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African American and European American Children in Diverse Elementary Classrooms: Social Integration, Social Status, and Social Behavior

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Abstract

With a sample of African American and European American 3rd and 4th grade children ($N = 486$, ages 8–11 years), this study examined classroom ethnic composition, peer social status (i.e., social preference and perceived popularity as nominated by same- and cross-ethnicity peers), and patterns of ethnic segregation (i.e., friendship, peer group, and cross-ethnicity dislike). African American—but not European American—children had more segregated relationships and were more disliked by cross-ethnicity peers when they had fewer same-ethnicity classmates. African American children's segregation was positively associated with same-ethnicity social preference and perceived popularity and with cross-ethnicity perceived popularity. European American children's segregation was positively associated with same-ethnicity social preference but negatively associated with cross-ethnicity social preference and perceived popularity.

The integrated elementary school stands as one of America's proudest and most hard-won achievements. Yet true integration calls for more than just a diverse collection of children in the same building, but also for *social* integration. When it comes to relationships between African American and European American children—relationships of deep, historical significance to the United States—critical questions regarding social integration in American schools remain unanswered (Schofield & Hausmann, 2004). One question is whether African American and European American children have more positive social relationships in more ethnically diverse classrooms. Does greater exposure to cross-ethnicity peers result in more positive intergroup contact (e.g., Allport, 1954) or instead trigger mistrust and dislike (Putnam, 2007)? A second question concerns how children with integrated social relationships are perceived by peers. Are children who have diverse peer relationships viewed as class leaders (Kawataba & Crick, 2008; Lease & Blake, 2005), or might they be less popular (at least among same-ethnicity peers) than children with segregated social relationships (Castelli, De Amicis, & Sherman, 2007)? Taken together, the research questions of this study ask whether the peer social ecologies of contemporary elementary classrooms support or undermine the presence of positive, integrated relationships between African American and European American children.

Classroom Ethnic Composition and Social Integration

The ethnic composition of U.S. public schools varies widely by demographic setting (i.e., urban, suburban, rural) and geographic location. Roughly one in three ethnic minority children and one in eight European American children are enrolled in the nation's 100 largest school districts; 71% of children in these districts are ethnic minorities (National Center for Education Statistics, 2008). Many urban schools are multiethnic, having substantial representation from three or more ethnic groups. There is considerable heterogeneity in the ethnic composition of urban districts. For example, in New York City, the nation's largest school district, 39% of children are Latino, 33% are African American, and 15% are European American; Los Angeles, the second largest school district, is less balanced: 73% Latino, 12% African American, and 9% European American (National Center for Education Statistics, 2008). Variability in urban school demographics permits investigation into how diversity relates to schooling outcomes.

Psychological research generally finds support for the benefits of diversity and intergroup contact in schools (e.g., Juvonen, Nishina, & Graham, 2006) and other social settings (Pettigrew & Tropp, 2006). Juvonen and colleagues (2006) investigated student perceptions of school safety in 11 urban, multiethnic middle schools; students felt safer and less lonely, experienced less peer harassment, and exhibited higher self-worth the more ethnically diverse were their classrooms and schools. The authors attributed the positive findings in part to a more equitable distribution of numerical power across ethnic groups. Recent work in political science (Putnam, 2007), however, offers the provocative claim that living in more diverse settings leads to less interpersonal connection and trust for African Americans and European Americans alike. Aptly termed "hunkering down," this phenomenon signals that both "bonding" social capital (i.e., ties to the in-group) and "bridging" social capital (i.e., ties to out-groups) can suffer for years in the face of increasing diversity until a society has progressed (Putnam, 2007, p. 144). As applied to children, the "hunkering down" perspective suggests that exposure to greater ethnic diversity in a classroom may not readily lead to true integration, but instead may yield social cleavages (Criswell, 1937), thus suspending the realization of diversity's potential benefits.

Despite recent demographic growth among ethnic minority populations, the multiethnic school is the exception (Orfield, 2001; Pettigrew, 2004). Indeed, the majority of children in the U.S.—roughly two in three ethnic minorities and seven in eight European Americans—attend smaller and less diverse districts than those in large urban centers (National Center for Education Statistics, 2008). In less diverse districts, African American and European American children typically attend ethnically segregated schools or, to a lesser extent, schools with a numerical balance of African American and European Americans. The present study examines social integration within elementary schools where African American and European American students together compose the majority of the school population, with one ethnic group predominating. Of particular interest is whether the ethnic composition of the classroom *differentially* affects social integration patterns of African American and European American children.

Social integration patterns among African American children may be particularly sensitive to classroom and school ethnic distribution. Jackson, Barth, Powell, and Lochman (2006) asked children in 59 fifth-grade classrooms whom they "liked most" and "liked least," and who were the "leaders" in their classrooms. African American children received more liked most and leader nominations, and fewer liked least nominations, when they had more African American classmates; in contrast, ratings for European American children were similar across classrooms, regardless of their status as a classroom majority or minority. Bellmore, Nishina, Witkow, Graham, and Juvonen (2007) surveyed over 1100 sixth graders from multicultural schools with Latina/o, African American, European American, and Asian

American children; they measured peer acceptance (i.e., liked most), peer rejection (i.e., liked least), and perceptions of being “cool.” Children of all ethnic groups received more acceptance and cool nominations from same-ethnicity peers in classrooms with higher percentages of same-ethnicity classmates. However, African American children in particular were less accepted by cross-ethnicity peers when they had fewer same-ethnicity classmates. Thus, both Jackson et al. (2006) and Bellmore et al. (2007) find that African American children, more than European American children, are viewed less positively by classmates when their classrooms have fewer same-ethnicity peers.

The present study examines whether Jackson and colleagues (2006) and Bellmore and colleagues’ (2007) findings on acceptance and rejection (i.e., social preference) generalize to children’s *relationships*. To the extent that African Americans are less accepted by cross-ethnicity peers when they are classroom minorities, African Americans who are classroom minorities should have more segregated relationships (see also Hamm, Brown, & Heck, 2005); for European American children, segregation ratios should be similar across classrooms of different ethnic composition. In contrast, a “hunkering down” perspective might suggest that ethnic composition effects would be similar (i.e., less integration in more diverse classrooms) for African American and European American children alike.

Social Integration and Social Status

An ideal scenario for the integrated elementary school is when children value peers with many positive cross-ethnicity relationships and few negative cross-ethnicity relationships. In this case, true social integration is supported by the children themselves. Indeed, children with integrated social relationships may be particularly well adjusted, with reputations as influential class leaders (Kawabata & Crick, 2008; Lease & Blake, 2005). On the other hand, children with segregated relationships might also enjoy high social status. Castelli et al. (2007) interviewed White Italian children about drawings of White protagonists interacting with White and/or Black children. White Italian preschoolers and first graders preferred White protagonists who played exclusively with other White children, although in middle childhood this effect was not present. Bellmore et al. (2007), in their multicultural sample of U.S. sixth graders, report that African American and European American children who nominated more same-ethnicity classmates as “liked most” were in turn liked more by same-ethnicity peers. Thus, Castelli et al. (2007) and Bellmore et al. (2007) find positive associations between children’s preference for same-ethnicity peers and their acceptance by same-ethnicity peers.

The present research extends the scope of these investigations to examine whether children with segregated social relationships are perceived to be *popular* among same-ethnicity peers, and for that matter among cross-ethnicity peers. Perceived popularity gives insight into the social status of African American and European American children beyond social preference and its “liked most” and “liked least” components (Cillessen, Schwartz, & Mayeux, in press; Rodkin, Farmer, Pearl, & Van Acker, 2000). One child can like another without perceiving him or her to be generally popular, and one child can perceive another to be popular without feelings of personal affection, and possibly even with feelings of personal dislike (Adler & Adler, 1998). Social preference expresses a personal sentiment (i.e., who do *you* like?), but perceived popularity represents a judgment about what others value and the consensual norms of the peer ecology (Hartup & Abecassis, 2002). Social preference is positively associated with prosocial characteristics and negatively associated with aggressive characteristics, whereas perceived popularity has only modest (in some cases positive, in other cases negative) correlations with aggression (Cillessen & Mayeux, 2007; Cillessen & Rose, 2005; Mayeux, Houser, & Dyches, in press; Parkhurst & Hopmeyer, 1998; Rodkin & Wilson, 2007).

