School Districts and Academic Achievement: Socio-Economic Structure and Social Reproduction in Ohio

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ABSTRACT

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Despite ideologies of meritocracy in American education and culture more broadly, inequalities within the educational system have drawn the ire of critics and the attention of scholars. Historic and contemporary processes of uneven economic development have created geographic patterns of race, class, education, and occupational structure. Focusing on the state of Ohio, this study uses data from the 2007-2009 American Community Survey and the Ohio Department of Education to help explain between-district differences in standardized test proficiency. The results find that race and the concentration of family poverty are the most significant predictors of educational achievement. Students classified as economically disadvantaged have substantially higher proficiency levels in wealthier districts, compared to disadvantaged students attending poorer schools, and this gap is wider between third and seventh grade test takers, suggesting a reinforced disadvantage or a “disadvantaged student achievement gap”.

Recent educational policies and suggestions are addressed.

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CHAPTER 1: INTRODUCTION

(One) of the most disheartening experiences for those who grew up in the years when Martin Luther King and Thurgood Marshall were alive is to visit public schools today that bear their names…and to find how many of these schools are bastions of contemporary segregation. (Kozol 2005:22)

Educational inequality has long been of interest to researchers and policymakers. Scholars in the fields of social stratification and inequality have offered numerous explanations for the persistence of inequality. Working both within this broader field but at times independent of it, educational sociologists and educational researchers have long noted a racial and class-based gap in achievement and pointed to various individual and community-level processes as influencing this inequality. Since 1965, federal government policies have attempted to address and reduce this gap. Following No Child Left Behind (NCLB) and its successor program Race to the Top, policymakers have increasingly used standardized testing to measure the progress of schools, districts, and states. While it can be argued that NCLB has made educational inequality and the achievement gap more apparent, critics argue that it has done little to redress these inequities.

Focusing on the state of Ohio, this study uses data from the 2007-2009 American Community Survey and the Ohio Department of Education to explain between-district differences in average proficiencies as mandated by NCLB. Furthermore, this study seeks to re-conceptualize educational inequality within the framework of socio-spatial structure. There is a marked geographic component to inequality, which through
numerous processes, manifests in disparities in local funding, standardized test scores, and graduation rates among other measures of educational opportunities and achievement. Furthermore, economically disadvantaged students in relatively well-off communities tend to do better on standardized tests than disadvantaged students in poorer communities. In other words, poor students in low-income communities appear to do worse than poor students in more well off areas, which can be understood as a double or reinforced pattern of disadvantage.

In giving his 1848 report to the Massachusetts Board of Education, early reformer Horace Mann declared, “Education then, beyond all other devices of human origin, is the great equalizer of the conditions of men – the balance-wheel of the social machinery (sic)”¹ (Myers 1942, Glomm and Ravikumar 2003). Mann believed that a successful republican government required a universal and meritocratic education (Mann 1969); a notion that no matter how low one’s origins, a free and high quality education can provide a vehicle with which to advance in society and become responsible citizens. While this may be widely seen as the cultural ideal, others have noted that the rise of mass public education occurred with the growth of large-scale industrial capitalism, which was by no means meritocratic (Bowles and Gintis 2011). What makes persistent educational inequality so compelling a social problem then, is that it contradicts these widely shared and nostalgic values of equality of opportunity in American society. When

¹ The quote is from secondary sources, it was originally published in *The Twelfth Annual Report to the Secretary of the Massachusetts Board of Education* (1848).
educational opportunity structures differ so radically, it in a sense de-legitimizes meritocracy.

While “equality of opportunity” presents itself as a widely acceptable ideal, it has historically run counter to other values and processes. Localism (in this particular sense - a desire for local control over the education of youth) has also featured prominently in the history of American education. In most states, locally generated property taxes have historically been and remain the principle revenue sources for school districts. Critics such as Jonathan Kozol (1991, 2005) among many others have pointed to this, widespread de facto segregation, and other long-standing social problems in many impoverished urban and rural communities as giving some American children a sub-standard education along with reduced opportunity. As research suggests the growing importance of educational credentials for middle class status and social mobility (Albrecht and Albrecht 2009), endemic inequality in education can perpetuate broader social and economic inequality, rather than act as a meritocratic institution enabling social mobility.

A substantial body of literature over the past 50 years has identified SES, race, and family structure as partially explaining differential achievement in education (Coleman et al. 1966; Lareau 1987, Hedges and Nowell 1999, Roscigno 2000). Furthermore, recent scholars have sought to apply spatial theories to the study of education (Gulson and Symes 2007; Robertson 2010). Trends toward standardization and centralization, in the form of testing and authority, are relatively recent phenomenon in the history of American public education; and while there is substantial criticism of these
trends, they do provide the opportunity for analysis of differential achievement outcomes within states (though often not between them or even longitudinally).

Specifically, No Child Left Behind required states to develop standards and regularly test pupils in reading, writing, mathematics, social studies, and science. Unlike much past research that has focused heavily on individual and family-level factors that influence educational achievement, school-district data can provide a broader window into the geographical component to differential educational achievement. Borrowing from the framework of Agnew (1989) and Lobao, Hooks, and Tickamyer (2007), this thesis takes a “society-in-place” approach in that I seek to critically examine how the social processes of education play out across different geographies. Thus this thesis seeks to reconceptualize theoretical approaches to educational inequality in a spatial context.

Using public school district data from the Ohio Department of Education, as well as American Community Survey estimates, I create a model that helps explain the achievement and attainment gap school districts in terms of NCLB-mandated standardized tests. Studies such as this should be valuable to sociologists of education and policymakers as much state and federal money is allocated in part on the performance of school districts. Analysis of data at the school district level should go some way in helping to see what makes successful districts work, as well as what makes other districts much less successful.

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2 For more on standardized testing, see Au (2007).
R1: Grouping school districts into an urban and income typology, do significant geographic differences emerge in both socio-economic structure and test proficiency?

By organizing school districts within urban, suburban, and rural subgroups, it is worth exploring whether or not significant social structural differences emerge. I hypothesize that urban, suburban, and rural subgroups show significant differences however, they may not independently explain differences if there is substantial variation within these subgroups. Research over the past decade has shown the spread of poverty into suburban areas of metropolitan regions (Holliday and Dwyer 2009, Murphy 2010), adding a new dynamic to the now-old characterization and dichotomy of “urban/poor, suburban/rich”.

R2: Does racial composition of school districts influence average district achievement levels?

I hypothesize that the racial composition of school districts should be significantly related to average graduation rates and proficiency levels. Similarly to past research, the concentration of African-American minority populations should be strongly related to lower test scores (Bankston and Caldas 1996). However, community SES variables should explain most of this race-achievement relationship. Past research has shown that family background or social class mitigates the relationship between race and performance (Roscigno and Ainsworth-Darnell 1999, Ainsworth 2002), though race at times remains independently significantly related (Hedges and Nowell 1999).
R3: Do district-level SES indicators such as median household income, poverty rate, and adult educational attainment mediate the relationship between race and achievement?

I hypothesize that SES, or “community characteristics” variables should explain much of the gap between high and low-performing school districts. Past research has shown substantial racial and class-based differences in not only student achievement but parental involvement and the types of schools students attend (Lareau 1987, Saporito and Sohoni 2007). With continuing patterns of racial and economic residential segregation, poorly performing students are most likely not equally distributed across public schools. More likely, students in the need of the most “help” are disproportionately found in school districts located in poor communities.

R4: Do school-district variables such as expenditures on instructional resources, teacher salaries, and the quality of teachers account for some variation in achievement levels? While non-school environmental factors have long been associated with achievement levels, to what extent, if any, do school-specific factors mediate this relationship?

Critics often point to the unequal funding of schools as examples of a less than meritocratic institution that perpetuates social inequality (Kozol 2005), and some past research has shown that funding can influence achievement indirectly through the ability to hire more teachers, thus creating a lower student-pupil ratio (Wenglinsky 1998, Reeves 2003). The meta-analysis of Greenwald, Hedges and Laine (1996) also found a moderate relationship between a host of resources and educational achievement. I hypothesize that
district organizational variables such as instructional resources as a percent of total expenditures should explain some difference, though perhaps not independently of community-level factors, since many district variables may merely reflect the dynamics of the community structure. The SES of a district will likely influence the financial organization of the school, which may add to the overall explanatory map. However wide variations (for example, a low SES school district with a higher percentage of highly-qualified teachers, or a greater share of its total expenditures devoted to instruction, may buck the trend of low SES – low achievement.

In Chapter 2, I examine the historical processes that have shaped modern public education in the United States. I then introduce sociological theories on education and educational inequality as well as post-modern, Marxist theories of geography. In Chapter 3, I introduce the methodology of the thesis, discussing data obtained from the Ohio Department of Education and the American Community Survey. In addition, I address the methodological shortcomings. Chapter 4 covers the findings of the analysis and in Chapter 5 I elaborate upon these findings, their relationship to past research, and directions for future research. Finally, Chapter 6 offers concluding thoughts.
CHAPTER 2: LITERATURE REVIEW

In this literature review I examine 1) the historical processes that have shaped contemporary school districts, 2) sociological theories of educational inequality, 3) sociological studies of educational opportunity and the achievement gap and 4) some of the trends in educational policy at the state and federal level. Broadly speaking, sociologists studying education have primarily focused on four areas: status attainment, school effects, school organization, and social-psychological processes within the school and classroom (Hallinan 1988). Critical, scholarly attention to educational inequality and outcomes is considered to have begun in the 1960s with the Coleman Report, and has diversified and expanded greatly in the decades since. Inequality within the realm of education can have several points of focus. Scholars examining “educational inequality” have been primarily concerned with a few areas: unequal access to education (Coleman 1966, Walters 2001), classroom and family processes that influence achievement (Lareau 1987, 2002, Rivkin, Hanusek and Kain 2005), subjectivity and aspirations (Willis 1977, Datcher-Loury 1989, McLeod 1991), and finally educational and status attainment. (Ainsworth and Roscigno 2005).

