

THE ROLE OF SCHOOL AND NEIGHBORHOOD CONTEXT IN PATTERNS OF
INTERGENERATIONAL TRANSMISSIONS OF SOCIOECONOMIC STATUS

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ABSTRACT

Karen Gerken: The Role Of School And Neighborhood Context In Patterns Of Intergenerational Transmissions Of Socioeconomic Status
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Research on social mobility and status attainment has focused on education and the production of human capital to explain how parents pass their socioeconomic status onto their children. While human capital is undoubtedly important, social capital and social context are significant for status attainment as well. Using the National Longitudinal Study of Adolescent Health, I study how neighborhoods and schools, as well as individual characteristics, influence adolescents' trajectories from their parent's socioeconomic status to their own. While most of the variation in adult income is within contexts, there is variation among respondents' income across adolescent contexts. Some of this variation is explained by the sociodemographic composition of contexts, as individual and family background characteristics matter a great deal for income attainment. However, levels of neighborhood disadvantage and advantage are also significantly related to adolescents' eventual income attainment. Neighborhood and school effects vary by parental economic background, and by respondent gender.

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Introduction

Social stratification is central to sociological research, and has grown in relevance as inequality in the United States continues to increase in the wake of the great recession. Since Blau and Duncan's (1967) fundamental work on how fathers pass on their socioeconomic status (SES) to their sons, the intergenerational transmission of societal status has been often cited as a reason for a limited amount of mobility between social classes (Mayer and Lopoo 2005, Erickson and Goldthorpe 2002). Recent estimates show that parental socioeconomic status predicts a sizeable portion of the variation in their children's SES (Nam 2004, Musick and Mare 2004; Bowles et al 2005). Researchers traditionally focus on the importance of education and the production of human capital to explain how parents are able to pass their SES onto their children (Card 1999, Schultz 1961, Becker 1962),

While human capital is undoubtedly important, social structure and social processes matter as well. Social capital—or the social resources and connection one can draw upon to gain economic benefits — also plays a role in the intergenerational transmission of SES (Becker and Tomes 1979; Coleman 1988; Larreau 2003). Various individual-level mechanisms that may build social capital and thus underlie the intergenerational transmission of SES have yet to be empirically tested. In addition, the role of social context in the intergenerational transmission of SES is another key aspect that has not been fully examined. The contexts in which young people develop their human and social capital may define the quality of such capital resources which impact subsequent SES in adulthood. Adolescence is a key time for development when teens spend more time outside the home and within neighborhood and school contexts. As such, these

contexts may have profound effects on their human and social capital development during the transition to adulthood, possibly facilitating upward and downward mobility from their parents' socioeconomic status (Brooks-Gunn et al 1993, Wodtke et al 2011, Page and Solon 2003). Using the National Longitudinal Study of Adolescent Health (Add Health), I study how neighborhoods and schools, as well as individual characteristics, influence adolescents' trajectories from their parent's socioeconomic status to establish their own socioeconomic status as they move into young adulthood. Add Health's unique nationally representative, clustered sample, rich with contextual and longitudinal data, allows me to examine how adolescents' neighborhoods and schools are associated with their eventual SES and which features of these social structures carry the greatest weight during this transition.

I build multilevel models and find that, while most of the variation in adult income is within contexts, there is variation in income attainment among respondents across adolescent contexts as well. Some of this variation is explained by the varying sociodemographic composition of contexts, as individual and family background characteristics matter a great deal for income attainment. Specifically, within both neighborhood and school contexts, children from wealthier families are more likely to obtain a college degree and participate in certain adolescent activities, both of which are associated with increased incomes in early adulthood. However, variation between schools still exists, and levels of neighborhood disadvantage and advantage are significantly related to adolescents' eventual income attainment. School level variables are less important for this relationship. Most interestingly, neighborhood and school effects vary by parental economic background, and by respondent gender. I argue that understanding how family background is related to and interacts with social contexts in

adolescence to affect income attainment in early adulthood can help policy makers focus intervention policies to increase mobility and poor children's life chances.

Background

Status Attainment

Blau and Duncan (1967) developed the prevailing model for describing how parental socioeconomic status impacts the eventual socioeconomic status of their children. Their status attainment model suggests that paternal socioeconomic status, measured by occupation, is related to his son's own status attainment, also measured as occupation. However, the relationship is mediated by sons' educational attainment, such that wealthier, higher status fathers can invest in better and more education for their children, which thus improves their chances for occupational and economic success.

A number of analyses have found evidence for the Blau and Duncan status attainment model, using longitudinal data sets like the Panel Study of Income Dynamics (PSID) to assess the extent to which variation in sons' income can be attributed to variation in their fathers' income (Bowles et al 2005). These estimates come from varying samples, study designs, and time periods and thus the extent to which variation in adult income can be explained by parental income is still contested (Duncan et al 2005). Peters (1992) estimated that only 10% of variation in son's income could be attributed to variation in their fathers' income. One study using data on brothers assessed that between 40 – 45% of adult income was related to family economic backgrounds (Hauser and Sewell 1986). However, others using average parental income regressed on average adult income attainment have found much larger coefficients, as high as .80 (Behrman and Taubman 1990, Solon 1992). Mazumder (2005), adjusting for income volatility

and including a more long-term, stable estimate of paternal and son income, found a father-son income correlation of .60

Regardless, there is undoubtedly a connection between family background and adult income. For this paper, I am not as concerned with replicating the above analyses to obtain more precise or recent point estimates and coefficients of the importance of parental income, but rather I aim to investigate the processes through which the intergenerational transmission of socioeconomic status operates. Specifically, I am concerned with how this process differs among adolescents from higher socioeconomic status families compared to adolescents with lower parental SES in leading to their eventual socioeconomic status in young adulthood, which will set them up on pathways for the rest of their life. I illuminate this process by addressing the mediating effects of individual-level human and social capital and the mediating and moderating effects of social context in the intergenerational transmission of SES in young adulthood.

Human Capital Development in the Intergenerational Transmission of Socioeconomic Status

Human capital is defined as the skills, abilities, knowledge and capacities that can be employed in the labor market to receive better qualities jobs and higher incomes (Schultz 1961, Becker 1962). Education, especially higher education, is an important mechanism for building an individual's human capital (Beck 1963). Studies that have focused on the determinants of adult income often cite the importance of education for improving one's life chances (Card 1999, Boxman et al 1991). Recent studies confirm the existence of a college wage premium, specifically that adults who earn a college degree earn more money than those with less than a college degree (Grogger and Eide 1995, DiNardo and Card 2002).

Human capital development is a key mechanism through which parental economic status impacts their children's eventual economic success. Human capital was central to the Blau and

Duncan status attainment model, and further research in the intergenerational transmission of socioeconomic status continues to focus on role of human capital (Becker and Tomes 1986, Hill and Duncan 1987). Parental income is correlated with the educational attainment of their children, such that wealthier families have children who obtain more years of school (Hill and Duncan 1987, Duncan et al 1998, Plug and Vijverberg 2005). Recent studies confirm that parents with higher socioeconomic status are more able to and more likely to invest in their children's human capital through education and other means, like SAT prep and tutoring, which eventually increase their children's future income (Haverman and Wolfe 1994, Buchmann 2010). On the other hand, poor parents cannot afford the same investments, which results in their children lacking the same returns wealthier children are provided (Mayer and Lopo 2005, Nam 2004). However, when educational attainment is controlled for, only half of the intergenerational correlation in income attainment between parents and their children is explained (Mulligan 1999, Bowles et al 2005). As such, human capital and education are not the only mechanisms through which parents pass on their socioeconomic status to their children.

Social Capital Development in the Intergenerational Transmission of Socioeconomic Status

Social capital, or the value of the social resources attributed to one's position in social networks, can be translated into human capital and is thus connected to economic success (Coleman 1988). Human and social capital can both interact to and independently affect income attainment and occupational opportunities (Boxman et al 1991, Lin 1999). Individuals with more social capital are able to tap into greater social networks, which in turn give one more access to knowledge and information, more opportunities to develop other forms of capital, and additional possible connections that increase potential capital sources. Specifically, most of the research on the role of social networks and mobility has focused on how social capital and social

resources can be utilized to gain employment and higher status occupations (Granovetter 1973, Marsden and Hurlbert 1988, Lin 1999).