When applied to perceived popularity, research turns from the preference-based question, “Do children especially like same- (or cross-) ethnicity peers with more segregated social relationships?” to the popularity-based question, “Do children perceive same- (or cross-) ethnicity peers with more segregated social relationships to have greater status and influence?” In addition, the inclusion of perceived popularity as an index of social status allows for a fresh examination of whether social segregation patterns differentially affect the social status of African American and European American children.

Children’s negative interpersonal sentiments are not extensively studied (Card, 2010; Hodges & Card, 2003; Pfeifer, Brown, & Juvonen, 2007), so it is unclear whether children who disproportionately *dislike* cross-ethnicity peers are more preferred or perceived as more popular by their same-ethnicity classmates. Bellmore et al. (2007) did not find an association between disliking peers of another ethnicity and being preferred by peers of one’s own ethnicity. Yet since negative relationships can make a person’s other relationships more cohesive (Heider, 1958), it is reasonable to suspect that children may in fact value same-ethnicity peers who demonstrate cross-ethnicity dislike. Social segregation can also bring costs (Putnam, 2007): Children with segregated social relationships may be better liked by their same-ethnicity peers, but are probably disliked or perceived as unpopular by cross-ethnicity peers.

Study Overview

This study broadens previous research on how children’s intergroup relations are associated with two characteristics of elementary classroom peer ecologies: classroom ethnic context and peer social status. The methods of this study have several notable strengths.

First, integration patterns are assessed using multiple positive (i.e., friendship, group affiliation) and negative (i.e., liked least) ties. Including a social network measure such as group affiliation is particularly appropriate for a study of children’s intergroup relations, but previous research has mainly considered acceptance and friendship choices, reflecting a larger trend in social development literature to focus on individuals and dyads more than groups and social networks (Cillessen & Borch, 2008). Of procedures for identifying children’s groups (see Cillessen & Borch, 2008), this study used Social Cognitive Mapping (SCM; Cairns & Cairns, 1994). SCM has the benefit of being *multi-informant*, meaning that children report their own affiliative groups and those of other children in the classroom. Social network block modeling procedures are typically constructed to consider only who is *your* friend or affiliate. The multi-informant aspect of SCM contributes to the stability of identified peer groups, and is particularly robust for the identification of aggressive and unpopular children (Rodkin & Ahn, 2009).

Second, analyses feature a *compositionally invariant* segregation index that correctly controls for the differing opportunities for same- and cross-ethnicity contact in classrooms of varying ethnic composition (Gorard & Taylor, 2002; Moody, 2001; Rodkin, Wilson, & Ahn, 2007); this index provides a ratio of bonding social capital (same-ethnicity ties) to bridging social capital (cross-ethnicity ties).

Third, primary study analyses are multilevel (children nested within classrooms) and control for the key social behavior variables of peer-perceived prosocial behavior, and relational and overt aggression. There are well-established connections between these behaviors and social status (Cillessen et al., in press; Cillessen & Rose, 2005), and additional evidence indicates that status-behavior associations may vary by individual ethnicity and classroom ethnic composition (Meisinger, Blake, Lease, Palardy, & Olejnik, 2007; Rodkin et al., 2000).

Fourth, the sample is ethnically heterogeneous at individual and classroom levels. Most classrooms have a clear numeric ethnic majority, but also sufficient numeric minority children to permit quantitative analysis. Finally, the sociometric design of this investigation has children nominate classmates with whom they were friends, whom they believed to be popular, whom they liked least, etc., but children were not asked about race, ethnicity, African Americans, or European Americans per se. This minimizes social desirability effects.

Method

Participants

Participants attended nine elementary schools across three Midwestern school districts located in small- to moderate-size urban areas. The schools varied considerably in ethnic composition and socioeconomic status (SES) as indicated by school lunch status. A school was targeted for inclusion in this study if its student ethnic distribution approximated a 60:40 ratio of African American to European American students, or vice versa. The 60:40 ratio balances having a clear ethnic majority with having enough ethnic minority participants to permit quantitative analysis of within-classroom social relations. The actual percentage of ethnic minority students in each school ranged from 34.1% to 86.8% ($M = 63.1\%$). The percentage of students in each school who received free or reduced lunch ranged from 36.0% to 83.3% ($M = 59.0\%$). The neighborhoods (census tracts) in which the schools were located varied considerably in SES as measured by per capita income and the percentage of individuals below poverty level (U.S. Census Bureau). Neighborhood per capita income ranged from \$11,100 to \$36,700, with a median of \$15,000. The percentage of individuals in each neighborhood living below poverty level ranged from 5.6 to 39.5, with a median of 21.6 percent. The correlation between the percentage of individuals living below poverty level and the percentage of African Americans in each neighborhood was .71 ($n = 9, p < .05$).

The study sample consisted of 34 third and fourth grade classrooms in which there were at least two African American and two European American children. Within these classrooms, there were 757 children (370 female, 387 male): ten in second grade, 337 in third grade, 387 in fourth grade, and 23 in fifth grade. One classroom was mixed second/third grade; two others were mixed fourth/fifth grade. All findings were very similar when second and fifth grade children were excluded from analysis. The mean ethnic distribution of classrooms as reported by teachers was 44.1% African American, 41.1% European American, 7.9% Asian, 2.8% Latino/a, and 4.1% other. Classroom ethnic distributions varied considerably, from 8.0% to 78.6% African American ($SD = 16.4\%$), and from 9.1% to 70.8% European American ($SD = 17.1\%$) (for details see Rodkin et al., 2007). Analyses considered only African American and European American participants. The final sample included 486 children in 34 classrooms: 235 African American (127 females, 108 males) and 251 European American children (130 females, 121 males).

Procedure

Study participation required parental/guardian consent and individual assent; the participation rate was 77.0%. Researchers surveyed children in the Spring semester. For each classroom, surveys were conducted in two 30-minute sessions on two consecutive days. To guard against biases due to reading difficulties, a member of the research team read each item aloud, while at least two others walked around the room to monitor students' progress and answer questions. The order of administration of measures for each classroom was randomized.

Measures

Friendship—Children were asked to circle yes or no to the question, “Some kids have a number of close friends, but others have just one best friend, and still others don’t have a best friend. What about you? Do you have a best friend?” Children responding affirmatively were prompted to write an unlimited number of names of children whom they considered to be their best friends. Of the 486 participants, 450 (i.e., 92.6%) nominated at least one best friend.

Peer affiliations—Peer groups were determined using the SCM procedure (Cairns & Cairns, 1994). We first asked participants, “Do you hang around together a lot with some kids in your classroom?” Participants responding affirmatively were prompted to check off boxes adjacent to the first names and last initials of peers in their classroom under the heading, “MY GROUP.” We then asked, “Besides the group that you’re in, are there other kids in your classroom who hang around together a lot?” Participants responding affirmatively were prompted to write the first names and last initials of every child in each group they could recall. The frequency of being named to the same group is correlated with observable interaction rates ($r = .56$; Gest, Farmer, Cairns, & Xie, 2003). Group membership was processed using the SCM version 4.0 program. Of the 486 participants, 458 (i.e., 94.2%) were named to a group.

Social behavior—Social behavior scores were obtained from unlimited peer nominations. Proportions were calculated for each child from the quotient of nominations received over the number of nominators in a classroom, with self-nominations excluded. Proportions were log-transformed for normality. *Prosocial* was the average of cooperative (i.e., “These kids COOPERATE. Here are kids who really cooperate—they pitch in, share, and give everyone a turn.”) and nice (i.e., “These kids are always willing to do something NICE for somebody else, and are really nice people.”) ($\alpha = .92$). *Relational aggression* was the average of makes fun (i.e., “These kids MAKE FUN of people. They like to make fun of other kids and embarrass them in front of other people.”) and says mean things (i.e., “These kids SAY MEAN THINGS to other kids, and they spread nasty rumors about other kids.”) ($\alpha = .91$). *Overt aggression* was the average of fights (i.e., “These kids start FIGHTS. These kids push other kids around, or hit them or kick them.”) and trouble (i.e., “These kids get into TROUBLE. These kids don’t follow the rules, don’t pay attention, and talk back to the teacher.”) ($\alpha = .89$).

