian) students. Overall, minority students report almost ten times as many interracial friends and best friends as white students. This pattern persists strongly across gender and school. Males of color report over five times as many interracial friends and best friends as white males, while females of color report over twenty times as many interracial best friends as white females and

**Table 2: Average Number of Interracial Friendships by Race**

	Best Friends		Friends	
	<i>White</i>	<i>Minority</i>	<i>White</i>	<i>Minority</i>
Overall	0.22**	2.17**	0.83**	6.72**
Male	0.42**	2.50**	1.19**	6.50**
Female	0.08**	1.75**	0.58**	7.00**
Hillcrest <sup>+</sup>	0.08**	2.68**	0.46**	11.00**
Emerson	0.44**	2.07**	1.40**	5.87**

Notes:

\*\*  $p < 0.05$ , \*  $p < 0.10$ +  $N < 10$ 

over ten times as many interracial friends as white females. At Hillcrest, the discrepancy between white and minority students is even more striking, with minority students reporting over thirty times as many interracial best friends and over twenty times as many interracial friends as white students. At Emerson, minority students report approximately four times as many interracial friends and best friends as their white peers.

Table 3 presents data on the average number of interracial friendships by gender. Overall, males report more interracial best friends than females, although there is no significant difference in the levels of diversity in their broader friendship groups. At Hillcrest, gender differences are not statistically significant. At Emerson, males report more interracial best friends than females, and the trend is present, but not significant, in their broader friendship groups. Overall, white males indicate significantly higher numbers of interracial friends and interracial best friends than white females. However, white males at Hillcrest report similar numbers of interracial friends as white females at Hillcrest. On the other hand, white males at Emerson demonstrate more interracial friends and interracial best friends than white females at Emerson. Minority males and

**Table 3: Average Number of Interracial Friendships by Gender**

	Best Friends		Friends	
	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
Overall	1.00**	0.37**	2.67	1.70
Hillcrest	0.33	0.22	1.60	1.00
Emerson	1.48*	0.58*	3.43	2.68
Whites	0.42**	0.08**	1.19**	0.58**
At Hillcrest	0.14	0.04	0.57	0.40
At Emerson	0.75**	0.15**	1.92*	0.92*
Minorities <sup>+</sup>	2.50	1.75	6.50	7.00

Notes:

\*\*  $p < 0.05$ , \*  $p < 0.10$

+  $N < 10$

minority females indicate no significant variation in numbers of interracial friends.

Table 4 outlines trends in racial attitudes by school. Bias refers to the average out-group bias scores on the modified Multiple-Response Racial Attitudes measure (e.g., a white student's bias equals the average number of negative adjectives attributed to minorities plus the positive adjectives attributed to whites). Counterbias refers to the average out-group counterbias scores (e.g., a white student's counterbias equals the average number of positive adjectives attributed to minorities plus the negative adjectives attributed to whites). Prejudice is the sum of bias minus counterbias; positive prejudice scores indicate high prejudice, whereas negative prejudice scores indicate low prejudice. Overall, students at Hillcrest and Emerson report similar levels of bias, but Emerson students are significantly more counterbiased than Hillcrest students. Emerson students are less prejudiced than their Hillcrest peers, although this trend is not statistically significant ( $p=0.13$ ). Males show the same trend, although school differences are not statistically significant ( $p=0.11$ ). Females at Hillcrest and females at Emerson report

**Table 4: Racial Attitudes by School**

	Bias		Counterbias		Prejudice	
	<i>Hillcrest</i>	<i>Emerson</i>	<i>Hillcrest</i>	<i>Emerson</i>	<i>Hillcrest</i>	<i>Emerson</i>
Overall	10.71	10.83	10.41*	11.86*	0.30	-1.03
Male	10.13	10.68	10.33	11.85	-0.20	-1.18
Female	11.06	11.00	10.46*	11.86*	0.60	-0.86
Whites	10.54	10.48	10.16**	12.66**	0.38**	-2.18**
Males	10.29	10.25	10.25**	12.79**	0.04	-2.54
Females	10.69	10.69	10.10**	12.54**	0.58**	-1.85**
Minorities <sup>+</sup>	14.00	11.50	15.25*	10.31*	-1.25	1.19