While social capital is multifaceted and thus difficult to operationalize, we can measure a number of social activities and interactions that may be associated with social capital in adolescence. First, popularity, or friend count, reflects network size, and greater social connections leads individuals to have greater access to more educational and occupational opportunities and higher socioeconomic status attainment (Lin et al 1981, Montgomery 1991). Similarly, civic engagement, or the extent to which an individual actively participates in his or her community, increases community connections and potential social capital. Community service and participation in clubs, sports and other activities are forms of civic engagement that can develop social capital. The greater and varied the number of social connections young people make with others in their schools and local community, the greater access they have to potential forms of human and financial capital that will enhance future SES and income. While civic engagement has yet to be linked directly to status attainment on an individual level, macro analyses have demonstrated that more engaged communities have higher educational and economic success (Putnam 1995, Putnam 2001).

Like human capital, social capital can also be the product of parental investment. In addition to economic investments, parents pass along endowments, which can be genetic, like ability and attractiveness, or social, including family standing and social networks, which can be translated into higher SES (Becker and Tomes 1979). Parenting behaviors and home environment have been linked to disparities in test scores among children, above and beyond family socioeconomic status (Phillips et al 1998). According to Lareau in her ethnography *Unequal Childhoods*, childrearing and parenting behaviors vary based on social class, with

lower-class and middle-class parents using different strategies to foster certain skills for their children (Lareau 2003). Specifically, middle-class parents practice what Lareau calls “concerted cultivation”, encouraging their children to participate in organized activities, which increases their social capital and prepares them to succeed in a middle-class jobs. Other work has shown that higher socioeconomic status parents are more likely to use their social capital within their children’s school in order to support and enhance their children’s educational attainment and success (Ream and Palardy 2008).

Gender Differences in the Intergenerational Transmission of Socioeconomic Status

Traditional examinations of the intergenerational transmission of socioeconomic status have focused solely on men, specifically the relationship between fathers and sons (Blau and Duncan 1967, Hauser and Sewell 1986, Solon 1992). This makes sense, as men had traditionally been the sole income source for families. However, since the 1970s, women have been increasingly entering and remaining in the labor force, even after childbearing, and attending and graduating from college at higher rates than men (Altonji and Blank 1999, Buchmann and DiPrete 2006). Thus, while recent trends indicate that the transmission of socioeconomic status is equally relevant for women, few have included women in their studies. Although the role of mothers’ education has been examined more recently in addition to fathers SES (Beller 2009), the inclusion of daughters in examining intergenerational mobility is less extensive. The few who have included both genders in their samples found that income elasticity is slightly more extensive for boys than and girls (Behrman and Taubman 1990, Chadwick and Solon 2000). Overall, the inclusion of women into research examining intergenerational socioeconomic status transmissions is very relevant, especially as new longitudinal data sets like Add Health include both fathers and mothers, and sons and daughters in recent cohort data.

Theories Regarding the Role of Social Context

While family background plays a primary role in the transmission of SES across generations, research demonstrates that other contexts, especially during adolescence, are important as well. Although family effects are generally larger than school- and neighborhood-effects, context still matters above and beyond individual characteristics and thus is important to consider when examining the intergeneration transmission of SES (Duncan et al 2001).

Neighborhoods and schools are especially important during adolescence and the transition to adulthood, as young people begin to spend more time away from their families and their spheres of influences shift to a broader context at the same time they seek autonomy in making decisions and develop their own behaviors and habits (Harris 2010). As such, I view neighborhoods and schools as additional spheres of influence in which adolescent social and human capital can be developed, impacting later life socioeconomic status.

Jencks and Mayer (1990) theorize the ways in which people might be influenced by the contexts in which they live. Collective socialization models theorize that actions of the majority of the residents in a neighborhood influence others to behave in certain ways or subscribe to certain norms (Jencks and Mayer 1990). As such, residents, particularly adolescents, may be influenced by their neighbor's values and decisions when making their own decisions regarding their educational aspirations and/or level of civic engagement. In a more material sense, differences in institutional resources, such as community organizations and public services, may limit poor areas' resident's access to social and human capital building mechanisms (Sampson and Groves 1989, Jencks and Mayer 1990). While Jencks and Mayer focused on neighborhood effects, I apply their theory to school contexts in which peers and teachers represent collective socialization mechanisms, and in which institutional resource differences may be profound.

In his ethnographic work in three inner-city, disadvantaged neighborhoods, Harding (2013) examined the theory of social isolation, which posits that poor residents in disadvantaged neighborhoods are cut-off from mainstream society and thus develop alternative cultural ideas that deemphasize traditional educational and economic pathways and instead prioritize violence, crime and other non-normative behaviors. He does not find support for these strict alternative cultural models, but rather finds evidence that low-income boys are exposed to a number of cultural models that complicate their ability to make choices at this crucial life stage that set them up for negative life trajectories. Therefore, human and social capital development may be restricted, as residents in poor neighborhoods and schools are not well informed to make decisions regarding educational goals and civic engagement when faced with heterogeneous choices.

Neighborhood Advantage and Disadvantage and Adolescent Capital Development

Recent empirical evidence supports the theoretical mechanisms of contextual influence described by Jencks and Meyer (1990) and Harding (2011) at the neighborhood level. Even when family background and individual characteristics are controlled for, community disadvantage in adolescence has been linked to increased rates of a variety of non-normative behaviors, including dropping out of school, teen pregnancy and leaving home during adolescence, supporting a collective socialization process that does not prioritize human and social capital development (Harding 2003, Harding 2007, Harris and Lee 2012; Wickrama et al 2005, Ainsworth 2002). Advantage can work in the opposite way, as more positive collective socialization, or exposure to others with high human and social capital, is associated with better health, less delinquency and better educational outcomes (Cantillion 2006, Ainsworth 2002).

However, most of the work linking neighborhood context to behavioral and health outcomes, including the ones mentioned above, is conducted with cross-sectional data sets. These studies show that current neighborhood disadvantage (advantage) is associated with levels of delinquency, violence, depression and risky health behaviors as a result of collective socialization and institutional resources at the time of analysis (see Sampson et al 2002 for review). Few have used longitudinal data to link later-in-life outcomes regarding human and social capital development with early neighborhood context in adolescence. Only one recent study did show that prolonged time spent living in disadvantaged neighborhoods in youth does decrease the probability of graduating high school and presumably socioeconomic status attainment, though it did not directly address the themes of intergenerational transmissions of SES (Wodtke et al 2011).

School Characteristics and Capital Development during the Transition to Adulthood

The influential Coleman Report (1966) highlighted the role of school quality in influencing educational outcomes for youth. Specifically, he examined how school resources and school quality was associated with students scores on standardized ability and achievement tests. While with-in school differences are large, and much of the variation in test scores are related to family and peer socioeconomic status, the report did find that differences in school facilities and staff did hold educational consequences for youth. Larger school size was associated with greater institutional resources and thus better outcomes among students. Teacher quality was also examined, suggesting that more highly educated and more experienced teachers had positive influences on their students' achievement. However, while these school qualities were found to have some impact on students, they were often insignificant or quite small effects relative to student socioeconomic background (Coleman et al 1966).

The Coleman Report was mostly descriptive, but others have attempted to explain why and how school quality matters for educational outcomes. As schools are designed to impact the capital of its students by educating them, more school resources and better teachers would theoretically explain how higher quality schools can more effectively foster human and social capital development. A number of studies have demonstrated school effects on income and educational attainment (Betts 1995, Card and Kruger 1992). However, school quality, as measured by per-student spending, teacher experience and other resources, has little explanatory power regarding how schools affect student's labor market outcomes, once background characteristics are controlled (Haushek 1997, Card and Kruger 1992). Nonetheless, these analyses examined older cohorts, and it is quite possible the extent to which school quality may impact later life SES through teacher quality and resources has changed. good

Moderating Role of Schools and Neighborhoods

All in all, neighborhoods and schools impact a variety of outcomes for adolescents. Disadvantage can negatively impact adolescent development, while advantage is associated with more positive outcomes later in the life course. However, neighborhood and school quality may interact with residents' own SES backgrounds to impact adult socioeconomic status to different extents. The "double jeopardy" hypothesis suggests that low SES students would be "doubly" negatively impacted by family disadvantage and neighborhood disadvantage and low quality schools, compared to high SES students living in disadvantaged neighborhoods and attending low-quality school because the human and social capital development stemming from higher SES students' parents would protect them from being affected by collective socialization and lack of resources to the same extent (Patacchini and Zenou 2011). On the other hand, low SES adolescents may not be able to benefit from the positive aspects of living in advantaged

neighborhoods and attending high quality schools as high SES students, because high SES students are armed with capital investments from their parents and are more prepared to compete for and utilize the rich resources in these environment (Jencks and Mayer 1990). On the other hand, poor students may have the most to gain from relatively advantaged neighborhoods and quality schools, and thus positive school and neighborhood effects may be greater for low SES adolescents (Jencks and Mayer 1990). Given these theories provide competing arguments about how parental SES and contextual SES and school quality may interact, there is compelling reason to examine the role this interaction could serve in the intergenerational transmission of socioeconomic status with recent and contemporary data.

