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Public Education in an Era of Privatization: A Spatial Examination of the Relationship Between Charter School Clusters and Gentrification in Washington, D.C. and Brooklyn, NY

Stacey Kerr

University of Miami, s.kerr@umiami.edu

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PUBLIC EDUCATION IN AN ERA OF PRIVATIZATION: A SPATIAL
EXAMINATION OF THE RELATIONSHIP BETWEEN CHARTER SCHOOL
CLUSTERING AND GENTRIFICATION IN WASHINGTON, D.C. AND
BROOKLYN, NY

By

Stacey Kerr

A THESIS

Submitted to the Faculty
of the University of Miami
in partial fulfillment of the requirements for
the degree of Master of Arts

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A thesis submitted in partial fulfillment of
the requirements for the degree of
Master of Science

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Stacey L. Kerr

Approved:

Peter Muller, Ph.D.
Professor of Geography
& Regional Studies

Terri Scandura, Ph.D.
Dean of the
Graduate School

Thomas Boswell, Ph.D.
Professor of Geography
& Regional Studies

Joshua Diem, Ph.D.
Professor of Teaching
and Learning

KERR, STACEY

(M.A., Geography and
Regional Studies)
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Public Education in an Era
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Examination of the
Relationship Between Charter
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Gentrification in Washington,
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Brooklyn, NY

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Over the past decade, American public education has undergone a major transformation. Today, corporations, philanthropists, and the federal government promote and fund the charter school movement, which effectively diminishes the role of public education. Although charter schools in the United States were created with the intention of serving underprivileged students, several studies by geographer and education policy specialists have found that some of these schools have become institutions of gentrification and, in turn, establishments that reproduce social class distinctions. This thesis examines the distribution of charter schools in Washington, D.C. and New York's borough of Brooklyn and compares charter school clusters to local spatial trends in gentrification. The

methodology combines spatial, quantitative, and qualitative analyses, specifically a spatial statistical analysis of charter school clustering; a quantitative analysis of census data since 1990; and a qualitative assessment of the literature on gentrification and charter schools as it applies to these study areas. The findings indicate a growing trend in school choice and gentrification as a state-sponsored method of social exclusion, dissolving public systems, and further advancing the neoliberal urban agenda.

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Chapter 1: Introduction

Every time some expert, public official, or advocate declares that our public schools are in crisis, stop, listen, and see what he or she is selling. In the history of American education, crisis talk is cheap. Those who talk crisis usually have a cure that they want to promote, and they prefer to keep us focused on the dimensions of the "crisis" without looking too closely at the proposed cure (Ravitch, 2010a).

Public education in the United States is historically riddled with "crises." The history of the system shows that advocates, officials, and experts alike often succumb to a hysteria surrounding a certain issue, and propose a cure-all for the problem. Today, that crisis is public education as a whole, and the cure-all is school choice. Leading the reform agenda is the implementation of public schools under private governance, also known as charter schools.

Privatization of the American public education system is viewed as the answer to the crisis surrounding democratic governance in public education systems - but what implications does the privatization of a public system, particularly in the form of charter schools, have on school populations and their surrounding urban areas?

The focus of my thesis is on the relationship between education reform and urban restructuring, particularly in the form of charter school creation and gentrification. My study links relevant topics in both education policy and urban geography. Here in Chapter 1, I examine the literature in urban geography that focuses on educational

phenomena, the history of modern education reform, the basics of gentrification, and the relationship between neoliberal urbanism and educational restructuring. The chapter concludes with a discussion of the main research question I pose as well as the data and methodologies that are employed.

Chapter 2 serves as a geographic and spatial statistical analysis of charter school location amid gentrification in Washington, D.C and New York's borough of Brooklyn. It provides maps showcasing the relationship between ongoing education reform movements and city restructuring. The chapter highlights histories of gentrification as well as changing demographics, school populations, school types, and locations.

The final chapter draws conclusions about the future of the relationship between education reform movements, charter school creation, and urban restructuring. It also examines the broad implications of a changing education system and what further studies may come from this research.

1a. The Study of Educational Systems from a Geographic Perspective

Recent literature and research in urban and human geography suggests that geographers are beginning to take notice of the widespread restructuring in capitalist

education sectors in the United States. Thiem (2008) calls for greater attention to be paid to educational phenomena occurring within urban regions. She suggests that there has been "an awakening interest in education" in human geography research. Additionally, this interest has been "coupled with widespread and profound restructuring in the field" which in turn has produced a "possibility of geographic research on formal education." She also ponders the research questions geographers might ask about contemporary education, and how this emerging subdiscipline may be placed within human geography at large.

Thiem's dominant argument is "that the restructuring of education sectors in advanced capitalist political economies can inform discussions of globalization, neoliberalization, and knowledge economy formation." Therefore, in-depth research based on geographic perspectives must be engaged. Furthermore, "because both compulsory schooling and higher education have been implicated in and affected by these processes," developments in either sector might be used to elaborate, evaluate, and refine existing concepts and theories, despite differences between them. Not only does Thiem provide insight that such research would be beneficial to the discipline, she also proposes a research agenda. In

particular, she discusses the need for research on how schools create space and contribute to geographical processes, education-based migrations, uneven distributions of education that (re)produce advantages or disadvantages in places where schooling is produced and consumed, education hubs affecting territorial development, and how the education sector has become a home for a "growing number of autonomous agents of globalization." She discusses how many of these topics have been explored in education policy and sociology, but exhorts geographers to introduce a spatial dimension to these bodies of work (Thiem, 2008).

Although Thiem's article may be considered a seminal statement in advocating for the inclusion of education in human geography, previous studies have already addressed certain educational issues from a spatial perspective. Hankins and Martin (2006) explore specific school types, and how the neoliberalization of current education systems creates stratification in urban populations alongside gentrification, as well as new publicly-funded private spaces in metropolitan Atlanta. Essentially, they found that education systems in the United States have become another arena in which "neoliberal reform has dangled a promise of, and at times, actual opportunity for, increased

local control over the delivery of public education” (Hankins, & Martin, 2006).

Using this ideology and the increased privatization of education systems, nearly anyone may found their own schools based on business and market models. Innovative and trendy schools in an urban area provide a competitive edge, as well as increased marketability of the city center on the global scene (Lipman, 2008). Since the “state can be a critical tool in promoting or encouraging the transformation of inner city neighborhoods,” businesses and local governments now promote the existence of charter schools within their districts to regain the middle-class clientele once lost to typical inner-city neighborhoods (Hankins, 2007). Through this endorsement,

gentrifiers of the 2000s are the beneficiaries of a complex arrangement of state-encouraged investment into inner city neighborhoods that has shifted over time and is now recognizable through a patchwork of public-private partnerships that encourage inner city revitalization (Klaf, & Kwan, 2010).

Through gentrification and the institution of charter schools, class structures within communities are recreated, most often resulting in the displacement of the original resident and public school populations (Hankins, 2007; Slater, Curran, & Lees, 2004; Smith, 1996). Slater et al. (2004) point out that gentrification involves not only the renovation of housing, but also the creation of space for

"a more affluent and very different incoming population" than the longer-term residents of a given neighborhood. As the demographics of the inner-city resident pool changes, the wants and needs of residents change as well. One of these main "needs" is something that the inner city is not historically known for providing: good schools (Hankins, 2007).

As gentrification continues to be a pivotal sector in neoliberalized urban economies, charter schools and their market-oriented foundations logically find their place within these communities. In response to a desire to compete at a national and global level, cities have begun marketing their inner cities as areas with "downtown luxury living with gentrified neighborhoods, as well as new 'innovative' schools in gentrified communities" (Lipman, 2008). Since the inner city is often referred to as a "soft spot" for neoliberal experimentation, creating schools to market new mixed-income development to the middle class has become the norm to legitimate what gentrifiers refer to as a "land grab" (Lipman, 2008). Incoming middle-class populations are attracted to these neighborhoods for their sense of history, authenticity, affordability, and the plethora of services that soon follow a more affluent residential influx. Essentially, a good school in a

gentrified neighborhood has the potential to ground the mobile gentrifiers and keep their money and development in the city center - a strong desire of urban officials, businesses, and other advocates for neoliberal urbanism (Hankins, 2007).

Indeed, the linkage between gentrification and education policy restructuring, particularly in the form of charter school creation, has become a major focus in education policy, and now, increasingly in urban geography. Although grounded in analyses of policy, the effects of charter schools can be viewed through a geographic lens as their influences reflect issues of neoliberalization, space, and social equity within urban systems.

Hankins (2007) specifically explores the implications of charter schools as new community institutions of gentrification in metropolitan Atlanta. She presents a case study for a charter school that may serve as a model of current education policy shifts and gentrification for the United States. Hankins deduces through interview and archival analysis that white, middle-class citizens of Grant Park, a gentrified neighborhood in Atlanta, obtained a charter to open a new charter school in this recently gentrified area, because they did not want their children attending the predominantly black, local public schools.

Then, upon opening the charter school, local school officials (also part of the gentrifying community) established limitations and school boundary zones so that gentrifiers' children dominated the school population. In this production of new space within the neighborhood, they reinforced local social stratification (Hankins, 2007).

Essentially, "the significance and role of education in gentrification processes cannot be generalized," yet it is crucial to produce an examination of cases, especially those affecting interactions between local educational infrastructures and the varying middle-class strategies designed to exploit them (Robson & Butler, 2001). Further study on charter schools as agents of gentrification needs to occur in order to understand if many other existing and proposed charter schools aim to follow the path of the neighborhood studied by Hankins (2007).

Additionally, it is critical to understand what role these schools have played on the changing urban structure of their surrounding neighborhoods. Are charter schools in these areas viewed as a selling feature that provides an edge and increased marketability of the city center on the global competitiveness scale?

Before further examining the relationship between charter schools and gentrification, it is critical to gain

a better understanding of what charter schools are, where they came from, and how they have become such a prominent player in inner-city restructuring. The next section provides a brief history of education reform and its lasting effects on the urban landscape, whereas the subsequent section takes a look at the basic history and effects of gentrification.

1b. The Rise of Charter Schools - A Brief History of Modern Education Reform

The creation of charter schools and the overall school choice movement stems from a major educational crisis in 1983. Under the Reagan administration, the famous National Commission on Excellence in Education report, *A Nation at Risk*, spurred modern education reform movements by decrying that public schools in the United States were failing. According to the report, American students were far behind their peers in comparable advanced nations, so far behind that the very economic and cultural thread of the United States was in jeopardy. Essentially, the document noted that "the educational foundations of society [were] being eroded by a rising tide of mediocrity that [threatened] our very future as a Nation and a people" (Harvey, 1983).