2.1 HISTORICAL PROCESSES

Where one lives and the educational opportunities available are in part a function of larger historical processes of social stratification. The educational inequalities in many ways mirror and contribute to inequalities within society as a whole, despite meritocratic cultural values (Au 2007, Roscigno 1998). Using the spatialized approach of Lefèbvre
(1991), Soja (1980, 1996), Massey (1995), and Harvey (Castree and Gregory, 2006), the places people call home (and who those people are) are in part a product of social relations, in the words of Robertson (2010) they can be seen as “social relations stretched out”. Differences in wealth, income, occupation, and educational attainment across geographic boundaries should not be seen as arbitrary or absolute, but very much a product of social relations, and in particular, uneven capitalist development.

In examining differential school district achievement in a spatial context, scholars should see contemporary origins in historical processes over the last century: post-World War-II desegregation, suburbanization, and economic restructuring. The growth of suburbs following the end of World War II, white flight, and discriminatory policies of redlining (the denial of home loans to minorities deemed “high risk”) have led to a de facto segregation of American neighborhoods and schools (Massey and Denton 1993, Rivkin 1994), though recent evidence suggests a slight trend away from this (U.S. Census Bureau 2011a). Despite segregation being somewhat less pronounced than in the past, it remains largely entrenched for many African-Americans, with research pointing to the diminished opportunities that result from living in impoverished neighborhoods (Massey and Denton 1993). The irony in the dismantling of de jure segregation was the concurrent emergence of middle and upper-middle class, majority-white suburbs and low-income urban neighborhoods that remained disproportionately minority. As schools have historically been funded and managed at the local level, this mid-twentieth century “white flight” had important implications for education because it exacerbated discrepancies in local populations’ ability to fund their districts via property taxes. Then,
beginning in the 1970s, the American economy began a gradual and continual shift away from an industrial-manufacturing base to a post-industrial, service sector base. This economic shift has resulted in some profound socio-spatial changes. The erosion of relatively low-skill work from inner cities created a chronic unemployment problem (Wilson 1996). Furthermore, the erosion of high-wage, relatively low-skill manufacturing jobs made household and individual income much more component on educational attainment, which over time has resulted in what Albrecht and Albrecht (2009) refer to as widening educational income inequality and a spatial component to inequality (Lobao, Hooks, and Tickamyer 2007). Residential housing in the U.S. is more segregated by income today than before this historical period of economic restructuring, and there is some evidence to suggest its impact as raising attainment for high-income children, while similarly lowering it for low-income children (Mayer 2002, Reardon 2011). These social structural changes have led to differential educational and economic opportunity structures for American children (Massey and Denton 1993, Epps 1995, Wilson 1996). Educational author and activist Jonathan Kozol goes as far as to use the term “apartheid” to draw parallels with South Africa’s historical exclusion of the majority-Black population from educational, economic, and political opportunity (Kozol 2005).

Irrespective of the terminology used, racial and class-based residential segregation remains largely entrenched in U.S. cities, with consequences for life outcomes (Reardon 2011). Focusing on school districts in the state of Ohio should illustrate this trend. An examination of racial residential dissimilarity indexes (the extent to which people live in a neighborhood that is mostly their own racial/ethnic group), shows that Ohio has some
of the most segregated metropolitan areas in the nation (Segregation: Dissimilarity Indices 2012).

2.2 THEORIES OF EDUCATIONAL INEQUALITY

Sociological theories of education have developed out of the broad theoretical traditions of functionalism, conflict, and symbolic interactionism (Ballantine and Spade, 2012; Hallinan 2000). Since the mid-twentieth century, functionalist perspectives have largely fallen out of favor, though they have been incorporated into theories rooted in conflict theory (Bowles and Gintis, 2011, Gordon 1984). Early functionalists examined the role education plays in creating a stable society. Émile Durkheim wrote and lectured on several issues concerning education. He theorized schools as places that transferred the moral values of society to the youth (Durkheim 1956). In “The Evolution of Educational Theory” (originally published in 1904), Durkheim analyzed the history of French educational systems. His functionalist and socio-historical approach to education is exemplified in his contention that “no educational subject can be truly understood except by placing it in the context of the institutional development, the evolutionary process, of which it forms a part…”(Durkheim 1956). His early and deeply sociological approach can be seen as an attempt to contextualize education within the broader (and changing) social structure. In the context of education, inequalities between school districts can be understood as products of historical developments not only in the institutions of education, but also economic and social change.

Durkheim ponders the role of education in an industrializing and modernizing society, arguing most fundamentally that educational systems change with the particular
needs of a society (p.69-71). Regarding social class and division, he writes that “If the society has reached a degree of development such that the old divisions of castes and classes can no longer be maintained, it will prescribe an education more uniform at its base” (p.71). While his aforementioned quote refers to society in the abstract, his same piece belies a belief that his own contemporary society demanded an educational system that was meritocratic and serving the ever-increasing division of labor in the burgeoning industrial capitalist system.

“Even though the career of a child would…no longer be predetermined by blind heredity, occupational specialization would not fail to result in a great pedagogical diversity. Each occupation…requires particular aptitudes and specialized knowledge (thus) education, beyond a certain age, can no longer remain the same for all those to whom it applies (p.68).

Later functionalists, such as Talcott Parsons, viewed schools as transitioning children from the close family life to the more impersonal adult world (Parsons 1959). Notably absent from much early functionalist work is the focus on contemporary inequality. Some functionalists saw inequality as to be expected, given that the ideally meritocratic school system rewards those with inherent talent and ability (Ballantine and Spade 2012, Durkheim 1956). Later scholars criticized this functional approach as idealizing the “dream rather than the reality of liberal democracy” (Giroux 1980). Borrowing heavily from the Frankfurt School and neo-Marxist theory, Giroux expanded these critiques and focused more heavily on developing a counter-hegemonic “pedagogy of the opposition” (Giroux 2001).
Social upheaval and the civil rights struggle of the 1960s brought increased scholarly attention to inequalities within the educational system, as well as the fundamental role of education within the broader economic system (Hallinan 2000). While not necessarily contradictory, much work driven from the conflict perspective saw the educational system as a function of the broader capitalist economic order. While Karl Marx wrote little specifically on education, those applying Marxist perspectives to education have used the concepts of social, cultural, and economic reproduction in exploring the relationship between schooling institutions and the broader social structure of advanced capitalist societies (Apple 1982). Furthermore, emphasis has been placed on Antonio Gramsci’s concept of cultural hegemony, in which schools instill the dominant cultural (in most Western contexts, capitalist) beliefs in meritocracy (Giroux 1980, 1982)³. As a fundamental institution within the broader social structure, education’s role is to produce various kinds of workers in the expanding industrial capitalist economic order.

Working from a Marxist and functionalist perspective, Bowles and Gintis’ “correspondence theory” argued that capitalism and power relations lay at the root of economic inequality (2011)⁴. Furthermore, they contended that schools did not minimize overall economic inequality, rather they perpetuate social stratification through “ostensibly meritocratic” means, and that school organization and power relations reflect society’s hierarchical occupational structure (p.13). Harking back to the functional historicism of Durkheim, the authors trace the evolution of the public schooling system in

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³ For more on Marx and education, see Small (2005).
⁴ Originally published in 1976.
America. Beginning with Horace Mann and the Massachusetts public school movement, the authors argue that these meritocratic ideals have historically and contemporaneously clashed with development of a fairly stratified social and economic system. In many places throughout the second half of the nineteenth century, wealthy capitalists backed the centralization and expansion of the public schooling system as a means ensure the new industrial capitalist order being forged. Schooling processes such as tracking and standardized testing were introduced as ways to allocate future workers for different work within a fairly hierarchal occupational structure. In other words, they saw the emerging industrial order as forged not only in steel, but in the schools that would supply its workers.

Seeing Bowles and Gintis’ approach as overly deterministic and economic, Giroux (1980) and others developed resistance theories of education, which posit that educational inequality is not always a passive process. Rejecting a purely deterministic or a “top-down” understanding to the reproduction of society through educational institutions, resistance theorists have suggested that these institutions can serve as places of cultural contestation. Disadvantaged groups can develop ideologies that resist the dominant cultural (and thus schooling) beliefs (Willis 1977, Giroux 20015). Willis’s ethnographic account of working class British youths explored how these youths developed what he called an oppositional “counter-school culture” (1977), which, already

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5 Willis, Giroux, and other resistance work could open the door for conceptualizing the dropout rate as a component of social reproduction if the argument holds that to some extent, leaving secondary school reflects a lack of faith in the educational system – in other words, a belief that it does not benefit them. However, I cannot draw conclusions about student aspirations from this data.
disengaged from middle-class notions of educational attainment, achieve autonomy through overt displays of masculinity. Finally interactionist theories have been applied to micro-level processes in the classroom and at school. Labeling theorists such as Rist (1970) and Wilkens (1976) have suggested that teacher perceptions of student status markers (such as race and class) can impact perceptions of success and influence placement into different educational tracks.

Similarly to Bowles and Gintis, as well as much Marxist scholarship on education, Pierre Bourdieu critiqued the liberal notion of education as an equalizer of opportunity. However where Bowles and Gintis explore history to arrive at their conclusion, Bourdieu developed theoretical processes of social reproduction. His main contention was that through a “series of selection operations. . .the system separates holders of inherited cultural capital from those who lack it”, thus maintaining inequality (Bourdieu 1998). Bourdieu viewed society as stratified by economic capital—the material resources of individuals or groups (money, wealth, property, etc.). But in addition to, and much more important is his concept of cultural capital—the nonmaterial goods, skills, that aid individuals in society and in particular, the educational system. Thus, while a seemingly meritocratic educational system advances only those capable, it in fact serves the function of reproducing the prevailing social order as the system is biased in favor of the upper classes.

Later research has sought to further develop the social reproduction mechanisms theorized by Bourdieu, finding that despite similar

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6 While this thesis does not deal with tracking specifically, it is useful to consider as one of the many processes occurring within schools that this type of data cannot capture.