Parental Selection into Neighborhoods and Schools

As most researchers who study neighborhood and school effects acknowledge, selection effects can often bias the estimates for how much neighborhoods and schools matter above and beyond individual level factors (Sampson et al 2002, Brooks-Gunn 1993). A number of factors influence people's decisions to move into neighborhoods and send their children to certain schools [Sampson and Sharkey 2008]. While SES matters for this selection, other personal variables may also be related to neighborhood and school selection. This poses a problem, as some of these characteristics may be related not only to neighborhood and school selection, but also outcome variables of interest. Even more problematic is that some of these factors are impossible to observe and thus control for.

The only true way to control for these unobserved characteristics is through experimental designs, which the Moving To Opportunity study attempted to do (Katz 2010), though random assignment into neighborhoods and schools is generally not a feasible option. Researchers can try to control for as many observed characteristics as possible that might influence both

neighborhoods selection and the outcome variable. Add Health contains a unique set of questions related to neighborhood and school selection and other parental behaviors that I add in as controls, turning often-unobserved characteristics into observable, controllable variables. This is the strategy that I will pursue.

Study Design:

Using Add Health, I examine variation in income attainment in early adulthood between and within adolescent school context with multilevel models. I expect variation to exist between contexts. Figure 1 shows my conceptual model, which mostly explains within context variation. I expect parental income to impact adult income, but mostly through individual level mechanisms and correlation with schools and neighborhoods characteristics that are related to adult income. Neighborhoods and schools may also moderate the intergenerational transmission of SES, as Figure 2 shows. With this design, I assess the following hypotheses:

1. Adult income attainment varies by school context in adolescence. Communities serve as an additional sphere of influence that may affect the development of human and social capital during the transition to adulthood. However, while I expect some variation between contexts, I predict that most of the variation in adult income will occur within contexts. As such, I then set out to explain both within and between school variation.

2. Within school contexts, parental income matters for adolescent's eventual income attainment in young adulthood, but only in so much as parent income is associated with family background and individual characteristics as well as human and social capital building mechanisms in adolescence that are correlated with income attainment in early adulthood.

Higher SES parents may encourage their children to participate in community service and extracurricular activities as well as have more friends, examples of what Lareau (2003) calls “concerted cultivation” that serve to build social capital. Higher SES children would thus be

better equipped for educational attainment and professional and economic success that would lead them to be higher SES adults. I hypothesize that children from high-SES backgrounds will be more likely to participate in community service and many school activities, and a higher number of friends and that these behaviors will all be positively associated with socioeconomic status attainment. I hypothesize these relationships will persist once race, age, sex and family structure are controlled for.

3. Measures of neighborhoods and school disadvantage and advantage will be associated with income attainment in early adulthood, explaining some of the variation between adolescent school contexts. I expect disadvantaged neighborhoods to be associated with income penalties in young adulthood, while neighborhood advantage will be associated with higher incomes. I also predict that parental income will be associated with neighborhood advantage and disadvantage.

4. Neighborhoods and schools will also moderate the relationship between parental and adult SES, impacting lower-SES children differently than their higher-SES peers. First, I expect to see that wealthier adolescents in disadvantaged neighborhoods will be protected from negative contextual consequences. I am unsure how poor adolescents in advantaged neighborhoods may fare, considering the competing theoretical predictions for how poor children might fair in high SES neighborhoods. Such neighborhoods and schools, rich with resources, may be a way for poor children to gain the human and social capital they cannot learn from their own family background. Thus the institutional model would suggest that neighborhoods could positively impact poor students eventual SES to a greater extent than relatively more advantaged adolescents (Jencks and Mayer 1990). However, the relative deprivation model posits that poor adolescents may be worse off in higher SES environments, as they may not be able to

successfully navigate these contexts and therefore miss out on the benefits more resources carry (Jencks and Mayer 1990).

Data

I use data from two waves of the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a nationally representative, multistage stratified survey begun in adolescence, sampling students in grades 7 through 12 during the 1994-1995 school year. The sample is drawn from and clustered within 132 schools (80 high schools and the middle schools and junior high schools that feed into them). In addition to the original study, three additional waves of data collection have been conducted, essentially following these students from adolescence through the early portion of their life course. Previous studies that have examined similar research questions have not had the advantage of detailed, longitudinal data sources like Add Health. Not only do I have information about the socioeconomic characteristics of the respondents and their parents, I also have in-depth details about their characteristics and activities from adolescence through early adulthood. In addition, Add Health contains a wealth of contextual information linked to the respondent's neighborhoods and schools in Wave I.

The dependent outcome variables come from the in-home interviews of Wave IV, administered in 2008-09 when most of the respondents were between 24-34 years old. The main independent, control, mechanism, and contextual variables come from Wave I of Add Health, when respondents were between 12 and 19 years old. I combine information from the original in-school survey, the in-home parental questionnaires, the in-home respondents interviews and the community- and school-level data compiled by the research team.

My analytical sample includes respondents who participated in the Wave I in-school and in-home surveys, Wave III and Wave IV interviews, and who had valid data for all variables of

interest. About 12,000 respondents participated in the Waves I, III, and IV interviews, but about a quarter of the adolescents included in the Wave I in-home sample are missing data from the in-school questionnaire (where I draw my friendship and school activity variables) either because they were absent from school that day, or because school administrators refused to allow Add Health researchers to conduct in-school data collection. An additional 15% are missing parent interviews, from where I draw my main independent variable of parental income. Wave III had a 77% response rate and Wave IV an 80% response rate from the original cohort interviewed in Wave I. For my analysis, I use longitudinal weights to adjust for the probability of selection in the original sample and attrition over time. About 900 respondents are missing sampling weights, but very few respondents (less than 1%) are missing contextual data. My final sample size is 5890, with the main source of missingness due to lack of in-school data. As is recommended for Add Health data analysis, I use survey commands in Stata 12.1 with sampling weights in order to adjust standard errors for the clustered sampling design.

Measures

Dependent and Independent Variables:

My outcome variable of interest is the socioeconomic status of the respondents in early adulthood. The debate on how to best measure SES is ongoing and complicated, as no single aspect of class (education, earnings, occupation) can fully account for its multifaceted nature (Hauser 1994, Entwisle and Astone 1994). As such, I investigated a number of proxies for socioeconomic status, including educational attainment, household income, occupational prestige, and an index that encompasses all three. However, using education as an outcome variable prevents me from utilizing college degree attainment as a measure of human capital (in

order to test the Blau and Duncan status attainment model). Thus, I concluded that income is my best option for measuring SES.

Still, income is a fairly volatile measure of SES that can fluctuate over the life course (CITE). Due to data constraints, I limit my analysis to income in young adulthood. While it is possible to include Wave III household income as an additional point in time in order to construct a more persistent measure of income, the youngest respondents in Wave III were 18 years old, and roughly 10% of respondents in Wave III had no personal income earnings at the time. As such, I argue that using income from one point in time later in the life course is better than including a possible skewed and volatile data from the transition to adulthood. Additionally, I argue that while 24 years old, the smallest age in Wave IV, is still young, even these adults have taken their first steps into adulthood and begun a trajectory that will carry through the rest of their life course. Although parental income data is from only one point in time as well, adolescence is a particularly sensitive period, and I am focusing on how parental economic resources during this specific point matter for income attainment in young adulthood. I also ran models separating the 24 – 26 years olds from the rest of the sample and found qualitatively similar results.