A Nation at Risk not only highlighted the faults in America's 1980s era public school system, but also called

for reform mechanisms to ensure a measurable improvement in student achievement. Many educators and politicians alike saw the document as apocalyptic, and inferred that the best way to monitor these changes and to save America's students was through the establishment of a business model - privatization and outsourcing of school leadership and testing materials. Outsourcing was seen as the most viable option for improvement since according to *A Nation at Risk*, public education had lost reliability as an institution.

Alternatively, opposition to the reformers believed that money spent on privatization and outsourcing efforts could have been used in the public system so that all schools had an opportunity to be successful. In their opinion, extra resources and money provided to the institutions would have alleviated the need to introduce private corporations to organize and control school affairs (Ravitch, 2010a).

One of the greatest changes to arise since *A Nation at Risk* in the American public system of education is the introduction of charter schools. Charter schools are privately managed but publicly funded K-12 educational institutions. Anyone may apply for a charter to start their own school in the style of their choice, so long as the school does not have a religious affiliation and the

charter is held by a non-profit organization (Hankins & Martin, 2006; Ravitch, 2010a). Although only nonprofits may apply for a charter, the charter school must be operated by a governing board. Subsequently, the governing board of the non-profit "can then subcontract the management of the school to a for-profit Education Management Organization (EMO) or nonprofit Charter Management Organization (CMO)" (Fabricant & Fine, 2012).

Charter schools differ from typical public school institutions because they are not required to follow all state education regulations or bureaucratic procedures. Most of the literature in education policy describes these schools as possessing an increased level of flexibility to experiment with different teaching methods, curriculum content, disciplinary procedures, levels of parental involvement, and acceptance measures (Hankins, 2007; Klaf & Kwan, 2010; Lipman, 2008; Ravitch, 2010a; Richwine, 2010). Since all of these factors are determined by each independent school, "a fragmented and differentiated educational landscape [occurs] within any given school district" (Hankins, & Martin, 2006; Lipman, 2008; Ravitch, 2010a).

As the prevalence of charter schools increases, an ever-growing tension over the use of public funds to create

increasingly private spaces has developed. Since charter schools use public funds for their daily operating costs, the space and services should be available to the public at large. Although most charter schools claim to be accessible to all residents of the neighborhood, many employ limiting admission requirements that create a highly selected school population.

As charter schools gain popularity in places like New York City, school board officials have been known to allow charter schools to open within public school grounds, often locating themselves in a school's gymnasium, cafeteria, or auditorium, reducing the space available for the public schools' participation in subjects such as physical education and art education (Ravitch, 2010b).

Despite disputes over funding, space, and acceptance measures, some charter schools produce promising academic and social results. Many even give students from troubled or impoverished backgrounds a chance to obtain a good education in their own neighborhood. But, because of the lack of governance and standardization found across these schools, many fall to the wayside, providing unsatisfactory educational experiences, or even closing down because of bankruptcy or corruption (Hankins, 2007; Ravitch, 2010a). For example, in 2009, "12.5% of the more than 5,000 charter

schools established in the United States had closed because of financial, management, and academic reasons (Center for Education Reform, 2009; Fabricant & Fine; 2012).

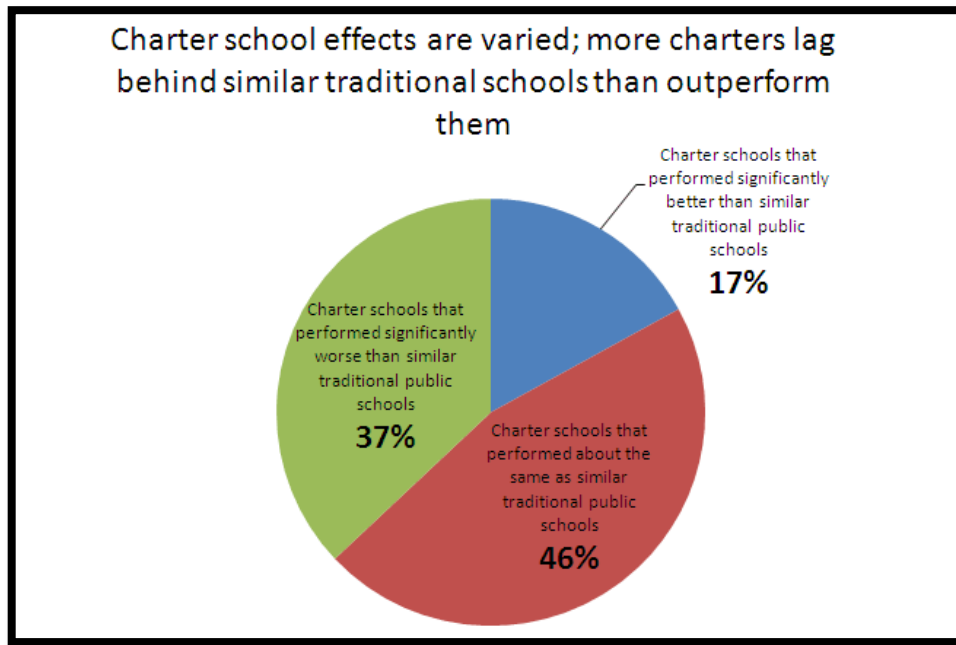


Figure 1: Charter School Performances, Source: Center for Research on Education Outcomes, 2009

In 2009, the Center for Research on Education Outcomes (CREDO) conducted a study across states with active charter legislation and compared overall student performance in math and reading in both public and charter schools. As a whole, CREDO found that while some charter schools outperform traditional public schools, the majority of schools achieve the same, or inferior academic outcomes (see Figure 1). Subsequently, CREDO separated the math from the reading scores to determine state performance in the

individual subjects. They found very mixed results based on student location.

In terms of reading performance, students in charter schools in Arkansas, California, Colorado (Denver), Louisiana, Missouri, and North Carolina significantly outperformed their peers in traditional public schools. In the District of Columbia, Georgia, Illinois (Chicago), and Ohio, there were minimal differences between public and charter school performance. In Arizona, Florida, Minnesota, New Mexico, and Texas, students in traditional public schools significantly outperformed their peers in charter institutions.

Similar results were found concerning student performance in math. Students in charter schools achieved greater scores than their peers in public schools in five states (Arkansas, Colorado (Denver), Illinois (Chicago), Louisiana, and Missouri), whereas charter school performance in the District of Columbia showed little or no difference from traditional public schools. Like the reading results, there were many states in which students from charter schools actually performed more poorly in math assessments than students in public schools. These results were found in Arizona, California, Florida, Georgia, Minnesota, New Mexico, North Carolina, Ohio, and Texas.

Reformers do not often view such major variations in charter school performance negatively, as those in favor of school choice see market mentalities as the only possible mechanism for producing high overall student achievement. They believe that "in an open market, good schools [...] thrive, and bad ones [...] die" (Ravitch, 2010a). Unfortunately, in the realm of K-12 education, results are not produced in this manner. Students are increasingly viewed as commodities, and not as citizens deserving of an equitable education opportunity.

Since 1991, when the first charter school was opened in St. Paul, Minnesota, 39 states plus the District of Columbia and Puerto Rico have enacted legislation allowing the creation of charter schools. The process of charter school creation is driven mostly through state laws, yet recently interest in charter creation at the federal level has skyrocketed. Even though most funding for charter schools does come from state governments, it must be noted that the federal government offers support to charter creation in the form of competitive grant programs.

For the greater part of the past decade, the U.S Department of Education has used the *Charter Schools Program* to allocate hundreds of millions of dollars to states employing charter school legislation. If a state

does not participate in the program or has no charter legislation, money can be allocated directly to charter school operators. Additionally, increased federal funding occurred during 2009 and 2010 under the *Race to the Top* government initiative.

The *Race to the Top* program brought charter school legislation to the forefront of national education policy and discussion. The national initiative offered additional federal funding to state governments for increased charter school creation and reexamination of public education policies. *Race to the Top* began as a part of the *American Recovery and Reinvestment Act* of 2009 and over the course of the 2010 school year, *R2T* allocated nearly \$4.5 billion in grants to state education agencies (Center for Research on Education Outcomes, 2009; Ravitch, 2010a).

Grants were allocated based on performance in a 500-point initiative scale where points were assigned according to state support for charter school creation, use of national standards, teacher and administrator quality assessments, and innovative use of technology. As a result, many states made sweeping changes to their charter legislation so that they would be eligible for the maximum grant dollars possible.

R2T endorsed that "states have no legal limit on the number of charters authorized." This endorsement "accelerated a stampede of states 'lifting the cap' despite an empirically demonstrated inverse relationship between rapidly expanding the number of charter schools and the aspiration to lift student testing outcomes" (Fabricant & Fine, 2012). Essentially, as the number of charter schools increases, supervision grows more lax, and charter performance declines (Dingerson, 2008; Fabricant & Fine, 2012).

With their business-based models, many charter schools have become the new face of free-market mentality in the public realm. They are a representation of the interplay between educational restructuring and urban transformations. Privatization of a public system as important as public education has major implications for future education as well as urban policies and structures because these shifts produce greater inequalities in housing, labor, and racial segregation (Fabricant & Fine, 2012).

Across the United States, predominantly in cities in the midst of urban restructuring, the ultimate goal of charter school creation and legislation has been neglected. Instead of remaining true to the original goal of charter schools - an alternative for impoverished inner-city

residents to failing public schools - cities promote new "innovative" schools to those of a higher socioeconomic status as means of heightening interest in urban centers. If we are to understand the dynamics of (charter) schools as marketing devices for gentrification - or euphemistically speaking, inner-city revitalization - it is important to understand the basics and history of the process and how it has come to be influential in the realm of American public education.

1c. Defining Gentrification

Ruth Glass, a British sociologist, was the first to coin the term "gentrification" in 1964. She defined it as the "movement of middle-class residents into low-income areas of London where they set about rehabilitating working-class and derelict housing." Over the past 40 years, the definition of gentrification has expanded to include many cities across the globe, beyond the original constraints of London, as well as the phenomenon that usually follows: resident displacement. Today, gentrification can be understood as

a class-based process whereby working-class or rundown areas of the city are transformed into middle-class residential areas often with attendant changes in commercial use and resident composition (Hamnett, 2009)

or as "a process of spatial and social differentiation in which a new middle-class segment rejects suburbia for a

consumption-oriented lifestyle in the city center" (Zukin, 1987). Whereas gentrification may be initially welcomed as a mechanism for revitalizing neighborhoods long suffering from disinvestment, "the long-term implications of it may result in once-welcoming residents being eventually forced from their homes and/or their family and friends being unable to live in the area" (Davidson, 2008).