Notes:

\*\*  $p < 0.05$ , \*  $p < 0.10$ +  $N < 10$ 

similar levels of bias and prejudice; however, females at Hillcrest are significantly less counterbiased than females at Emerson. White students highlight the trend even more strongly, with significant increases in counterbias and decreases in prejudice at Emerson. Among white males, this pattern persists, although prejudice levels are not significantly different ( $p=0.16$ ). However, white females at Emerson demonstrate striking higher counterbias and lower prejudice than white females at Hillcrest. Minority students show no significant difference in bias or prejudice across schools; however, students of color at Hillcrest are significantly more counterbiased than minorities at Emerson.

Table 5 displays racial attitudes by gender. Overall, males and females report similar levels of bias, counterbias, and prejudice. No significant differences emerge across any of the subgroups of the study. Males and females reported similar racial attitudes at both Hillcrest and Emerson. Likewise, white students reveal similar bias, counterbias, and prejudice scores across genders, as do students of color.

Table 6 presents data on racial attitudes by ethnic group. Overall, minority students show significantly higher bias scores than white students, but all students score similarly on counterbias and prejudice. At Hillcrest, minority and white students report similar levels of bias and prejudice; however, students of color are significantly more counterbiased than white students. At Emerson, minority students show the opposite trend, reporting lower counterbias scores and higher prejudice scores than white students. Males indicate no significant variation in bias, counterbias, and prejudice scores across racial groups, and neither do females.

Table 7 displays racial attitudes by level of diversity of best friends. Interracial best friends are defined as peers of a different ethnic group who students identify as “best friends” in Questionnaire 1. Overall, students with at least one interracial best friend and students with no interracial best friends display similar levels of bias, counterbias, and prejudice. Males show no variation in racial attitudes across different levels of racial diversity among their best friends; neither do females. Students at Hillcrest score similarly on bias, counterbias, and prejudice, regardless of whether or not they have at

**Table 5: Racial Attitudes by Gender**

	Bias		Counterbias		Prejudice	
	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
Overall	10.44	11.03	11.20	11.05	-0.75	-0.01
Hillcrest	10.13	11.06	10.33	10.46	-0.20	0.60
Emerson	10.68	11.00	11.85	11.86	-1.18	-0.86
Whites	10.27	10.69	11.42	10.96	-1.15	-0.27
Minorities <sup>+</sup>	10.94	13.17	10.56	11.58	0.39	1.58

Notes:

\*\*  $p < 0.05$ , \*  $p < 0.10$

+  $N < 10$

least one interracial best friend. However, overall at Emerson, students with at least one interracial best friend tend to have lower counterbias scores and higher prejudice scores than students with no interracial best friends. On the whole, white students' racial attitudes do not vary with increased racial diversity among best friends and neither do the racial attitudes of minority students. Bias, counterbias, and prejudice scores among white students at Hillcrest are stable across varying levels of racial diversity of best friends. In contrast, white students at Emerson without interracial best friends demonstrate significantly higher counterbias than white students at Emerson with at least one diverse best friend.

**Table 6: Racial Attitudes by Ethnic Group**

	Bias		Counterbias		Prejudice	
	<i>White</i>	<i>Minority</i>	<i>White</i>	<i>Minority</i>	<i>White</i>	<i>Minority</i>
Overall	10.52	11.83	11.15	10.96	-0.63	0.87
Hillcrest <sup>+</sup>	10.54	14.00	10.16**	15.25**	0.38	1.25
Emerson	10.48	11.50	12.66**	10.31**	-2.18**	1.19**
Male <sup>+</sup>	10.27	10.94	11.42	10.56	-1.15	0.39
Female <sup>+</sup>	10.69**	13.17**	10.96	11.58	-0.27	1.58

