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Defining and documenting cross-SES friendships among kindergarten students

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Defining and Documenting Cross-SES Friendships Among Kindergarten Students

A thesis submitted in partial satisfaction for the requirements of Masters of Arts in Education

by

Katherine Mildred Griffin

2014
ABSTRACT OF THESIS

Defining and documenting cross-SES friendships among kindergarten students

by

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Masters of Arts in Education
University of California, Los Angeles, 2014
Professor Rashmita S. Mistry, Chair

For decades, social scientists have investigated how children make friends across social group divides (Graham, Taylor, & Ho, 2009; Howes, 2009). These studies have mostly defined “cross” friendships as those friendships that bridge gender, race, and ethnic differences. In the current study, I extend this paradigm and investigate friendships across socioeconomic lines. I document the methodological challenges posed by defining cross-socioeconomic status (SES) friendships while analyzing sociometric ratings nominations. Results indicate that overall children at this age do not form friendships based on their SES background. Implications and future directions for research are discussed.
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**Introduction**

Since the late 19th century, social scientists have been interested in learning how children choose their friends (for a review see Ladd, 2009). These early studies documented what today is known as homophily: children’s preference for friends who are similar to them across a number of social categories (Ladd, 2009). Given these trends, social scientists became interested in how some children broke with homophily and made friends across social group lines. Researchers examined intergroup friendships, first across gender lines and then, following racial integration in the 1960’s, across racial and ethnic groups (for reviews see Graham, Taylor, & Ho, 2009; Howes, 2009). The friendship literature has neglected, however, to fully examine if children report friendships across socioeconomic status (SES) lines, the central contribution of this paper to the wider friendship literature. Specifically, I document methodological considerations that are necessary in using the paradigm of cross friendships with SES while examining the prevalence and stability for cross-SES friendship nominations for kindergarten students in a university laboratory school.

This topic is particularly important given the increasing SES segregation in the US school system and the movement in some districts towards economic school integration—a system wherein students attend schools with children from diverse SES backgrounds (Kahlenberg, 2001; Schechter & Bye, 2007). Advocates of income-based integration cite studies suggesting a range of academic benefits that accrue for students from low-income backgrounds attending socioeconomically diverse schools, including increased math, reading, and science scores, better receptive and expressive language skills, and improved high school performance (Crosnoe, 2009; Kahlenberg, 2001, 2013; Reid, 2012; Schechter & Bye, 2007, 2007). Yet, only one study to date has looked at the psychosocial outcomes of children from low-income families attending
economically integrated schools and found evidence of higher levels of psychosocial problems, such as negative self-image and feelings of isolation (Crosnoe, 2009).

Therefore, it is timely to expand the literature on intergroup friendships as cross-friendships are known to be an important factor in creating a positive environment in diverse classroom settings (Graham, Munniksma, & Juvonen, 2014). By applying the paradigm of cross-friendships to SES, I hope to expand our methodological tool kit as developmental psychologists while shedding light on the social environment inside economically integrated classrooms. The aims of this study are therefore twofold: to explore the methodological considerations of using the concept of “cross” friendships with SES and furthermore to examine the presence of cross-SES amongst kindergarten students.

**Literature Review**

**Intergroup Friendships**

Although to date there is a dearth of information on children’s cross-SES friendships, there is a substantially larger literature on children’s friendship preferences across other social groups. Children’s intergroup friendships tend to be defined by two principles: homophily and propinquity. Homophily is the preference for friends that look and behave in a similar manner to oneself (McPherson, Smith-Lovin, & Cook, 2001; Rubin, Fredstrom, & Bowker, 2008). Children tend to exhibit homophily across gender and racial/ethnic lines as well as through participating in similar activities, holding similar attitudes and values, and having similar levels of self-esteem (Aboud & Mendelson, 1996). Propinquity, another driver of friendship formation, refers to the tendency to form friendships on the basis of physical proximity, though it is sometimes trumped by other more salient aspects of homophily (McPherson, et.al., 2001), such as same-gender friendships within a mixed gender classroom.
Homophily and propinquity are prominent characteristics of childhood friendships and thus it would be reasonable to expect that both are at work in the formation of cross-SES friendships. The two principals, however, lead to different hypotheses. Homophily suggests that, despite being in an economically mixed classroom, children from similar SES backgrounds would tend to stick together and thus not form many cross-SES friendships. Propinquity, on the other hand, suggests that due to their proximity and opportunities to interact with each other, children in mixed SES classrooms would in fact be likely to form cross-SES friendships. It is therefore difficult to base our hypotheses solely on these two principles of friendship. Instead, it is important to consider the literature that exists on cross-gender and cross-race and ethnic friendships as they can speak to how children form friendships with members of other social groups with whom they share a learning space.