I use household income in early adulthood collected from the Wave IV in-home questionnaire in Wave I in response to the question, “thinking about your income and the income of everyone who lives in your household and contributes to the household budget, what was the total household income before taxes and deductions in {2006/2007/2008}?” The Wave IV in-home survey asked respondents to choose a range in which their household income fell. To create a linear measure, I assign the midpoint of the categories (which mostly encompassed only a five or ten thousand dollar range) to their income value.

My main independent variable is parental income, which was collected from the parental questionnaire, in which a parent (most often the mother) responded to the question “About how much income, before taxes, did your family receive in 1994? Include your own income, the income of everyone else in your household, and income from welfare benefits, dividends, and all other sources.” This parental household income was reported in thousands of dollars (range 0 – 999 thousand). I chose to use household income for both parents and young adults, as socioeconomic status measured at the household level captures a more complete idea of the individual’s access to shared family resources (Krieger et al 1997). Additionally, the household income measure is the same for parents and adults, and mirror the information provided by the census contextual measures. I control for family structure and marital status to adjust for any skewing that may occur due to these additional characteristics.

Sociodemographic and Parental Background Controls:

I control for a number sociodemographic variables, including race, sex, age, family structure and immigrant status, which may affect income attainment. While respondents could indicate that they self-identified as several races, I use a five-category combined race and ethnicity variable that categorizes respondents as one race (Harris et al 2009). Hispanics of any race are “Hispanic”, while non-Hispanics are placed in one of the other four racial categories: White, Black, Asian or Native American/Other. Age is measured as age at Wave IV. I also control for family structure at Wave I, which I collapse into five categories: two-parent, biological, two-parent, other (stepfamilies), single mother, single dad, and other (grandparent-headed or foster homes). Immigrant status is measured as a set of dummy variables. Foreign-born respondents are categorized as first generation, native-born respondents with foreign-born parents are indicated as second generation, while all others (native-born respondents with native-

born parents) are collapsed into the third generation or higher category (Harris et al 2009). I also control for parental education, specifically whether or not the respondent had at least one parent who completed college.

To control for personal characteristics that may affect eventual income attainment, I include a measure of cognitive ability at Wave I, AHPVT, which is the respondent's standardized score on a short vocabulary test that is meant to capture verbal aptitude. I also include a dichotomous measure of college aspiration. Students were asked, "On a scale of 1 to five, where 1 is low and 5 is high, how much do you want to go to college?" Respondents who answered with a four or a five were recoded as "wanted college", compared to those with lower aspirations for college.

Wave IV Individual Level Variables

Because my income measure is a household income measure, I considered whether the respondent had been married to attempt to control for dual-income households. I also control for whether the respondent had earned a college degree by Wave IV, my human capital mechanism. Presumably, some of the sample may not have completed their education at the time of the Wave IV survey, especially some of the younger respondents. Nonetheless, a college degree is likely an important predictor for income attainment levels, and most who complete a college degree would have done so by age 24 (Jacobs and King 2002, Maralani 2011). Therefore, I include a dichotomous variable that equals 1 if the respondent reported having a college degree or more.

Individual-Level Mechanism Variables

Add Health has a number of unique variables that have not been examined previously as mediating mechanisms in the intergenerational transmission of SES. These include whether the respondent engaged in community service, the number of school activities (clubs or sports) in

which they participated, and popularity (the number of friends in the social network).

Community service in adolescence is reported in Wave III when respondents were asked, “Between 12 and 18 years old, did you regularly participate in volunteer or community service work?” The community service dichotomous variable excludes respondents whose service was court-ordered. Number of school activities is the sum of the amount of sports or clubs in which the respondent reported participating in on the Wave I in-school questionnaire. Because most students participated in between one and three activities, I use that category as my reference group in comparison to the dummy variables for respondents who had no school activities and those who participated in four or more clubs or sports. Finally, popularity, or number of friends, is drawn from the social network data compiled from the in-school survey. All students at the respondents’ schools were asked to name up to ten friends (five male and five female). I use the in-degree number of friend nominations (the number of other students who listed the respondent as a friend) as a more objective measure of popularity and friend count.

School- and Neighborhood-Level Variables:

Because Add Health used a school-based sampling design, data on school quality and characteristics were gathered from the school administrator questionnaires, filled out by a representative from each school. To measure teacher experience, I include a variable measuring proportion new teachers, which comes from the question, “Approximately what percentage of your full-time classroom teachers are new (i.e., began teaching at this school during the present school year?”. To measure teacher ability, I include a variable regarding proportion of teachers with master’s degrees from the question, “Approximately what percentage of your full-time classroom teachers hold Master’s degrees or higher?”. In addition to the school-reported data, the Add Health research team also constructed two relevant variables related to the urbanicity and

size of the school. My categorical urbanicity variable labels schools as either urban, suburban or rural. Urban schools are located within the central city of Consolidated Metropolitan Statistical Area (CSMA) or Metropolitan Statistical Area (MSA). Suburban cities were either also located in a CSMA or MSA, but not in the central city or non in a CSMA/MSA but in a place with a population larger than 2,500. Rural schools are in places whose small populations do not fall in any of the above categories. School size was also compiled by Add Health, placing schools into three groups: small, medium or large. Small schools had 400 or less students, medium schools have between 401 and 1000 students, and large schools had more than 1,001 students.

Neighborhood level data comes from census-tract data from the 1990 United States Census linked to respondents in Wave I. With this census tract information, I build two indexes, one of neighborhood disadvantage (NDI) and neighborhood advantage (NAI) (adapted from South and Crowder 1999 and Crowder and South 2011, respectively). The aspects of neighborhood disadvantage I am most concerned about include proportion of households that are headed by females, proportion of families receiving public assistance, proportion of poor families (with incomes under the poverty line), proportion of affluent families (families with household incomes over \$40,000), proportion of male who are unemployed, and proportion of residents over age 25 without a high school degree. For each measure, a census tract can have one count of disadvantage if it falls in the top quartile of all census tracts. I formed the NDI by summing all the dummy measures for each tract such that the index can range from 0, no disadvantage, to 5, high disadvantage ($\alpha = .87$). The NAI is constructed similarly, but from four measures of neighborhood advantage, thus ranging from 0 (no advantage) to 4 (high advantage). The four variables that form the NAI are proportion of households who own their homes, proportion of wealthy families (with household incomes above \$75,000), proportion of

residents employed in managerial or professional occupations, and the proportion of residents 25 and above with a college degree ($\alpha = .70$).

Methods

To assess whether schools and neighborhoods influence how parental background matters for adult income attainment, I conduct multilevel random intercept linear models to test for and explain between context variation. While I would ideally use multilevel models with neighborhoods as level-2 clusters which are nested within schools (as level-3 clusters), the complex sampling design Add Health specifies that the appropriate level-2 clustering is at the school level, which then accounts for any additional clustering (and the non-independence of individuals) at the lower level neighborhood clusters as well (Lee et al 2013). Thus, I use the school in Wave I as the level 2 cluster. Because neighborhoods are clustered within schools, I am able to estimate the neighborhood characteristics that explain variation in income attainment across schools.

I first test a null model to test for variation between schools. To address with-in school variation, or how parental background matters for adult income attainment, I introduce individual-level explanatory variables to examine correlations that occur between parental income, human and social capital mechanisms, and adult income. Next, I include level 2 school and neighborhood variables to attempt to explain some of the school level variation. Finally, I include interaction terms that assess if the effect of such school and neighborhood variables varies by parental income.

To attempt to control for selection bias regarding neighborhood choice, I examined parent's responses to a question asking why did they live in their current neighborhood. A variety of options are available for parents to choose including "because the schools here are

better than they are in other neighborhoods” or “because there is less drug use and other illegal activity by adolescents in this neighborhood”. Parents are also asked, “how disappointed would you be if [your child] did not graduate from college?”, indicating their expectations for their child’s education. Controlling for their answers to these types of questions can help control for selection bias and illuminate a better model of how neighborhood effects differ above and beyond observable parental characteristics, regardless of why a family moved to a neighborhood. When added to the fully adjusted models, none of these variables were correlated with my outcome variables or impacted the model significantly. As such, I do not include them in my final models, and conclude selection of schools and neighborhoods is minimal once I control for parental income and other family background characteristics.