7 van de Werfhorst (2009) argues that western countries have seen a “massive educational expansion” among middle and working class that seemingly contradicts Bourdieu’s initial theory.
educational aspirations, racial and class-based differences existed in terms of parental involvement (Lareau, 1987, 2002) and benefits children derive from the cultural capital of their parents (Roscigno and Ainsworth-Darnell 1999).

2.2.1 Spatial Approaches to Education

Recent work has applied postmodern theories of space into the study of education and inequality, particularly the work of Henri Lefèbvre, David Harvey, Doreen Massey, and Edward Soja (Gulson and Symes 2007, Robertson 2010). This fits with work by scholars who use spatial discourse in the study of inequality more generally (Lobao, Hooks, and Tickamyer 2007). This section calls attention to the need for a spatial dynamic to the sociology of education and outlines the theories surrounding the social production of space and their potential application to the sociology of education.

Space, and the differences between, may often be taken for granted. The social differences of the places people call home is perhaps most overt in the various books and websites that exist to aid prospective home buyers (“Neighborhood Scout” 2012). Property values and crime rates are considered, as well as the perceived quality of the public schools. The quality of public education in a prospective location may be the deciding factor for families of all means (that is of course, dependent on whether or not they have the means to move in the first place). Whether poor schools lead wealthier families to pay tuition for private schooling, or good schools lead poor families to find the cheapest rent falling within a district’s boundaries, place matters. Since this thesis ultimately focuses on similar processes in different places (achievement across school districts), an introduction to social theories of geography provides a useful conceptual
tool that extends into examining differential educational achievement. In the words of Alexander, Entwisle, and Olson (1999) space can be seen as a “‘proxy’ for economic standing and other dimensions of social advantage or disadvantage” (p.171).

Henri Lefèbvre’s 1976 work, translated into English in 1991 as the “Production of Space”, is seen as ushering in a new theoretical approach to space in the Anglophone academic world. Lefèbvre sought to examine space in a social and historical way. In Lefèbvre’s work, space is not solely geometric and “neutral”, but is inextricably a part of broader social relations. His own and admittedly “tautologous, and hence . . . obvious” contention is that ‘(social) space is a (social) product”’ (p.26). His main contribution for later work is seen as his conceptual triad of spatial practice (perceived space), representations of space (conceived space), and representational space or “lived space”. “Spatial practice/perceived space” refers to production and reproduction of social relations and to an extent, how the individual perceives those spaces. Lefèbvre gives the example of modern spatial practice as a “close association between daily reality (daily routine) and urban reality (the routes and networks which link up the places set aside for work, ‘private’ life, and leisure” (p.38). “Representations of space/conceived space” refers to the “order” imposed by spatial practice and the verbal signs used to understand this order. In some sense, they embody all the symbolic, cultural, and ideological understandings that individuals imbue with spaces. Finally, “representational space/lived space” refers to the lived experiences of people resulting from the relationship between

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8 Unwin (2000) argues that general philosophical and scholarly differences between Anglo-American and French/Continental intellectual traditions have made for a tenuous and incomplete incorporation of Lefèbvre’s work into spatial scholarship in Anglophone countries.
perceived and conceived space. To Lefèbvre, this is how space is “directly lived through its associated images and symbols” (p.39).

American post-modern geographer Edward Soja expanded on Lefèbvre’s work⁹, incorporating more Marxist concepts related to “uneven development” (1980) and hypothesizing a “trialectics of spatiality” (1996). Building from neo-Marxist work, Soja sees space as inextricably linked to the capitalist system of production. Mindful of Marxist scholars’ hesitancy towards a “fetishism” of space, Soja looks at the development of capitalism as in some ways leading to the “overdevelopment” and “underdevelopment” of particular geographies, as a relatively disadvantaged labor reserve in some place is needed by the capitalist class to preserve profit (1980). Soja’s later work combined these various influences to posit his “trialectics of spatiality” idea, referring to the relationship between “space, time, and sociality” (Soja 1996).

British geographers David Harvey (Castree and Gregory 2006) and Doreen Massey (1995) have incorporated Lefèbvre’s work into their neo-Marxian geographic approaches. Harvey (Castree and Gregory 2006) has focused heavily on absolute, relative, and relational approaches to understanding space. Absolute space is seen as “fixed”. It conceptualizes space in terms of boundaries, he writes that “socially, this is the space of private property and other bounded territorial designations (such as states)” (p.272). Views of relative space incorporate the subjectivity of space to the individual. Harvey exemplifies this by pondering the various ways in which one could conceptualize the distance between two places (in terms of miles, time, type and ease of transportation).

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⁹ Soja also incorporated the work of scholars Castells and Ernest Mandel (“Capitalism and Regional Disparities.” 1968).
Finally a relational view of space sees processes (including social processes) as not occurring within space but defining its own spatial frame (p.273). While rooted in classic philosophy and (to an extent) physics, even the most basic propositions of spatial theory add new perspectives for understanding the role of space in society, and more specifically, to processes of reproduction and inequality. Working from a general epistemological approach of seeing space as absolute, relative, and relational, Harvey has been particularly concerned with space in relation to inequality and modern capitalism.

Following his move from the UK to US, his subsequent work *Social Justice in the City* examined the role of urban planning in perpetuating patterns of inequality (Harvey, 2009). British geographer Doreen Massey has shared her contemporaries’ interest in spatial relations under capitalism. Her work “Spatial Divisions of Labour: Social Structures and the Geography of Production” (1984, 1995), and “Space, Place, and Gender” (1994) are seen as contributing greatly to the incorporation of traditional geography into social science and sociological discourses. In “Spatial Divisions of Labour”, Massey focuses on the geographic component of uneven capitalist development in Britain. Similar work is seen in the United States as well. Tickamyer and Duncan (1990), for example, focused on the impact that economic restructuring was having on rural communities in the 1980s, noting that as even as governments and other entities produce policies geared towards bringing in manufacturing (as wages are lower in rural areas), capital flight was nonetheless continuing with the globalization of capitalist production, along with the growth of service sector (and generally low-wage) work. Such uneven development puts rural areas along with urban areas at an acute disadvantage not
only economically, but in terms of education as well. Greater shares of low-wage and unemployed workers might translate into less economic, social, and cultural resources at the community level.

Robertson (2010) addresses some of these scholars and arrives at several important considerations for the sociology of education. At the most basic level, spatial discourse provides sociology with the concept of space as a product of social relations (p.22). Furthermore, she argues the similar epistemologies of Lefèbvre and Harvey can provide a framework to apply towards issues in the sociology of education. Using spatial theories for the study of school districts’ academic achievement, I expand on this, arguing sociology needs an understanding of modern schools and districts, their location, and the people they educate, as products of historical and current social relations. Given that educational policies are meted out by geography (from federal, to state departments, onto local school districts), understanding why some geographies “succeed” and others largely “fail” is a necessary prerequisite to making schools institutions of social mobility (almost universally the stated goal of policymakers). Furthermore, one should see differences in social structural characteristics (poverty, employment structure, adult educational attainment, among others) as emblematic of the “uneven development” of twentieth century and contemporary capitalism. In defining the communities that lie within school district boundaries, space can illuminate differences in the socio-economic structure.

It is with such considerations that I apply these conceptualizations of space into this study. School districts represent *absolute* space in that they are physically separate

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10 Though symbolic of uneven capitalist development, this thesis does not explore longitudinal changes in district-level social structure.
geographic entries. Geography is used here in its neutral sense – by dividing lines over maps, physically separate districts have been created. These spaces are then used in comparison to one another with measurements of the same social processes (learning and academic achievement). Secondly, these school districts represent relative space in that their absolute boundaries have symbolic, cultural, and ideological value in terms of developing one’s identity (for example a youth may see him or herself as a Ridgemont High Tiger or a Jefferson High Bobcat). Schools are but one institution within particular geographies that can shape identity and can be imbued with symbolic, cultural and ideological meaning. Finally, school districts are relational in that they contain a community’s social relations within them. Though there is no way of addressing this in my analysis, it can be conceptualized that schools act as mass cultural institutions that serve all communities regardless of their place within the hierarchy of uneven capitalist development. The same tests are given to students in different districts throughout the state, these tests in turn are used to determine proficiency and direct future resources and policies. Furthermore, applying the theoretical framework of Bourdieu and social capital, space can influence the types of economic, social, and cultural capital available to students. While there is a range and variation of incomes within geographies, persistent patterns should make it so that there is differential geographic access to social, economic, and cultural capital.

2.3 STUDIES OF EDUCATIONAL INEQUALITY

The Coleman Report (1966) is widely seen as the beginnings of critical scholarly attention to inequalities in American education. Following the report, scholarly focus
towards various forms of inequalities (in access/opportunities and outcomes) has grown and diversified considerably (Hallinan 1988, Marsden 2005).

In compliance with Section 402 of the Civil Rights Act of 1964, the U.S. Department of Health, Education, and Welfare commissioned a study to assess the educational opportunities of students from different racial and ethnic backgrounds in the United States. Formally known as “The Equality of Educational Opportunity Study”, it became known as the “Coleman Report” after the principal author, sociologist James S. Coleman. The report addressed four key questions: 1) to what extent racial and ethnic groups remained segregated in public schools; 2) whether equal opportunities were afforded to different students; 3) how much students were learning as defined by performance on standardized tests; and 4) whether there is a relationship between student achievement and the types of schools students attend, or in other words, if there were school effects that influenced student achievement. The report was a massive undertaking and a considerable achievement even by today’s standards. The main findings and Coleman’s later work have influenced educational discourse and research for decades (Murphy 1981, Dika and Singh 2002, Marsden 2005).

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11 The report was undertaken by the U.S. Office of Education, housed within the former Department of Health, Education, and Welfare. The office was reorganized into a full department by law in 1979. The changes can be seen in some ways as symbolic of growing recognition of problems in education, as well as the growth of federal oversight and control of educational policy.

12 The authors examined the following racial and ethnic groups (for some the accepted terminology has changed): Puerto Ricans living in the continental U.S., Indian Americans, Mexican-Americans, Oriental Americans, Negroes, and Majority (Whites). The authors were careful to note that they were not attempting to use these groups in any “anthropological sense” but as groups as they identified themselves and were referred to by others (iii).