Notes:

\*\*  $p < 0.05$ , \*  $p < 0.10$

+  $N < 10$

**Table 7: Racial Attitudes by Level of Diversity of Best Friends**

	Bias		Counterbias		Prejudice	
	<i>No Interracial Friends</i>	<i>At Least One Interracial Friend</i>	<i>No Interracial Friends</i>	<i>At Least One Interracial Friend</i>	<i>No Interracial Friends</i>	<i>At Least One Interracial Friend</i>
Overall	10.63	11.14	11.17	10.98	-0.54	0.17
Male	10.30	10.63	11.45	10.87	-1.15	-0.23
Female <sup>+</sup>	10.81	12.42	11.01	11.25	-0.20	1.17
Hillcrest <sup>+</sup>	10.66	11.10	10.20	11.90	0.46	-0.80
Emerson	10.59	11.16	12.70**	10.69**	-2.11*	0.47 *
Whites	10.56	10.32	11.25	10.68	-0.69	-0.36
At Hillcrest <sup>+</sup>	10.66	9.17	10.20	9.67	0.46	-0.50
At Emerson <sup>+</sup>	10.35	10.75	13.41**	11.06**	-3.06	-0.31
Minorities <sup>+</sup>	11.40	12.05	10.30	11.30	1.10	0.75

Notes:

\*\* p < 0.05, \* p < 0.10,

+ N < 10

## Additional Relevant Findings

In addition to addressing the impact of school organization on interracial friendships and racial attitudes, this study collected data on the characteristics of interracial friendships. Questionnaire 2 asks students to name their three best friends and answer questions regarding the characteristics of those friendships (see Appendix B). This data was analyzed using T-tests to compare responses for same-race and cross-race friends.

Table 8 compares perceived popularity of same-race and cross-race friends on a scale of 1 (not at all popular) to 5 (very popular). Overall, students indicate no difference in the perceived popularity of same-race and cross-race friends. However, white students rank cross-race friends as significantly less popular than same-race friends. Unfortunately, the number of minorities included in this study was not large enough to support an analysis of same-race friends among students of color. Comparing popularity across schools reveals that students at Emerson rank cross-race and same-race friends as

**Table 8: Perceived Popularity of Same-Race and Cross-Race Friends**

	Same Race	Cross Race
Overall	3.79	3.38
Whites	3.79**	3.21**
Minorities <sup>+</sup>	~	~
Emerson	2.99	3.37
Hillcrest	4.16**	3.38**

Notes:

\*\*  $p < 0.05$ , \*  $p < 0.10$ ,

+ The number of same-race friendships among minorities was too small for analysis.

equally popular, while students at Hillcrest indicate significantly lower status for cross-race peers.

Table 9 presents data on the length of acquaintance (in years) of same-race and cross-race friends. Overall, students indicate knowing same-race peers an average of fifteen months longer than cross-race peers. Emerson students report no significant difference in the length of acquaintance with same-race and cross-race friends, whereas Hillcrest students report knowing same-race friends almost one year longer than cross-race friends.

Table 10 compares levels of perceived parental approval of same-race and cross-race friends. Students rated parental approval on a scale of 1 (not at all) to 5 (very). Overall, students perceive higher levels of parental approval of same-race friends than for cross-race friends. However, there is no significant variation in perceptions of parental approval of same-race and cross-race friendships among white students and among students at Hillcrest and Emerson. Likewise, males report equal parental approval of same-race and cross-race friends. In contrast, females indicate a significant

**Table 9: Length of Acquaintance (Years) with Same-Race and Cross-Race Friends**

	Same-Race	Cross-Race
Overall	3.21**	1.98**
Whites	3.22**	2.79**
Minorities <sup>+</sup>	~	~
Emerson	2.99	2.65
Hillcrest	3.31**	2.72**

Notes:

\*\* p < 0.05, \* p < 0.10,

+ The number of same-race friendships among minorities was too small for analysis.

decrease in perceived parental approval of cross-race friends compared with same-race friends.