Cross-gender friendships are rare in early and middle childhood (Graham & Cohen, 1997; Howes, 2009; Lee, Howes, & Chamberlain, 2007). As early as toddlerhood, children begin to show preference for same-sex playmates and this preference tends to strengthen with age (Howes, 1988). While children may form some cross-gender friendships in their toddler years, by preschool, children’s friendship choices are almost exclusively of the same gender despite children in the US typically being in mixed gender classrooms (see review Howes, 2009). In a recent school-wide study of first through six graders, only 7% of children’s friendship dyads were cross-gender as compared with 59% of friendships that were cross-racial or ethnic (Lee, et.al., 2007). This trend persists throughout elementary school, waning as children become adolescents (McPherson, et.al., 2001). The preference for same-gender friendship is stable across time (Martin & Fabes, 2001) and has been documented across cultures (Coplan & Arbeau, 2009).
The other major literature on intergroup friendships comes from the field of race and ethnic studies. Beginning in the 1960’s after the watershed decision in *Brown versus the Board of Education*, social scientists began to investigate how children formed cross-race and ethnic friendships inside newly integrated schools (Graham, et.al., 2009). Their conclusion after decades of research: cross-race and ethnic friendships are less common and less stable than same-race and ethnic friendships, and these friendships tend to decrease in prevalence with age (Graham, et.al., 2009; Rubin, et.al., 2008). Contrary evidence, however, comes from an earlier study by Howes & Wu (1990) who found that third graders had more cross-race and ethnic friendships as compared with kindergarteners in their sample. While cross-race and ethnic friendships are less common than same-race and ethnic friendships, they are more common than cross-gender friendships (Lee, et.al., 2007).

While less common as children age, there are noted benefits to cross-race and ethnic friendships, such as feelings of security and potential reductions of prejudice (Graham, et.al., 2009). Munniksma & Juvonen (2012) found that cross-race and ethnic adolescent friendships were associated with a stronger sense of safety at school. Graham, Munniksma, and Juvonen (2013) found that children who formed cross-race and ethnic friendships reported lower feelings of vulnerability, though this result was contingent on classroom level racial and ethnic diversity. The authors suggest that when given the opportunity to interact, students in their sample who formed cross-group friendships showed better adjustment in that they reported less loneliness (Graham, et.al, 2013). While we cannot be sure that this pattern holds true in economically integrated educational environments, this literature speaks to the importance of looking at cross-SES friendships.

**Cross-SES friendships.** Given the documented benefits of intergroup friendships in the
cross-race and ethnic literature, one can see the importance of understanding cross-SES friendships in economically integrated schools. While there are limited studies on children’s cross-SES friendships, there is a rich literature on how children think about SES and how SES may be made salient to young children. This literature is essential in guiding how the proposed study will define SES.

In my review of the literature, I have found one study that begins to document cross-SES friendship based on peer nominations. King and Easthope (1973) explored if secondary school students in the United Kingdom, typically the ages of children in middle and high school students in the United States, nominated best friends who were within or outside of their own social class, as determined by their father’s occupation. Their results indicated that for these students social class was not an important factor for friendship formation (King & Easthope, 1973). The authors interpret these results cautiously, however, noting the limitations of their measure of social class and the collection of only one best friend nomination (King & Easthope, 1973).

Over the last fifty years, a much more substantial body of research has examined children’s beliefs and attitudes about individuals from different socioeconomic backgrounds and when perceptual discriminability of SES differences develops (Lavatelli, 1949; Leahy, 1981; Mistry, et.al., 2012; Sigelman, 2012). Researchers suggest that children as young as five can sort people into the categories of “rich” and “poor” mostly by focusing on external characteristics, such as clothing (Ramsey, 1991). By second grade, children are able to accurately sort possessions (e.g., houses, clothing and shoes) into “rich” and “poor” categories (Mistry, 2000). As children get older, they focus less on extrinsic differences and more on perceived intrinsic differences between individuals from different SES backgrounds (Leahy, 1981; Sigelman, 2012).
In a study of 6-11 year olds, Leahy (1981) found that, “with increasing age there is an increasing tendency to view categories of rich and poor people as not only differing in their external, observable qualities but as also being different kinds of people,” (p. 529). Studies find that children’s attributions about the causes of wealth and poverty typically become increasingly intrinsic over time, with older children believing that wealth and poverty are the result of an individual’s actions or character (Baldus & Tribe, 1978; Leahy, 1981; Sigelman, 2012).

The above literature points to developmental considerations that must be made when defining the of SES concept for young children. When defining SES for the current study, it is vital to consider how SES could be made salient to children making the transition to school. The salience of an identity, that is its presence in a child’s experience of daily life, can be highlighted in a number of explicit and implicit ways for children (Bigler, Jones, & Loblinier, 1997; Bigler & Liben, 2007). Possessions and external markers of wealth as well as their absence, poverty, are most salient to young children (Leahy, 1981; Mistry, 2000; Ramsey, 1991). In light of this salience, possessions may play a vital role in how children in an economically mixed classroom experience SES differences. Through playdates, show and tell, and other sorts of peer interactions, children may begin to notice that others have more or less than they do and have different experiences. According to homophily, if children notice these differences they will form friendships with children who have common experiences to their own and thus make friendships with children of similar SES backgrounds.