13 “Equal opportunities” were measured from a number of criteria such as number of laboratories, the types of courses offered, and the qualifications of teachers, among others.
In answering the first question, the study found that public education remained largely segregated and thus unequal (as interpreted by the landmark Brown v. Board of Education decision in 1954). In assessing whether or not equal opportunities were afforded to students of different racial and ethnic backgrounds, the researchers examined several components of schools: the types of facilities available, the types of programs offered, the characteristics of teachers and administrators, and the social characteristics of the students themselves. In terms of facilities, African-American students had less access to places such as “physics, chemistry, and language laboratories” (p.9), as well as fewer books per pupil in their libraries (p.12). Paralleling access to physical educational laboratories, minority students had less access to college preparatory, vocational, and remedial programs than white students, though there was substantial regional variation. In terms of faculty characteristics, minority students were more likely to attend schools where fewer teachers had a master’s degree, were less experienced, and paid less than schools that were majority white (p.12-15). Though they did not use specifically sociological terminology, the report found substantial SES differences between white and non-white students, with Black students much less likely to have mothers who graduated from high school than white students.

The report examined individual student data and median test scores of schools (which is the essentially the same nature of data employed in this study). The report

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14 This could be seen using Bourdieu’s later work as a crude and partial measure of cultural capital.
15 To measure student achievement, the study employed standardized tests at grades 1, 3, 6, 9, and 12. Reflecting the still-dominant notion of “schools as meritocratic institutions”, the authors were careful to argue that these test were not measuring intelligence, but the general consensus
found that all minority students (except for Asian-Americans on a few tests) had lower median scores than majority whites. African-Americans had the lowest median scores of all minority groups. Furthermore, the report found that the gap in test scores between African-Americans and whites increased with grade level (p.21). Finally, and perhaps most importantly, the report found that when controlling for student SES characteristics, schools themselves accounted for very little of the variation in test scores between racial and ethnic groups. The report also found that minority student achievement seemed to be more affected by the quality of schools than white and Asian achievement. In a pre-Bourdian (and crude) measure of social and cultural capital, the report found that minority pupil achievement seemed to be affected by “educational background and aspirations of the other students in the school” (p.22).

The report produced a substantial discussion within scholarly and policymaking fields as to the best approach to reduce this gap between minority and white achievement (later referred to as the “achievement gap”)17. Busing students across districts to achieve integration was seen as one way to boost minority achievement, but social changes such as white flight (into private schools and suburban public schools), de facto residential segregation, along with growing political opposition in the 1970s, seemed to minimize among educators and policymakers as to what skills were necessary for “getting a good job and moving up to a better one” (p.20).

16 In some sense, most if not all measures of cultural capital are imperfect, for more on the applicability of Bourdieu to educational studies see Grenfell and James (1998) Bourdieu and Education: Acts of Practical Theory.

17 The report also generated substantial criticism among academics over issues mostly concerned with methodology.
any effects busing and integration would have on the achievement gap (Kahlenberg 1996, Andrews 2002).

Following the Coleman Report, decades of research has in one way or another attempted to answer the question “what influences student achievement?” In trying to answer this, sociologists of education have employed a variety of measures to study educational inequality, notably “achievement” in terms of graduation rates, advancement into universities, and performance on standardized tests. Scholars have argued that the emphasis on family background in the Coleman Report and subsequent research, led researchers to ignore school-level processes as having little if any effect on achievement (Hallinan 1988), though there is debate that this initial finding has been misread (Marsden 2005). Nonetheless, there is a substantial body of research that has examined both since the 1960s (Lareau 1987, Roscigno, Tomaskovic-Devey, and Crowley 2006).

2.3.1 Meta-Analyses

While there have been contradictory findings in studies of the relationship between SES and achievement, two major meta-analyses of SES and achievement studies carried out in the last three decades have shown a moderately strong relationship between SES measures and student achievement (White 1982, Sirin 2005). Sirin’s 2005 meta-analysis examined 201 studies on the relationship between SES and academic achievement published between 1990 and 2000. A new meta-analysis was warranted, Sirin argues because factors such as adult educational attainment average family size had changed dramatically since the 1960s and 1970s when scholars first began to focus on inequalities in education. (p.418). His findings suggested a moderate relationship
between SES and achievement at the individual student level, but a stronger relationship at the school level (in terms of aggregate test scores). His findings suggested that not only did students seem to benefit directly from resources at home (economic capital to Bourdieu) but indirectly from the social capital as theorized by Coleman (1988) as well as influencing the types of schools they attend (p.438). Thus even outside the “socio-spatial dialectic” of cultural geographers such as Soja, there is a recognition that place can have social implications.

### 2.3.2 Equality of Opportunity

Hallinan (1988) argues that most work on educational inequality stems from scholarly concern about the ideally meritocratic nature of American society. Presented with discrepancies in resources and attainment, scholars have sought to examine how the educational experience can be socially reproductive and less than meritocratic. Hallinan (1988) divides sociology of education research into four primary areas: 1) equality of educational opportunity and status attainment, 2) educational opportunity and school effects, 3) school and classroom organization, and 4) studies of school and classroom processes (p.252). Noting the need for more incorporation of spatial work into educational research, I combine the field’s interest in educational opportunity and school effects with space.

### 2.3.3 Achievement Gap

Of particular concern to educational reformers, policymakers, and researchers in the last two decades has been the “achievement gap” (Ladson-Billings 2006, Gamoran 2001), referring to the racial and class-based disparities in achievement on standardized
tests. Low-income students and racial and ethnic minorities consistently score lower than their white counterparts (Gamoran 2001). SES, race, residential segregation, and family structure have all been shown to influence the achievement gap in interrelated ways (Lareau 1987, 2002, Roscigno 2000, Ainsworth 2002). Numerous studies have documented this gap at the individual student-level, but the same gap should also be visible at the school district level, as high-poverty and disproportionately minority districts consistently score lower averages of proficiency than their wealthier counterparts. Ainsworth (2002) found that neighborhood characteristics rivaled individual and family characteristics in explaining academic achievement.

Furthermore, critics have long pointed to unequal funding of public school districts as exacerbating inequalities (Kozol 1991, 2005). As property taxes make up the majority of school district revenues, the resources available to school districts are in large part dependent on the local tax base. Educational policy addressed this funding gap beginning in 1965 through “Title I”. This policy allocated federal and state resources to low-income school districts to the extent that per-pupil revenue and expenditures are comparable with or higher than wealthier school districts, and that federal and state revenue make up a greater share of the school districts’ money (Ohio Department of Education 2011). Despite the implementation and continuation of Title I, there is ample evidence to suggest the racial and class-based achievement gap remains (Contreras 2010). It has also been suggested that high poverty schools may devote more resources to areas

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18 The attention to the achievement gap between white and minority (as well as low-income and upper-middle income students) dates back at least as far as the Coleman Report in 1966. However this specific term is a relatively recent invention.
other than education as these schools deal with many more local social problems (Jacques and Brorsen 2002, Roscigno et al. 2006). The relationship between a district’s expenditures and achievement on standardized tests is muddled, though there is some support of indirect effects, through the ability to hire more teachers and thus reduce the student-teacher ratio (Wenglinsky 1998).

Studies of academic achievement then, have a long history of focusing on the intersection of race, class, and its relationship to an achievement gap (Coleman et al. 1966, Lareau 1987, Roscigno 1998). Following Bourdieu’s theory of social reproduction (Bourdieu and Passeron 1977, Bourdieu 1979), educational sociologists in both Europe and the US have sought to refine his original work (Willis 1977, Morrow and Torres 1994, van Zanten 2005), build upon his theoretical framework in ethnographic research (Lareau 1987, 2002), and use components in quantitative studies (Roscigno and Ainsworth-Darnell, 1999)\(^{19}\).

In applying Bourdieu’s theoretical work to the American public educational system, some research has lent credence to the notion that students of high-SES families will inherit the economic, cultural, and social capital of their parents (Lareau 1987). High-SES parents give economic capital in the sense that they have additional resources to invest in their children’s education (private schooling for example). Economic capital gives more freedom of movement (choice of residency and school district). Furthermore, economic capital can translate into cultural capital in that parents can invest in educational resources that better situate their children (books, early learning programs, ...

\(^{19}\) While much qualitative work has found support for Bourdieu’s theory of social reproduction, a cross-national comparison of quantitative studies has not yielded such results (Tzanakis 2011).
etc.), and in cultural markers of the upper classes (Roscigno and Ainsworth-Darnell 1999). Other research has pointed to how local economic opportunity can create a “collective socialization”, namely that, areas with low educational and employment levels might negatively influence students’ educational aspirations (Willis 1977, McLeod 1991, Wilson 1996). In other words, the economic system as experienced by children can influence their perceptions of the educational system, and its relative importance toward their future. When taken at an aggregate level, these various social processes should be at least mildly discernible in some district-level data. Given residential segregation by income and race, school districts will differ markedly in SES measures and in turn, resources available, graduation rates, and average standardized test scores. In other words, elements of social reproduction can be conceptualized with geography in mind.

Using the framework of cultural capital, Lareau’s (1988) ethnographic study of white upper middle-class and white working class and poor students argued that social class position influenced parental involvement with their children’s education. Parents of both classes wanted academic success for their children, however working class and poor parents were less likely to take active roles in their children’s education, compared to upper middle class parents. Teachers in both schools were active in pursuing parental involvement in their children’s education. However, upper-middle class parents were more active in “reinforcing and monitoring the school work of their children” than working class and poor parents (p.78). While not expressly using the language of cultural capital, Lareau (2002) builds on her past work in examining differences between both black and white, upper-middle and working/poor parents. In brief, upper middle class
parents had the economic capital to enroll their children in activities that developed cultural capital, as well as transmitted their own cultural capital (reasoning, language skills, sense of entitlement) to their children. Conversely, working class and poor parents (with far less money) did not enroll their children in numerous activities that could develop cultural capital. Furthermore, Lareau examined profound differences in parents’ interactions with professionals, including school personnel. Upper middle class parents were more likely to have personal relationships with institutional figures such as doctors and school personnel and appeared better equipped to exert influence over these individuals. Working class and poor parents were more likely to have a “generic relationship” with institutional personnel and were more likely to be intimidated or confused in their interactions with these professionals (p.97).