Results

Descriptive Statistics

Table 1 describes the characteristics of my analytic sample (N = 5,890) and how they vary by parental income quartile. Mean household income in adulthood is \$65,395, though there is significant difference in mean income by parental background quartile. Those who grew up in the highest quartiles on average make more than \$30,000 in early adulthood than those who grew up in the bottom quartile. While 72.6% of the sample is white, 15% is black and 8.8% is Hispanic, race differences by parental income quartile are profound. Both the third and fourth quartiles are over 80% white and less than 10% black, while nearly a third of the lowest quartile is black (29.3%). The largest proportion of Hispanics is also found in the bottom quartile (13.1%).

In addition to clear racial patterns, other family background characteristics are strongly associated with parental income quartile. While 60% of the sample was living with both

biological parents at Wave I, less than a third of the lowest quartile lived in two biological parents. 17.6% of the sample lived with one biological parent and a step-parent, but this doesn't vary significantly across the quartiles. Single mother families made up nearly half of the first quartile (44.8%), while less than a fifth of the whole sample grew up with a single mother. College education of parents is also strongly related to parent income quartile. While on average 36.0% of families have at least one parent with a college degree, those in the highest quartile are nearly seven times more likely to be in that category than those the first quartile.

Several of my hypothesized individual-level mechanisms at Wave I also vary by parental income quartile. The wealthiest children had almost 1.5 more friends than the poorest children. Those in the bottom two quartiles were nearly twice as likely to participate in no school activities than those in the highest quartile. While a fourth of the sample participated in four or more school activities, the highest quartile is twice as likely to do so than the lowest. A large portion of all respondents did some sort of community service as an adolescent, though the amount of participation increased as parent income increases. The large majority of all students had college aspirations, and while the lowest quartile had lowest proportion with college aspirations, nearly four-fifths still indicated college was in their plans.

In Wave IV, it is clear actual college completion varies dramatically by parental income quartile. While over a third of the whole sample graduated from college, only 16.44% of the lowest quartile did so. College graduation increased with parental income quartile, peaking with well over half of the respondents from the highest quartile graduating from college by Wave IV. The proportion ever married does not vary by parental income quartile; slightly over half the sample has been married by Wave IV.

School and neighborhood context descriptive statistics are also shown in Table 1.

Children of different parental income backgrounds are living in different areas and attending different types of schools. While most adolescents live in neighborhoods with little disadvantage (average NDI = 1.07), those in the lowest income quartile live in neighborhoods with twice that level of disadvantage (NDI = 2.10) and those in the highest quartile experience less than half the disadvantage (NDI = 0.44). In terms of advantage, the average NAI for all respondents is less than 1 (NAI = .92). NAI does increase as parental income increases, from less than .5 in the lowest quartile (0.46) to nearly three times that in the highest quartile (1.48).

On average, the sample attended schools that had about 9.32% new teachers and about 50% with teachers with masters degrees. Adolescents in the parental income highest quartile were slightly more likely to have both new and MA teachers than adolescents in the other three quartiles. Most of the whole sample (59.21%), and of each parental income subsample, attended a suburban school, though the two highest quartiles also had the two highest proportions of suburban students. The poorest two quartiles were also the most likely to be attending rural schools. And while on average most students attend a medium size school, the upper two quartiles were more likely to attend a large school, while the lowest two quartiles were the most likely to attend small schools.

Multilevel Analysis

As demonstrated above, parental income is correlated with a number of other family background characteristics, individual student qualities and contextual variables. In order to test whether these differences begin to explain the variation in adult income attainment, I use multilevel models. The null model is presented in Table 2, and does show significant variation in adult income between schools, confirming hypothesis 1. The intra-class correlation (ICC) of the

null model is .0673, meaning 6.73% of the variation in adult income is between schools. Models 1-5 in Table 2 include individual level variables to explore within context variation, and to assess to what extent contextual composition can explain between context variation.

Model 1 begins to examine within context variation and shows there is a small but significant bivariate relationship between parental income in Wave I and adult income in Wave IV. For every additional \$1,000 of parental income, adult income increases \$75. Controls for additional background characteristics added in Model 2 reduce the coefficient to .055, though it remains significant. Being female, Black and growing up in a household without two biological parents all have large negative effects on eventual income attainment. Older respondents are more likely to have higher incomes. Model 3 introduces parental education, showing that children with at least one parent with a college degree have much higher household incomes in early adulthood. This explains the remaining significant variation in adult income due to parent income. With the addition of all these individual controls, the ICC of Model 3 is roughly half of the null model ICC, demonstrating that about half of the variation between contexts can be explained by the sociodemographic composition of the contexts. However, 3.7% of the variation in adult income, even with these controls introduced, is between contexts.

Model 4 includes my hypothesized individual level mechanisms, which completely attenuate the association between parental income and adult income. Higher PVT scores have a small association with higher adult incomes. Each in-degree friend nomination carries more than an additional one thousand dollar increase in income (1.049). Those who participated in no school activities had lower incomes, and those with more than four activities had much higher incomes than those who participated in an average number of activities. College aspirations and voluntary community service in adolescence both are associated with large increases in adult

income attainment.. When introduced separately, activities and in-degree friend nominations equally shrunk the parental income coefficient to completely insignificant, while community service participation only slightly reduced the parent income coefficient (which still remained marginally significant) . When I control for marital status and college degree status in Wave IV in Model 5, the effects of these individual level mechanisms shrink slightly but all but PVT score still remain significant.

Despite the findings that individual level controls and mechanisms completely explain the intergenerational income association and reduce between school variation in adult income, there is still some variation between schools ($ICC = .0378$). I therefore explore Wave I school and neighborhood variables and their relationship with adult income to explain the remaining between context variation. Model 6 shows that in addition to individual characteristics, adolescent NDI and NAI do have an effect on eventual income attainment. Each additional marker of neighborhood disadvantage in adolescence is associated with a relatively large, significant decrease in income in young adulthood while an increase in neighborhood advantage has a slightly larger, significant increase. Model 7 introduces school characteristics, demonstrating that children who attend urban or suburban schools have equally positive increases in income compared to those in rural schools. While the proportion of new and master's degree teachers is insignificant, attending large schools is significantly beneficial for students.

Moderating Effects of Social Context

To examine whether the intergenerational transmission of socioeconomic status is moderated by neighborhood advantage and disadvantage, Model 8 includes an interaction effect between NDI, NAI and parental income. Only the NDI interaction is significant, and this is

confirmed by the Chi-Square statistic for the Wald test. To interpret the linear and multiplicative effects, I plot mean predicted income by parental income quartile and NDI category based on the multilevel Model 8. As Figure 3 shows, while all respondents are negatively impacted by increased neighborhood disadvantage, respondents in the highest parental income quartile are less impacted by disadvantaged neighborhoods than adolescents in the bottom three quartiles, confirming the protective effect of family SES cited in the literature. Finally, in Model 9, I add the school quality—parental income interactions, which are insignificant and do not improve the fit of the model.

Gender Differences

I ran separate multilevel models for males and females. Table 3 shows the same models as in Table 2, beginning with Model 6, focusing on gender differences in how contextual variables are related to eventual income, in addition to cross-level interaction differences by sex. While the individual level variables had qualitatively similar effects on income attainment in young adulthood, there are significant differences for the effects neighborhood advantage and disadvantage had on men and women. As Model 6 for women shows, there is an interaction between parental income and NAI, such that the positive effect of NAI decreases as parental income increases, while there is no interaction between NDI and parent income. Figure 4 shows the significant interaction by plotting mean predicted probabilities by income quartile and NAI score. For males, the effect of both aspects of neighborhoods increases relative to women and to the full model. Each additional marker of disadvantage reduces income attainment, while each extra neighborhood advantage increase is correlated with higher incomes in early adulthood. The interaction effect for males between parent income and neighborhoods is only significant for NDI and is shown in Figure 5.

Discussion

At first glance, within school contexts, it may seem that parental income in adolescence has little effect on one's eventual income attainment. The correlation coefficient between parent and child income is small compared to other background characteristics, yet still significant once the model is adjusted for other sociodemographic variables. In Model 3 for the full sample, the predicted increase in adult income for just one additional year of age is approximately the same as an additional \$35,000 in parental income. Essentially, the bivariate and adjusted bivariate relationships between parental and early adulthood income are unremarkable.