Generally, the process of gentrification occurs over the course of three stages. First, "pioneers," most often artists and other members of the counterculture, "bring a certain aesthetic indemnity to [a] neighborhood that increases its attractiveness to others" (Walks & Maaranen, 2008). Subsequently, rental tenants with generally higher standards of living than the original resident population are attracted to the area. These individuals have the financial capital to renovate the housing stock and land values begin to rise. As a result, the working class residents and even many of the pioneers are displaced as rents increase (Gale, 1979; Gottlieb, 1982; Hankins 2007). In the final stage, middle-class professionals buy property "in the neighborhood as it becomes perceived as a safer investment." Thus,

Gentrification is associated with displacement (direct or indirect) of low-income households and is specifically meant to apply to the transformation of working class communities into spaces for middle class and elite households (Walks & Maaranen, 2008).

Historically, the last stage of gentrification is carried out by single individuals or childless couples, who, upon having children, often return to the suburbs in search of amenities that the inner-city was not often known for providing, such as good schools (Hankins, 2007). Within the past decade alongside school reform movements, parents have had the opportunity to remain in their resettled neighborhood because options beyond the local public schools have been made available.

Davidson (2008) found that gentrifiers are pivotal in establishing a reimagined sense of place as well as involving themselves in the reorganization of neighborhood social welfare provision, like public education. With increasing privatization of the public system, gentrifiers now utilize the privatization of the public education as a means of getting what they want. If this population does not wish to send its children to the local public school, in many states parents now have the option of starting their own school - an action as controversial as gentrification itself.

The study and discussion of gentrification once focused primarily on the negative aspects of the phenomenon. The emphasis of empirical study on gentrification during the 1970s and 1980s was concerned with its effect on existing city neighborhoods, especially the displacement of blue-collar residents. According to Hannigan (1995), urban ecologists tend to downplay the extent of displacement [... while] researchers with a more critical perspective contend that gentrification has been more extensive than the urban ecologists have reported, and that it has caused considerable economic hardship to those who have been displaced.

Today, in many cases, the urban ecological view prevails as the process of gentrification has become a widely promoted, implemented, and favored method of policy-makers to initiate resident-led urban renewal. Gentrification, in turn, has undergone an image makeover; once associated with riots and the forceful resistance of displacement in Tompkins Square Park, New York City (Smith, 1996), it has now found favor in some quarters, particularly in cities that have embraced the ideology of neoliberal urbanism (Davidson, 2008).

1d. The Relationship between Neoliberal Urbanism and Education Reform in Today's Cities

Neoliberal urbanism serves as the ideology used in most of today's cities in the United States. It advocates for market-like efficiencies in political, social, and economic life. Rather than seeing neoliberalism as a new form of economic policy-making, it is more easily viewed as part of an evolving globalized capitalism (Brenner, 2004). As international linkages become more common through globalization, cities in the United States experience a desire to compete at a new level to attract internal investment, more affluent residents, and contests for funding or events from higher levels of government (Gordon, 1999). Neoliberalism, in turn, has created a type of urban entrepreneurialism "typified by interurban competition for economic investments and privatized governance" (Peck, & Tickell, 2002). The state and its infrastructures now manage the shift to privatization under neoliberalism, contracting the traditional philosophy of a separation between market and state (Brenner, 2004).

Throughout the past 20 years, public education systems in the United States have become another arena in which neoliberal urbanism exerts its business-centered ideologies. Although neoliberal urbanism pumps more money into

educational institutions across the United States, it does so in a fragmented and controversial manner. Neoliberalism assumes that business models work in educational system, which is not necessarily the case (Hankins, & Martin, 2006).

Today in the United States, the education system is a victim of an increasingly negative influential neoliberal agenda. With the introduction of charter programs in many states, governments are progressively losing the focus of public schools as the great equalizers in society, and have allowed them to become a fluctuating factor of the market. With the creation of charter programs across many states, government agencies and businesses alike have seen the opportunity to take advantage of the \$550 billion industry that is education. To reap the greatest rewards, privatized education systems shift the focal point of charter creation away from helping unprivileged children to businesses and middle-class gentrifiers who want customized education programs and more marketable inner cities.

As part of the neoliberal agenda, a place's success depends on the productivity, innovativeness and market-orientation of all sectors of the local economy; the creation of charter schools is a natural extension of the ideology into public life (Gordon, 1999). As the government increasingly seeks to distance itself from financially

providing for education systems, "spaces of education, particularly those in urban areas, have been greatly impacted by the streamlining process and continue to be dramatically affected by reductions in public spending and the reshaping of public education to fit free-market ideals of economic success and competitiveness" (Klaf, & Kwan, 2010).

Since the "state can be a critical tool in promoting or encouraging the transformation of inner city neighborhoods," businesses and local governments are increasing the promotion of charter schools to attract a middle-class clientele to these areas (Hankins, 2007).

Through this endorsement,

gentrifiers of the 2000s are the beneficiaries of a complex arrangement of state-encouraged investment into inner city neighborhoods that has shifted over time and is now recognizable through a patchwork of public-private partnerships that encourage inner city revitalization (Klaf, & Kwan, 2010).

Instead of remaining true to the original goal of charter schools, cities promote their schools to more affluent populations to generate greater income in urban centers.

The creation of charter schools as a form of marketing housing developments is also becoming increasingly common. More and more, they are used as a tool for both housing and commercial developers to lure middle-class families into areas that urban and development officials wish to develop

and gentrify. Charter schools not only lure middle-class into the area, but make them stay as well. Essentially, a good school in a neighborhood has the potential to “ground” the mobile gentrifiers and keep their money and development in the city center; a strong desire of urban officials, businesses, and other advocates for neoliberal urbanism (Hankins, 2007).

Charters schools, and the buzz that generally surrounds them, make developments more appealing, therefore increasing sales, and removing any uncertainty of where homebuyers will send their children to school. Many of these charter-centered housing developments are in the city center, thereby reinforcing the idea that charter schools revolve more around a business approach than an equitable education approach.

Not only is the charter school movement complementary to the gentrification of urban centers and the creation of housing developments, it corresponds to the relationship between urban governance, the neoliberal agenda, and metropolitan development. Advocates for charter schools use the influence of neoliberal urban governance to redefine the meaning of public education. The use of “market language is reflected in positive references to choice, freedom and accountability, while state-based education is

characterized as bureaucratic and unresponsive." With this influence, public education begins to stray away from the idea of public good and equity, and moves towards the concern of consumer goods.

The education system now aligns itself with business norms and needs, not that of communities. Essentially, "charter schools reflect the neoliberal trend of finding market-based solutions to social-service provisions, and offering "choice" and "autonomy" to parents and charter-school administrators. Indeed like "privatized" urban governance, charters still rely on state resources (tax money) to accomplish their goals" (Hankins, 2007; Hankins & Martin, 2006).

Spaces of education, particularly those in urban areas, have been greatly impacted by the streamlining process and continue to be dramatically affected by reductions in public spending and the reshaping of public education to fit free-market ideals of economic success and competitiveness. It is now highly visible, and almost undeniable that "contemporary education policy reflects the ideals of a neoliberal agenda (i.e., reform and economic competitiveness)" (Klaf & Kwan, 2010).

1e. Research Question

The increasing privatization of school systems is the greatest threat to American public education as an institution. As a rule, privatization of school systems has increased dramatically since *A Nation at Risk*, and those who speak of public education as the current "crisis" of today seek to diminish, if not obliterate, the role of local school boards. State and national initiatives coincide with the decline of the influence of public schools and public school systems, as charter schools and school choice reflect a neoliberal, business-like agenda.

Although charter schools in the United States were created with the intention of serving underprivileged students, some of these schools have become institutions of gentrification, and in turn, establishments that may reproduce social class (Hankins, 2007; Hankins & Martin, 2006; Dowling, 2009; DeSena, 2009).

Using the Hankins (2007) study of Grant Park as a basis for comparison, I explore gentrified neighborhoods in Washington, D.C, and the New York City borough of Brooklyn. The goal of my study is to examine the relationship between charter school creation and gentrification in Washington, D.C, and Brooklyn, New York.

Unlike Hankins (2007), I look beyond one focused charter school and neighborhood, and explore the broader spectrum in which this phenomenon is taking place. In the study areas, I look at the city as a whole, and then focus in on selected neighborhoods to illustrate the effects of educational and urban restructuring. I look at where gentrification has recently taken place, the location of charter schools, and the relationship between the two phenomena.

My thesis therefore aims to answer the following questions:

1. Are there clusters of charter schools in Washington and Brooklyn? If so, where are they?
2. What are the demographic characteristics of the clusters? (i.e.: established/studied areas of gentrification, distinct income levels, racial features, etc.)
3. Does the neighborhood cluster have a history of gentrification?
4. Is there a relationship between charter schools and gentrification in the study areas?

1f. Data & Methodology

To meet the aims of this study, data were gathered from various government and literary sources. For the

statistical analysis aspect of the study, I used demographic and housing information from the American Communities Survey (2005-2009 figures) as well as Census 2000 on census.gov. The Center for Disease Control website (cdc.gov) provided the 1990 census figures required for the study. Additionally, NeighborhoodInfo DC, in association with The Urban Institute and the Washington DC Local Initiatives Support Corporation (2011), provided a compilation of data from the Census Bureau and the American Communities Survey at the neighborhood cluster level.

Shapefiles for the study areas - community board and neighborhood cluster boundaries, as well as charter school points - were gathered from government data websites, specifically dc.gov for Washington, D.C., and "Bytes of the Big Apple" for Brooklyn, New York. All shapefiles included 2011 data.

In the study areas, I used spatial statistical analysis to examine the clustering of charter schools in relation to established and studied areas of gentrification. In both cities, I started with an average nearest neighbor analysis to determine if the charter schools were clustered.

The nearest neighbor function calculated an index based on the average distance from each point to its nearest neighboring point. Using ArcGIS, the ratio of the

observed mean distance to the expected mean distance is computed, resulting in the nearest neighbor index. In the analysis, "the expected distance is the average distance between neighbors in a hypothetical random distribution. If the index is less than 1, the pattern exhibits clustering; if the index is greater than 1, the trend is toward dispersion or competition" (ArcGIS Resource Center, 2012a). Figures 2 and 4 display the results of the nearest neighbor analysis for charter schools in both Washington and Brooklyn.

In both study areas, there were confirmed instances of charter school clustering. Thus, it was necessary to determine where the specific clusters were located by conducting a cluster and outlier analysis, also known as the Anselin Local Morans I test.

This test was chosen for its ability to identify concentrations of high values. The cluster and outlier analysis uses a set of weighted features to identify clusters of features with similar values. Using the cluster and outlier analysis on ArcGIS, spatial relationships are conceptualized using the inverse distance method, where nearby neighboring features have a greater influence on the result rather than features that are further away. Distances were computed using Euclidean distance, or the

straight-line distance between two points. In my analysis, no standardization of spatial weights was applied. Each feature is then assigned a z-score which signifies statistical significance of clustering. Finally, areas are highlighted where high and low values of points cluster spatially (ArcGIS Resource Center, 2012b).