The salience of possessions to young children is critical in deciding how to measure SES in the current study. As mentioned earlier, SES refers to a multipronged construct, most often measured in terms of parental education level, occupational prestige, and family annual income (Diemer, Mistry, et al., 2012). While all of these measures are used to ascertain a family’s level
of SES, family annual income seems to be an appropriate measure of SES for the current project given young children’s propensity to focus on possessions and their demonstrated tendency to most strongly define wealth and poverty on the basis of money (Ramsey, 1991; Mistry, 2000); in accordance with homophily, if children notice differences in possessions, which are a result of income, they would form friendships along SES lines in economically integrated schools. Additionally, family annual income is the most common means by which economically integrated schools consider SES, usually in the form of qualification for free and reduced price lunches (Kahlenberg, 2013). Finally, some research suggests that other markers of SES, such as occupational prestige, may not become salient to children until later on in development (O'Bryant, Durrett, & Pennebaker, 1978). One study found that children in the fifth and seventh grade were still developing an understanding of occupational prestige (O'Bryant, et.al., 1978). This is not to say that elementary school children do not have any understanding of this concept, as Bigler and colleagues (2003) found that students could sort jobs into high status and low status. This understanding of SES, while developing, may not yet be salient enough yet to effect friendship formation in young children. In light of all these factors, we use family annual income to measure the SES level of students in the current study and thus determine cross-SES friendships.

A final important consideration for this project is that income is a continuous variable. This makes it distinct from race, ethnicity, and gender, all of which are categorical and thus easier to identify in-groups and out-groups for intergroup friendships. Thus, a methodological challenge for the study was to adequately define what constitutes a cross-SES friendship for participants. This was examined in several ways, from the most stringent (i.e., only looking at the friendships of children from extreme ends of the income spectrum in our sample), to more liberal...
definitions (i.e., classifying children whose families’ income are in adjacent income brackets as having a cross-SES friendship.)

The Present Study

The present study is among the first to apply the paradigm of cross-friendships to the study of cross-SES friendships, thus a principle aim is to investigate the methodological considerations of identifying cross-SES friendships. Beyond this aim, I hope to document the extent and stability of cross-SES friendships in a kindergarten classroom. These topics are important given the lack of information on social interactions in classrooms between children from different SES backgrounds (Crosnoe, 2009).

Research Questions

- RQ1: What are some of the methodological considerations in applying the paradigm of intergroup friendships to the study of cross-SES friendships?
- RQ2: To what extent do kindergarteners from a wide range of SES backgrounds report cross-SES friendships?
  - RQ2a: How does the rate of cross-SES friendships compare to children’s rate of cross-gender friendships?
- RQ3: If cross-SES friendships are reported, how stable are they over the course of a single academic year (i.e., fall to spring)?

Methods

The Research Setting

The setting for this study is critical to the design, as the school has a purposeful commitment to having students from a wide range of socioeconomic backgrounds, which makes it ideal to begin to study friendship across SES lines. The data were collected at a university
laboratory school in Southern California. This elementary school is tuition-based, but scholarships are available on a sliding scale based on financial need. The school has an explicit commitment to diversity across many different domains including race, gender, ethnicity, language, SES, and family structure. The racial and ethnic makeup of the student body is 36% Caucasian, 20% Latino, 12% Latino-Caucasian, 9% Asian, 5% Asian-Caucasian, 7% African American, 3% African American-Caucasian, and 8% Other. In terms of economic diversity, the school has students whose annual household incomes range from $10,000 to over $1,000,000. The median income category of the school is $150,000-$199,999. This median income is high relative to the median income ($56,266) for the county as a whole (US Census Bureau, 2014), but it is more inline in the context of the surrounding neighborhoods of the school. The county where the school is located has the most expensive home prices in America (Bloomberg, 2014) and median incomes in the neighborhoods surrounding the school are some of the highest in the county, ranging from $74,830-$141,527 (Zipatlas.com, 2014).

**Procedures**

Data for the study come from a larger cohort-based longitudinal study, evaluating the benefits and challenges of attending a dual-language immersion program (English-Spanish) on children’s academic, linguistic, and social outcomes. Parents and children provided consent and assent in accordance with the guidelines set out with the IRB of the school and the University. For the larger study, students were assessed on a number of academic and social measures, including a sociometric interview (Howes, 1990), which provided the primary dependent variable. All interviews were conducted by trained research assistants and took place in a quiet research office away from other students and teachers.

**Participants**
Data used in the current study came from 64 students, 53% of whom were female, enrolled in all three kindergarten classrooms in the school. This represents the entire kindergarten level at the school. One classroom was dual-language (Spanish and English) in which some subjects (e.g. language arts) and part of each day is taught in Spanish and other subjects (e.g. mathematics) and the remaining part of the day is taught in English while the language of instruction in the other two rooms was entirely English.