However, despite this lack of a direct strong relationship, it is impossible to ignore the way in which parental income is correlated with a number of mediating mechanisms at both the individual and contextual levels that significantly impact eventual income attainment in early adulthood. Race and family structure are closely related to income in adulthood, and both are also strongly associated with parental income. Growing up with a single parent has a significant negative penalty for eventual income attainment, and the poorest families are most likely to have a single parent (over half of the lowest income quartile was a single mother or single father family). Parental education is also highly, positively correlated with their children's income attainment, a relationship that is completely attenuated when Wave IV college degree is added in. Therefore higher education is very important for income attainment, and more common among the most advantaged children, confirming Blau and Duncan's class status attainment model (1967).

In addition to confirming a variety of background traits that the literature has deemed important to the relationship between the income parents and children, my analysis also illuminates the role that certain individual mechanisms in adolescence have in transmitting SES

between generations. Friendships, school activities and community service all operate in the direction I expected them to. More friends and more activities in adolescence are associated with higher incomes in adulthood, as is volunteering in the community. Participating in no activities is negatively correlated with income attainment. These activities and relationships are all ways in which adolescents can build social capital, which the literature suggests can independently and via translation into human capital eventually increase income potential in early adulthood. Not only are these activities important, but it is important to remember who is mostly likely to participate in schools activities, have the most friends or volunteer: adolescents with wealthier parents. Presumably, these children are encouraged to make friends, participate in activities and volunteer by their middle and upper class parents, confirming what Lareau calls “concerted cultivation” (Lareau 2003). Thus, the transmission of SES is not direct, but instead operates through these individual level behavioral mechanisms in adolescence.

But while individual level mechanisms explain a large portion of the transmission of SES between parents and their children, there still is some variation in income attainment between contexts. While the clustering structure allows me to confirm that variation exists between schools, I use neighborhood measures in addition to school characteristics in order to assess the impact of contextual disadvantage and advantage. Both the NDI and NAI has strong, significant effects on resident’s eventual income attainment. As neighborhood disadvantage increases, income is likely to decrease. Conversely, more neighborhood advantage is associated with more income in early adulthood. This confirms my hypothesis that one reason parental income is important for their children’s income is the types of neighborhoods parents either choose to live in (or are unable to choose to leave). Higher income parents lived in, on average, more advantaged and less disadvantaged neighborhoods. Poor parents, on the other hand, live in more

disadvantaged and less advantaged neighborhoods. As such, neighborhood selection by wealthier parents is one way they can transmit their high SES across generations.

Surprisingly, though a certain amount of variation exists between schools, the school level variables I used to attempt to explain that variation did not have great explanatory power. Larger schools were associated with the higher income, perhaps because these schools are able to offer a wide variety of school activities and possible friends to their students. Urbanicity mattered, but only so far as rural schools were associated with lower eventual income, which might be reflecting neighborhood disadvantage rather than school disadvantage. The composition of the teaching staff, in terms of new and highly educated teachers, was insignificantly related to adult income.

To see whether parental income can have a differential effect across neighborhood contexts, I tested an interaction term between parent income and NDI and NAI. The predicted incomes plotted in Figure 3 suggesting that the wealthiest adolescents are less negatively impacted by disadvantaged neighborhoods than others. Essentially, while everyone from disadvantaged neighborhoods tends to have lower incomes, those with wealthier parents are not as penalized, suggesting a protective factor of wealthy parents exists. This confirms a “double jeopardy” hypothesis, as children from the most disadvantaged families and most disadvantaged neighborhoods are likely to have the lowest incomes. There was no significant interaction between neighborhood advantage and parent income, suggesting that while poor adolescents may benefit from living in a more advantaged neighborhood, they receive no additional support or penalties in those contexts compared with higher SES adolescents.

When I ran separate models for both genders, it is apparent that double jeopardy exists for males, who are most effected by neighborhood context. The interaction between parent

income and NDI is much larger than in the full model, and as Figure 5 shows, boys in the poorest neighborhoods but who live in the wealthiest families actually have the highest predicted mean incomes. This may be in part due to a small cell size, but nonetheless is an unexpected and intriguing finding. Perhaps these boys are able to combine the protective nature of their family background and the additional advantage to being relatively wealthy in an otherwise poor neighborhood to uniquely benefit from this type of situation.

Girls, on the other hand, are not as effected by neighborhoods, but when they are, their parental background interacts especially with neighborhood advantage, unlike the male subsample. While the disadvantage interactions confirm a double jeopardy theory, the female advantage interaction suggests that poor women benefit more from contextual advantage than their wealthier neighbors. Advantage is associated with higher incomes for female adolescents, but the slope is larger for girls from poor families.

Conclusion

Parental socioeconomic background is important in determining young adults economic success. Building off of Blau and Duncan's traditional status attainment model (1967), I show that while a college education is important for higher incomes in early adulthood, a variety of other choices adolescents make while growing up, including participating in school activities, community service, and social networks, are both important for income attainment and associated with parental income level. As Lareau (2003) hypothesized, middle-class and upper class parents likely encourage college attendance to build human capital, but also support a variety of activities in youth that aid the formation of social capital, which is equally as important for future success.

While family and individual level factors certainly explain a large portion of income attainment, this analysis shows that neighborhood context and school qualities do have an additional effect on income attainment in early adulthood. Above and beyond individual characteristics and family background, disadvantaged neighborhoods are associated with lower income attainment, while advantaged neighborhoods have a positive association with income levels in early adulthood. Because well-off adolescents are more likely to live in relative advantage, I argue that neighborhood selection is one way in which middle- and upper- parents pass on their high SES to their children. Conversely, children whose parents are unable to move out of disadvantage are even more likely to remain poor themselves.

The cross-level interaction effects between parent income and neighborhood reveal that the long-term effects neighborhoods have on their adolescent residents are not uniform, and vary by parental income status. Wealthy parents mostly protect adolescents from the negative effects of living in disadvantaged neighborhoods, suggesting that higher socioeconomic status parents likely only choose to live in disadvantaged neighborhoods when they can guarantee that such neighborhoods will not significantly effect how they pass their high status onto their children. There is no such advantage interaction, and so while poor adolescents may benefit from living in advantaged neighborhoods and experience some upward mobility, there is not additional benefit or harm uniquely experienced by lower income adolescents. Poor boys especially are especially negatively impacted as disadvantage increases, while wealthier boys are protected from the consequences of living in disadvantage. On the other hand, poor girls disproportionately benefit from increasing neighborhood advantage. Overall, whether I consider gender or SES differences, this analysis suggests that neighborhood effects may not be the same across the board for all adolescents.

While I argue that intragenerational income pathways begin early in the life course, these findings may only be applicable for income attainment in early adulthood. As such, further analysis would do well to continue to assess if income attainment in later life is as related to early life contexts and choices. More stable income measures may strengthen the argument regarding the importance of adolescent context and mechanisms in the transmission of socioeconomic status. Additionally, while I find strong neighborhood disadvantage and advantage effects, the school quality variables were relatively unimportant. Further analysis would be well served to investigate better measures of school quality.

Policy to aid mobility would be well served to focus on encouraging low-income children to participate in these social capital building activities. While college graduation is undoubtedly a key factor in economic mobility, supporting other policy interventions that focus on building social capital as well as human capital can improve the economic attainment of adolescents. In addition, focusing these programs at the community level may be especially important, as neighborhoods serve as an additional key sphere of influence for adolescents.