Table 11 compares perceived similarity of personalities among same-race and cross-race friends. Table 12 compares perceived similarity of hobbies. Students rated similarity on a scale of 1 (very different) to 4 (very similar). Overall, students report sharing more similar personality traits with same-race peers. Neither of these findings is statistically significant among whites, males, or students at Emerson and Hillcrest. However, both personality and hobby similarity are salient among females, with same-race friends sharing more in common than cross-race friends.

**Table 10: Parental Approval of Same-Race and Cross-Race Friendships**

	Same-Race	Cross-Race
Overall	4.30*	3.92*
Whites	4.31	4.15
Minorities <sup>+</sup>	~	~
Males	4.20	3.98
Females	4.34*	3.86*
Emerson	3.98	3.68
Hillcrest	4.44	4.53

Notes:

\*\*  $p < 0.05$ , \*  $p < 0.10$ ,

+ The number of same-race friendships among minorities was too small for analysis.

**Table 11: Similarity of Personalities among Same-Race and Cross-Race Friends**

	Same-Race	Cross-Race
Overall	3.10*	2.84*
Whites	3.11	3.00
Minorities <sup>+</sup>	~	~
Males	2.95	2.96
Females	3.20**	2.71**
Emerson	2.87	2.76
Hillcrest	3.21	3.03

Notes:

\*\*  $p < 0.05$ , \*  $p < 0.10$ ,

+ The number of same-race friendships among minorities was too small for analysis.

**Table 12: Similarity of Hobbies among Same-Race and Cross-Race Friends**

	Same-Race	Cross-Race
Overall	2.97	2.79
Whites	2.98	2.82
Minorities <sup>+</sup>	~	~
Males	2.89	2.94
Females	3.02*	2.63*
Emerson	2.90	2.69
Hillcrest	3.01	3.02

Notes:

\*\*  $p < 0.05$ , \*  $p < 0.10$ ,

+ The number of same-race friendships among minorities was too small for analysis.

## **Discussion**

This data clearly indicates that students who attend a diverse school are more likely than students at a homogenous school to establish interracial friendships, both among their best friends and their broader friendship groups. Additionally, students at the diverse school demonstrate more counterbias and lower levels of prejudice than their peers at homogenous schools. These findings support racial integration in schools as an effective means of increasing interracial interaction and challenging racial stereotypes. However, variation across characteristics such as race and gender make data complex and suggest that the issue of interracial friendship formation and racial attitudes is influenced by a myriad of individual and societal factors.

### ***Interracial Friendships***

General data indicates a greater number of interracial friendships and best friendships among students attending the diverse school than among their peers in a homogenous school environment. This trend is not simply the result of a higher proportion of minority students, who are more likely to have interracial friendships, at the diverse school. Closer examination reveals that white students at the diverse school report almost twice as many interracial friendships as white students at the homogenous school. The same trend is present, although not statistically significant, among white students' best friends. These findings are consistent with contact theory and support the argument that proximity to diversity in school promotes interracial interaction among fifth graders.

Although white students at the diverse school report more interracial friends than white students at the homogenous school, minority students demonstrate the opposite trend. This is not surprising because minority students at a predominantly white school are often the only students of their ethnicity in their classes, and they lack the opportunity to establish any same-race friendships at school. On the other hand, students of color at a diverse school have the opportunity to befriend students of similar racial backgrounds and therefore report smaller numbers of friendships with cross-race students. However, all minority students, regardless of the school they attend, report extremely high levels of interracial friendships.

Data comparing interracial friendships by race indicates that minority students have more interracial friends and interracial best friends than white students regardless of their gender or school. In this study, over eighty percent of interracial friendships and best friendships are between white students and minority students, rather than between minority students of different ethnicities. Because interracial friendships assume the participation of two individuals of different racial backgrounds, it is interesting to note the low level of interracial friendships reported by white students. This suggests that either minority students perceive friendships with white students who do not reciprocate, or that a few white students have interracial friendship with many different students of color. Unfortunately, this study did not include a close analysis of reciprocity.