Students ranged in age from 5.28 years old to 7.04 years with a mean age of 5.82 years, SD=.37, at the time of the first administration. The racial and ethnic makeup of the students in the is 31% Caucasian, 22% Latino, 11% Latino Caucasian, 9% Asian, 5% African American, 3% African American Caucasian, and 19% Other. The distribution of family annual income, based on parent report, is between $10,000-$14,999 and $1,000,000 or more with a mean of 3.53 (SD= 1.31) on a five tiered income scale (3= $100,000-$199,999; 4= $200,000- $349,999).

**Measures**

**Annual Income.** Parents’ family annual income data were collected at the time they applied to the school. For the present study, annual family income was aggregated into a five tiered scale, shown in Table 1.

**Sociometric Interview.** Students were interviewed individually during the fall and spring semesters using the *Sociometric Rating Interview* used by Howes (1990), which is a modified version of the sociometric interview developed by Asher, Singleton, Tinsley, & Hymel (1979). The sociometric interviews have been shown to be a valid assessment of childhood friendships, correlating with other measures of childhood friendship such as observed interaction (Hymel, 1983).
Before beginning the task, participants completed a practice task of naming and sorting vegetables and then identifying their favorites and least favorites to ensure their understanding of the activity. Participants were first asked to look at photos of students in their own and the other kindergarten classrooms at the school and to name the student in each photo. The classrooms were presented in a counter-balanced order. If participants did not know the name of a student in a particular classroom, the interviewer told them the child’s name. After naming all students, participants identified the three children in the classroom they like to play with the most and the three children they like to play with the least. Finally, participants were asked to sort all of the child photographs into four containers, indicating those children they Like to play with a lot, Like to play with a little, Like to play with a tiny bit or not at all, and Person I don’t know. Each participant repeated this activity for all three classrooms, eventually naming and rating all kindergartners. Interviews generally took 30 minutes.

For the current project, I used participants’ nominations of the three children in their classroom that they liked to play with the most. Both unidirectional and reciprocal friendship nominations were used for all analyses.

Results

RQ 1: Defining Cross-SES Friendships

To create the dependent variable, total cross-friendships, nominated friends were compared to the participant in terms of their family annual income and gender. While the definition of a cross-gender friendship is fairly straightforward (i.e., friendship pair consisting of a girl-boy pair), I considered multiple definitions of what could be considered to be a cross-SES friendship. Given that our measure of family annual income is divided into 5 tiers (1= $10,000-$49,999; 2= $49,999- $99,999; 3= $100,000- $199,999; 4= $ 200,000- $349,999; 5=...
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$350,000+), I looked at friendships between those at the extremes (e.g. a 1 and a 5), friendships with at least one tier in between them (e.g. a 3 and a 5 or a 1 and a 4), friendships outside of a child’s own tier (e.g. a 1 and a 2), and friendships between children in the highest income tier and all others (e.g. 5 and a 1, 2, 3, or 4).

This scale, and the resulting tiers of comparison, are a result of the demographics of the participants in this study with a consideration for potential perceived difference of these categories for young children as reviewed in the above literature review. For example, a child whose family makes less that $50,000 a year (tier 1) likely has access to different resources than a child whose family makes between $100,000 and $200,000 (level 3). This type of difference could also occur for children whose families are at the higher end of the spectrum. For example, a child whose family makes $100,000-$199,999 (tier 3), which is below the median income of some of the surrounding neighborhoods, may have an observable different life (in terms of the size, type, and quality of their home, participation in extracurricular activities, vacations, etc.) than a child whose family makes above $350,000 a year (tier 5), well above the median income for the area.

After creating the definitions, I explored the descriptive statistics of the data. The means and standard deviations of all outcome variables are presented in Tables 2 by definition of what constitutes a cross-SES friendship. It is important to note that these descriptive statistics do not account for the availability of cross-SES or cross-gender friendships, which varies by the child’s own demographics and availability of cross-SES and cross-gender friends in the classroom or in other classes. Additionally, all the cross-gender friendship statistics, except for those presented at the extreme definition, do not vary by the definitions in Tables 2, though they are presented multiple times for ease of comparisons. The cross-gender statistics presented at the extremes are
only based on the students whose annual family income was less than $50,000 or above $350,000 as those are the only students in the analysis for the extreme definition.

Next, I explored the distribution of nominations across the different definitions of cross-SES friendship. As shown in Table 3, these results indicate that when defined at any tier of difference, students overwhelming reported cross-SES friendships as compared to same-SES friendships. In this table, we see that the 1- tier difference definition is more evenly distributed than any tier difference and extremes. Additionally, the number of participants for the extreme comparisons drops to 24, which could be cause for concern in finding significant differences in later analyses.