Social status—Social status scores were obtained from unlimited peer nominations. *Social preference* was computed as the difference between liked most (i.e., “These are the kids whom I would LIKE MOST to play with.”) and liked least (i.e., “These are the kids whom I would LIKE LEAST to play with.”). *Perceived popularity* was computed as the difference between popular (i.e., “These are the most POPULAR kids in my class.”) and unpopular (i.e., “These are the most UNPOPULAR kids in my class.”) (cf., LaFontana & Cillessen, 2002).

Social status scores were calculated separately with regard to same- and cross-ethnicity nominators. Thus, same-ethnicity social preference and perceived popularity were the quotients of same-ethnicity nominations received over the number of same-ethnicity nominators in a classroom, with self-nominations excluded. Similarly, cross-ethnicity social preference and perceived popularity were the quotients of cross-ethnicity nominations received over the number of cross-ethnicity nominators in a classroom. Same- and cross-ethnicity social preference and perceived popularity scores were normally distributed without log-transformation, so raw proportions were used in multilevel analyses.

Ethnic segregation—Each child's pattern of sent friendship nominations, peer group affiliations, and sent like least nominations were used to calculate up to three ethnic segregation indices. Friendship and like least nominations were unilateral (i.e., did not require reciprocation). We calculated all valid indices for each child; for example, if a child was named to a peer group and named at least one peer as liked least, but did not name a best friend in the classroom, segregation indices were calculated only for peer affiliations and dislike.

Calculating segregation indices was similar for all three constructs, so we illustrate the process for friendships and then note how it differed slightly for affiliations and dislike (for details see Rodkin et al., 2007). To measure friendship segregation, we used the compositionally invariant odds ratio, α , which controls for opportunities present for same- and cross-ethnicity contact in classrooms of varying ethnic composition (Moody, 2001). Measures of segregation that do not maintain compositional invariance, such as strict proportions, yield misleading results (Gorard & Taylor, 2002). For each child, an ethnicity-by-nominations cross-tabulation was constructed. In this table, A is the number of same-ethnicity ties, B is the number of cross-ethnicity ties, C is the number of same-ethnicity peers with whom the child did not have ties, and D is the number of cross-ethnicity peers with whom the child did not have ties. Only ties among African American and European American children based on sent nominations were considered. The cross-tabulation yields an odds ratio, namely $\alpha = AD/BC$. Wherever there was a zero value in one or more cells of the cross-tabulation, 0.5 was added to each cell. The formula for friendship segregation is $\log \alpha = \log (AD/BC)$. On this scale, positive values favor same-ethnicity friendships, negative values favor cross-ethnicity friendships, and zero is a neutrality point. The larger the absolute value, the stronger is the same- or cross-ethnicity favoritism.

Consider an example of a classroom with twenty students: 13 African American (65%), six European American (30%), and one Asian American (5%). A female African American student in this classroom has friendships with two African American classmates (ignoring the student herself, $A = 2$, $C = 10$) and one European American classmate ($B = 1$, $D = 5$). Thus, her index of friendship segregation is $\log \alpha = \log (AD/BC) = \log ([2 \times 5]/[1 \times 10]) = \log (1.0) = 0$. Thus, this student exhibits no same- or cross-ethnicity favoritism within this classroom; this is true even though she has more same-ethnicity than cross-ethnicity friends, because she has proportionately more opportunities for same-ethnicity friends.

To calculate segregation in children's peer group affiliations, SCM-identified peer groups were found, and then group affiliates were used in the place of friendships to calculate $\log \alpha$. For like least nominations, the odds ratio was inverted, where $\log \alpha = \log (BC/AD)$, to maintain a consistent valence across all three measures of ethnic segregation. Positive values reflect disproportionate like least nominations towards cross-ethnicity peers and negative values reflect disproportionate like least nominations towards same-ethnicity peers.

Ethnic context of classroom: Percentage of same-ethnicity peers—The percentage of children in the classroom who were either (a) African American or (b) European American was used to measure classroom ethnic context. Percentage of African American classmates was used in multilevel models at level-2 for African American children, and percentage of European American classmates was used in models at level-2 for European American children.

Analysis Plan

The plan of analysis had two stages; each stage employed multilevel linear modeling techniques. We performed separate analyses for African American and European American children (cf. Bellmore et al., 2007). Preliminary three-level unconditional models (i.e.,

children nested within classrooms nested within schools) revealed that no outcome measure varied significantly across schools (all $ps > .10$). Thus, each model had a two-level hierarchical structure, with children nested within classrooms. To better detect between-classroom differences, we did not standardize independent and dependent variables (Willett, Singer, & Martin, 1998). Preliminary models detected no significant grade effects.

Ethnic segregation—First, we modeled how individual characteristics and classroom ethnic context accounted for individual-level variance in three types of ethnic segregation: friendships, group affiliations, and dislike. There were three models each for African American and European American children, where one form of segregation was the dependent variable in each model; gender and perceived prosocial behavior, relational aggression, and overt aggression were level-one independent variables; and percentage same-ethnicity (either African American or European American) was the level-two independent variable.

Social status—We then modeled individual-level variance in social preference and perceived popularity as a function of children's segregation patterns and the classroom ethnic context. There were four sets of models in all: (a) same-ethnicity preference and popularity for African American children; (b) same-ethnicity preference and popularity for European American children; (c) cross-ethnicity preference and popularity for African American children; and (d) cross-ethnicity preference and popularity for European American children. Gender and social behavior variables were entered as controls to better identify unique associations between segregation patterns and social status in these four sets of models.

Results

Preliminary Analyses

Gender and ethnic differences in segregation, social behavior, and social status—Table 1 presents the means and standard deviations of all individual-level variables by ethnicity and gender; we provide standardized scores in this analysis to better illustrate gender and ethnicity differences. A multiple analysis of variance was performed with gender and ethnicity as independent variables to test for gender, ethnicity, and gender $\times$ ethnicity interactions. Results confirmed three significant gender differences: Compared to boys, girls were reported by their classmates as more prosocial ($M_{\text{girls}} = .32$, $M_{\text{boys}} = -.36$; $p < .01$), less relationally aggressive ($M_{\text{girls}} = -.16$, $M_{\text{boys}} = .18$; $p < .01$), and less overtly aggressive ($M_{\text{girls}} = -.27$, $M_{\text{boys}} = .30$; $p < .01$).

There were nine significant ethnic differences and one gender $\times$ ethnicity interaction. Compared to European Americans, African American children had more segregated friendships ($M_{\text{AA}} = .38$, $M_{\text{EA}} = .26$; $p < .05$) and peer groups ($M_{\text{AA}} = .42$, $M_{\text{EA}} = .29$; $p < .05$). For cross-ethnicity dislike, there was a significant gender $\times$ ethnicity interaction: European American girls disproportionately disliked African American peers more than did European American boys ($Ms = .35$ versus $.15$), but African American boys disproportionately disliked European American peers more than did African American girls ($Ms = .25$ versus $.11$). In terms of social behavior, African Americans were perceived as more relationally aggressive ($M_{\text{AA}} = .45$, $M_{\text{EA}} = -.42$; $p < .01$), more overtly aggressive ($M_{\text{AA}} = .37$, $M_{\text{EA}} = -.34$; $p < .01$), and less prosocial ($M_{\text{AA}} = -.29$, $M_{\text{EA}} = .27$; $p < .01$) than European Americans. With respect to same-ethnicity social status, African Americans were more preferred ($M_{\text{AA}} = .13$, $M_{\text{EA}} = -.12$; $p < .01$) and perceived as more popular ($M_{\text{AA}} = .26$, $M_{\text{EA}} = -.25$; $p < .01$) than European Americans. Finally, with respect to cross-ethnicity

social status, African Americans were less preferred ($M_{AA} = -.05$, $M_{EA} = .05$; $p < .05$) but perceived as more popular ($M_{AA} = .33$, $M_{EA} = -.31$; $p < .01$) than European Americans.