Given patterns of residential segregation (racial and class-based), it is likely capital-differences are manifested in geographic patterns across districts. While there is certainly a great degree of variation within districts, it could emerge that some areas have a higher percentage of upper-middle class parents that largely do the processes that help develop cultural capital outlined by Lareau. In other words, the educational and occupational structure of the local adult labor market might influence the amount of economic, social and cultural capital available to both students and parents.

2.4 EDUCATIONAL POLICIES

Since the 1960s, federal, state, and local policies have aimed to equalize funding of local school districts (Title I) and minimize the racial achievement gap (No Child Left Behind, Race to the Top). In Ohio, recent sociological research has been cited as part of
efforts to a make a “third grade guarantee” (Hernandez 2011). This type of policy would require mandatory retention for students who do not pass third grade reading proficiency tests (along with a targeted intervention-style approach for those children).

In the last decade, policies such as No Child Left Behind (NCLB) have been implemented to address this achievement gap, though critics have pointed to numerous shortcomings of the laws—namely the system of rewards and sanctioning that punishes under-performing schools, state manipulation of test figures, and various pedagogical changes (Au 2007, Hursh 2007). NCLB represented a dramatic increase in the role of the federal government in primary and secondary education in the United States (Shaul and Ganson 2005). The act required school districts to meet achievement benchmarks (through devising thresholds of what constituted “adequate yearly progress”) via standardized tests of core subjects. Some federal money was allocated to support districts that improved their test scores, while districts that continued to lack progress risk losing state and federal resources. The act called for 100 percent test proficiency by 2014, which many scoffed at as an impossible and impractical goal (Haas, Wilson, Cobb, and Rallis 2005). Critics pointed early on that the lowest performing school districts generally served low-income students (Ladson-Billings 2006, Hursh 2007), and that not enough resources were provided to address the multitude of factors influencing this gap. The federal approach of NCLB has led some sociologists of education to condemn it as “sociology ignored” (Karen 2005).

The successor to NCLB at the federal level has been Race to the Top, which essentially offers incentives for states to devise their own policies to address this
continuing achievement and attainment gap. The federal government allocated $400 million to the state of Ohio to develop policies that reduce the achievement gap. By 2014, the program calls for reducing the gap in white and non-white graduation rates and standardized testing by half.
CHAPTER 3: DATA AND METHODS

3.1 DATA COLLECTION

To examine my research questions I collected secondary data from two federal and state governmental sources. Socio-economic and demographic data on school districts was collected from the U.S. Census Bureau’s American Community Survey 2007-2009 3-year estimates\(^{20}\). Data on school district performance, revenue, expenditures, and teachers for the years 2007-2008 and 2008-2009 come from the Ohio Department of Education’s Power-User Reports available from the department’s Web site\(^{21}\). The ACS’s 3-year estimates only produce figures for selected geographies with populations over 20,000. Thus, of Ohio’s 609 public city, local, and exempted village school districts, only 152 had the complementary ACS data, making the final sample size 152 school districts. Data from these two primary sources were then merged into a single database. The ACS data are estimates, and for some variables the margin of error is troublingly high. Nonetheless, the data is sufficient for empirical analysis. In some ways, the data can be seen as a snapshot of local social structure and public education in the late 2000s.

Ohio was chosen for two reasons. First, Ohio has historically been seen as a snapshot of the entire country. Politically the state is considered a “bellwether” or swing state, in a somewhat geographically polarized country. Economically, the state is also

\(^{20}\) Much of the 2010 Census data was unavailable at the time.
\(^{21}\) The Ohio Department of Education Power-User Reports can be accessed at: http://ilrc.ode.state.oh.us/Power_Users.asp.
considered to mirror the nation as it has large metropolitan areas regarded as part of the nation’s Midwestern “rust belt”, as well as largely rural Appalachian counties in the southern and eastern part of the state. It should be noted however, that Ohio now differs from national averages more than other states (lower rates of adult college education and a greater share of workers employed in manufacturing). Educational author and activist Jonathan Kozol focused on the state in his *Savage Inequalities* (1991) to highlight a national problem of wide discrepancies in resources between public schools. Secondly and for personal reasons, I’ve lived and traveled throughout the state and know it much more intimately (for better or worse) than any other place in the United States or the world.

3.2 MEASUREMENT

The dependent variables are measures of educational achievement. Educational achievement is most often conceptualized as advancing through the stages of the American schooling structure (performance on tests, graduation, advancement into college, etc.) and I capture the early stages of that in this analysis. Thus the dependent variables are the percent of students proficient in standardized tests at grades three and seven. Furthermore, I explore the standardized test measures for the percentage of students classified as “disadvantaged” by school districts (those receiving free or reduced-price lunches). While there are ample and justifiable criticisms of proficiency tests (Au 2007, Bracey 2006), they are worth exploring given the great emphasis that federal and state policies have placed on them. Table 3.1 displays a summary table of the main variables analyzed.
3.3 DEPENDENT VARIABLES

I use the percentage of students who are at or above proficiency on 3rd grade Reading tests as an early measure of educational achievement. Past research has shown racial and class-based disadvantages in literacy and vocabulary begin early and that these differences are shown in standardized tests as early as kindergarten (Epps 1995). The third grade is important conceptually, methodologically, and politically relevant. Conceptually, the third grade is seen by as the period when one begins to shift from “learning to read” to “reading to learn”, and the point at which curriculum begins to shift and reflect this (Duke, Bennett-Armistead, and Roberts 2002), so proficiency data will give a snapshot of that district’s relative reading ability at a crucial age.

Methodologically, grade three is the lowest grade level data available from the ODE, so while not capturing the youngest cohort of students that other studies have used, racial and class-based differences should remain apparent and significant (of course at the generalized, community level, rather than individual or family level). Finally, recent proposals in the state of Ohio have called for a “third grade guarantee” that students must be proficient at reading at the third grade level in order to advance into the fourth grade (National Public Radio – State Impact 2012).

I use percentage of students who are at or above proficiency on 7th grade Reading tests as a later measure of educational achievement. Of course, this data is not longitudinal, so this is a cohort four years older than the 3rd graders in the year these tests were administered (2007-2008 school year). Nonetheless, seventh grade data should still help explore basic trends in the achievement gap. Conceptually, it captures reading
proficiency typically a year after students complete their primary education (elementary school).

*Disadvantaged student variables* are measures of the dependent variables specifically applied to students classified as “economically disadvantaged” (the criteria being receiving free or reduced-price lunches). While the same “yardstick of disadvantage” is used for all school districts, differences in achievement between poor students in poor, middle class, or wealthy districts might lend credence to a *double or reinforced disadvantage*. It is hypothesized that poor students in wealthier school districts, aided by wealthier classmates, well-funded schools, and minimal social problems associated with impoverished communities, will fare better on average than poor students in poor districts. In this sense, it could be that the cultural, social, and economic capital of the community mitigates the poor student-poor performance relationship.

3.4 INDEPENDENT VARIABLES

I capture the socio-economic status of the communities located within the boundaries of school districts. SES has in past research shown to be a moderately strong explanatory predictor in terms of educational achievement (Hedges and Nowell 1999, Roscigno 2000, Sirin 2005). Beyond the median income level of residents, I specifically explore the levels of adult educational attainment (often used as an alternative SES), as a way to explore the cultural capital of residents. Furthermore, I explore the differences in economic structure of the districts, in terms of the percent of the labor force employed in various types of occupations and industries.
3.5 SOCIO-ECONOMIC STRUCTURAL MEASURES

I use *percentage of the population over 25 with a bachelor’s degree* to measure cultural capital. Bourdieu’s concepts of cultural capital, habitus, and social reproduction have been conceptualized as family-level processes. Families transfer the cultural “know-how” to subsequent generations. District-level data then, cannot directly measure family or individual-level processes. However, if geographic patterns of cultural capital and social reproduction exist, then educational attainment of the adult population can serve as a measure of a “community” or “geographic-level” cultural capital, if it holds that high educational levels will capture those parents who send their children to the public schools.

The *percentage of residents who are Black or African-American* is a measure of the racial composition of residents in the districts. Considering persistent patterns of residential segregation and race’s continued correlation with SES, examining racial differences remains important. Furthermore, racial measures are needed to address past scholarly work that shows independent effects of race on achievement (Epps 1995)\(^\text{22}\).

The *percentage of female-headed households with dependent children* as well as those *whose income fell below the poverty rate* are measures capturing the scope of single motherhood within geographies, and the poverty of this family subgroup. Past research has shown that single parenthood can have a negative impact on children’s educational

\(^{22}\) A measure of the Hispanic/Latino population was considered but Ohio’s Latino population falls well below the national average at 3.1 percent compared to 16 percent (U.S. Census Bureau 2011b).
achievement, though racial and ethnic differences emerge, in some cases showing a positive influence on test scores (Kao and Thompson 2003).

The \textit{relative family poverty rate} was calculated from the ACS family income group categories. Those families earning less than $10,000 annually, along with those earning between $10,000 and $14,999, and those between $15,000 and $24,999 were added together to see the total proportion of all families living with less than $25,000 each year. Since income inequality measures such as the Gini coefficient cannot be obtained, and median income statistics will not speak to the range of incomes, this measure will capture the relative concentration of low-income families\textsuperscript{23}.

The \textit{percentage of the civilian population employed in management, professional, and related occupations} is a measure from the ACS. It is an attempt to examine differences in occupational structure. Given increased residential segregation by income level, it can be hypothesized that the types of occupations that adults (and parents) have will differ by geographic boundary. Links between occupational structure and achievement (accounting for other variables) could lend some support for school-work link theories such as Bourdieu’s social reproduction as well as Bowles and Gintis’ perspective that schools prepare students for work in the labor force (as experienced by their parents and in their communities).