To adjust for the unequal opportunity for cross-SES and cross-gender friendships, I converted the raw scores into proportions, dividing them by the number of total nominations. Next, I took the difference of the observed proportion and the expected proportion (the number of potential cross friendships divided by the number of other children in the room or in other rooms) to create a difference score. For example, if a child reported 2 cross-SES friendships out of 3 possible, her cross-friendship proportion would be $\frac{2}{3}$. From there, the availability of cross friendships in the classroom is calculated, in this example 15 out of the other 23 students are potentially cross-SES friends, and then subtracted from $\frac{2}{3}$ to find a difference score of -0.01. For this child then her reported proportion of cross-SES friendships is slightly less than the proportion available, as the difference score is negative and just under zero (the difference score if the two proportions matched perfectly.)

The mean difference scores reported in Table 4 therefore, reflect the extent to which on average participants’ proportion of cross-friendship nominations deviated from the expected value of cross or same friendships, accounting for the availability of cross friendships based on
the child’s own SES or gender, and the SES or gender diversity of the classroom. Higher values indicate greater difference from the available proportion of cross-friendships, with negative values reflecting under-reporting cross-friendships and positive values reflecting an over selection of cross-friendships. Without running any statistical tests, we can see that children’s difference scores for cross-gender friendships seem to be much lower than their rates for cross-SES friendships, suggesting that participants were reporting fewer cross-gender friendships than one would expect from the number available within the classroom.

This first exploration of the data suggests two things. First, looking just at the rates of reported cross-SES friendships by definition, as shown in Table 3, it seems as though not all definitions of cross-SES friendship might be appropriate. Particularly, any-tier difference seems to be overly generous, making the majority of nominations considered cross, while the extreme definition potentially will not have enough power for significant results. Secondly, while further statistical analyses are needed, the difference scores suggest that children in the sample nominate cross-SES friendships at rates fairly close to chance, while nominations of cross-gender friendships seem less common.

**RQ2: Assessing the Prevalence of Cross-SES Friendship Nominations Among Kindergarten Students**

To address my second research question I ran a series of single sample \( t \)-tests that compared the cross-SES friendship difference estimate discussed above to zero (i.e., the difference score if the observed proportion of cross-SES friendships were the same as chance). The results for both cross-SES and same-SES nominations are reported in Table 5. Only fall nominations defined at any level of difference differed from chance: students reported fewer cross-SES nominations than would be expected due to chance \( t (60) = -2.20, p < .05 \). Thus, the
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statistical analysis confirms that overall students’ rates of cross-SES nominations did not differ significantly from chance.

RQ 2a: Assessing the Prevalence of Cross-Gender Friendship Nominations Among Kindergarten Students

To address research question 2a, I ran a series of single sample t-tests comparing the difference estimates for cross-gender friendships to zero. The results of these analyses are also shown in Table 5. At all time points, children’s rates of cross-gender friendship nominations were significantly less than chance, $p < .001$. This suggests that, unlike SES, for children in the sample gender is a very salient characteristic upon which they nominate friends, a finding that fits with the literature on cross-gender friendships (Howes, 2009).

RQ3: Comparing the Stability of Cross and Same-SES Friendships Across the Academic Year

To address my third research question, I ran a series of paired-samples t-tests comparing the difference score of stable cross-SES friendship nominations to the difference score of stable same-SES friendship nominations. The results are presented in Table 6. From the results, it appears that when cross-SES is defined at any level difference, cross-SES nominations are significantly less stable than same-SES nominations, $p < .001$. When the definition is more stringent however, this is not the case. At 1-tier of difference same-SES nominations are less stable than cross-SES nominations, $p < .05$. The stability of cross and same-SES nominations does not appear to differ in the extreme definition. When looking at how students in tier five nominate or are nominated by children in other tiers, same-SES nominations are significantly less stable than cross-SES nominations, $p < .01$. 

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Discussion

Descriptively, the current study results speak to some of the important considerations in documenting cross-SES friendships among young children. Overall, the results suggest that with few exceptions, the proportion of children’s cross-SES friendship nominations did not differ significantly from chance. This implies that factors other than children’s SES background is influencing children’s friendship nominations. In contrast, children reported significantly fewer cross-gender friendships than would be expected by chance.

To return to the homophily-propinquity debate from the start of the paper, the results of this study suggest that different principles may be at work depending on which social identity is explored. For SES, children seem to behave more in line with propinquity, forming friendships at rates that mirror the availability of cross-SES friendships within the classroom. For gender however, children’s friendship nominations show evidence of homophily, as they clearly nominate peers of the same-gender much more often than would be expected by chance. Given the salience of gender in early childhood (Howes, 2009) these results are not surprising. Additional research is needed to determine if similar patterns emerge with older children or in conditions where SES is more salient.