Correlations among individual-level variables—Table 2 presents bivariate correlations between all individual-level variables, computed separately for African American (below diagonal) and European American (above diagonal) children, ignoring nesting within classrooms; where relevant, Fisher's z-statistics are provided below to highlight between-group differences. The correlations among the three ethnic segregation measures indicate that, for both ethnic groups, students high on one measure of segregation tended to be high on the two other measures of segregation ($.27 \leq r \leq .56$, all $ps < .01$); friendship segregation and peer group segregation were the most highly correlated ($r_{AA} = .56$, $p < .01$; $r_{EA} = .43$, $p < .01$).

The correlations between ethnic segregation (rows/columns 1–3) and social status (rows/columns 7–10) for African American and European American children are of greatest interest in this study. For each ethnic group, friendship segregation and peer group segregation were positively correlated with same-ethnicity social preference ($.17 \leq r \leq .30$, all $ps < .01$) but negatively correlated with cross-ethnicity social preference ($-.32 \leq r \leq -.23$, all $ps < .01$). However, friendship segregation, peer group segregation, and cross-ethnicity dislike were positively correlated with same-ethnicity perceived popularity for African Americans ($.25 \leq r \leq .32$, all $ps < .01$), but not for European Americans ($-.07 \leq r \leq .02$, all ns); each pair of correlations between the ethnic segregation and same-ethnicity popularity measures differed significantly across ethnic groups ($2.93 \leq z \leq 3.96$, all $ps < .01$). Friendship segregation, peer group segregation, and cross-ethnicity dislike each was negatively correlated with cross-ethnicity perceived popularity for European Americans ($-.30 \leq r \leq -.21$, all $ps < .01$), but not for African Americans ($-.01 \leq r \leq .09$, all ns); each pair of these correlations also differed significantly across ethnic groups ($2.22 \leq z \leq 3.50$, all $ps < .05$).

These preliminary findings point to ethnicity differences in integration patterns and social status. However, they do not account for classroom-level variability—in particular, how the ethnic context of a classroom might moderate children's social integration patterns and social status. Multilevel analyses were performed to address these issues.

Multilevel Models of Ethnic Segregation

Multilevel models were performed separately for African American and European American children for friendship segregation, peer group segregation, and cross-ethnicity dislike using PROC MIXED, SAS 9.1 (Singer, 1998). Table 3 presents variance components and intraclass correlations for all outcome variables. African Americans evidenced significant classroom-level variance in friendship segregation ($\tau = .122$) and peer group segregation ($\tau = .247$), but not in cross-ethnicity dislike ($\tau = .032$). European Americans evidenced significant classroom-level variance in peer group segregation ($\tau = .078$) and cross-ethnicity dislike ($\tau = .104$), but not in friendship segregation ($\tau = .030$). Preliminary analyses revealed no effects for gender or overt aggression, including interactions. The remaining level-one predictors were perceived prosocial behavior and relational aggression; the level-two predictor was mean-centered percent same-ethnicity. Final models are presented in Table 4; for each model, the null model intercept represents the mean classroom value of the dependent variable. The meta- R^2 value for each hierarchical linear model assesses explained variance, indicating specifically the proportional reduction of error for predicting an individual outcome (Snijders & Bosker, 1999).

African Americans' segregation patterns—African American children had moderately segregated friendships ($\beta = .41, p < .01$) and peer groups ($\beta = .45, p < .01$). African American children were particularly likely to have more segregated friendships ($\gamma = -.019, p < .01$) and peer groups ($\gamma = -.023, p < .01$) in classrooms where there were fewer African Americans. African American children disproportionately disliked European American children ($\beta = .18, p < .01$), but this did not vary by classroom context. African American children who were viewed as more relationally aggressive had more segregated friendships ($\beta = 1.27, p < .01$) and peer groups ($\beta = 2.02, p < .01$), and demonstrated greater cross-ethnicity dislike ($\beta = 1.08, p < .01$). Prosocial behavior was not significant in any of the models.

European Americans' segregation patterns—European American children also had relatively segregated friendships ($\beta = .27, p < .01$) and peer groups ($\beta = .27, p < .01$); in contrast to African Americans, segregation patterns were not associated with relational aggression or classroom ethnic context. European Americans who were viewed as more prosocial had more segregated friendships ($\beta = 1.66, p < .01$) and peer groups ($\beta = 1.45, p < .05$). European American children disproportionately disliked African American peers ($\beta = .22, p < .01$); this tendency increased with more European Americans in the classroom ($\gamma = .010, p < .05$).

Summary—African American and European American children displayed same-ethnicity segregation in their friendships and peer groups, and both disproportionately disliked cross-ethnicity peers. However, classroom ethnic context differentially predicted children's segregation levels. African Americans had more segregated friendships and peer groups with fewer same-ethnicity peers in the classroom (i.e., in mostly European American classrooms). Conversely, European American children disliked more of their African American peers in classrooms that were mostly European American (see also Rodkin et al., 2007). In addition, perceived relational aggression positively predicted African American children's segregation, but perceived prosocial behavior positively predicted European American children's segregation.

Multilevel Models of Social Status Perceived by Same- and Cross-Ethnicity Peers

Same- and cross-ethnicity social preference and perceived popularity were dependent variables in two-level multilevel models (children within classrooms) performed separately for African American and European American children. As indicated in Table 3, African Americans evidenced significant classroom-level variance in same-ethnicity ($\tau = .027$) and cross-ethnicity ($\tau = .009$) social preference, but not in same-ethnicity ($\tau = .016$) or cross-ethnicity ($\tau = .017$) perceived popularity; European Americans evidenced significant classroom-level variance in same-ethnicity ($\tau = .004$) and cross-ethnicity ($\tau = .012$) social preference, as well as in cross-ethnicity perceived popularity ($\tau = .006$), but not in same-ethnicity perceived popularity ($\tau = .004$). Individual level predictors were entered simultaneously and were: (a) gender; (b) the social behavior variables of perceived prosocial, relational aggression, and overt aggression; and (c) the ethnic segregation variables of friendship, group affiliation, and cross-ethnicity dislike. The sole classroom-level variable was percent same-ethnicity. In preliminary models, friendship segregation and percent same-ethnicity showed no significant effects after controlling for other predictors and were dropped. In other preliminary models, relational and overt aggression were aggregated into one four-item aggression construct to reduce variable colinearity (cf., Table 2). There was no instance where any significant association between the social status and social segregation variables of primary interest was altered by entering a global aggression construct rather than relational and overt aggression separately.

Table 5 presents the final multilevel models; for each model, the null model intercept represents the mean classroom value of the dependent variable. Prosocial behavior was positively associated with social preference and perceived popularity for African American and European American children (all $ps < .01$). Relational and/or overt aggression were significant predictors in five out of the eight Table 5 models, but there was not a clear pattern of effects. Primary findings regarding social status and social segregation patterns are discussed below.

Same-ethnicity social preference and perceived popularity—Regarding social preference, African Americans were better liked by their same-ethnicity peers when they had more segregated peer groups ($\beta = .100, p < .01$) and disproportionately disliked European Americans ($\beta = .032, p < .05$). European Americans were better liked by their same-ethnicity peers when they had segregated peer groups ($\beta = .031, p < .05$), but not when they disproportionately disliked African American peers. Regarding perceived popularity, African American children were viewed as more popular by their same-ethnicity peers when they had more segregated peer groups ($\beta = .138, p < .01$) and disproportionately disliked European Americans ($\beta = .052, p < .01$). European American children's same-ethnicity perceived popularity was unrelated to segregation levels.