Race is not the only factor that influences the impact of racial diversity in school. In examining differences among males and females, it becomes clear that gender plays a large role in shaping the outcome of school desegregation. Males at the diverse school indicate more interracial friends and best friends than males at the homogenous school.

On the other hand, females at the diverse school do not report an increase in interracial best friends and demonstrate only slightly more diversity in their broader friendship groups. This gender discrepancy is particularly striking among white students. White males report more interracial friends and best friends at the diverse school than they do at the homogenous school, while white females across schools show no significant variation in racial diversity among friends or best friends.

This gender discrepancy may suggest that males benefit from school desegregation more, in terms of interracial friendship formation, whereas females select friends based more on racial similarity rather than on proximity. Or this finding may be caused by the size of friendship groups among males and females. Males typically have more friends ( $N=7.72$ ) and more best friends ( $N=3.67$ ) than females, who identify smaller friendship groups ( $N=6.41$ ) and fewer best friends ( $N=2.07$ ). In larger groups, there is a higher probability of interracial interactions; thus, males would be more likely to have interracial friends. However, the number of friends does not take into account intimacy. Males may have more friendships that are less intimate, while females select only a handful of intimate companions. Further research is necessary to determine the intimacy and quality of interracial friendship bonds among males and females.

### ***Racial Attitudes***

The impact of interracial friendships on racial attitudes is one of the strongest arguments supporting school desegregation in terms of students' social and emotional development. Overall, students attending the diverse school demonstrate significantly less prejudice than students at the homogenous school. However, it is striking to note

that students' bias scores do not vary significantly across schools. It is counterbias that increases significantly at the diverse school. This suggests that students' interactions with diversity in diverse school environments increase their positive emotions toward students of other races.

Although this trend is not statistically significant for males across schools, females at the diverse school indicate significantly higher levels of counterbias and lower levels of prejudice than females at the homogenous school. Even though females report fewer interracial friendships than males, proximity to diversity still has a strong positive impact on their racial attitudes. In fact, males and females report extremely similar levels of bias, counterbias, and prejudice. Thus, desegregating schools appears to be an effective means of decreasing prejudice among both genders.

Racial attitudes vary significantly by race. Minority students mirror the trend of the general population, reporting increased counterbias at the diverse school. The racial demographics of the school have an even stronger impact on the racial attitudes of white students. White students at the diverse school are significantly more counterbiased than white students at the homogenous school, and they also display significantly lower levels of prejudice. This holds true for both white males and white females. Because "white flight" often removes white students from diverse school settings, it is important to note that the benefits of school desegregation in terms of lower levels of racial prejudice are particularly relevant to white students. This finding serves as an incentive for white parents who want their children to become tolerant and accepting of others to seek out, rather than avoid, diverse schools.

Although diverse school environments clearly decrease students' prejudice, interracial friendships have a more complex impact on racial attitudes. Overall, having interracial friends is not correlated with significant changes in bias, counterbias, or prejudice. However, at the diverse school, students with at least one interracial friend exhibit lower levels of counterbias and more prejudice than their peers with homogenous friendship groups. It is counterintuitive that the same students who report maintaining intimate relationships with peers of other racial backgrounds to express fewer positive judgments of those ethnic groups. One explanation for this trend is that students with interracial friends feel that they are less accountable for expressing their views verbally because they outwardly demonstrate affection for cross-race peers on a daily basis. Or, perhaps they view their friends as exceptions to the stereotypes that they associate with racial groups as a whole. In order to better understand this finding, it would be necessary to examine the consistency of students' racial attitudes with their behaviors toward students of other racial backgrounds.

### ***Additional Relevant Findings***

Although school demographics explain some of the trends in interracial friendship formation and racial attitudes among elementary school students, analyses of additional factors such as popularity, length of acquaintance, parental approval, and similarity help clarify some of the nuances in the data.