In terms of how to define a cross-SES friendship, results from the current study suggest that there are a few key factors to consider, all of which are grounded in the importance of context. First, there is the age of the children in the sample. Older children may have a more nuanced understanding of SES and thus may be able to notice more subtle differences or different cues for the SES status of peers (Leahy, 1981, 1983). As researchers, this suggests that we should be aware of these developmental changes and examine children’s cross-SES
friendship patterns over time. Additionally, educators should be aware of children’s developing consciousness of SES differences, especially while formulating policy on SES integration.

Second, it is important to consider the larger social environment in which children live. The sample for this study had a wide range of annual family income and the school was surrounded by a number of very affluent communities (Zipatlas.com, 2014). Both were important guiding factors in my definitions of cross-SES friendship. In other school contexts there may be very different SES distributions and thus income scales and definitions of what counts as a cross friendship should be sensitive to these factors.

After reviewing the findings, the most meaningful overall definition of cross-SES friendships seemed to be specifying at least one tier of separation on a five-tiered income scale. This definition made the differences between students that would be considered cross-SES friends great enough that one could argue that these differences might be considered perceptible to five or six year old given the median income of the neighborhood, while still maintaining statistical power, which the extreme definition did not. This is not to say that the extreme definition and the comparison of the highest income students to everyone else were not of use. Both breakdowns of cross-friendship could provide insight into how these relationships work in different contexts. For example, the analyses for friendships at the extremes may more closely approximate the experiences of students in private schools where the majority of children come from high-SES backgrounds with a small number of children from low-SES backgrounds. Additionally, the analyses looking at the highest income tier compared to everyone else allows us to consider how the children living well above the median income of the surrounding community form friendships with peers from lower-SES backgrounds.
While the 1-tiered difference may have been most meaningful distinction for the current study participants, most of the definitions of cross-SES friendship showed similar trends in our analyses. With few exceptions, children’s proportion of cross-SES friendship nominations did not differ significantly from chance. This suggests that at this age and in this context children are not selecting their friendships based on the SES background of friends. This finding is in line with King & Easthope (1973) who found that social class did not significantly predict friendships for older children in secondary school. Additionally, the results of the cross-gender analysis suggest that gender is a much more salient feature for friendship formation for the current sample than SES.

In terms of the stability of cross-SES friendship nominations, the current data do not paint a clear picture. At the any tier difference level, same-SES nominations were significantly more stable than cross-SES nominations. At 1 tier of separation, cross-SES nominations significantly are more stable. This is also the case when comparing the students in the 5th tier to everyone else. Thus at the more stringent definition, it seems as though cross-SES friendships are more stable than same-SES friendships. Given the variability of results, it would be wise to investigate this phenomenon more before confidently stating a trend.

Limitations

Although the current study contributes to the literature by extending methodology and examining friendships in a novel way, there are certainly limitations to the work and questions left unanswered. The demographics of the sample limit the generalizability of the results to other populations. While the school’s explicit commitment to having a range of SES backgrounds in the classroom made it a good candidate for this type of work, educators and policy makers looking to apply these results to schools with a more segmented SES population should proceed
cautiously. Future research should investigate cross-SES friendships in other school settings (e.g. public and private schools).

A second important consideration of the current findings is the age of the participants. The literature suggests that while 5 and 6 year olds may be able to differentiate some aspects of SES, mainly rich and poor, they are just beginning to understand the concept and this understanding continues to develop long into middle childhood and even adolescence (Leahy, 1981, 1983; O’Bryant, Durrett, & Pennebaker, 1978; Sigelman, 2013). As this study is a part of a larger longitudinal project, I hope to continue this investigation as the children mature to see if developmental differences do exist in cross-SES friendship formation.

Finally, in the current project I was unable to explore the underlying mechanisms behind the formation of cross-SES friendships. For example, research suggests that vocabulary development varies by SES background (Hoff, 2003, 2013). Theoretically, these linguistic differences could be a marker of SES for children, prompting the formation of SES segregated friendship groups, in line with the theory of homophily. While I did not see such friendship formation in the current study, this may be due to the sample’s high general level of parent education (79% of all participants had at least one parent with a graduate degree.) Thus, some of the students from lower-income families may still have benefited from academic and linguistic advantages associated with having a parent with a high level of education (Davis-Kean, 2005; Hoff, 2003, 2013), which would account for the null relationship between SES and children’s friendship choices observed in the current study. Beyond linguistic development, other potential mechanisms including parental involvement in friendship choice (Hunter, Friend, Williams-Wheeler, & Fletcher, 2012) and differential participation of after school activities by SES group
Griffin could also be at work. Future research should examine such a hypotheses to more thoroughly understand children’s cross-SES interactions.

**Conclusion**

Overall, the current study adds to the literature both in terms of content and methodology by pushing the field of intergroup friendships to consider SES as an important social category for children’s friendship formation. Generally, the kindergarteners in the current study did not seem to make their friendship nominations based on the SES background of students in their classroom or grade. While I cannot be sure if this trend holds over time, it is an important time period to investigate, as we know that children are just beginning to understand SES differences at this age. Additionally, the study suggests that further research across a variety of school settings and an exploration of the mechanisms underlying children’s cross-SES friendship formation is needed. This study also extends the methodology of cross friendships to a new social category.