Cross-ethnicity social preference and perceived popularity—African American children's peer group segregation and cross-ethnicity dislike were unrelated to their social preference among European Americans. In contrast, European American children were less preferred by their African American classmates when they had more segregated peer groups ($\beta = -.061, p < .01$) and disproportionately disliked African Americans ($\beta = -.045, p < .05$). Regarding perceived popularity, African American children with more segregated peer groups were viewed by European Americans to be *more* popular ($\beta = .055, p < .05$), but there was no association with cross-ethnicity dislike. In contrast, European American children with more segregated peer groups ($\beta = -.088, p < .01$) and who disproportionately disliked African Americans ($\beta = -.045, p < .05$) were viewed as less popular by their African American classmates.

Summary—Children of both ethnic groups were more preferred by same-ethnicity peers when they had more segregated peer groups. However, only African American children with more segregated peer groups were perceived by same-ethnicity peers to be more popular. African American children, but not European American children, were perceived as more popular and preferred by same-ethnicity peers when they disproportionately disliked cross-ethnicity peers. European American children with more segregated peer groups were viewed as less popular and preferred by their African American peers; however, African American children with more segregated peer groups were perceived as more popular by European American children. European American children who disproportionately disliked African American children were viewed as less popular and preferred by their African American peers.

Discussion

The research questions of this study asked whether or not the peer social ecologies of diverse elementary classrooms support the presence of positive, integrated relationships between African American and European American children. We examined two facets of the peer ecology: a) how the *ethnic composition of the classroom* moderates intergroup relationships; and b) *social status structures*—whether children with more segregated relationships are perceived to have higher social status by same- and cross-ethnicity peers. Compelling evidence emerged for each set of questions, discussed in turn.

Classroom Ethnic Composition and Social Integration

Overall, African American and European American children participated in moderately segregated peer groups and friendships, and showed a modest but significant tendency to dislike cross-ethnicity peers more than same-ethnicity peers. However, to consider only the average classroom would miss differential effects by ethnicity (Hamm et al., 2005). Controlling for classroom opportunities for same- and cross-ethnicity contact, when African American children had fewer same-ethnicity classmates, they had disproportionately more segregated friendships and peer groups, and were more disliked by their European American peers. In contrast, the segregation patterns of European American children were similar across classroom contexts, and European Americans with numerical minority status were not more disliked by African Americans. Phrased differently, these findings present a variation to the “hunkering down” perspective (Putnam, 2007): Children of both ethnic groups generally had more bonding than bridging social capital (i.e., more ties to the ingroup than to the outgroup), but only African Americans “hunkered down” with their in-group in the face of cross-ethnic majorities.

The present findings are consistent with prior research on children’s intergroup relations. Jackson et al. (2006) and Bellmore et al. (2007) also found that African American children but not European American children were less liked when their classrooms had fewer same-ethnicity peers. However, in contrast to Bellmore et al. (2007), who found that African American children showed a general bias to nominate other African Americans for negative as well as positive nominations, the African American children in our sample disproportionately disliked *cross-ethnicity* peers. This latter discrepancy may reflect a key methodological difference: Bellmore et al. (2007) examined raw proportions of peer nominations given to same- and cross-ethnicity peers, but the present study used compositionally invariant odds ratios that directly control for opportunities for contact with same- and cross-ethnicity peers.

In majority European American classrooms, African American children’s ethnic segregation may act reciprocally with European American children’s dislike of their African American peers. European American children over-attribute negative behavior to African Americans, particularly in majority European American schools (McGlothlin & Killen, 2006). African American children are sensitive to prejudice and may come to expect discrimination in cross-ethnic social encounters (Rodkin, 1993; Rowley, Burchinal, Roberts, & Zeisel, 2008). Thus, African American children’s heightened segregation in majority European American contexts may be a protective mechanism, a kind of reaction to stereotype threat (e.g., Cohen, Garcia, Apfel, & Master, 2006). Unfortunately, by reducing opportunities for authentic intergroup contact, these ethnic segregation patterns may reinforce the prejudices of European Americans (Pettigrew & Tropp, 2006).

Social Integration and Social Status

The findings of this study complement research suggesting that children who demonstrate greater preference for same-ethnicity peers are in turn more preferred by same-ethnicity peers (Bellmore et al., 2007; Castelli et al., 2007). This view is consistent with Social Identity Theory (Tajfel & Turner, 1985), which proposes that identification with one’s group is associated with in-group pride that satisfies a need for positive self-esteem. The present study had two main findings regarding the positive association between ethnic segregation and social status. First, the effect was much stronger for African American than for European American children. Second, distinctions between perceived popularity and social preference have important implications for understanding how peers reinforce segregation norms.

Consistent with previous findings (Bellmore et al., 2007), European American and African American children with disproportionately more same-ethnicity relationships were more preferred by same-ethnicity peers. In addition, African American children exhibiting higher levels of cross-ethnicity dislike were more preferred by same-ethnicity peers. This finding is noteworthy because it was absent among European American children, and because research has generally shown little relationship between in-group favoritism and negative sentiments toward out-groups (Aboud, 2003). African American children's preference for same-ethnicity peers who disliked cross-ethnicity classmates may reflect an oppositional response that promotes group identity and differentiation (Fordham & Ogbu, 1986). To the extent that African American children feel marginalized by the dominant European American group (see Jackson et al., 2006), or, as in a study of Black and White seven-year-olds in the United Kingdom, are less assertive in intergroup dialogue (Leman & Lam, 2008), one might expect European American children who interact mainly with other European Americans to command the top of the classroom social hierarchy, and thus be perceived as popular by same- and cross-ethnic peers. However, this pattern of findings was not present in this study. Instead, African American children were perceived to be more popular when they had higher levels of segregation and cross-ethnicity dislike. Perceived popularity is a marker of group values and norms (Hartup & Abecassis, 2002), so African American children who have high levels of perceived popularity and segregated social relationships may symbolize group solidarity and ethnic pride.

Surprisingly, African American children with more segregated relationships were even perceived to be popular—though not liked—by their European American classmates. One possible explanation for this finding is that children have different perceptions of societal majority and minority group members who display same-ethnicity preferences. That is, children of both ethnicities might view African American children's segregation to be a normative, adaptive response to being a societal minority. For European American children, however, social exclusivity might more likely be seen as a reflection of personal prejudice. A second possibility is that, at least in the schools targeted in this study, African Americans are generally seen as possessing social savoir-faire, or as being “cool,” for reasons that go beyond classroom ethnic composition and prosocial and aggressive behavior. Interestingly, the connection between being cool and African American culture has been explored in literary work (Majors & Bilson, 1992; Pountain & Robins, 2000) and developmental research (Graham & Juvonen, 2002; Hoff, Reese-Weber, Schneider, & Stagg, 2009; Rodkin, Farmer, Pearl, & Van Acker, 2006). Perhaps these positive perceptions of African American children can be transformed into a building block towards more harmonious classroom peer ecologies. An intriguing direction for future work will be to examine if one form of positive intergroup perceptions (e.g., popularity) can generalize to another (e.g., likeability) with the establishment of actual, integrated social relationships.

There is a large developmental literature on relations between social status and social behavior (e.g., Mayeux et al., in press). This topic was not the focus of the present study, but there were some noteworthy findings regarding status-behavior linkages. Most important, prosocial behavior was consistently associated with social status. Prosocial children were preferred and perceived as popular by African American and European American children alike, for same- and cross-ethnicity nominations. This is a good sign for children's behavioral norms. A second finding is that African American children who tended to segregate were relationally but not overtly aggressive. This may speak to the savoir-faire of popular African American children who interact mainly with other African American children. There were a number of significant effects between relational and overt aggression regarding social preference and perceived popularity, effects that often differed by ethnicity (see also Hoff et al., 2009; Meisinger et al., 2007). The substantive significance of these effects lies beyond the scope of this paper, and should be interpreted cautiously given high

correlations between relational and overt aggression measures. The large correlation between relational and overt subtypes may explain why boys were perceived as more relationally aggressive than girls, whereas most studies do not show gender difference (Card, Stucky, Sawalani, & Little, 2008). It is clear that the complex relationships between aggression, social status, and ethnicity are a rich source for future study.