In my study, I focused on the neighborhood clusters or community boards that had high positive z-score values as indicated by the Anselin Local Morans I test, indicating a high number of charter schools surrounded by neighborhood clusters or community boards of similar values. In the maps featured in Figure 3 and Figure 5, the neighborhood clusters or community boards with high positive clusters of charter schools are highlighted.

Next, I examined the average household income, racial makeup, level of educational attainment, homeownership rates, and house values within the identified clusters of charter schools. For the purpose of analysis, demographic and income comparisons were drawn using 1990 census data, the 2009 American Communities Survey, data from NeighborhoodInfo DC, as well as Brooklyn community information from Bytes of the Big Apple (2011) and NYC.gov (2011).

The starting date of 1990 was chosen to signify a time when gentrification had not been reported for any of the identified neighborhood clusters in Washington or community boards in Brooklyn. These pre-gentrification data are then compared to the most recent data available to highlight the major changes in the makeup of these neighborhood clusters. For monetary data, all values account for inflation at the 2010 level as outlined by the Bureau of Labor Statistics at www.bls.org.

After each neighborhood cluster and community board was examined in terms of demographic and income comparisons, those data were compared to academic studies and citizen reports documenting changes in these neighborhoods. I examined existing literature pertaining to urban restructuring and charter school creation in the specific charter school clusters within the study areas. Using both measures provides a greater understanding of the processes at hand - a certain element of ethnography and personal experience to understand the human reaction to gentrification, as well as statistical data to document these perceived transformations.

Chapter 2: Analysis

The analysis section aims to answer the research questions posed in Chapter 1. The two study areas are treated separated but in similar fashion. For each study area I provide:

1. An overview of the study area's public education system
2. A spatial analysis of charter school locations and clusters
3. A discussion of the neighborhood/community clusters as they relate to the gentrification movement as well as their current demographics and school facilities

2a. An Overview of Public Education in Washington

Washington is home to one of the most dynamic school systems in the United States. Over the past five years, sweeping changes were made to the district's public school system that undeniably made Washington one of the leading examples of current education reform. The most notable change occurred in 2007 when the mayor, Adrian Fenty, relieved the D.C Board of Education of all decision-making power.

In turn, a business model of governance was employed that gave a single leader total control of the school system. Because of Washington's proximity to government

organizations, relatively compact size, diverse student populations, and reputation as an underperforming school district, Michelle Rhee, the first chancellor of D.C. schools, in 2007 was able to make dramatic changes to the public system.

Rhee's first objective was to purge what she referred to as "bad" teachers through a weakened tenure system, and reward "good" teachers through the mechanism of merit pay (Chison Oh, 2010). In Rhee's first year, she fired 79 teachers and 36 principals, removed 15% of office jobs, and closed 23 schools (Bolduan, 2008). The following year, 96 teachers were fired. Then, after hiring 500 new teachers in the spring and summer of 2009, Rhee laid off 266 teachers. Finally, in 2010 she terminated 302 employees - 241 teachers - based on a combination of "poor performance," "ineffectiveness," and a lack of licensing required by the No Child Left Behind legislation (Lewin, 2010). Essentially, the district turned into an experimental ground for some of the most radical changes a public school system has ever witnessed (Ripley, 2008). The result was a fragmented landscape of school performances, types, and public accessibility.

Although Rhee resigned in 2010, her legacy of stringent reform lives on in the public school system in

Washington. Since the beginning of Rhee's work as chancellor, the number of students enrolled in charter schools has risen by nearly 50% (DC Public Charter School Board, 2011). Today, the Public Charter School Board (PCSB) of Washington manages 53 schools on 98 campuses, serving more than 32,000 students (~50% of the total student population), giving Washington the second highest percentage of children in charter schools in the nation after New Orleans. These enrollments however are not necessarily associated with choice - one of the pillars of charter school creation. Many students today enroll in charter schools because they lack a neighborhood public school.

Although charter schools are meant to provide an alternative to a failing public school, or simply an educational institution in an impoverished neighborhood, many students do not have the opportunity to attend a charter school because of restricted admission procedures and/or geographic constraints. An increasingly common occurrence in Washington is the lack of a public institution in many neighborhoods. Natalie Hopkinson, a journalist and mother of two living in Washington, describes the result of the Rhee-based school closures:

My neighborhood's last free-standing middle school was closed in 2008, part of a round of closures by then Mayor Adrian Fenty and his schools chancellor, Michelle Rhee [...] The idea was to introduce competition [...] It effectively created a second education system which now enrolls nearly half the city's public school students. The charters consistently perform worse than the traditional schools, yet they are rarely closed [...]

After Ms. Rhee closed our first neighborhood school, the students were assigned to an elementary school connected to a homeless shelter. Then that closed, and I watched the children get shuffled again. Earlier this year, when we were searching for a middle school for my son, [...] our public options were even grimmer. I could have sent him to one of the newly consolidated kindergarten-to-eighth-grade campuses in my neighborhood, with low test scores and no algebra or foreign languages [...or we] could enter a lottery for a spot in another charter or out-of-boundary middle school, competing against families all over the city (Hopkinson, 2010).

Hopkinson's story is not uncommon among parents in Washington. Although the school district has been lauded for its "success" with charter schools and serves as an example of "what could be" in school systems across the country, the problem remains that students who often need an alternate option for school do not necessarily have access because of strict admission procedures and school location.

In the next section, Figure 3 displays the dispersion of charter schools across Washington. This map is accompanied by a discussion of the clustering of charter schools, and how these clusters are not necessarily located in the city's underserved neighborhoods.

2b. An Analysis of Charter School Locations and Clusters in Washington

The first step in the analysis of charter school clustering in Washington was to map and analyze the basic point pattern. The nearest neighbor analysis was performed using ArcGIS. Figure 2 shows the results:

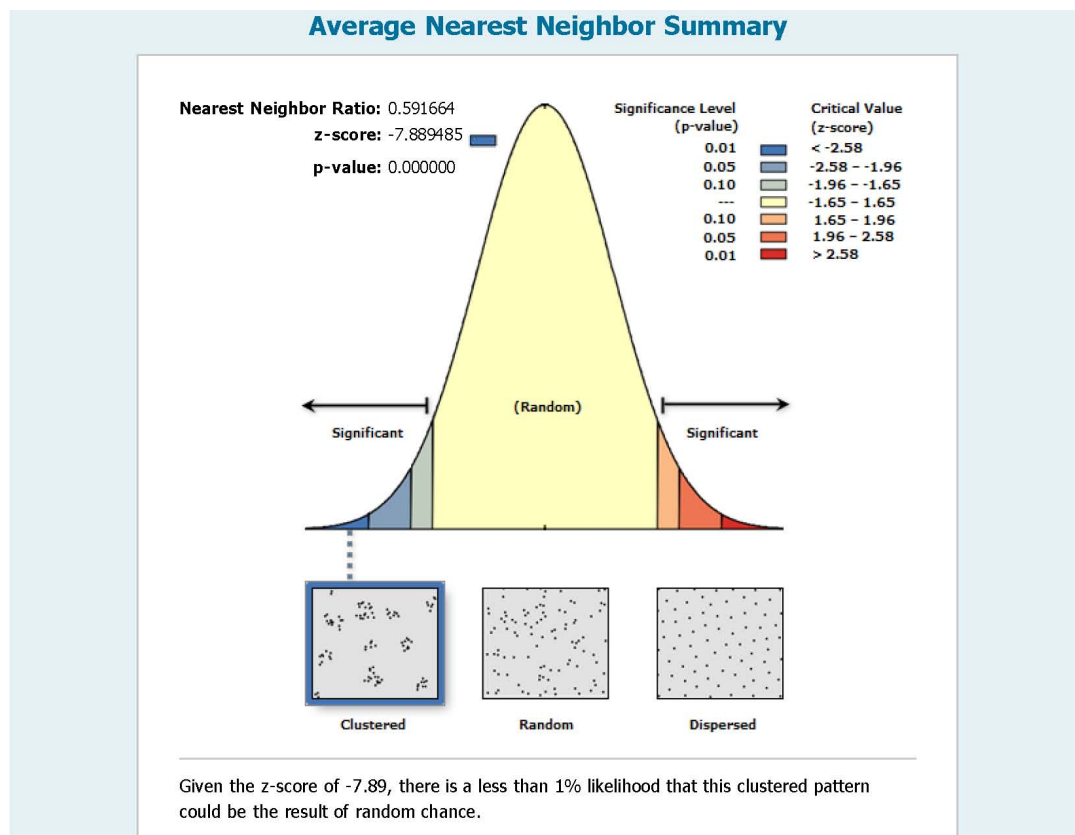


Figure 2: Average Nearest Neighbor Summary for Washington Charter Schools

After conducting the analysis, the nearest neighbor ratio is determined as 0.59, meaning that the point pattern of charter schools is clustered. Furthermore, the average nearest neighbor analysis yields a z-score of -7.89,

indicating a less than a 1% likelihood that the clustered pattern could be random. This result confirms that there is a statistically significant clustering of charter schools in Washington.

The spatial unit that I used to divide the different areas of Washington and identify charter school clusters is a government-established unit known as the "neighborhood cluster." Washington is made up of 39 neighborhood clusters, which include three to five neighborhoods apiece. Washington does not use single neighborhoods as spatial unit because "there is a substantial amount of debate about the boundaries of single neighborhoods and these boundaries tend to change over time even where there is agreement." Neighborhood clusters are the standard unit for budgeting, planning, service delivery, and analysis purposes used by D.C governments (NeighborhoodInfoDC, 2011).

Upon conducting the cluster and outlier analysis for Washington in 2011, three neighborhood clusters were identified that are home to a high number of charter schools: neighborhood clusters 2, 18, and 21.