In a time of increasing SES disparity in the United States (Stiglitz, 2012), it is more important than ever to understand how SES may impact children’s development both academically and socially. Hopefully this project serves as a basis for future research into children’s cross-SES friendship patterns and a catalyst for discussion about the role that SES can play in the social lives of children.
References


Griffin


Table 1
*Family Yearly Income on a 5-tiered scale*

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10,000- $49,999</td>
<td>7</td>
<td>10.9</td>
</tr>
<tr>
<td>$50,000-$99,999</td>
<td>6</td>
<td>9.4</td>
</tr>
<tr>
<td>$100,000-$199,999</td>
<td>16</td>
<td>25.0</td>
</tr>
<tr>
<td>$200,000-$349,999</td>
<td>16</td>
<td>25.0</td>
</tr>
<tr>
<td>$350,000 or more</td>
<td>19</td>
<td>29.7</td>
</tr>
</tbody>
</table>

Table 2
*Raw (unconverted) Means (Standard Deviations) for Total Nominations*

<table>
<thead>
<tr>
<th>Definition of Cross</th>
<th>Time Point</th>
<th>Cross-Gender Nominations</th>
<th>Cross-SES Nomination</th>
<th>Same-SES Nominations</th>
<th>Stable Cross-SES</th>
<th>Stable Same-SES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any tier difference</td>
<td>Fall</td>
<td>.52 (.79)</td>
<td>2.16 (.82)</td>
<td>.84 (.82)</td>
<td>1.20 (.84)</td>
<td>.23 (.43)</td>
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<tr>
<td></td>
<td>Spring</td>
<td>.53 (.82)</td>
<td>2.42 (.68)</td>
<td>.53 (.66)</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>1 tier of separation</td>
<td>Fall</td>
<td>.52 (.79)</td>
<td>1.23 (.97)</td>
<td>1.77 (.97)</td>
<td>.73 (.80)</td>
<td>.70 (.63)</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>.53 (.82)</td>
<td>1.26 (.93)</td>
<td>1.70 (.97)</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Extremes (1 &amp; 5)</td>
<td>Fall</td>
<td>.65 (.85)</td>
<td>.41 (.65)</td>
<td>.83 (.76)</td>
<td>.09 (.40)</td>
<td>.14 (.35)</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>.46 (.86)</td>
<td>.35 (.67)</td>
<td>.80 (.77)</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Tier 5 with Any Other</td>
<td>Fall</td>
<td>.52 (.79)</td>
<td>1.20 (.95)</td>
<td>1.48 (1.07)</td>
<td>.66 (.72)</td>
<td>.76 (.59)</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>.53 (.82)</td>
<td>1.13 (.94)</td>
<td>1.33 (1.02)</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>
Table 3  
*Number of Cross and Same SES Friendship Nominations in the Fall*

<table>
<thead>
<tr>
<th>Definition of Cross</th>
<th>N</th>
<th>0 Nominations</th>
<th>1 Nominations</th>
<th>2 Nominations</th>
<th>3 Nominations</th>
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</thead>
<tbody>
<tr>
<td>Any tier difference</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same</td>
<td>61</td>
<td>24</td>
<td>25</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Cross</td>
<td>61</td>
<td>2</td>
<td>10</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>1 tier of separation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same</td>
<td>61</td>
<td>8</td>
<td>13</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Cross</td>
<td>61</td>
<td>15</td>
<td>25</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Extremes (1 &amp; 5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same</td>
<td>24</td>
<td>8</td>
<td>13</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Cross</td>
<td>24</td>
<td>15</td>
<td>25</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Tier 5 with Any Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same</td>
<td>61</td>
<td>6</td>
<td>18</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>Cross</td>
<td>61</td>
<td>14</td>
<td>23</td>
<td>18</td>
<td>6</td>
</tr>
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</table>

Table 4  
*Means (Standard Deviations) of Differences from Expected Proportion of Friendships*

<table>
<thead>
<tr>
<th>Definition of Cross</th>
<th>Time Point</th>
<th>Cross-Gender Nominations</th>
<th>Cross-SES Nominations</th>
<th>Same-SES Nominations</th>
<th>Stable Cross-SES</th>
<th>Stable Same-SES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any tier difference</td>
<td>Fall</td>
<td>-.35 (.26)</td>
<td>-.07 (.24)</td>
<td>.07 (.24)</td>
<td>-.39 (.26)</td>
<td>-.17 (.11)</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>-.35 (2.8)</td>
<td>.02 (.21)</td>
<td>-.02 (2.1)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1-Tier of separation</td>
<td>Fall</td>
<td>-.35 (.26)</td>
<td>-.05 (.27)</td>
<td>.05 (.27)</td>
<td>-.21 (.25)</td>
<td>-.33 (.25)</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>-.35 (2.8)</td>
<td>-.02 (.28)</td>
<td>.02 (.28)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Extremes (1 &amp; 5)</td>
<td>Fall</td>
<td>-.29 (.28)</td>
<td>-.02 (.17)</td>
<td>.12 (.31)</td>
<td>-.09 (.16)</td>
<td>-.11 (.15)</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>-.32 (.31)</td>
<td>-.05 (.19)</td>
<td>.09 (.31)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Tier 5 with Any Other</td>
<td>Fall</td>
<td>.52 (.79)</td>
<td>.002 (.27)</td>
<td>-.002 (.27)</td>
<td>-.18 (.24)</td>
<td>-.34 (.24)</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>.53 (.82)</td>
<td>.03 (.24)</td>
<td>-.03 (.24)</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