\textsuperscript{23} Relative poverty measures are often calculated as 50\% or 60\% of the median statistic being considered. The median family income was $58,868 based on the state-wide ACS estimate. However the median family income of the 152 school districts included in the study was $66,007. Taken with consideration of the entire state average, this creates a relative poverty measure of roughly 42.5\% of the median family income. If used in consideration of the dataset solely, it creates a relative poverty rate of slightly less than 38\% of the median family income.
3.6 SCHOOL DISTRICT ORGANIZATIONAL MEASURES

*Instructional expenditures as a percent of total* \(^{24}\) is a measure that captures the percent of all expenditures that is used specifically for instruction (salaries of teachers and educational resources). The ODE breaks down expenditures by five types: 1) instructional, 2) administrative, 3) pupil support, 4) staff support, and 5) building (construction and maintenance). Some of these types were originally used as fixed dollar amounts per pupil (ex. Instructional expenditures per pupil), however given state and federal equalization policies that direct money to poor and underperforming schools, a fairly consistent negative relationship emerges (more money per pupil leading to lower achievement).

The *percent of core courses taught by “highly qualified” teachers* captures how qualified the teachers are teaching the core curriculum. All schools in the dataset have at least 90 percent of core courses taught by those deemed “highly qualified”, however it is hypothesized that differences between districts in this category will be related to SES and ultimately, achievement.

The *pupil to teacher ratio* measures the number of students per teacher (at the whole district level). Past research has shown beneficial effects of smaller class sizes on student achievement, specifically at early ages (Greenwald, Hedges, and Laine 1996). Wenglinsky (1998) found that higher levels of per-pupil expenditures were positively associated with achievement through lower pupil to teacher ratios.

\(^{24}\) All school district data is for the 2007-2008 academic year. This is one of two school years that fall within the period of the ACS estimates paired with the data (2007-2009). I considered compiling both school data from 2007-2008 and 2008-2009, then creating averages however not all ODE data was available for the most recent year.
The median teacher salary is the median yearly salary of all teachers in the school district. It is hypothesized that wealthier districts will have the ability to offer higher salaries to teachers, and this wage difference presenting an incentive for better teachers to “go where the money is”. Although, given that teacher salaries generally increase with age, it remains possible that districts with higher median salaries could have a greater proportion of older teachers.

The attendance rate measures the average daily attendance rate of students. This seems to be fairly obvious hypothesis (more students going to school on a daily basis would result in higher achievement), but it remains likely that districts with low attendance rates will primarily exist in areas already identified as low-income and underperforming. When predicting achievement of disadvantaged students, an alternative measure is used (the attendance rate of disadvantaged students). No district in the dataset had perfect attendance, and none had an attendance rate lower than 90 percent, nonetheless these differences could emerge as significant.

In sum, these variables should adequately capture many of the basic measureable processes with school district data. While there are several important limitations, these measures constitute a range of factors that are consistent with past theoretical work and empirical research. Furthermore, the focus on community-level factors represents an incorporation of spatial theory and research into studies of educational inequality. Finally, the focus on achievement for disadvantaged students seems appropriate to examine whether or not educational outcomes vary for low-income students across different districts.
CHAPTER 4: FINDINGS

In this chapter I discuss the results of my data analysis focusing on the relationship between a school district’s SES structure, school organization, and academic achievement. I find that school districts differ significantly in terms of race, community characteristics, and school organization (with the exception of the pupil-to-teacher ratio). Furthermore, results from the regression analysis demonstrate that school organization plays only a small and generally insignificant role in predicting achievement scores, suggesting that schools do little in affecting overall achievement. The percentage of district residents who are Black or African-American and the relative family poverty rate are the strongest predictors of achievement levels.

Descriptive statistics were collected for the main dependent and independent variables and displayed in the comparison of means test (Table 4.3). A correlation matrix is shown in Table 4.1 to illustrate the bivariate relationships of the variables used in the analysis. One particularly noteworthy aspect is the high degree of colinearity between the majority of the measures, excepting many of the school district variables. On the surface, this does not appear to show much evidence that school district factors can have an independent effect. As stated earlier, some school district variables such as expenditures per pupil and local revenue as a percent of total (not shown in analysis) do show significant bivariate relationships with achievement, but conceptually these are

25 Note: Some variables displayed on the correlation matrix, such as disadvantaged students as a % of total student enrollment, are not used in the regression analysis but simply used to give a better picture of the data.
26 Of the 171 bivariate correlations displayed, only 31 (18 percent) were insignificant, and of those all but four were from the school organizational variables.
often merely indirect measures of a community’s relative SES status. Despite this, more than half of the school organizational bivariate relationships were significant.

I address the research questions in order, first focusing on a comparison of means test to examine differences between districts using an urban-income typology developed by the Ohio Department of Education (Typology of Ohio School Districts 2007). To answer the following research questions, I use several linear regression models to examine the effect of SES and school organizational indicators on test proficiency at grades three, seven, and on the graduation tests.

R1: Grouping school districts into an urban and income typology, do significant geographic differences emerge in both socio-economic structure and test proficiency?

4.1 COMPARISON OF MEANS TEST

I explore key variables with the ODE district typology. The ODE devised a typology that grouped districts into seven categories based on their urban/rural classification and some SES measures such as median household income and percentage of labor force employed in professional/administrative occupations. Geographic patterns are apparent through a comparison of means test for the districts. In this section I explore mean differences in the dependent variables of test proficiency, then community characteristics, and finally variables of school organization. Table 4.4 shows the means and standard deviations for three of the seven district types: rural/small town, major

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27 While it is obvious that a typology devised with income levels and occupational statuses would show distinct differences in these categories, it is a useful conceptual tool as the districts grouped together display key similarities while being spatially similar in their location and relation to major urban centers.
urban/high poverty (henceforth referred to as “urban”), and urban/suburban, very low poverty (henceforth referred to as “suburban”). Beyond purely aesthetic reasons (16 columns with 27 rows each would be sensory overload), these three district types capture common structural differences when it comes to conceptualizing space in the context of American communities.

4.2 DEPENDENT VARIABLES

Differences in test proficiency are pronounced. The mean test proficiency level for suburban schools is above 90 percent for grades three and seven. In major urban/high poverty districts, mean test proficiency is 63.1 for third grade and 57.9 for seventh grade. This shows a 20 to 30 percent gap between urban and suburban districts. Rural/small town districts generally fall somewhere in between but closer to suburban, rather than urban districts. When focusing specifically on disadvantaged students, we see that in suburban districts, the proficiency rate is 15 percent higher than urban districts for third grade, and 24.5 percent higher for seventh grade. In other words, a substantial gap exists between poor students in poor districts, and poor students in wealthier districts, and this gap is wider between third and seventh grades. This speaks to the idea of a “reinforced disadvantage”. While this data captures different cohorts of students, poor students seem to do worse when they live in districts where the majority of their peers are also poor, and that gap is more pronounced between the third and seventh grade. Conversely, poor students display higher reading proficiency levels when they attend schools in districts where most students are not poor. Finally, it should be noted that the urban proficiency gap between disadvantaged students and the whole student body is narrower than in the
other district types. This is partially explained by the percentage of disadvantaged students as a percent of the total. The mean percent for rural/small town districts is 19.6, in suburban districts it is 9.6, and in urban districts that figure is 70.7 percent.

4.3 COMMUNITY CHARACTERISTICS

By linking ACS data to the ODE district typology, we see divergent patterns in socio-economic and demographic structure. Urban household and family incomes are less than half of what they are in suburban districts. Looking at the main SES variable considered, the relative family poverty rate, we see that this rate is highest in urban districts at 30.7 percent, lowest in suburban districts at 5.9 percent, and slightly higher in rural/small town districts, at 8.3 percent. This poverty statistic is closely mimicked by the proportion of Black or African-American residents. Again, urban districts have a mean Black population of 31.5 percent, whereas the mean Black population of suburban districts is 5.7 percent. It is lowest in the rural/small town districts (3.4 percent).

Examining the poverty rate of female-headed families, we see a familiar pattern as the mean poverty level for this family group is 51.8 percent in urban districts, while less than half that in suburban and rural/small town districts. What emerges here is a distinct concentration of poverty and a substantial African-American population in these major urban districts. Certainly there is variation, with some districts classified as suburban displaying comparable levels of poverty with urban areas. Nonetheless, the concentration of African-American populations in urban school districts is highly correlated with the relative family poverty.
In examining adult educational attainment and occupational structure, this general pattern of disadvantage remains. On average, more than half of adults over the age of 25 have at least a four year bachelor’s degree, whereas about a quarter of rural/small town adults, and less than 20 percent of urban adults have bachelor’s degrees. Urban areas show the smallest percentages of the labor force employed in management and professional occupations (at 27.1 and 22.7 percent), compared to suburban areas (52.3 percent). Major urban districts also have the highest percentage of the labor force employed in service occupations (23.2 percent) compared to suburban areas (16 percent). Service sector occupations vary substantially in terms of educational prerequisites and wages. Nonetheless, if it holds that service sector occupations are generally lower wage, then these types of jobs could have a negative relationship to achievement. While these differences may seem small, they remain significant and lend credence to a differential occupational and educational structure. High incomes and greater levels of adult educational attainment are disproportionally concentrated in these areas.

It should be noted that rural areas already having been identified as high-poverty areas (not displayed), also have the second lowest household and family income levels. Rural, low-income areas have the lowest mean percentage of the population with a bachelor’s degree (10.2 percent). Major urban areas with very high poverty rates actually have a slightly higher percentage of college-educated residents (18.6 percent) than other district types not listed. Many of these major urban districts are also home to universities.

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28 Because of the limited availability of ACS estimates on small areas, only 5 of the total 152 districts fit this “rural/agricultural, high poverty” classification. But for the district to have the relevant ACS data, the population of school-district area must exceed 20,000, so these districts are probably some of the most heavily populated areas that the state still classifies as rural.
and have witnessed residential gentrification projects that have been geared toward bringing highly-educated and high-income individuals to these areas (Bryant and Poitras 2003, Shuler, Kent, and Monroe 1992). Given this, the link between adult educational attainment in the community and reading proficiency in a school district may be less clear.