Overall, students indicate no difference in the perceived popularity of cross-race and same-race friends. However, white students rank cross-race friends as significantly less popular than same-race friends. This finding is expected given the context of

mainstream American society, which values whiteness. It would be interesting to examine whether minority students rank their white friends as more popular than same-race friends. Unfortunately, the number of minorities included in this study was too small to support an analysis of same-race friends among students of color. Analysis of popularity by school shows that students at Emerson rank cross-race and same-race friends as equally popular, while students at Hillcrest indicate significantly lower levels of popularity for cross-race peers. This finding suggests that the school atmosphere at Emerson promotes racial equality, whereas the organization and demographics at Hillcrest maintain a racial hierarchy that devalues students of color.

In terms of length of acquaintance, students indicate knowing same-race peers an average of fifteen months longer than cross-race peers. This may be a result of living in segregated neighborhoods where students are more likely to meet same-race friends. Residential segregation also helps explain the findings at Emerson and Hillcrest. Emerson students, who typically live in more diverse neighborhoods, report no significant difference in the length of acquaintance with same-race and cross-race friends, whereas Hillcrest students, who live in predominantly white neighborhoods, report knowing same-race friends almost one year longer than cross-race friends. These findings suggest that neighborhood racial composition influence interracial friendship formation.

In addition to neighborhood racial composition, parental approval is a factor that may influence friendship selection. Overall, students perceive higher levels of parental approval of same-race friends than of cross-race friends. However, there is no significant variation in perceptions of parental approval of same-race and cross-race friends among

white students and among students at Hillcrest and Emerson. Likewise, males report equal parental approval of same-race and cross-race friends. In contrast, females indicate a significant decrease in perceived parental approval of cross-race friends compared with same-race friends. These findings suggest that in general, students perceive support from their parents in establishing and maintaining interracial friendships. The discrepancy among females may be a misconception of parental views on the part of the students, or it may accurately represent parental attitudes. If this data reflects reality, it would help explain why females are less likely to establish interracial friendships than males. Without the support of their parents, children may not have as many opportunities to visit friends outside of school. Regardless of whether parents think more poorly of their daughters' cross-race friends, the perception of decreased parental approval probably influences female students' choice of friends.

Because similarity is often a factor in friendship selection, this study also includes a short analysis of perceived similarities in students' personality and hobbies. Overall, students report sharing more similar personality traits with same-race peers. Neither of these findings is significant among whites, males, or students at Emerson and Hillcrest. However, both personality and hobby similarity are salient among females. This finding may reflect the fact that females report increased similarity with same-race friends to justify their exclusion of cross-race peers from their friendship groups; or perceived differences may be the motive for friendship selection among females. Either way, a more in-depth analysis of similarity would enhance the study of interracial friendships.

Because students' interactions with race are not limited to the classroom or

school, it is necessary to consider the individual and societal factors that impact interracial friendship formation. These additional findings help explain some of the discrepancies found in this data and also reveal the complexity of interracial contact and racial attitudes, highlighting additional research questions related to interracial contact.

### ***Broader Implications***

This research corroborates many of the findings of previous studies. It also expands their relevance to a wider age range and examines the implications of the changing demographics of American society in the 21<sup>st</sup> century. Prior research, conducted in the 1980's and 1990's, focused primarily on adults and adolescents; an analysis of interracial friendships among young children was strikingly absent from the field. Previous studies also examine interracial contact on a societal level rather than in specific environments, such as schools. This thesis suggests that contact theory is applicable to children in elementary school settings and highlights specific ways in which school organization affects interracial interactions. This research also renews the relevance of contact theory in the changing demographics of modern society.

In addition to updating past theories and contributing new findings to the field, this study highlights some of the benefits of interracial interaction for students' social and emotional development. Children who attend diverse schools are more likely to establish interracial friendships and demonstrate lower levels of racial prejudice, two traits that are essential for communication and collaboration in an increasingly multicultural world. In order to promote positive interracial interactions, administrators, teachers, and parents should work to create learning communities that have diverse student bodies, are small

enough for the active participation of all students, incorporate flexible teaching techniques that promote interaction among all students, and openly celebrate diversity and racial equality as an integral focus of the school curricula and events.