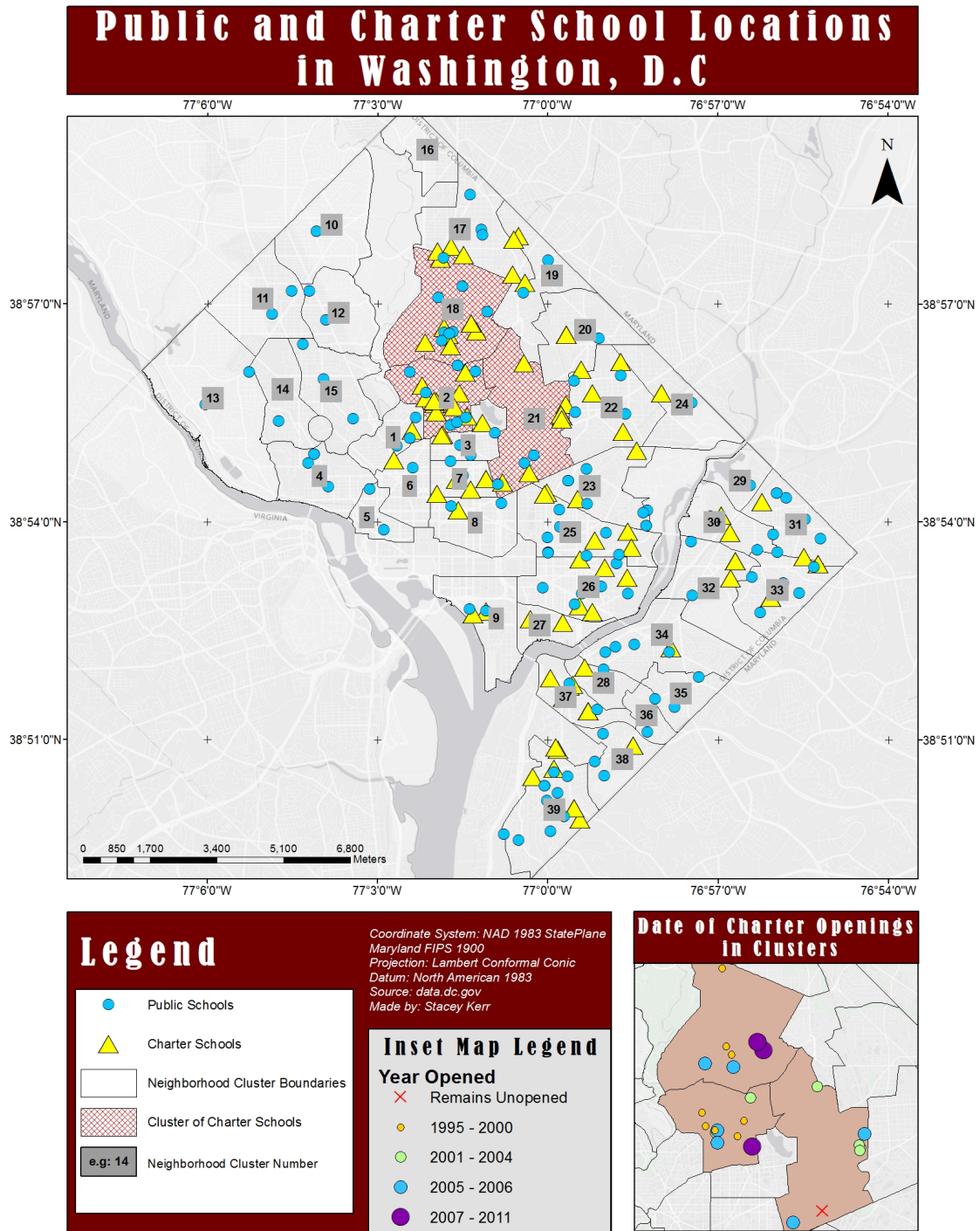


Figure 3: Public and Charter School Locations in Washington, D.C., Data Source: DC.gov

Table 1: Neighborhood Clusters of Washington

Number	Neighborhood Names
1	Kalorama Heights, Adams Morgan, Lanier Heights
2	Columbia Heights, Mt. Pleasant, Pleasant Plains, Park View
3	Howard University, Le Droit Park, Cardozo/Shaw
4	Georgetown, Burleith/Hillandale
5	West End, Foggy Bottom, GWU
6	Dupont Circle, Connecticut Avenue/K Street
7	Shaw, Logan Circle
8	Downtown, Chinatown, Penn Quarters, Mount Vernon Square, North Capitol Street
9	Southwest Employment Area, Southwest/Waterfront, Fort McNair, Buzzard Point
10	Hawthorne, Barnaby Woods, Chevy Chase
11	Friendship Heights, American University Park, Tenleytown
12	North Cleveland Park, Forest Hills, Van Ness
13	Spring Valley, Palisades, Wesley Heights, Foxhall Cresecent, Foxhall Village, Georgetown Reservoir
14	Cathedral Heights, McLean Gardens, Glover Park
15	Cleveland Park, Woodley Park, Massachusetts Avenue Heights, Woodland-Normanstone Terrace
16	Colonial Village, Shepherd Park, North Portral Estates
17	Takoma, Brightwood, Manor Park
18	Brightwood Park, Crestwood, Petworth
19	Lamont Riggs, Queen's Chapel, Fort Totten, Pleasant Hill
20	North Michigan Park, Michigan Park, University Heights
21	Edgewood, Bloomingdale, Truxton Circle, Eckington
22	Brookland, Brentwood, Langdon
23	Ivy City, Arboretum, Trinidad, Carver Langston
24	Woodridge, Fort Lincoln, Gateway
25	Union Station, Stanton Park, Kingman Park
26	Capitol Hill, Lincoln Park
27	Near Southeast, Navy Yard
28	Historic Anacostia
29	Eastland Gardens, Kenilworth
30	Mayfair, Hillbrook, Mahaning Heights
31	Deanwood, Burrville, Grant Park, Lincoln Heights, Fairmont Heights
32	River Terrace, Benning, Greenway, Dupont Park
33	Capitol View, Marshall Heights, Benning Heights
34	Twining, Fairlawn, Randle Highlands, Penn Branch, Fort Davis Park, Fort Dupont
35	Fairfax Village, Naylor Gardens, Hillcrest, Summit Park
36	Woodland/Fort Stanton, Garfield Heights, Knox Hill
37	Sheridan, Barry Farm, Buena Vista
38	Douglas, Shipley Terrace
39	Congress Heights, Bellevue, Washington Highlands

Source: NeighborhoodInfo DC, 2011

2c. Discussion of Washington Neighborhood Clusters 2, 18, & 21

Interestingly, Washington neighborhood clusters 2, 18, and 21 have all recently experienced changing demographic and income characteristics. These changes are indicative of gentrification. From the 1960s to approximately the mid-1990s, all three clusters reported values below Washington's average in income, house values, and levels of educational attainment. Additionally, all had large black populations. More recently, those characteristics have changed in some communities as a result of gentrification.

Neighborhood Cluster 2: Mount Pleasant, Columbia Heights, Pleasant Plains, Park View

Table 2: Demographics and Income Characteristics of Neighborhood Cluster 2

	1990	2000	2010
% Black Non-Hispanic	66	53	38
% White Non-Hispanic	11	13	31
% Hispanic	21	30	27
Average Family Income (2010 \$)	56,232	63,766	79,381
Median Home Value (2010 \$)	135,227	220,332	505,500
Homeownership Rate (%)	26	26	34
# of Residents with Bachelor's Degree or Higher	6200	7791	12610

Source:
Neighborhood
InfoDC, 2011

Neighborhood Cluster 2 contains the communities of Mount Pleasant, Columbia Heights, Pleasant Plains, and Park View, and has a current population of 47,378. This cluster reports the highest number of charter schools of any neighborhood cluster in Washington with 10 institutions.

Once a predominantly black neighborhood cluster, there has been a major decrease in the black population since 1990. A little more than 20 years ago, nearly 70% of the residents were black. Today, that number has dropped to 38%. This decrease is directly related to an influx of non-Hispanic whites. The white population increased from 11% in 1990 to 31% in 2010. Additionally, there has been a modest increase in Hispanics, from 21% in 1990 to 27% in 2010 (Census Data 2000, American Communities Survey 2005-2009, NeighborhoodInfo DC, 2011).

Neighborhood Cluster 2 has been referred to as "the red-hot core of Washington's Gentrification Belt." With its borders neighboring Adams Morgan - the poster community for gentrification in Washington - the neighborhoods in Cluster 2 became the next community to secure the gaze of middle-class homebuyers Washingtonians looking for the next trendy (and relatively cheap) community to transform (Fisher, 2003).

This interest is not only associated with the aforementioned transformation in demographic composition, but also with major changes in income figures, educational attainment levels, and homeownership rates. Alongside the basic statistical data reporting changes that signify gentrification, local newspapers, blogs, and community websites have documented citizen-reported events directly related to gentrification.

In 2003, the Washington Post covered the plight of residents in a Mount Pleasant apartment building as they began to feel the power of gentrification in their community. When their property management sought to convert a typical apartment building into luxury condominiums, residents were offered progressively higher payments of \$5000, \$10,000, and finally \$12,000 to leave their homes. One woman, a resident of the building for nearly 30 years, said, "Now they are offering us money to leave, but where will we go? If we don't take the money, we will have to leave anyway, because of the rent." If she had chosen to remain in the building during conversion, her monthly rent of \$378 would have increased to \$1600. Another resident, upon complaining to city officials about the unexpected jump in rent pricing, was told that her apartment was actually predicted to soon be worth over \$2500 a month, and

her landlord had the right to raise her rent until it reached that level (Fisher, 2003).

These individual stories underscore the major changes in home values in Neighborhood Cluster 2. On average, the value of homes in these communities has increased by \$285,158 since 1990 - a 116% surge. Between 2000 and 2010, many more large apartment buildings underwent condominium conversions in Neighborhood Cluster 2. Most of the original residents could not afford the steep price tags that came with the change - in many cases, the condominium companies sold the converted one-bedroom units for upwards of \$300,000. In turn, numerous affordable-housing units were destroyed, resulting in resident displacement (Kerlin, 2007). Although there have been major increases in home prices in the area, homeownership rates have actually increased by 30% since 1990, indicating the arrival of a more affluent population.

Since 1990, the average household income has increased by 41% to \$79,381. This increase in income is related to the fact that 6500 more people in Neighborhood Cluster 2 held bachelor's or advanced degrees in 2009 than in 1990. In turn, more people were employed in managerial and higher earning positions (Census 2000, American Communities Survey 2005-2009, NeighborhoodInfoDc, 2011). Transformations in

the fabric of Neighborhood Cluster 2 has not only resulted in a different "look" and "feel" to the community, but has also created changes in educational landscape within the cluster.

Between 2000 and 2011, four new charter schools opened in neighborhood cluster 2. In a Walton Family Fund sponsored IFF 2012 report entitled, "Quality Schools: Every Child, Every School, Every Neighborhood," school locations and performance levels were analyzed across Washington. The focus of the report was to analyze the performance of public and charter schools and make recommendations on how learning conditions could be improved.

In the report, Neighborhood Cluster 2 was deemed a "priority neighborhood" for school performance improvement. It was recommended that Tier-4 schools (the lowest performing) be "turned around" or closed, based on a cost/benefit analysis. The recommendation also noted that if schools could not be turned around, then more charter schools should be authorized within that area (IFF, 2012). The institution of more charter schools would continue to attract a more affluent resident base and thereby continued reinvestment in the neighborhood cluster.