4.4 SCHOOL DISTRICT ORGANIZATION

On the surface, less dramatic (though still significant) variation is seen between district types in terms of school organization. Though not used in the regression analysis, the revenue variable shows that urban and rural districts generate substantially less local revenue than suburban districts, and this figure makes sense if thought of as an indirect SES measure. Less money in the community overall means less that can be raised to fund schools. Moving into expenditures, urban districts spend more per pupil in terms of instructional, administrative, staff support, and pupil support. A few phenomena are likely influencing this. First, state and federal policies such as Title I have attempted to equalize funding discrepancies by redistributing resources to districts that otherwise lack the funding capability. Secondly, some research has suggested that urban districts devote more resources to areas other than instruction as they deal with more problems than wealthier districts (Jacques and Brorsen 2002, Roscigno, Tomaskovic-Devey, and Crowley 2006). Finally, my data does not include any way to measure cost-of-living differences, so it is at least possible that these differ across districts.

In terms of school organizational variables used in the analysis, seemingly small but significant differences emerge. Urban districts have a mean of 96.77 percent of core
courses taught by highly qualified teachers, compared to 99.68 for rural/small town districts and 99.76 for suburban districts. On average, urban districts devote 3.5 percent less of total expenditures towards instruction compared to suburban districts, which again lends credence to the idea that these areas are dealing with more social problems that require additional resources. Median teacher salaries are lowest in the rural/small town areas, slightly above the mean for the dataset in urban districts, and highest in suburban districts. The only non-significant variable considered was the pupil to teacher ratio.

What emerges is a differential educational, income, and occupational structure between school districts. Low-income, high poverty districts in the major urban areas have lower levels of education, more single-parent families, and more service sector jobs that have a wider variation in wages (and often lower) than other occupations. Low-income areas also generate less local revenue and receive a greater share of their revenue from the state and federal governments than other district types. Rural, high-poverty areas mimic major urban areas in these patterns, the key difference being that these areas lack substantial minority populations. Conversely, high-income suburban areas have the most educated workforces and a greater share of their workforce employed in professional and managerial occupations. While this cannot speak directly to family-level processes in the transmission of social, economic, and cultural capital, the correlations between socio-economic structure and student achievement remain significant. While these area differences are significant, a linear regression model was used to help explain differential achievement on standardized tests.
4.5 LINEAR REGRESSION MODELS

I use linear regression models to help explain differences in educational outcomes and the racial achievement gap. The high degree of co-linearity among many of the variables can make it difficult to extrapolate explanatory processes. Given this and the numerous social structural and school variables.

R2: Does racial composition of school districts influence average district achievement levels?

R3: Do district-level SES indicators such as median household income, poverty rate, and adult educational attainment explain the relationship between race and achievement?

R3: Do school-district variables such as expenditures on instructional resources, teacher salaries, and the quality of teachers account for some variation in achievement levels? While non-school environmental factors have long been associated with achievement levels, to what extent, if any, do school-specific factors mediate this relationship?

In answering these questions, I built two linear regression sequences that predicted a school district’s percent of students at or above proficiency on reading tests for third and seventh grade, as well as predicting proficiency for disadvantaged students.

Model 1 of Table 4.5 shows that the percent of residents who are Black or African-American is strongly correlated and significantly related to proficiency on third grade reading tests. Model 2 adds in community SES measures, showing that the relative family poverty rate is very significant and in the expected direction, but not the other
measures (female-headed households with children in poverty is significant only at the .1 level). The adjusted $r^2$ rises to .732 indicating quite a bit of explained variance. Model 3 introduces school organizational variables, showing that the percentage of highly qualified teachers teaching core courses is a significant predictor in the expected direction, however the explanatory power of the model only increases slightly. Model 4 introduces the overall attendance rate of the school district. When attendance is factored in, the percent of highly qualified teachers teaching core courses is no longer a significant predictor (still significant at the .1 level). Race and relative family poverty remain significant (at the .001 and .05 level, respectively).

Table 4.6 shows the regression results for predicting 7th grade reading proficiency. In Model 1, race is again significant, explaining more than half of the variation in proficiency levels at the bivariate level. Model 2 introduces the community SES variables along with the percent of African-American residents, showing that race, the relative family poverty rate, and the percent of female-headed families with children in poverty are significant. Model 3 introduces the school organizational variables, none of which are shown to be significant, however the percentage of female-headed families in poverty becomes less so. In sum, only race, relative family poverty, and the attendance rate become significant predictors.

Table 4.7 is the regression model for third grade reading proficiency of disadvantaged students. Model 1 again predicts achievement based solely on race. The relationship is significant; however the overall model explains much less ($r^2$ of .272) than previously when measuring reading scores for all students. When community SES
variables are introduced, the relative family poverty rate and the percentage of people employed in service occupations become significant (.01 and .05, respectively). Model 3 introduces the school organizational variables, showing that none are significant predictors (highly qualified teachers are significant at the .1 level). When these school organizational variables are introduced, adult educational attainment becomes significant but not in the expected direction, meaning that higher adult educational attainment seems to become negatively related to achievement. Model 4 introduces the attendance rate of disadvantaged students. When accounting for this, the relative family poverty rate no longer remains significant, however the percentage of people employed in professional occupations becomes almost significant at the .05 level. This could have to do with the fact that professional occupations are directionally related to not only achievement, but also the overall attendance rate of the district. Service occupations become more significant and the percent of highly qualified teachers teaching core courses loses significance. In sum, none of the school organizational variables (save the attendance rate) are predictors of disadvantaged test proficiency, while the SES factors seem to carry much more weight.

Table 4.8 displays the regression results for reading proficiency of disadvantaged students in the seventh grade. Model 1 shows race to be a significant bivariate predictor ($r^2 = .373$). Model 2 introduces community characteristics and again, the relative family poverty rate becomes significant (female-headed families I poverty at the .10 level). When school organizational variables and attendance are introduced in Model 4, instructional expenditures as a percentage of total and the attendance rate becomes near
significant. But in sum, race and relative family poverty remain the only significant predictors, race more so than the family poverty measure.

Overall, these relationships change when predicting disadvantaged student reading proficiency on the graduation tests. Two models (third grade reading and seventh disadvantaged student reading) show near-significant and directional influence of two separate school organization variables, which lends some small iota of support to school effects. However, each model shows a consistently strong relationship between race, relative family poverty, and achievement. tests.
CHAPTER 5: DISCUSSION

In this chapter I elaborate on the results from my analysis, examining links with other research and suggesting directions for future spatial educational research.

Significant differences emerge between districts by comparing the factors such as race, occupational structure and educational attainment. While this underplays the diversity existing within geographies, it suggests a geographically stratified social structure. The regression models show some important general trends. Most fundamentally, various community characteristics play a significant predicting role in all the models. Specifically, the relative family poverty rate and the concentration of African-American residents are the strongest determinants of reading proficiency. School organizational variables (excluding attendance) only play a minor and inconsistent role, showing a significant and directional impact on some but not all models. In many models, the addition of school organizational variables adds very little in terms of the overall explanatory power, again reinforcing past research suggesting a limited impact that educational systems can have on the racial and class-based achievement gap (Ornstein 2010). Disadvantaged students have higher average proficiency levels when they attend schools that predominantly non-poor, compared to disadvantaged students who attend schools in poorer communities. While this should be explored more fully and with other data, this suggests a double or reinforced disadvantage for students who attend poor schools. Disadvantaged students in the wealthiest suburban communities have aggregate
proficiency levels 20 to 30 percent higher than those students in the poorest districts. This could also be conceptualized as a “disadvantaged student achievement gap”.

With regards to community characteristics, the relative family poverty rate matters in all but one model (third grade disadvantaged students). I chose this measure over other income-related variables because conceptually, it seemed the best at capturing SES. By focusing on family rather than household income, it ignores non-family households (which generally have lower median incomes)\(^29\). Race is a significant predictor of achievement in each model. I had expected that the relationship between the percentage of district residents who are Black or African-American would be explained away by other social structural variables; however this is not the case. Subsequent analysis divided the Black or African-American variable into two groups based on the mean percentage (11.54). Space plays an important role here, as 107 out of the 152 districts have an African-American population that is below the mean. In 70 districts, the African-American population is less than 5 percent of the total. Comparing the means of the relative family poverty rate and median family incomes, significant differences emerge between districts with a large Black minority population and those with much smaller populations. In some districts, the African-American population is the majority, and within East Cleveland City Schools (one of the poorest and lowest performing), 94 percent of the population is African-American. It could be that race is so highly correlated with class and other factors influencing educational achievement (but not

\(^{29}\) One potential shortcoming of note here is the implicit assumption that the vast majority of students enrolled within these districts live in family households. I cannot be sure since there was not data available to examine this specifically.
directly addressed in the regression models) that it proves to be a greater explanatory variable on its own, rather than being mediated or explained away by other social structural variables. Subsequent research might separate districts by minority population and examine what other differences emerge and whether or not they seem indirectly related to academic achievement.

Occupational structure also plays an important role in some of the models, though not always as originally hypothesized. The percentage of residents in the labor force employed in management, professional, and related occupations is positively related to test proficiency on one model. That more direct support for this did not materialize was not expected, but perhaps not entirely surprising. Much separates the transmission of cultural capital from parent to child (Lareau 1999) from occupational structure and educational achievement at the aggregate, macro-level. Saporito and Sahoni (2007) found a greater concentration of poverty in schools than would be expected given the district’s boundaries, suggesting those with the means to send their children to private schools. Thus the percentage of those with high-income and high status occupations may not matter as much, since it remains possible that many of these parents do not enroll their children in the public schools being used in the analysis. Given that private school enrollment could not be addressed in this analysis, it remains possible that even in high-income districts, a substantial portion of parents choose to enroll their children in private schools. Recent analysis has shown that the achievement gap between private and public school students remain (Carbonaro and Covay 2010). Furthermore, districts with a relatively high concentration of these types of occupations could also have a different
subset of the population in poverty and displaying relatively low test proficiency. So that even one moderate link between professional occupations and test proficiency emerges does lend partial support for school-work linkages and general social reproduction, though this should be teased out more thoroughly in future research.