## Questions For Future Research

Although this study clearly indicates that interracial contact is correlated with increased numbers of interracial friendships as well as increased counterbias and decreased prejudice, further research is necessary to fully understand the implications of this data and extend its generalizability. Conducting a similar study in another geographic region of the United States with a larger number of students would reveal whether these findings apply to other social contexts.

Additional research on other aspects of interracial interactions would help answer some of the questions raised by this study. In particular, future studies might explore the roles of reciprocity and gender in interracial friendships. A closer analysis of the differences in racial attitudes and behaviors of students with interracial friends and students with homogenous friendship groups would also compliment this research.

In the era of school standards, additional research might examine the correlation between interracial friendships and academic performance. Do racial minorities at diverse schools perform better or worse academically than their peers at homogenous schools? The lasting effects of school desegregation on the racial composition of students' friendship groups are also an important aspect of this topic. A longitudinal study examining the stability of interracial friendships over time and addressing whether students who attend diverse schools maintain interracial interactions through adulthood would greatly contribute to this field of study.

# Appendices

## *Appendix A: Consent Forms*

### PARENTAL CONSENT FORM

FOR QUESTIONS ABOUT THE STUDY, CONTACT: Caitlin Kline, P.O. Box 12411, Stanford, CA 94309, 650-996-6545, ckline@stanford.edu.

**DESCRIPTION:** Your child is invited to participate in a research study on the effects of school environment on friendship formation and racial attitudes in elementary school. Your child will be asked to complete a written questionnaire regarding his or her identity and friendships, as well as an oral activity regarding their perceptions about people.

**RISKS AND BENEFITS:** There are no risks associated with this study. The potential benefits are a better understanding of how to organize schools to encourage the formation of interracial friendships and break down negative racial stereotypes. We cannot and do not guarantee or promise that you or your child will receive any benefits from this study.

**TIME INVOLVEMENT:** Your child's participation in this experiment will take approximately 30 minutes.

**PAYMENTS:** Neither you nor your child will receive any compensation for your participation.

**SUBJECT'S RIGHTS:** If you have read this form and have decided to allow your child to participate in this project, please understand that participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. Your child has the right to refuse to answer particular questions. Your privacy and the privacy of your child will be maintained in all published and written data resulting from the study.

If you have questions about your child's rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish - the Administrative Panels Office, Stanford University, Stanford, CA (USA) 94305-5401 (or by phone (650) 723-2480 - you may call collect).

The extra copy of this consent form is for you to keep.

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

Protocol Approval Date: November 19, 2004

Protocol Expiration Date: November 18, 2005

## STUDENT ASSENT FORM

1. What will happen to me in this study? You will be asked to complete a written questionnaire that will ask questions about you and your friendships. You will also be asked to complete an individual activity about describing people.

2. Can anything bad happen to me? Nothing bad can happen to you as a result of this study.

3. Can anything good happen to me? Nothing good will happen to you as a result of this study, but the study will help teachers understand how schools influence friendships and perceptions of people.

4. Will anyone know I am in the study? No one will know what you write on the questionnaires. Besides your teacher and classmates, no one will know that you participated in the study.

5. Who can I talk to about the study? If you have questions about the study, you can talk to Caitlin Kline, P.O. Box 12411, Stanford, CA 94309, 650-996-6545, ckline@stanford.edu.

6. What if I do not want to do this? You only have to participate in this study if you want to. If you want to stop, you can do that at any time. You can also leave questions blank if you don't want to answer.

If you have any problems with this study, you can call the Institutional Review Board at (650) 723-2480 or write the Administrative Panel on Human Subjects in Non Medical Research, Administrative Panels Office, Stanford University, Stanford, CA 94305-5401. Anything you tell the IRB can be kept secret, if you want.

Do you understand this study and are you willing to participate?