Limitations and Future Directions

This investigation was limited by not having other important individual and contextual data that may explain ethnic differences in social segregation at school, such as patterns of residential segregation (Mouw & Entwisle, 2006) and individual-level SES. The findings of this study may not generalize beyond this geographic region, where European Americans and African Americans together comprise the vast majority of the population. Having more than two ethnic groups in a classroom changes the dynamic from a school population that is mostly African American and European American to a truly multiethnic context (see Bellmore et al., 2007; Brown, Herman, Hamm, & Heck, 2008; Moody, 2001; Wilson & Rodkin, in press).

A strength of this investigation, namely that children were not asked explicitly about race and ethnicity, is also a weakness that prevents this study from answering questions about the role of perceived discrimination or ethnic identity. The development of a mature ethnic identity is associated with greater openness to people from other backgrounds (Phinney, Jacoby, & Silva, 2007), and can minimize negative outcomes that accompany discrimination, such as declines in academic self-concept and school achievement (Cohen et al., 2006; Pahl & Way, 2006). Insofar as segregation may help ethnic minority children to forge a positive ethnic identity, having information on perceptions of discrimination and ethnic identity will better illuminate children's intergroup behavior in different contexts. Along similar lines, conjoining the sociometric methodology featured in this study with the type of social cognitive interviews and experimental manipulations offered by Killen, Sinno, and Margie (2007) would go a considerable distance towards synchronizing processes responsible for intergroup reasoning with those responsible for real-world intergroup preference.

The findings of this study raise important developmental questions about changes in children's same-ethnicity preferences over middle childhood and early adolescence, and about operative causal pathways between social integration patterns and social status. A longitudinal study may have been more likely than the present cross-sectional analysis to find evidence of "hunkering down" (Putnam, 2007). For example, Cillessen and Borch (2008) presented results on the proportion of ethnically segregated cliques (where cliques were identified using block modeling procedures) among a diverse sample of children from the Northeastern U.S. followed annually from grades four to 12. Cillessen and Borch (2008, p. 74) reported findings consistent with hunkering down, namely that "the proportion of ethnically diverse groups was much higher in the early grades than in the later ones even though the school system had become more diverse over the same time period" (see also Moody, 2001). By no means did the present investigation exhaustively test the "hunkering down" hypothesis; there is much work to be done examining developmental changes in children's social integration patterns.

It is imperative to uncover the realities of social integration between African American and European American children in the school settings of today. Under pressure from residential segregation patterns (Graham, 2007; Killen et al., 2007), dwindling public attention (U.S. Commission on Civil Rights, 2006), and the U.S. Supreme Court decisions of *Seattle* and *Louisville* (*Parents Involved in Community Schools v. Seattle School District, No. 1*, 2007), today's integrated elementary school is growing scarce. Is this cause for concern? Does the

presence of integrated elementary schools impact children's social development? According to the results of this study, and to Putnam (2007, p. 164), the answer is "Yes": Schools were once "among the most efficacious instruments for... enabling us all to become comfortable with diversity," and so could be again. A critical challenge is to build on the positive ties that already exist between African American and European American children, and from there to cultivate integrated collaborations that enhance the development of all children, majority and minority alike.

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References

- About FE. The formation of in-group favoritism and out-group prejudice in young children: Are they distinct attitudes? *Developmental Psychology*. 2003; 39:48–60. [PubMed: 12518808]
- Adler, PA.; Adler, P. *Preadolescent culture and identity*. New Brunswick, NJ: Rutgers University Press; 1998. Peer power.
- Allport, GA. *The nature of prejudice*. Garden City, NJ: Addison-Wesley; 1954.
- Bellmore AD, Nishina A, Witkow MR, Graham S, Juvonen J. The influence of classroom ethnic composition on same- and other-ethnicity peer nominations in middle school. *Social Development*. 2007; 16:720–740.
- Brown BB, Herman M, Hamm JV, Heck DJ. Ethnicity and image: Correlates of crowd affiliation among ethnic minority youth. *Child Development*. 2008; 79:529–546. [PubMed: 18489411]
- Cairns, RB.; Cairns, BD. *Lifelines and risks: Pathways of youth in our time*. Cambridge, UK: Cambridge University Press; 1994.
- Card NA. Antipathetic relationships in child and adolescent development: A meta-analytic review and recommendations for an emerging area of study. *Developmental Psychology*. 2010; 46:516–529. [PubMed: 20210510]
- Card NA, Stucky BD, Sawalani GM, Little TD. Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development*. 2008; 79:1185–1229. [PubMed: 18826521]
- Castelli L, De Amicis L, Sherman SJ. The loyal member effect: On the preference for ingroup members who engage in exclusive relations with the ingroup. *Developmental Psychology*. 2007; 43:1347–1359. [PubMed: 18020816]
- Cillessen, AHN.; Borch, C. Analyzing social networks in adolescence. In: Card, N.; Selig, J.; Little, TD., editors. *Modeling dyadic and interdependent data in the developmental and behavioral sciences*. New York: Routledge; 2008. p. 61–86.
- Cillessen, AHN.; Mayeux, L. Variations in the association between aggression and social status: Theoretical and empirical perspectives. In: Hawley, P.; Little, TD.; Rodkin, PC., editors. *Aggression and adaptation: The bright side to bad behavior*. Mahwah, NJ: Erlbaum; 2007. p. 135–156.
- Cillessen AH, Rose AJ. Understanding popularity in the peer system. *Current Directions in Psychological Science*. 2005; 14:102–105.
- Cillessen, AHN.; Schwartz, D.; Mayeux, L., editors. *A view from the top: Popularity in the peer system*. New York: Guilford; (in press)
- Cohen GL, Garcia J, Apfel N, Master A. Reducing the racial achievement gap: A social psychological intervention. *Science*. 2006; 313:1307–1310. [PubMed: 16946074]
- Criswell JH. Racial cleavage in negro-white groups. *Sociometry*. 1937; 1:81–89.