**Neighborhood Cluster 18: Brightwood Park, Crestwood,
Petworth:**

**Table 3: Demographic and Income Characteristics of Neighborhood Cluster
18**

	1990	2000	2010
% Black Non-Hispanic	88	77	61
% White Non-Hispanic	5.8	5.4	13
% Hispanic	4.8	16	24
Average Family Income (2010 \$)	81,213	85,492	91,714
Median Home Value (2010 \$)	252,915	227,906	506,018
Homeownership Rate (%)	56	56	59
# of Residents with Bachelor's Degree or Higher	5788	6520	9273

Source:
Neighborhood
InfoDC, 2011

Neighborhood Cluster 18 is comprised of 39,924 residents in the communities of Brightwood Park, Crestwood, and Petworth. If Adams Morgan was the precursor to gentrification in neighborhood cluster 2, then Neighborhood Cluster 2 is the antecedent to gentrification-based transformation in Neighborhood Cluster 18. Although many of the impending changes of gentrification are in the beginning stages in Brightwood Park, Crestwood, and Petworth, their recent transformations are similar to other communities undergoing the early stages of gentrification.

Neighborhood Cluster 18 has experienced similar demographic shifts to those in Neighborhood Cluster 2. Most notable is the decrease in black residents. In 1990, blacks made up 88% of Brightwood Park, Crestwood, and Petworth communities. In 2010 however, they constituted only 61% of residents. Also similar to Neighborhood Cluster 2 is the increase of non-Hispanic whites and Hispanics. The presence of non-Hispanic whites has more than doubled from 5.8% in 1990 to 13% in 2010. Although there was an increase in Hispanic populations in neighborhood cluster 2, the increase in neighborhood cluster 18 was much higher - 4.8% in 1990 to 24% in 2010 (Census 2000, American Communities Survey 2009, NeighborhoodInfoDC 2011).

Unlike Neighborhood Cluster 2, which experienced a dramatic 41% increase in average income, the average income of neighborhood cluster 18 increased only by 12.9% - from \$81,213 in 1990 to \$91,714 in 2009. Another growth category is the level of educational attainment. In 2009, there were 3485 more people with a bachelor's and/or advanced degree than in 1990. The majority of this increase occurred between 2000 and 2009 as gentrification took place. Additionally, house values have increased by more than 100% from an average median value of \$252,914 in 1990 to

\$506,018 in 2009 (Census 2010, American Communities Survey 2009, NeighborhoodInfoDC 2011).

Although little attention has been paid to the changing demographics of Brightwood Park and Crestwood, the neighborhood of Petworth has received considerable publicity regarding its recent transformation. Similar to Neighborhood Cluster 2 and other communities that have experienced dramatic demographic shifts, Petworth has experienced new development and investment in the form of high-rise apartment buildings, trendy restaurants, and shops catering to a more affluent cosmopolitan clientele (Cauvin, 2011). Georgia Avenue is seen as the center of revitalization in Petworth, with organic food stores, bike-sharing programs, yoga studios, and luxury condominium developments now lining the street. Many attribute these changes to its proximity to other gentrifying communities and the opening of the Georgia Avenue-Petworth Metro station in 1999 (Lee, 2008).

Although the changes of gentrification took nearly a decade to coalesce, the addition of a Metro station enhanced the accessibility of the community for outside revitalization efforts. In a recent article in the Washington Post, D.C. Council Member Jim Graham boasted that Georgia Avenue now benefits from greater outside

investment in the community in terms of condominium and loft developments as well as commercial ventures. "Things have come to life on Georgia Avenue," Graham said. "The revitalization of lower Georgia Avenue is a certainty now, and just a short time ago it wasn't so certain." Additionally, he proclaimed that the changes in the community also triggered the opening of E.L. Haynes Public Charter School (Borden, 2011).

E.L Haynes Public Charter School is not the only charter school that has opened in Neighborhood Cluster 18 following recent neighborhood changes due to gentrification. Four more schools opened between 2005 and 2011. Today, nearly 40% of the neighborhood cluster's student population attends charter schools. In "Quality Schools: Every Child, Every School, Every Neighborhood," neighborhood cluster 18 was also considered a priority neighborhood for improved school performance. Similar to Cluster 2, one of the main recommendations for school performance improvement in Cluster 18 is the turn-around or closing of both Tier-3 and Tier-4 schools - to be replaced by a charter school if they cannot meet the improvement standards (IFF, 2012). This idea is also sponsored by D.C Council Member Jim Graham to rally continued support and investment in the neighborhood cluster.

Neighborhood Cluster 21: Edgewood, Bloomingdale, Truxton Circle, Eckington

Table 4: Demographic and Income Characteristics of Neighborhood Cluster 21

	1990	2000	2010
% Black Non-Hispanic	90	92	70
% White Non-Hispanic	7.1	4.0	20
% Hispanic	1.8	3.7	7.8
Average Family Income (2010 \$)	66,251	62,996	89,100
Median Home Value (2010 \$)	180,013	155,828	381,982
Homeownership Rate (%)	56	56	59
# of Residents with Bachelor's Degree or Higher	3520	3629	6044

Source:
Neighborhood
InfoDC, 2011

Neighborhood Cluster 21 is home to the neighborhoods of Edgewood, Bloomingdale, Truxton Circle, and Eckington. In 2010, the population of the cluster was the smallest of the three charter school cluster locations with 19,481 residents. Furthermore, it has the fewest number of charter schools among the three clusters containing only five such facilities. Although this neighborhood cluster is smaller than Neighborhood Clusters 2 and 18, its recent neighborhood transformations are quite similar to those seen in the other cluster locations.

Like 2 and 18, Neighborhood Cluster 21 has a history of a strong presence of a black population. Yet here too, this population has experienced a dramatic decline over the past 20 years. In 1990, blacks comprised 90% of all residents. Although that increased to 92% in 2000, the number sharply dropped off to 70% in 2010. Conversely, the percentage of non-Hispanic whites has nearly tripled from 7.1% in 1990, to 20% in 2010. The population of Hispanics has also increased in this neighborhood cluster - although not as dramatically as in 2 and 18 - from 2% in 1990 to 7% in 2010 (Census 2000, American Communities Survey 2009, NeighborhoodInfoDc 2011).

Alongside the demographics changes are shifts in income, educational attainment, and home values. Average family income has increased by nearly 35% over the past two decades - from \$66,251 in 1990, to \$89,100 in 2009. Moreover, like the dramatic increase in neighborhood cluster 2, 2524 more people had bachelor's and/or advanced degrees in this cluster in 2009 than in 1990. Lastly, house values in neighborhood cluster 21 have risen a whopping 112%. Despite these changing statistical indicators that typically accompany gentrification, there has been minimal coverage in the local media.

Although the level of gentrification in this neighborhood cluster is less than that of 2 and 18, the changes in demographics and income levels have attracted the opening of charter schools. Between 1995 and 2000, there were no charter schools located in neighborhood cluster 21. During the 2001-2004 period, when many of the demographic and income characteristics were rapidly changing, three charter schools opened. Then between 2005 and 2006, another 2 were founded. Today, the number of charter schools in Neighborhood Cluster 21 exceeds public schools.

2d. An Overview of Public Education in Brooklyn

New York City is the largest urban school district in the United States, serving over a million students in nearly 1700 schools. Recently, it has experienced unparalleled shifts in the public education system through the privatization of school leadership, governance, management, and accountability. In New York, "private sector actors are partnering and contracting with school districts to provide supplementary services, manage entire schools, [and] take over district-level administration" (Scott & DiMartino, 2009).

In 2002, the New York state legislature approved mayoral control of the New York City Department of Education. Mayor Bloomberg hired the chairman and CEO of

Bertelsmann, Inc., Joel Klein, to lead the Department of Education as chancellor. Klein swiftly hired private management consulting firms to reorganize the department's governance and operational structures (Gootman & Herszenhorn, 2008; Scott & DiMartino, 2009). Under the influence of new management, New York City's public schools became the recipients of private sector investment, mostly from philanthropists and hedge fund managers. The influx of these funds allowed for sweeping changes across the city's educational landscape. Private organizations became "involved in starting schools, reorganizing the DOE's governance system, creating system-wide data management programs, and contracting with advertising agencies to rebrand academic achievement" (Scott & DiMartino, 2009).

Mayor Bloomberg, Joel Klein, and his successors, have embraced charter schools as the means "to expand choices for students in struggling schools [and to] encourage competition between schools" (Scott & DiMartino, 2009). Currently, 122 charter schools operate in the city's five boroughs, with 48 located in Brooklyn alone.

In Brooklyn, charter schools became a major fixture of the educational landscape and now represent not only school choice but also controversy. This borough has been a battleground for debates over charter school co-location

with public schools, school acceptance measures, and accountability. One of the most recent controversies with charter schools in Brooklyn surrounded Eva Moskowitz's proposal to open three Success Academy charter schools in Brooklyn in the fall of 2012, one being in the affluent neighborhood of Cobble Hill.

Although Moskowitz had already opened twelve charter schools across New York City, "Cobble Hill represents [her] latest attempt to attract middle-class parents after winning a fight [last] summer to open Upper West Success Academy on West 84th Street" (Fleisher, 2011). Moskowitz, who has been criticized for drawing resources and high-achieving students away from public schools, spoke candidly about her desire to open another charter school in a distinctly middle-class neighborhood:

There's nothing that says charter schools are created exclusively for the poorest kids in the city [...] The bulk of our energies are devoted to kids and families with the smallest number of choices, and we will continue to make that our priority. We just believe that families who have more choices but not enough choices -- namely the middleclass -- deserve options too (Fleisher, 2011).

Locating a Success Academy on Manhattan's Upper West Side and in Cobble Hill raised the concerns of those who oppose the privatization of public education. If charter schools are supposed to provide students with an alternative to failing public institutions, why are they being opened in places where good public schools already exist?