YES    No

\_\_\_\_\_  
Signature of Child

\_\_\_\_\_  
Date

TEACHER CONSENT FORM

FOR QUESTIONS ABOUT THE STUDY, CONTACT: Caitlin Kline, PO Box 12411, Stanford, CA 94309, 650-996-6545, ckline@stanford.edu.

DESCRIPTION: You are invited to participate in a research study on the effects of school environment on friendship formation and racial attitudes in elementary school. You will be asked to provide written information about the seating arrangements and instructional groupings in your classroom.

RISKS AND BENEFITS: There are no risks associated with this study. The potential benefits are a better understanding of how to organize schools to encourage the formation of interracial friendships and break down negative racial stereotypes. We cannot and do not guarantee or promise that you will receive any benefits from this study.

TIME INVOLVEMENT: Your participation in this experiment will take approximately 30 minutes.

PAYMENTS: You will not receive any compensation for your participation.

SUBJECT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand that participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. Your privacy will be maintained in all published and written data resulting from the study.

If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish - the Administrative Panels Office, Stanford University, Stanford, CA (USA) 94305-5401 (or by phone (650) 723-2480 - you may call collect).

The extra copy of this consent form is for you to keep.

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

Protocol Approval Date: November 19, 2004

Protocol Expiration Date: November 18, 2005

*Appendix B: Questionnaires*

QUESTIONNAIRE 1

First Name \_\_\_\_\_ Last Name: \_\_\_\_\_

Age \_\_\_\_\_

Gender: (check one)

- male       female

Race: (check all that apply)

- White
- Black/African American
- Hispanic/Latino
- Asian
- American Indian/Alaska Native
- Native Hawaiian/Pacific Islander
- Other \_\_\_\_\_

How many brothers and sisters do you have? \_\_\_\_\_

What language is spoken at home: (check all that apply)

- English       Spanish       Other \_\_\_\_\_

When did you start attending Emerson? (check one)

- Kindergarten
- 1st grade
- 2nd grade
- 3rd grade
- 4th grade
- 5th grade

How popular are you in your class? (circle one)

- Very      Somewhat      A little      Not very      Not at all

Are you in ESL? (check one)

- Yes       No

## QUESTIONNAIRE 2

First Name \_\_\_\_\_ Last Name \_\_\_\_\_

For each student, circle one.

4=Best friend

3=Good friend

2=Friend

1=Not really a friend

Alphabetical list of students in class...

Student A

4      3      2      1

Student B

4      3      2      1

Student C

4      3      2      1

Student D

4      3      2      1

Student E

4      3      2      1

Student F

4      3      2      1

Student G

4      3      2      1

Student H

4      3      2      1

Student I

4      3      2      1

Student J

4      3      2      1

Student K

4      3      2      1

Student L

4      3      2      1

QUESTIONNAIRE 3

First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Name your top 3 friends in your class.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Thinking about Friend 1, please answer the following questions.

How popular is Friend 1 in your class? (circle one)

Very                  Somewhat                  A little                  Not very                  Not at all

Where did you meet Friend 1? (circle one)

Neighborhood      School      After-school activity      Family      Other\_\_\_\_\_

How long have you been friends? (circle one)

Less than 3 months                  3-9months                  1-2 years                  3+ years

How often do you and Friend 1 get together outside of school? (circle one)

Every day      1-2 times/week      1-2 times/month      1-2 times/year      Never

Do your parents like Friend 1? (circle one)

A lot                  Somewhat                  A little                  Not much                  Not at all

How similar are your and Friend 1's personalities? (circle one)

Very Similar      Somewhat similar      Somewhat different      Very different

How similar are your and Friend 1's hobbies? (circle one)

Very Similar      Somewhat similar      Somewhat different      Very different

How similar are your and Friend 1's families? (circle one)

Very Similar      Somewhat similar      Somewhat different      Very different

...repeat for Friend 2 and Friend 3

*Appendix C: Pictures for Multiple-Response Racial Attitudes Measure*

(by Janet Soressi)

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