- Fordham S, Ogbu JU. Black students' school success: Coping with the "burden of 'acting White." *The Urban Review*. 1986; 18(3):176–206.
- Gest SD, Farmer TW, Cairns BD, Xie H. Identifying children's peer social networks in school classrooms: Links between peer reports and observed interactions. *Social Development*. 2003; 12:513–529.
- Gorard S, Taylor C. What is segregation?: A comparison of measures in terms of 'strong' and 'weak' compositional invariance. *Sociology*. 2002; 36:875–895.
- Graham, S. Peer relations, social problems, and social policy. Invited Panel Presentation at the Peer Relationship Preconference at the Society for Research in Child Development; Boston MA. 2007 March.
- Graham S, Juvonen J. Ethnicity, peer harassment, and adjustment in middle school: An exploratory study. *Journal of Early Adolescence*. 2002:173–199.
- Hamm JV, Brown BB, Heck DJ. Bridging the ethnic divide: Student and school characteristics in African American, Asian-descent, Latino, and White adolescents' cross-ethnic friend nominations. *Journal of Research on Adolescence*. 2005; 15:21–46.
- Hartup, WW.; Abecassis, M. Friends and enemies. In: Smith, PK.; Hart, CH., editors. *Blackwell handbook of social development*. Oxford, UK: Blackwell; 2002. p. 285-306.
- Heider, F. *The psychology of interpersonal relations*. New York: Wiley; 1958.
- Hodges, EVE.; Card, N., editors. *Enemies and the darker side of peer relationships*. San Francisco: Jossey-Bass; 2003.
- Hoff KE, Reese-Weber M, Schneider WJ, Stagg JW. The association between high status positions and aggressive behavior in early adolescence. *Journal of School Psychology*. 2009; 47:395–426. [PubMed: 19808122]
- Jackson MF, Barth JM, Powell N, Lochman JE. Classroom contextual effects of race on children's peer nominations. *Child Development*. 2006; 77:1325–1337. [PubMed: 16999801]
- Juvonen J, Nishina A, Graham S. Ethnic diversity and perceptions of safety in urban middle schools. *Psychological Science*. 2006; 17:393–400. [PubMed: 16683926]
- Kawabata Y, Crick NR. The role of cross-racial/ethnic friendships in social adjustment. *Developmental Psychology*. 2008; 44:1177–1183. [PubMed: 18605843]
- Killen, M.; Sinno, S.; Margie, NG. Children's experiences and judgments about group exclusion and inclusion. In: Kail, R., editor. *Advances in child psychology*. Vol. 35. New York: Elsevier; 2007. p. 173-218.
- LaFontana K, Cillessen AHN. Children's perceptions of popular and unpopular peers: A multimethod assessment. *Developmental Psychology*. 2002; 38:635–647. [PubMed: 12220043]
- Lease AM, Blake JJ. A comparison of majority-race children with and without a minority-race friend. *Social Development*. 2005; 14:20–41.
- Leman PJ, Lam VL. The influence of race and gender on children's conversations and playmate choices. *Child Development*. 2008; 79:1329–1343. [PubMed: 18826528]
- Majors, R.; Bilson, JM. *Cool pose: The dilemmas of African American manhood in America*. New York: Lexington Books; 1992.
- Mayeux, L.; Houser, JJ.; Dyches, KD. Likeability and popularity: Distinct constructs with different correlates. In: Cillessen, AHN.; Schwartz, D.; Mayeux, L., editors. *A view from the top: Popularity in the peer system*. New York: Guilford; (in press)
- McGlothlin H, Killen M. Intergroup attitudes of European American children attending ethnically homogeneous schools. *Child Development*. 2006; 77:1375–1386. [PubMed: 16999805]
- Meisinger EB, Blake JJ, Lease AM, Palardy GJ, Olejnik SF. Variant and invariant predictors of perceived popularity across majority-Black and majority-White classrooms. *Journal of School Psychology*. 2007; 45:21–44.
- Moody J. Race, school integration, and friendship segregation in America. *American Journal of Sociology*. 2001; 107:679–716.
- Mouw T, Entwisle B. Residential segregation and interracial friendships in schools. *American Journal of Sociology*. 2006; 112:394–441.

- National Center for Education Statistics, U.S. Department of Education. Characteristics of the 100 largest public elementary and secondary school districts in the United States: 2004–05. Publication No. NCES 2008335. 2008 April. Retrieved from http://nces.ed.gov/pubs2008/100_largest/how.asp
- Orfield, G. Schools more separate: Consequences of a decade of resegregation. Cambridge, MA: Harvard University Civil Rights Project; 2001.
- Pahl K, Way N. Longitudinal trajectories of ethnic identity among urban Black and Latino adolescents. *Child Development*. 2006; 77:1403–1415. [PubMed: 16999807]
- Parents Involved in Community Schools v. Seattle School District, No. 1, 551 U.S. (2007).
- Parkhurst JT, Hopmeyer A. Sociometric popularity and peer perceived popularity: Two distinct dimensions of peer status. *Journal of Early Adolescence*. 1998; 18:125–144.
- Pettigrew TF. Justice deferred: A half century after Brown v. Board of Education. *American Psychologist*. 2004; 59:521–529. [PubMed: 15367087]
- Pettigrew TF, Troop LR. A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*. 2006; 90:751–783. [PubMed: 16737372]
- Pountain, D.; Robins, D. Cool rules: Anatomy of an attitude. London: Reaktion; 2000.
- Pfeifer JH, Brown CS, Juvonen J. Teaching tolerance in schools: Lessons learned since Brown v. Board of Education about the development and reduction of children's prejudice. SRCD Social Policy Report. 2007; 11(2):3–13.
- Phinney JS, Jacoby B, Silva C. Positive intergroup attitudes: The role of ethnic identity. *International Journal of Behavioral Development*. 2007; 31:478–490.
- Putnam RD. E pluribus unum: Diversity and community in the twenty-first century: The 2006 Johan Skytte Prize lecture. *Scandinavian Political Studies*. 2007; 30:137–174.
- Rodkin PC. The psychological reality of social constructions. *Ethnic and Racial Studies*. 1993; 16:633–656.
- Rodkin PC, Ahn HJ. Social networks derived from affiliations and friendships, multi-informant and self-reports: Stability, concordance, placement of aggressive and unpopular children, and centrality. *Social Development*. 2009; 18:556–576.
- Rodkin PC, Farmer TW, Pearl R, Van Acker R. Heterogeneity of popular boys: Antisocial and prosocial configurations. *Developmental Psychology*. 2000; 36:14–24. [PubMed: 10645741]
- Rodkin PC, Farmer TW, Pearl R, Van Acker R. They're cool: Social status and peer group supports for aggressive boys and girls. *Social Development*. 2006; 15:175–204.
- Rodkin, PC.; Wilson, T. Aggression and adaptation: Psychological record, educational promise. In: Hawley, PH.; Little, TD.; Rodkin, PC., editors. *Aggression and adaptation: The bright side to bad behavior*. Mahwah, NJ: Erlbaum; 2007. p. 235–267.
- Rodkin, PC.; Wilson, T.; Ahn, H-J. Social integration between African American and European American children in majority Black, majority White, and multicultural elementary classrooms. In: Rodkin, PC.; Hanish, LD., editors. *Social network analysis and children's peer relationships*. San Francisco: Jossey-Bass; 2007. p. 25–42.
- Rowley SJ, Burchinal MR, Roberts JE, Zeisel SA. Racial identity, social context, and race-related social cognition in African Americans during middle childhood. *Developmental Psychology*. 2008; 44:1537–1546. [PubMed: 18999320]
- Schofield JW, Hausmann LR. School desegregation and social science research. *American Psychologist*. 2004; 59:538–546. [PubMed: 15367089]
- Singer JD. Using SAS PROC MIXED to fit multilevel models, hierarchical models, and linear growth models. *Journal of Educational and Behavioral Statistics*. 1998; 24:323–355.
- Snijders, T.; Bosker, R. Multilevel analysis: An introduction to basic and advanced multilevel modeling. London: Sage; 1999.
- Tajfel, H.; Turner, JC. The social identity theory of intergroup behavior. In: Worchel, S.; Austin, WG., editors. *Psychology of intergroup relations*. 2. Chicago: Nelson-Hall; 1985. p. 7–24.
- U.S. Census Bureau. 2006–2008 American community survey 3-year estimates. 2010. Retrieved from http://factfinder.census.gov/home/saff/main.html?_lang=en
- U.S. Commission on Civil Rights. The benefits of racial and ethnic diversity in elementary and secondary education. 2006 October. Retrieved from <http://www.usccr.gov>

- Willet JB, Singer JD, Martin NC. The design and analysis of longitudinal studies of development and psychopathology in context: Statistical models and methodological recommendations. *Development and Psychopathology*. 1998; 10:395–426. [PubMed: 9635230]
- Wilson, T.; Rodkin, PC. Peer relations of Latina/o children in Midwest U.S. elementary schools. In: Cabera, N.; Villarruel, F.; Fitzgerald, H., editors. *Latino/a child psychology and mental health*. New York: Praeger; (in press)

Table 1
Means and Standard Deviations for Individual-Level Variables by Ethnicity and Gender

	African American			European American		
	Boys	Girls	Overall	Boys	Girls	Overall
Ethnic segregation						
Friendship	.40 (.69)	.37 (.58)	.38 (.63)	.21 (.58)	.30 (.58)	.26 (.57)
Peer group	.51 (.82)	.35 (.70)	.42 (.76)	.25 (.69)	.32 (.77)	.29 (.73)
Cross-ethnicity dislike	.25 (.78)	.11 (.71)	.17 (.74)	.15 (.73)	.35 (.76)	.26 (.75)
Social behavior						
Relational aggression	.64 (1.1)	.28 (.91)	.45 (1.0)	-.23 (.85)	-.59 (.70)	-.42 (.79)
Overt aggression	.75 (1.1)	.04 (.90)	.37 (1.0)	-.10 (.94)	-.57 (.62)	-.34 (.83)
Prosocial	-.62 (.70)	-.01 (.98)	-.29 (.91)	-.14 (.98)	.64 (.87)	.27 (1.0)
Same-ethnicity social status						
Social preference	.03 (1.1)	.21 (1.0)	.13 (1.1)	-.18 (.97)	-.06 (.90)	-.12 (.93)
Perceived popularity	.18 (1.0)	.35 (1.0)	.26 (1.0)	-.29 (.96)	-.21 (.89)	-.25 (.92)
Cross-ethnicity social status						
Social preference	-.09 (.92)	-.02 (.87)	-.05 (.89)	.09 (.97)	.01 (1.2)	.05 (1.1)
Perceived popularity	.32 (.89)	.34 (.98)	.33 (.94)	-.29 (.82)	-.33 (1.1)	-.31 (.96)

Note. Ethnic segregation scores are *log a* values. For ethnic segregation in friendship and peer group affiliations, positive values represent disproportionate same-ethnicity favoritism. For dislike, positive values represent disproportionate cross-ethnicity dislike. All other variables were standardized over the sample of 486 students.