26
Table 5  
*Means (Standard Deviations) of Differences from Expected Proportion of Friendships*

<table>
<thead>
<tr>
<th>Definition of Cross</th>
<th>Time Point</th>
<th>Cross-Gender Nominations</th>
<th>p value</th>
<th>Cross-SES Nominations</th>
<th>p value</th>
<th>Same-SES Nominations</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any tier difference</td>
<td>Fall</td>
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<td>-.07 (.24)</td>
<td>.03*</td>
<td>.07 (.24)</td>
<td>.03*</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>-.35 (2.8)</td>
<td>&lt;.001 **</td>
<td>.02 (.21)</td>
<td>.40</td>
<td>-.02 (2.1)</td>
<td>.40</td>
</tr>
<tr>
<td>1-Tier of separation</td>
<td>Fall</td>
<td>-.35 (.26)</td>
<td>&lt;.001 **</td>
<td>-.05 (.27)</td>
<td>.20</td>
<td>.05 (.27)</td>
<td>.20</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>-.35 (2.8)</td>
<td>&lt;.001 **</td>
<td>-.02 (.28)</td>
<td>.52</td>
<td>.02 (.28)</td>
<td>.52</td>
</tr>
<tr>
<td>Extremes (1 &amp;5)</td>
<td>Fall</td>
<td>-.29 (.28)</td>
<td>&lt;.001 **</td>
<td>-.02 (.17)</td>
<td>.50</td>
<td>.12 (.31)</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>-.32 (.31)</td>
<td>&lt;.001 **</td>
<td>-.05 (.19)</td>
<td>.17</td>
<td>.09 (.31)</td>
<td>.20</td>
</tr>
<tr>
<td>Tier 5 with Any Other</td>
<td>Fall</td>
<td>.52 (.79)</td>
<td>&lt;.001 **</td>
<td>.002 (.27)</td>
<td>.95</td>
<td>-.002 (.27)</td>
<td>.95</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>.53 (.82)</td>
<td>&lt;.001 **</td>
<td>.03 (.24)</td>
<td>.43</td>
<td>-.03 (.24)</td>
<td>.43</td>
</tr>
</tbody>
</table>

* $p < .05$  
** $p < .01$

Table 6  
*Comparison of the proportion of stable cross-SES nominations to the proportion of stable same-SES nominations*

<table>
<thead>
<tr>
<th>Definition of Cross</th>
<th>Mean (SD)</th>
<th>Degrees of Freedom</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
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<td>-.23 (.31)</td>
<td>55</td>
<td>-5.49</td>
<td>&lt;.001 **</td>
</tr>
<tr>
<td>1 tier of separation</td>
<td>.12 (.33)</td>
<td>55</td>
<td>2.82</td>
<td>.007**</td>
</tr>
<tr>
<td>Extremes (1 &amp;5)</td>
<td>.02 (.24)</td>
<td>19</td>
<td>0.28</td>
<td>.785</td>
</tr>
<tr>
<td>Tier 5 with Any Other</td>
<td>.17 (.41)</td>
<td>55</td>
<td>3.07</td>
<td>.004**</td>
</tr>
</tbody>
</table>

** $p < .01$
Footnotes

1 Socioeconomic status (SES) refers generally to a family’s access to resources, including parental education, household income, and occupational prestige (Diemer, Mistry, Wadsworth, López, & Reimers, 2012), though typically school economic integration policies are based on family annual income (Kahlenberg, 2013). The current study will use income as the measurement of SES based on its psychological salience to young children (Leahy, 1981; Ramsey, 1991; Sigelman, 2012) and on its use for most economic integration policies. The argument for this will be laid out in detail in my literature review.

2 Cross-gender friendship nominations were used as a comparison to cross-SES nominations because of the known salience of gender in early childhood friendship formation (Howes, 2009). Exploring cross-racial and ethnic friendship nominations was outside of the scope of this study due to the fact that 30% of the sample was biracial or multiracial and the cross-racial and ethnic friendship literature has yet to develop a systematic approach to calculate cross-racial and ethnic friendships. Future research is needed to address this emerging factor in children’s friendship formation.