Conversely, service occupations show a fairly consistent link with educational achievement, though not always in the expected direction. It should be noted that there are two key outlying districts that are wealthy, suburban, and have service occupation percentages well above 60 percent, whereas the next closest district has less than 35 percent. One of these districts also reports 100 percent reading proficiency of seventh grade students who are disadvantaged (several districts report 100 percent test proficiency of disadvantaged students for different tests). When I excluded these cases the relationships between service occupations generally returned to the being in the negative direction but no longer significant. While still significant and in the expected direction at the bivariate level for most dependent variables, when used in addition to the other variables, its relationship becomes less clear. It would be worthwhile for future research to examine school-work linkages with specific regard to low-wage service sector parents, since low-wage work might be associated with factors like parental involvement (Bogenschneider 1997). The fact that service sector occupations is a broad employment term makes it difficult to separate low-income service work from high and moderate-income service work.

Adult educational attainment in the district played an inconsistent role in influencing achievement. For predicting the reading scores of disadvantaged students in
the third grade, it is actually a significant negative predictor. While not what I expected, this is not entirely surprising. Similarly to the occupational measures, some of these lowest-performing districts also have relatively high levels of adult educational attainment. Many districts that cover large urban centers are also home to colleges and universities, in which case an aggregate measure of the cultural capital of residents would only indirectly and partially be related to cultural capital transmission from one generation to the next.

With regards to school organizational variables, far fewer significant effects are observed. Instructional resources show a moderate influence on test results for disadvantaged students on the model predicting seventh grade disadvantaged student proficiency. The percent of core courses taught by highly qualified teachers shows near significance in one model. Referring back to the comparison of means test, the wider standard deviation and lower overall mean of highly qualified teachers in major urban areas may be playing some modest role in overall achievement. Though not used in this analysis, major urban/high poverty districts also displayed trends with the converse figure: showing higher percentages of core courses taught by teachers with temporary qualifications. This may be reflected in part by programs such as “Teach for America” among others that plant recent college graduates (and generally less experienced and qualified teachers) in districts already identified as troubled. It could also be reflective of the relative inability of poorer districts to attract highly qualified teachers (Jacobs 2007). Based on the results, one simple policy suggestion would be to work towards bringing in more highly-qualified teachers to low-performing schools in urban areas.
Overall, the models predicting disadvantaged student test proficiency have less explanatory power than the models predicting proficiency for the whole school district, but seem to show more effects of occupational structure on achievement. Future research should explore educational processes for disadvantaged students in both poor and wealthier school districts. Further analysis might tease out effects of or find support for theories of social or cultural capital, as disadvantaged students in wealthier districts benefit from the material and cultural resources of their wealthier peers.

That disadvantaged students have lower proficiency rates in high-poverty districts may seem obvious on the surface, but future research should examine these educational outcomes as the scholarly literature is scant on differential outcomes for disadvantaged students. Exactly “why” these students tend to do better on tests of academic achievement needs to be explored in future research. Theories of social capital (Coleman 1988, Portes 1998) might help explain how the networks and resources available to disadvantaged students in wealthier schools might give them the added “boost” in terms of academic achievement. Furthermore, the networks and types of capital negatively associated with academic achievement are likely to be much less prevalent in wealthier communities. Such research, while beyond the scope of this study, might illuminate how social, cultural and economic capital is utilized by poor students in different places. Finally, research on subjectivity and student aspirations might further explain this phenomenon. Past work on aspirations already suggests that students in impoverished communities may feel that they have less to gain from schooling than their middle and upper class peers (Coleman et al. 1966, Willis 1977, McLeod 1991). While it may be difficult to tie research on
aspirations to aggregate district-level data, it could mediate the general SES-achievement relationship (along with stronger measures of social, economic, and cultural capital).

Some important considerations are drawn for educational policies. Seeing how districts differ so remarkably in terms of social structure and to a much lesser extent, school organization, policymakers should not expect rapid transformation in proficiency scores by focusing on schools independently of their communities. By understanding that a fairly economically stratified social structure has resulted out of processes of uneven development across geographies, some students (and schools the schools that serve them) are at an acute disadvantage. Nonetheless, using the same yardstick to measure student achievement is certainly warranted if the desired goals are to identify “troubled districts” as well as standardized curriculum (what is considered “legitimate” knowledge). It also seems reasonable that policymakers want to have all students meet a certain level of competency. Recent policy suggestions have included a “third grade guarantee” which would require students to pass third grade proficiency tests or otherwise be retained (National Public Radio - State Impact 2012). While the idea that all third graders should have a certain competency of reading is understandable, it must be recognized that the implementation of such as policy would disproportionately affect students in high-poverty districts. Given that grade retention is generally related to dropping out of school altogether (Alexander, Entwisle, and Horsey 1997, Lee and Burkham 2003), a mandatory retention policy might exacerbate the differential dropout rate between high and low-income students. While policymakers may continue to hold the goal of schools as the “great equalizer” envisioned by Mann, the influence of a stratified social structure
permeates this differential achievement. As evidenced from the results, schools do appear to play some role in overall achievement, but positive changes in social structure in terms of access to jobs and rising incomes would likely do far more in changing achievement over a generation.

Policies addressing this double or reinforced disadvantage would face difficulties. While speculative, the influence of poor schools on poor students is likely to be very different from the influence of wealthier schools on poor students. The Coleman Report noted this a half century ago and one policy suggestion was busing students across districts to create racial integration. The same could be suggested today, though along the lines of an “economic or class integration” similarly to Kahlenberg (2006), though perhaps not through recent policies of school choice. A proposal such as this would likely be opposed on many fronts. Critics may contest it as unconstitutional or as promoting “class warfare”. And many groups (parents and districts to name a few) who benefit from the current educational structure (or perceive something to lose) may mobilize to prevent such sweeping and radical transformations. Even groups who may not directly benefit may protest at the notion of even less local control over how schools are organized and function. Furthermore, given persistent patterns of racial and class-based integration, enforced busing to create economically-diverse student bodies (bodies that represent the true diversity of the American experience) may fail given the fairly stratified structure of race and class across the geographies of districts. Finally, the question would need to be asked whether busing students miles away from their neighborhoods and communities to
grow up and learn with an economically-diverse student body should be a goal of the educational system.
CHAPTER 6: CONCLUSION

This thesis has several aims. First, I draw together theories of educational inequality along with socio-spatial theories of uneven capitalist development. Secondly, I analyze community characteristics and school district data to see if the processes theorized at the individual and family level were manifested at the school district level. My results show that significant geographic differences emerge in terms of race, class, education, and occupational structure. In terms of predicting reading proficiency scores, this relationship remains, though is less clear. Race and family poverty are the best predictors of achievement, whereas the schools themselves appear to play a much more modest role. On the whole, this study shows a snapshot of community characteristics and early reading proficiency in public schools. While public schools ostensibly serve or are open children in all communities, these places differ remarkably in terms of poverty, occupational structure, and adult educational attainment. When it comes to predicting educational achievement, community (and its SES relative to others) matters much more than the schools themselves.

Despite the significance of my findings there are a few limitations noted here and worthy of exploration in future research. For one, by focusing on differences between school districts I do not address inequality within school districts (Au 2007, Condron and Roscigno 2002). Other research has indicated that poverty is more concentrated in large urban public school districts than is indicative of district-level Census data (Saporito and
Sohoni 2007), which suggests that parents with the means to do so send their children to private schools. It would be worthwhile for future research to examine poverty concentration in public schools and whether or not differences in educational aspirations emerge. Furthermore this study does not address seasonal research that has suggested that much variation in racial achievement is owed to processes when school is not in session (Downey, von Hippel and Broh 2004; Alexander, Entwistle, and Olson 2001). Finally, while much theoretical and empirical work has been done at the individual student or family level, district-level data does not speak directly this work. In other words, it cannot draw conclusions about individual, student and family-level processes influence achievement, only how these processes might be manifested in aggregate measures. Nonetheless, this thesis begins to provide a “map” of educational achievement and its relationship to social structure—particularly the spatial inequality dynamic which surprisingly has been largely unaddressed in this literature and I have made important strides toward filling that gap. Recognizing and understanding geographic differences in social and economic structure are an imperative prerequisite for devising policies that could minimize these inequalities.

Research building off this might follow the trend of Saporito and Sahoni (2007) by matching census-tracts to proficiency data on individual schools, rather than the district as a whole. This would also address differences between individual schools in a single district (Condron and Roscigno 2002), as much variation exists even within the boundaries of a particular school district. By having data on individual tracts, more support might be found for the influence of processes of social reproduction, as the wide
variation in community characteristics would be less pronounced at the neighborhood or census tract level. In addition, longitudinal data would be warranted to explore achievement as an individual cohort progresses through grade levels. Longitudinal school data could also be matched with different census estimates to see if patterns emerge between changes in the broader social structure and academic achievement, though several methodological issues would need to be addressed.

In sum, this thesis presents a snapshot of different communities and academic achievement in their public schools in the late 2000s. The analysis shows key differences in social structure and spatial inequality, with high achieving districts generally having the highest incomes and educational levels, along with the highest levels of reading proficiency. While acknowledging the diversity within school districts, findings suggest a geographically and economically stratified social structure that challenges the meritocratic ideals behind a system of education that ultimately reproduces the inequalities it intends to eliminate. Regression analysis shows that the concentration of family poverty and African-American minority populations have the greatest impact in predicting educational achievement. Measures of school organization (aside from the attendance rate) play a much weaker role in predicting overall achievement. Furthermore, differences between disadvantaged students across geographies speaks to a “reinforced disadvantage” of poverty amidst poverty, compared to poverty amidst relative affluence. Future research should expand on this and other directional findings to examine theoretical processes of social reproduction in a geographic context.
REFERENCES


Note: Racial minority concentration and community SES overlap in order to show the high degree of correlation between SES and (African-American populations in the school district dataset. It is hypothesized that both show a strong influence on overall educational achievement. An arrow is drawn from SES and race to school organization to illustrate the conceptualization that these influence the organization of the school district. It is kept separate however, to leave room for any independent effects that these variables might have on overall achievement.