2e. An Analysis of Charter School Locations and Clusters in Brooklyn

To begin my analysis of charter school clustering in Brooklyn, the charter schools were mapped and the basic point pattern of their distribution was examined. The nearest neighbor analysis was performed using ArcGIS. Figure 4 shows the results:

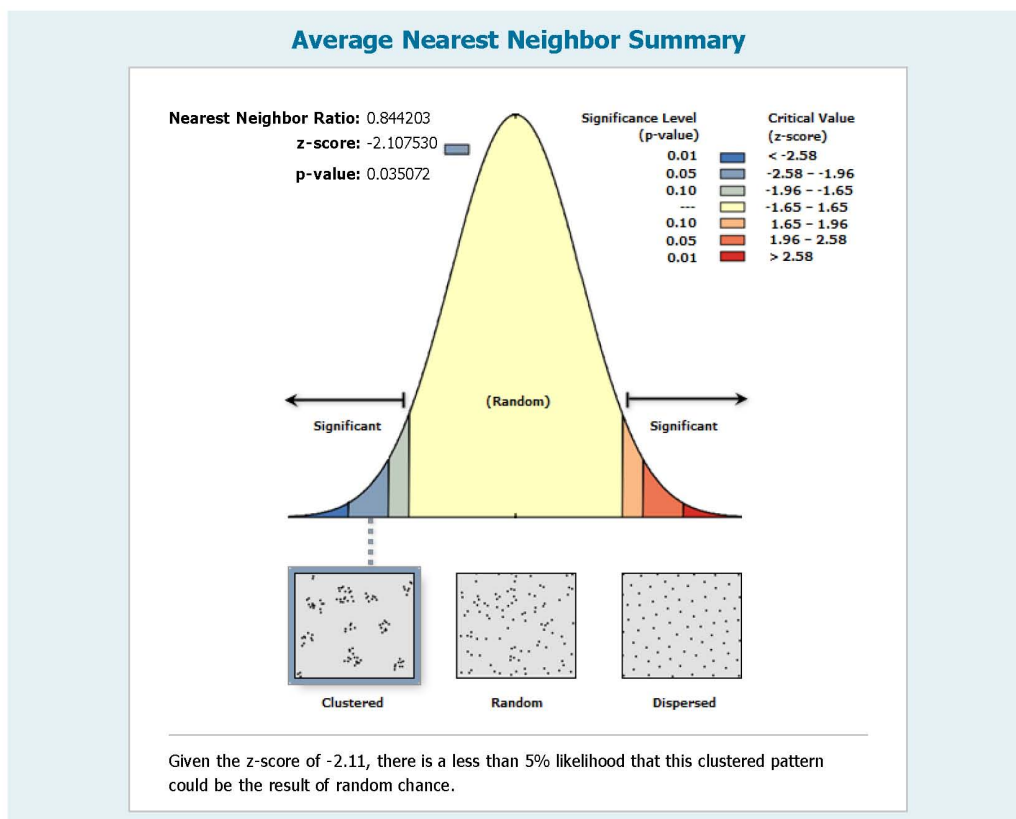


Figure 4: Average Nearest Neighbor Summary for Charter Schools in Brooklyn

After conducting the analysis, the nearest neighbor ratio is determined as 0.84, meaning that the point pattern of charter schools is clustered. Additionally, the average nearest neighbor analysis yields a z-score of -2.11,

indicating there is a less than 5% likelihood that the clustered pattern could be random. This confirms the existence of a statistically significant clustering of charter schools in Brooklyn.

Next, it was determined where these specific clusters were located by conducting the Anselin Local Morans I test. The spatial unit used to subdivide the different localities of New York is a community board. Community boards are the standard unit in New York City for budgeting, planning, service delivery, and analytical purposes (www.nyc.gov, 2011). They are integral to the governance of neighborhoods since they deal particularly with land use and zoning, as well as the needs and concerns of their respective community members. Most importantly, community boards across the city are involved in the creation of budgets that allocate funds to educational institutions. Thus, the community board serves as an important level of analysis for my particular study.

Brooklyn consists of 18 community boards, each of which includes several neighborhoods. After completing the analysis of charter school clustering in Brooklyn in 2011, it was revealed that Community Board 301 was the location of a high positive charter school cluster. The neighborhoods within CB 301 (Greenpoint, Williamsburg,

South Side, and North Side) contain a high number of charter schools in proximity to other community boards with a high number of charter schools. The map in Figure 4 shows the distribution of charter and public schools, as well as the cluster in question.

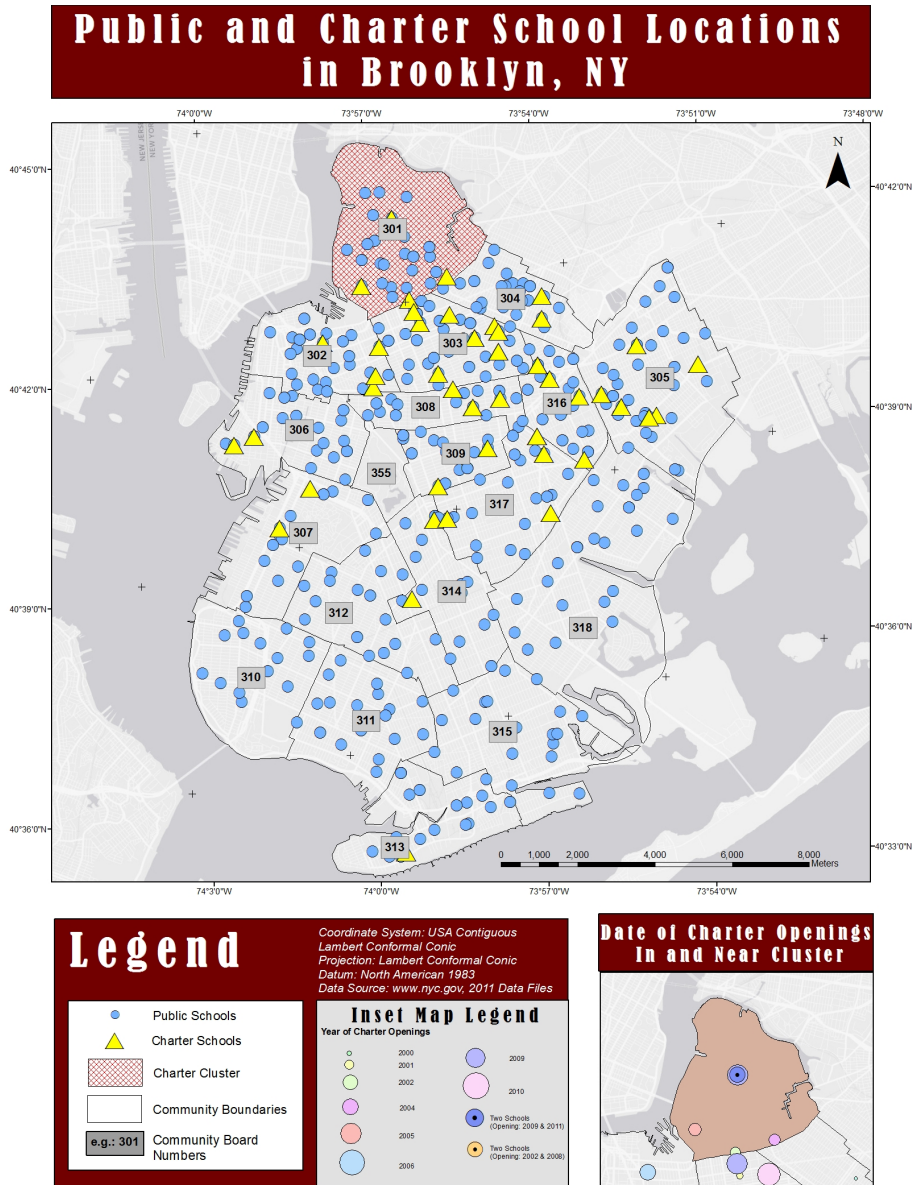


Figure 5: Public and Charter School Locations in Brooklyn, NY. Data Source: Bytes of the Big Apple, 2011

Table 5: Community Boards of Brooklyn

Community Board Number	Neighborhood Names
301	Flushing Avenue, Williamsburg, Greenpoint, Northside, and Southside
302	Brooklyn Heights, Fulton Mall, Boerum Hill, Fort Greene, Brooklyn Navy Yard, Fulton Ferry, and Clinton Hill
303	Bedford-Stuyvesant, Stuyvesant Heights, and Ocean Hill
304	Bushwick
305	East New York, Cypress Hills, Highland Park, New Lots, City Line, Starrett City, and Ridgewood
306	Red Hook, Carroll Gardens, Park Slope, Gowanus, and Cobble Hill
307	Sunset Park and Windsor Terrace
308	Crown Heights, Prospect Heights, and Weeksville
309	Crown Heights, Prospect Lefferts Gardens, and Wingate
310	Bay Ridge, Dyker Heights, and Fort Hamilton
311	Bath Beach, Gravesend, Mapleton, and Bensonhurst
312	Boro Park, Kensington, Ocean Parkway, and Midwood
313	Coney Island, Brighton Beach, Bensonhurst, Gravesend, and Seagate
314	Flatbush, Midwood, Kensington, and Ocean Parkway
315	Sheepshead Bay, Manhattan Beach, Kings Bay, Gerritsen Beach, Kings Highway, East Gravesend, Madison, Homecrest, and Plum Beach
316	Brownsville and Ocean Hill
317	East Flatbush, Remsen Village, Farragut, Rugby, Erasmus and Ditmas Village
318	Canarsie, Bergen Beach, Mill Basin, Flatlands, Marine Park, Georgetown, and Mill Island
355	Unnamed

Source: nyc.gov, 2011

2f. Discussion of Brooklyn Community Board 301

Table 6: Demographic and Income Characteristics of Community Board 301

	1990	2000	2009
% Black Non-Hispanic	7.2	5.5	5.5
% White Non-Hispanic	46.1	48	81.4
% Hispanic	43.6	37.7	25.3
Median Household Income (2009 \$)	No Data	26,329	59,729
Median Home Value (2010 \$)	No Data	155827.90	381981.82

Source:
nyc.gov, 2011

Community Board 301 lies at the heart of the transformative gentrification event known as the “Brooklyn renaissance.” Greenpoint, Williamsburg, North Side, and South Side are in the midst of being upgraded from uninviting post-industrial communities into appealing residential markets. Today, there is a mix of residents ranging from “Wall Street bankers attracted by the short commute to Lower Manhattan, families trading in their Brooklyn brownstones for condominiums, [to] 30-somethings fleeing high Manhattan prices” (Hope, 2008).

Community Board 301 has a history of being “white, stable, affordable, [and] physically well kept” making it an attractive area for investors and gentrifiers. Prior to World War II, the community was home to working-class immigrants of European descent who were employed in nearby

factories. In the 1950s, there was an influx of Puerto Ricans, followed by suburbanization-led white flight during the 1960s and 1970s. Next, during the 1980s, a substantial Polish population arrived converting a part of CB 301 into "Little Warsaw." Although there have been increases in minority populations, the community board has remained predominantly white over the past fifty years. Today, even though whites make up nearly 82% of all inhabitants, new residents are more affluent and have higher levels of education (DeSena, 2009).