Table 1: Descriptive Statistics, for Total Sample and by Parental Income Quartile (N = 5,890)

	Total	1 st Quartile (lowest)	2 nd Quartile	3 rd Quartile	4 th Quartile (highest)
	Mean	Mean	Mean	Mean	Mean
Dependent Variable					
Wave IV Income	65.395	48.721	61.228*	71.258*	79.388*
Main Explanatory Variable					
Parent Income	46.582	12.154	29.775*	49.106*	99.981*
Background Characteristics					
White	0.726	0.549*	0.692*	0.809*	0.829*
Black	0.150	0.293	0.165*	0.086*	0.079*
Asian	0.032	0.025	0.030	0.034	0.039
NA/Other	0.004	0.002	0.004	0.004	0.005
Hispanic	0.088	0.131	0.110	0.067*	0.048*
Two Parent Bio	0.605	0.311	0.570*	0.725*	0.779*
Two Parent, One non bio	0.175	0.170	0.187	0.178	0.162
Single Mom	0.184	0.448	0.202*	0.080*	0.041*
Single Dad	0.007	0.013	0.007	0.004	0.007
Other	0.028	0.057	0.034*	0.013*	0.012*
First Generation	0.033	0.058	0.038*	0.019*	0.022*
Second Generation	0.091	0.091	0.092	0.104	0.069
Third+ Generation	0.877	0.851	0.870	0.878	0.909*
Age (Wave IV)	28.096	28.146	28.015	28.106	28.130
Parent College	0.360	0.107	0.241*	0.422*	0.682*
Wave I					
In Degree Friend Nominations	4.725	3.994	4.369	5.055*	5.448*
No School Activities	0.191	0.245	0.232	0.162*	0.127*
4 or more School Activities	0.242	0.168	0.208*	0.257*	0.338*
Voluntary Community Service	0.423	0.333	0.385*	0.460*	0.512*
Wanted College	0.854	0.791	0.801	0.894*	0.926*
PVT Score	103.632	97.614	102.079*	105.909*	108.507*
Wave IV					
College Degree	0.351	0.164	0.234*	0.415*	0.596*
Ever Married	0.510	0.494	0.529	0.523	0.485
Neighborhood Variables					
NDI Wave I	1.067	2.099	1.205*	0.646*	0.441*
NAI Wave I	0.919	0.457	0.679*	1.070*	1.479*
School Variables					
New Teacher %	9.318	8.038	8.883	8.918	11.799
MA Teacher %	50.283	50.120	48.014	50.490	52.989
Urban	0.216	0.237	0.238	0.184	0.214
Suburban	0.592	0.541	0.550	0.640*	0.627
Rural	0.192	0.222	0.212	0.176	0.159
Small School	0.170	0.231	0.194	0.146*	0.110*
Medium School	0.495	0.488	0.511	0.503	0.472
Large School	0.335	0.281	0.295	0.351	0.418*

* indicates statistically significantly from 1st quartile mean at p<.05

Table 2: Multilevel Regression of Young Adult Income Attainment on Individual and Contextual Level Variables (N=5,890)

	Null	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Parent Income		0.0750*	0.0553*	0.0437	0.0296	0.0192	0.0117	0.0112	0.00837	-0.0383
Female			-2.952	-2.560	-4.930**	-6.521***	-6.624***	-6.614***	-6.644***	-6.598***
Black			-11.20***	-11.46***	-8.996***	-7.326**	-3.900	-4.598	-4.840*	-4.813*
Asian			10.14	9.186	8.957	9.905	11.54	11.11	11.24	11.70
NA/Other			29.77*	32.84**	38.80*	39.59*	38.42*	38.11*	37.70*	38.40*
Hispanic			-0.580	0.501	1.747	2.672	4.461	3.735	3.829	3.666
Age at Wave IV			1.459**	1.536**	1.769**	1.015	1.128*	1.164*	1.191*	1.144*
Step Parent			-6.264***	-5.238**	-4.073*	-3.689*	-3.681*	-3.674*	-3.582*	-3.573*
Single Mom			-11.29***	-10.29***	-9.620***	-9.192***	-9.131***	-9.357***	-8.617***	-8.800***
Single Dad			-22.80***	-22.36***	-21.19***	-15.30**	-15.23**	-15.19**	-14.32**	-13.97**
Other Family Structure			-11.53*	-9.621*	-5.641	-3.852	-3.687	-3.505	-2.936	-2.785
First Generation			3.888	3.421	6.294	3.810	4.586	3.660	3.666	3.230
Second Generation			4.245	4.006	4.309	3.638	3.807	3.571	3.775	3.447
Parent College Degree				7.683**	3.302	0.853	-0.138	-0.202	-0.377	-0.326
PVT Score					0.163*	0.125	0.111	0.112	0.107	0.104
In degree friend nominations					1.049***	0.943***	0.937***	0.972***	0.949***	0.940***
No School Activities					-4.714**	-3.590*	-4.079	-4.276*	-4.073*	-4.067*
4 or more School Activities					7.945***	6.930***	6.528***	6.584***	6.591***	6.530***
Voluntary Community Service					7.710***	5.658**	5.723**	5.822**	5.757**	5.850**
Wanted College					7.259***	5.986**	5.803**	5.571**	5.728**	5.733**
Ever Married						10.37***	10.47***	10.66***	10.66***	10.74***
College Degree						12.34***	12.02***	11.87***	11.80***	11.77***
NDI Wave I							-1.568***	-1.428**	-2.406**	-2.234**
NAI Wave I							2.092**	1.968*	2.23	2.690*
Urban								7.372*	7.301*	7.193*
Suburban								5.686*	5.540*	5.372*
New Teacher %								-0.0825	-0.0853	0.000979
MA Teacher %								-0.00832	-0.00921	-0.0667
Medium School								2.255	2.282	2.153
Large School								3.397	3.262	3.250
NDI x Parent Income									0.0327*	0.0277
NAI x Parent Income									-0.00335	-0.0126
MA Degree Teacher % x Parent Income										0.00150
New Teacher % x Parent Income										-0.00161
Constant	62.77***	59.53***	26.39	21.47	-15.69	4.080	3.100	-2.654	-2.721	0.587
Rho (ICC)	0.0673	0.0559	0.0413	0.037	0.0317	0.0378	0.0267	0.0217	0.0221	0.0214
<i>Comparison to previous model</i>										
Chi-square for Wald Test		6.30*	142.39**	6.85**	88.04**	31.82**	21.16**	24.88**	6.70*	5.46

Table 3: Sex Differences in Contextual Effects (Female N = 3,226, Male N = 2,664)

	Model 6		Model 7		Model 8		Model 9	
	Female	Male	Female	Male	Female	Male	Female	Male
Parent Income	0.00783	0.0245	0.008	0.022	0.060	-0.0667	0.00958	-0.0662
NDI Wave I	-2.114**	-1.101	-1.709*	-1.158	-1.238	-3.677***	-1.113	-3.594***
NAI Wave I	0.295	4.423***	0.207	4.173**	1.479	3.214*	1.772	3.381*
Urban			7.726*	4.955	8.253*	4.986	8.080*	4.962
Suburban			9.228**	1.909	9.425**	1.962	9.291**	1.934
New Teacher %			0.017	-0.148	0.008	-0.149	0.0977	-0.102
MA Teacher %			-0.049	0.036	-0.049	0.033	-0.107	0.0231
Medium School			2.629	1.806	2.337	1.924	2.148	1.916
Large School			3.571	3.188	3.181	3.515	3.134	3.569
NDI x Parent Income					-0.010	0.080***	-0.0135	0.0778***
NAI x Parent Income					-0.023	0.021	-0.0278***	0.0173
MA Degree Teacher % x Parent Income							0.00145	0.000307
New Teacher % x Parent Income							-0.00176	-0.000833
Constant	-11.78	11.83	-20.72	10.66	-23.45	16.23	-19.95	16.61
ICC	0.027	0.038	0.018	0.035	0.019	0.036	0.023	0.046
<i>Comparison to previous model</i>								
Chi-2 for Wald Test			18.28**	8.38	6.19*	15.33**	4.22	2.97

+All models adjust for sociodemographic background characteristics and controls, Wave I, III and Wave IV mechanisms shown in Table 2.