Table 2

Zero-Order Correlations Among Individual-Level Variables

	1	2	3	4	5	6	7	8	9	10
Ethnic segregation										
1. Friendship	--	.43**	.31**	-.17**	-.21**	.22**	.17**	.02	-.23**	-.21**
2. Peer group	.56**	--	.37**	-.18**	-.10	.11	.20**	-.03	-.25**	-.30**
3. Cross-ethnicity dislike	.27**	.28**	--	-.21**	-.16*	.13*	.10	-.07	-.28**	-.22**
Social behavior										
4. Relational aggression	.27**	.29**	.24**	--	.85**	-.63**	-.45**	-.09	-.05	.04
5. Overt aggression	.23**	.23**	.13*	.87**	--	-.66**	-.41**	-.13*	-.05	-.05
6. Prosocial	-.23**	-.27**	-.07	-.49**	-.58**	--	.55**	.38**	.12	.20**
Same-ethnicity social status										
7. Social preference	.27**	.30**	.21**	-.02	-.08	.28**	--	.53**	.24**	.18**
8. Perceived popularity	.28**	.32**	.25**	.20**	.07	.21**	.70**	--	.34**	.47**
Cross-ethnicity social status										
9. Social preference	-.32**	-.30**	-.12	-.41**	-.38**	.53**	.16*	.16*	--	.58**
10. Perceived popularity	-.01	.01	.09	.05	.01	.28**	.38**	.48**	.46**	--

Note. Correlations below the diagonal represent African Americans ($n = 235$); those above the diagonal represent European Americans ($n = 251$).

*
 $p < .05$.

**
 $p < .01$.

Table 3
Between-Classroom and Residual Variance Components and Intraclass Correlations for Outcome Variables

Outcome variable	African Americans			European Americans		
	Between- classroom variance	Residual variance	Intraclass correlation	Between- classroom variance	Residual variance	Intraclass correlation
Ethnic segregation						
Friendship	.1215**	.2873**	.297	.0302	.3029**	.091
Peer group	.2472**	.3524**	.412	.0784*	.4465**	.149
Cross-ethnic disliking	.0323	.5133**	.059	.1043**	.4187**	.199
Same-ethnicity social status						
Social preference	.0269*	.0540**	.332	.0043*	.0339**	.113
Perceived popularity	.0159	.0790**	.168	.0035	.0554**	.059
Cross-ethnicity social status						
Social preference	.0086*	.0320**	.212	.0122**	.0430**	.221
Perceived popularity	.0174	.0466**	.271	.0062*	.0466**	.117

Note. Variance components and intraclass correlations are based on 34 classrooms.

* $p < .05$.

** $p < .01$.

Table 4
Individual- and Classroom-Level Effects on Ethnic Segregation in Friendships, Peer Groups, and Dislike

Predictor Variables	Ethnic Segregation Index									
	Friendship			Peer Group			Cross-ethnicity dislike			
	Effect	SE	t	Effect	SE	t	Effect	SE	t	t
African Americans										
Null intercept	.413	.0712	5.80**	.448	.0959	4.68**	.177	.0575	3.08**	
Prosocial	--	--	--	--	--	--	--	--	--	--
Relational aggression	1.27	.3139	4.05**	2.02	.3700	5.46**	1.08	.3870	2.79**	
Percent same-ethnicity	-.019	.0034	5.26**	-.023	.0053	4.43**	--	--	--	--
European Americans										
Null intercept	.271	.0476	5.70**	.273	.0666	4.10**	.224	.0717	3.13**	
Prosocial	1.66	.5222	3.19**	1.45	.6534	2.22*	--	--	--	--
Relational aggression	--	--	--	--	--	--	--	--	--	--
Percent same-ethnicity	--	--	--	--	--	--	.010	.0046	2.12*	

Note. Percent same-ethnicity was mean-centered and entered as a level-2 variable. The null intercept represents the overall average classroom value for the dependent variable. Level-1 effects are represented by β s, and level-2 effects are represented by γ s. For African-Americans, meta- R^2 values were .240 (Friendship), .265 (Peer group), and .228 (Cross-ethnicity dislike). For European Americans, meta- R^2 values were .189 (Friendship), .276 (Peer group), and .153 (Cross-ethnicity dislike).

* $p < .05$.

** $p < .01$.

Table 5
Same- and Cross-Ethnicity Nominations of Social Status by Social Behavior and Social Segregation Patterns

Predictor Variables	Same-Ethnicity						Cross-Ethnicity					
	Social Preference			Perceived Popularity			Social Preference			Perceived Popularity		
	β	SE	t	β	SE	t	β	SE	t	β	SE	t
African Americans												
Null intercept	.081	.0328	2.48*	.108	.0293	3.70**	-.093	.0204	4.56**	.043	.0274	1.56
Female	--	--	--	--	--	--	-.071	.0325	2.19*	--	--	--
Prosocial	1.85	.3026	6.12**	2.74	.2479	11.04**	1.74	.2087	8.34**	1.04	.2392	4.35**
Relational aggression	.665	.1377	4.83**	--	--	--	-.720	.1454	4.95**	-1.03	.1431	7.17**
Overt aggression	--	--	--	1.19	.2661	4.48**	.484	.1467	3.30**	1.12	.1614	6.92**
Peer group segregation	.100	.0274	3.65**	.138	.0209	6.60**	--	--	--	.055	.0275	1.99*
Cross-ethnicity dislike	.032	.0156	2.03*	.052	.0181	2.87**	--	--	--	--	--	--
European Americans												
Null intercept	-.003	.0167	0.20	-.051	.0190	2.75**	-.058	.0239	2.43*	-.114	.0199	5.73**
Female	-.073	.0209	3.49**	-.058	.0279	2.10*	--	--	--	--	--	--
Prosocial	1.74	.1590	0.97**	2.37	.3396	6.96**	1.07	.1919	5.59**	1.10	.1926	5.73**
Relational aggression	--	--	--	-.010	.0027	3.62**	--	--	--	--	--	--
Overt aggression	--	--	--	.977	.2701	3.62**	--	--	--	--	--	--
Peer group segregation	.031	.0141	2.20*	--	--	--	-.061	.0266	2.30**	-.088	.0257	3.43**
Cross-ethnicity dislike	--	--	--	--	--	--	-.045	.0200	2.25*	-.045	.0196	2.30*

Note. Dependent variables were differences of raw proportions of peer nominations of peer nomination scores. Female was coded as 0 = male, 1 = female. For African-Americans, meta- R^2 values were .914 (Same-Ethnicity Preference), .881 (Same-Ethnicity Popularity), .770 (Cross-Ethnicity Preference), and .810 (Cross-Ethnicity Popularity). For European Americans, meta- R^2 values were .775 (Same-Ethnicity Preference), .801 (Same-Ethnicity Popularity), .689 (Cross-Ethnicity Preference), and .731 (Cross-Ethnicity Popularity).

* $p < .05$.

** $p < .01$.