Gentrification began during the 1990s when corporate developers bought property throughout Community Board 301. Older buildings were converted into condominiums and lofts that attracted more affluent residents. Today, houses sell for upwards of \$500,000 whereas rent begins around \$1,500 a month. Gentrification has also resulted in increased rates of homeownership, leading to a decreased number of available rental units. In turn, working-class households have been priced out of the community (Scott, 2003). In Community Board 301, "gentrifiers create segregation by social class, which perpetuates the current system of social stratification and ultimately reproduces social inequality" (DeSena, 2009). Although this is typical of

gentrification, a new phenomenon has emerged: gentrifying families.

Usually, gentrifiers are single, young professionals or childless couples. The "quality of [public] schools is a major reason that couples with children [have decided] against living in the city" in the past (DeSena & Ansalone, 2009). Yet, with the increasing privatization of public education, gentrifier parents now have more choices in schools. Many middle-class parents cannot afford the cost of private education in New York City, but with the introduction of charter schools and waiver programs those parents have found other options. Their children may apply for admission to a local charter school or enroll in an alternative program, such as "Talented and Gifted," so that they may attend any school within New York City. As a result, more affluent families have begun to settle in this part of Brooklyn because of school choices that were until recently non-existent.

The school choice of gentrifiers has had an impact on the community especially in Greenpoint and Williamsburg. When parents decide to send their children to charter schools or use waivers to attend institutions outside their community, CB 301 loses education money that could have been allocated to its local public schools. This, in turn,

intensifies the segregation of middle-class and working-class children.

Although charter schools are supposed to provide low-income students with an alternative to public school, in and near Community Board 301, there are actually fewer low-income children enrolled in charter schools than in neighboring public institutions. For example, at the Williamsburg Collegiate Charter School, 55% of students are low-income yet, the neighboring public school, J.H.S 050, contains 86% low-income students. The same phenomenon is found at Beginning With Children Charter School where 53% of students are low-income, while at nearby I.S 318, 71% are in this category. Perhaps the greatest discrepancy can be found at the Brooklyn Charter School where only 40% of students are low-income, versus 89% at neighboring P.S 023 (Gebeloff, 2010).

Chapter 3: Conclusions

3a. Thesis Results

In both study areas, clusters of charter schools were identified. These clusters were located in communities that had recently been affected by gentrification. Washington's neighborhood clusters 2, 18, and 21, as well as Brooklyn's Community Board 301 represent communities that have been the recipients of state investment and promotion of inner-city revitalization. In all charter school clusters, capitalist motives led to both gentrification and the proliferation of charter schools. In Washington, specifically in Neighborhood Cluster 18, the creation of certain charter schools promoted further private investment in the surrounding neighborhood, thereby reinforcing the processes of gentrification.

The clusters of charter schools in both Washington and Brooklyn were not located in the poorest neighborhoods (typically where the lowest performing schools are located and where charter schools would be most beneficial) thereby reflecting a lack of adherence to the original goal of charter legislation. Moreover, charter schools, as an education reform measure in both Washington and Brooklyn, are pushing the bounds of what is private and what is public.

Despite public funding, charter schools' private operating processes ensure that not every student may attend a charter. As demonstrated in Brooklyn's Community Board 301, the majority of charter schools within and near this neighborhood admit fewer minority students, English language learners, and those living in poverty than the local public schools. In both study areas, there were examples of charter schools being used to attract and anchor a more affluent resident population, thereby further marginalizing public schools and exacerbating social stratification.

The creation of charter schools and the processes of gentrification in Washington and Brooklyn are intrinsically linked. Although gentrified neighborhoods may be attractive for charter school operators and charter schools may draw more revitalization funding, one is not necessarily a precursor of the other. The two phenomena are components of the driving forces of neoliberal urbanism. As the state continues to take a greater interest in privatization of public services and increase the role of corporate-state governance partnerships, there are certain to be additional cases of investment in both charter school creation and neighborhood revitalization.

If we examine the study areas through the lens of neoliberal urbanism, gentrification and charter school creation in Washington and Brooklyn are embedded in a "development agenda that merges local, national, and transnational capital, in partnership with city governments" to make the study areas first-tier global cities (Lipman, 2004). Charter school development finds its place in the agenda of the state to create more desirable downtowns through revitalization and gentrification, which in turn attract investment, more affluent residents, and enhance tourism. In the study areas, as in the Hankins (2007) study of Atlanta, charter schools in Washington and Brooklyn are being directly employed as agents of gentrification.

Although I did not find a case similar to the Hankins study in which gentrifiers created their own charter institution, it is clear that in Washington and Brooklyn, more players than parents involved. In both study areas, business models of school board governance have been employed, essentially destroying the democratic nature of public school management. Furthermore, the location of charter schools has become increasingly dependent on private forces rather than public needs.

3b. Broader Implications

As more charter schools open in middle-class and/or gentrifying neighborhoods, the American school system will become more segregated. Charter schools, originally an educational reform measure to reduce inequities, will actually end up promoting them. Across the United States, charter schools "exacerbate already existent racial, economic, and ethnic segregation" and "continue to stratify students by race, class, and possibly language." Additionally, they are "more racially isolated than traditional public schools in virtually every state and large metropolitan area in the country" (Fabricant & Fine, 2012; Orfield, 2010).

Through the use and influence of business-based models, those groups with the means to create schools and maintain facilities and operations will be at an even greater advantage in an increasingly privatized education system. Those without the means will be left in public schools that will receive less and less attention and funding.

The propaganda of financial, cultural, media, and political players permeates American culture in order to justify the marginalization and shrinking of the public sector. Films like *Waiting for Superman* and *The Lottery*, philanthropists such as the Gates Foundation and the Walton

Family Fund, as well as agencies of the federal government, promote the charter school movement and sway the U.S. population to do the likewise without legitimate data to back up their support. Charter schools have not been found to be more effective than public institutions and only serve a relatively small percentage of students. Yet, many Americans blindly support their existence because of their portrayal by the media and political interest groups, and the increasing perception of public as "bad" and private as "good."

At the federal level, President Obama and U.S. Secretary of Education, Arne Duncan, continue to emphasize charter school creation, thereby detracting attention from an ailing public system. *Race to the Top* essentially "[relied] on the power of incentives and competition" which basically worsens schools by creating greater social and racial divides (Ravitch, 2010a). If the \$4.35 billion available through *Race to the Top* had been distributed equally across the country, each state would have received nearly \$80 million of more funding. Such an increase could have provided many benefits to states with educational budget deficits (Fabricant & Fine, 2012). The use of competition and programs like *Race to the Top* may work in the business world, but it does not hold true in the realm

of education. Through these initiatives, the neoliberal agenda reinforces inequalities in education that systematically produces a working and impoverished class (Apple, 1995).

Original charter legislation and the first charter schools were intended to help low-income families find new educational opportunities in ways that supplemented, supported, and augmented the success of the American public system. That original goal, in addition to reinvesting in community public schools, is essential to the future reduction of urban poverty. As we have seen through the increased privatization of education systems, neoliberal plans for charter schools diverge from these original objectives (Lipman, 2008). As charter schools continue to increase in "number and able students enroll in them, the regular public schools in the nation's cities will be locked into a downward trajectory. This [will] be an ominous development for public education and for our nation" (Ravitch, 2010a).

Since charter schools are essentially havens for the motivated, charter schools "in urban centers will enroll the motivated children of the poor, while the regular public schools will become schools of last resort for those who never applied or were rejected" (Ravitch, 2010a). The

traditional public schools will continue to admit any child and will essentially serve as collectors for students from impoverished homes, absentee parents, and inferior academic records, further undermining the condition and reputation of American public education (Hankins, 2007).

American public education originated as the great equalizer. Through democratic processes, it taught citizenship and created enlightened citizens (Dewey, 1924). Today, education in the United States is not democratic and no longer serves as an equalizer among populations. If this trend is to be reversed, the creation of charter schools needs be slowed.

Essentially, charter schools are detrimental to citizens who rely on equitable public education. As more charter schools open, good quality education for all students, no matter their race, socioeconomic status, or academic ability, will be much harder to obtain. How the goal of superior education for all will be obtained in the future "will determine the fate of public education" and the urban populations it influences. In conclusion, there needs to be a more rational balance between public and private systems - privatizing our public schools makes as much sense as privatizing the fire department or the police

department. It is possible, but it is not wise (Ravitch, 2010a).

3c. Future Studies

The most important research on charter schools that is needed is the development of objective reports that assess the success (or failure) of these institutions. Reports that are currently available are sparse, biased, and often funded by those investing in the privatization measures (e.g: The Walton Family Fund report of school success in Washington). Although there have been some individual success stories involving certain charter schools, their overall accountability remains unreliable. If the federal government continues to invest in this kind of education reform, funding should be based on objectively collected data from a variety of charter school settings across the country.

As vast transformations continue in the realm of public education, researchers in geography have the opportunity to examine these phenomena from a spatial lens. Such research will provide a fresh and unique perspective not found in the dominant discourse of educational policy. As Thiem (2008) suggests, the "geography of education" could become a new area of research in which educational systems, institutions, and practices are examined as to how

they “constitute space and/or challenge established accounts of sociospatial transformations”. This novel perspective would offer wide new research opportunities for urban geographers.

Further studies from a geographic perspective are necessary to better understand the effects of charter schools on public education systems and urban communities in general. As researchers continue to investigate the evolution of neoliberal urbanism, charter schools must be viewed as institutions that reflect neoliberal ideology in order to determine the long term effects they will have on urban systems and populations.

Although this thesis examined charter school clustering only in Washington and Brooklyn, this approach could be extended to examine clustering across urban America. Moreover, further research is needed in my two study areas to examine the demographic makeup of the individual charter schools. Documentation of the changing school makeup in terms of race and income would be fascinating to trace over the next decade. It would also be important to examine charter school creation in these study areas to see where facilities are choosing to open. Then, in a few years, the cluster analysis could be repeated to examine how charter school clusters change over time.

Overall, geographic research could move beyond charter schools and their clustering in urban centers to include: (1) the investigation of school demographics in relation to the local neighborhood, (2) examination of the spatial patterns that charter schools create in urban areas (e.g.: colocation with public schools, clustering), and (3) the study of the expenditure of public funds in charter schools versus public funds for public schools within cities.

The United States is at a crossroads that will determine the future of public education. What we have known as public in the past will undoubtedly change, but we must ensure it changes for the better. If we are to save public education, fully understanding the negative impact of charter schools and total education privatization is crucial. Yet, it will require more than research to ensure these changes, since "in the contested terrain of public education, logic and empirical record matter little. What matters most is power" (Fabricant & Fine, 2012).

New players must rise up to change the agenda and challenge the dominant discourse associated with public education. America's history of structural inequality and racism needs to be addressed, and financial justice and "equity of investment will need to be integrated into movements for a democratic, equitable, and accountable

public education system" (Fabricant & Fine, 2012). If public education continues along its current path of privatization, the possibility of an equitable system will surely be lost.

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