Figure 1: Mediating Mechanisms in the Intergenerational Transmission of SES

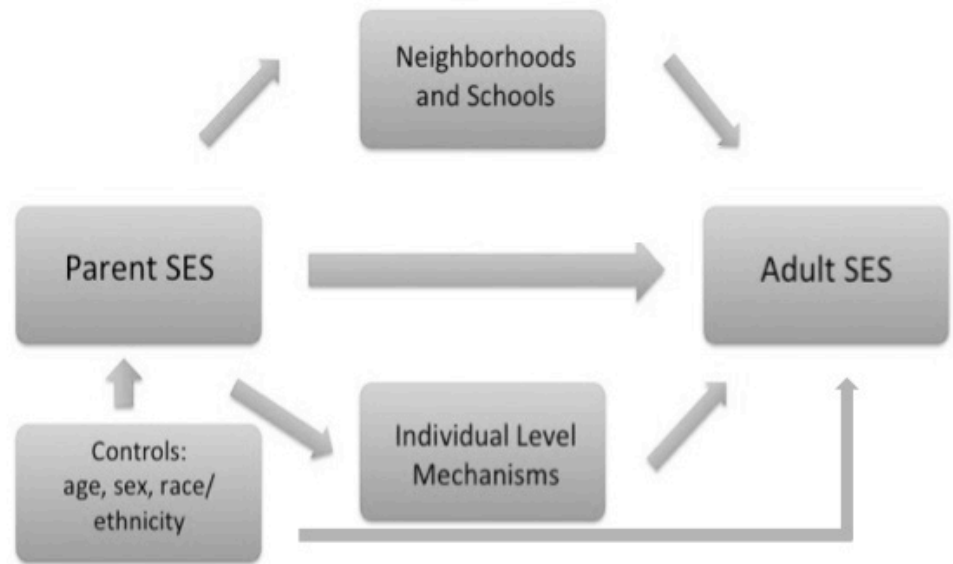


Figure 2: Neighborhoods and Schools also Moderate the Transmission of SES

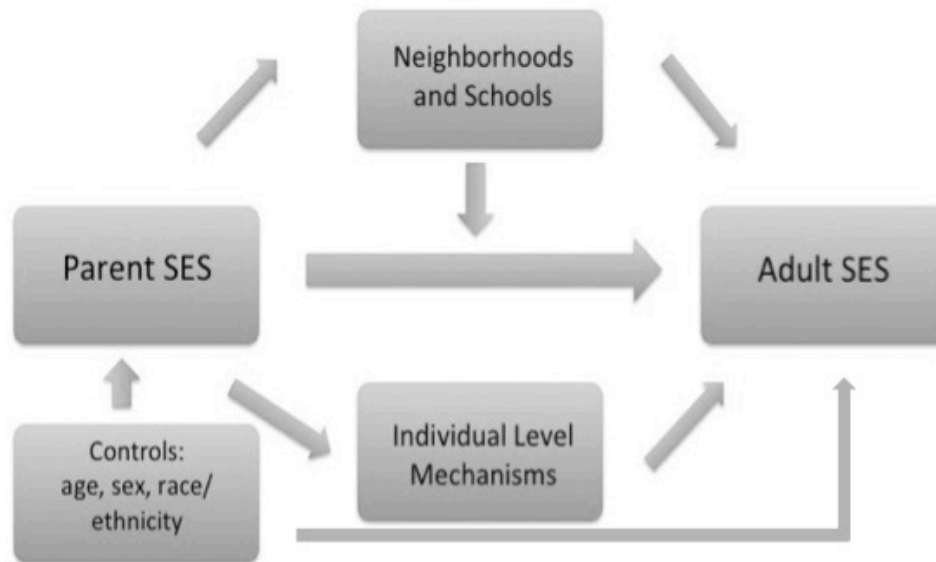


Figure 3: Full Model NDI Interaction Effect on Predicted Adult Income, by Parental Income Quartile and Neighborhood Disadvantage Index

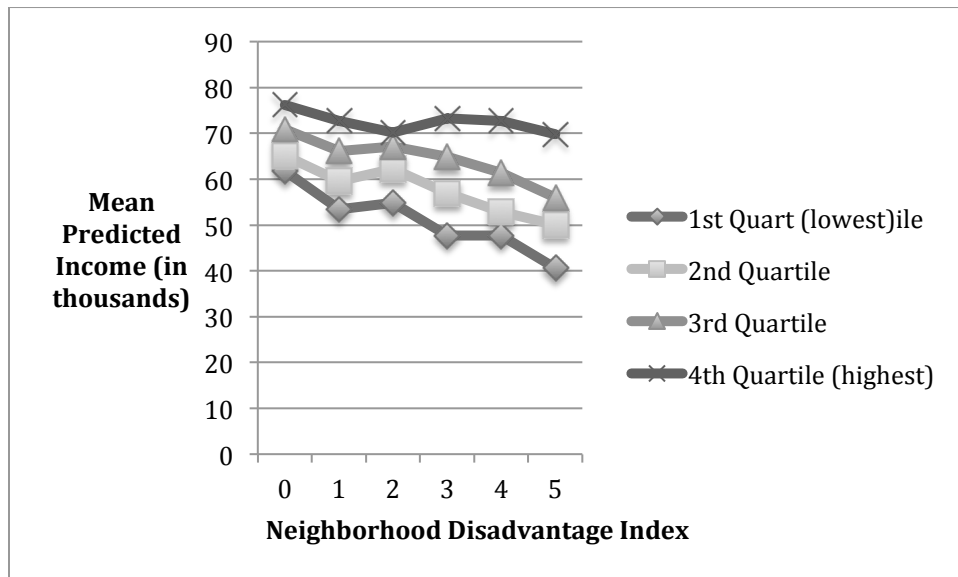


Figure 4: Female NAI Interaction Effect on Predicted Adult Income, by Parental Income Quartile and Neighborhood Advantage Index

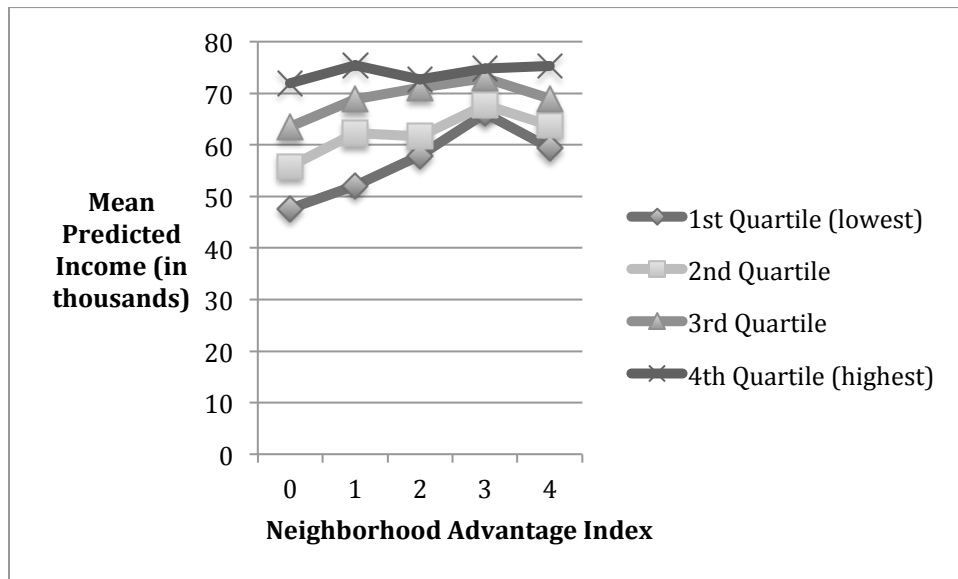
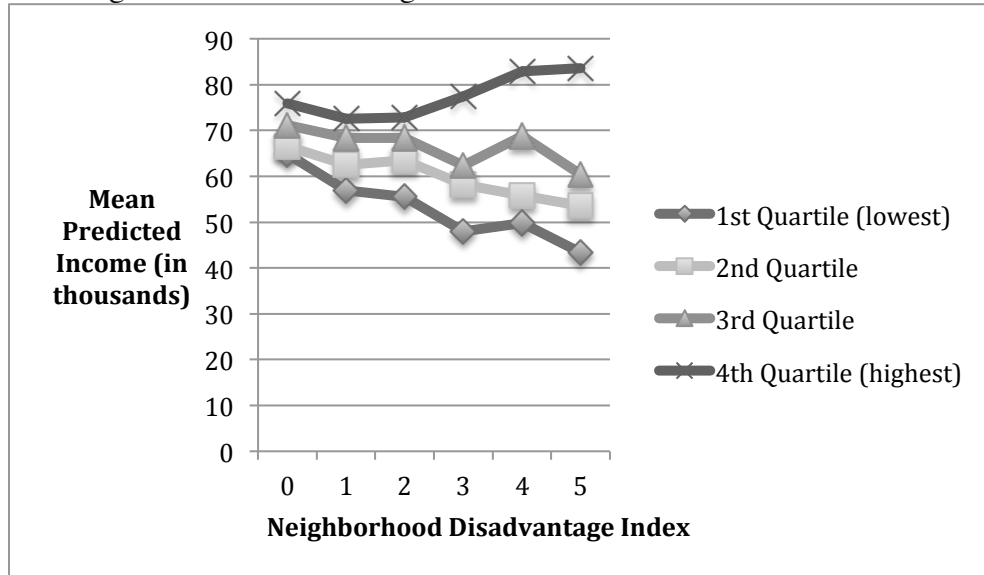


Figure 5: Male NDI Interaction Effect on Predicted Adult Income, by Parental Income Quartile and Neighborhood Disadvantage Index



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