Analyzing the Intersection of Gentrification and Public Education in the United States

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This paper examines the pushback against public schools as a result of urban gentrification. This trend has become apparent over the last 30 years, exacerbated by the emergence of charter schools as an educational alternative in addition to private schools. In this paper, we create a model that predicts community responses to gentrification and determine that the origin of gentrification in the area bears the most weight for predicting the community's eventual choice.

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I. Introduction

This paper examines the intersection of gentrification and public education in urban environments. As cities gentrify, it is not uncommon for the new occupants of the city to be unsatisfied with the state of public education in the area. The reaction goes one of two ways: either the new occupants of the city reinvest in the public education system and increase its quality, or they choose an alternative form of schooling that gives them a higher degree of control over their children's education. These alternatives usually take the form of charter or private schools. Unlike a private school in which the funds are privately sourced, a charter school is publicly funded while being run by a private entity.

This paper analyzes the characteristics of urban environments that spur parents in the direction of public reform or elsewhere when seeking solutions to the flawed education available to their children. To do so, we examine five cases in neighborhoods in New York, Georgia, Illinois, and Pennsylvania to create a model that will predict city behavior based on the characteristics and behaviors in those sample neighborhoods. We then use the model to predict education outcomes in Portland, Oregon, and Seattle, Washington, and compare those predictions to the actual choices made by the residents of those cities to test the model's robustness.

We find that the model as a whole seems to provide at the very least some hints as to the eventual decision made by the cities, with some characteristics providing more predictive power than others. We find the origin of gentrification in the city to be of particular importance when predicting behavior. When gentrification happens on its own, as a result of market forces, the resulting education solution tends to be private, while government sponsored gentrification generally leads to public education options. The model's predictive ability provides for us information with which to examine potential policy decisions that may push communities in one direction or another in the future.

The remainder of this paper is organized as follows: Section 2 provides a background for both public education and gentrification in the unique context of the United States. Section 3 explores the circumstances surrounding the gentrification and education choice in each of the five cities, and then draws on the circumstances to construct to create our model. In Section 4, we predict city behavior with our model and examine its effectiveness. Section 5 discusses the future of public education in the United States. Section 6 contains our conclusions on gentrification and school choice patterns.

II. Background and History

Public Education in the United States

Before we can discuss the factors that affect a parent's choice as to their child's education, we must first establish the purpose of public education and a context for parental involvement in the field. As Brown states, education typically correlates with power and authority in society (Brown 2002, 29). In addition, in their decision on *Brown v. Board*, the Supreme Court reaffirmed public education as "the very foundation of good citizenship" and "a principal instrument in awakening the child to cultural values."Accordingly, it is common for countries founded on principles of freedom and equality to provide their population with an educational base that gives all citizens an equal chance to participate in that society. While the United States is no exception with regards to providing its populace with an education, the intersection of American history and its provision of public education provide an interesting context for the public/private problem we see today.

Though it was not mentioned in the final draft, public education in the United States was first brought up by Thomas Jefferson during the Constitutional Convention (Thattai 2001, 2001). Before America gained its independence, colonial education was largely scattered and tenuous. Even after Jefferson planted the idea in the late 18th century, it was over 50 years before state-funded education began to be implemented Due to the efforts of educational reform activists, free, elementary-level education was available throughout the United States by the end of the 19th century. The first laws requiring attendance were passed in Massachusetts in 1852, and all states had passed similar legislation by 1918. The Catholic Church, opposed to secular schooling, fought these attendance laws in court. In 1925, the efforts of the Church were rewarded when the Supreme Court ruled in *Pierce v. Society of Sisters* that the state could not mandate public school attendance, and confirmed private schools as viable alternatives. (Thattai 2001, 2002)

Thattai points out that the locus of responsibility for American public education differs from that in other nations in that American public education is largely left up to the states rather than regulated at a federal level (Thattai 2001, 2001). This is supported by the Tenth Amendment: as control of education has not been explicitly enumerated as a power of the federal government, operation of it should remain with the states (Amendment X 1791). Congress seems to disagree with this sentiment, and has attempted to place controls on public education via the Commerce Clause on several occasions. These controls were checked at least once by the Supreme Court in United States v. Lopez. In Lopez, in the Court ruled that Congress had overstepped the power allotted it by the Commerce Clause by attempting to place rules on a public education institution (United States v. Lopez 1995). Despite some initial reluctance, over the course of the 20th century, the states began to take more responsibility in shouldering the burden of public education by consolidating districts and providing them with common education procedures (Thattai 2001, 2003). The states redoubled their efforts to implement effective public education after a 1983 federal report suggested parents sending their children to public schools were rewarded with "very low academic achievement" (Thattai 2001, 2004).

Another factor somewhat unique to American public school systems is the funding method. According to National Public Radio reporter Cory Turner, many schools earn their funding from three pools: the federal government provides a small amount, usually ten percent or less, while the remainder of the funds come from state money and local money,

often property tax revenues. The state money tends to be constant across districts and fairly consistent across states. The most erratic variable in public education funding is the local money. Because property wealth fluctuates widely district to district, it is not uncommon for some districts to rely only on the state and federal money with relatively low property tax revenues coming in from the surrounding area, while other districts are located in property wealthy cities and neighborhoods, leading to massive district budgets (Turner 2016). In the wise words of Billy Preston, "nothing from nothing leaves nothing," and the cities with nothing in terms of property value overwhelmingly end up the cities with nothing in terms of public education.

There are several ways in which this funding inequality has been exacerbated over the years. First, the incongruous public funding across districts has been upheld by the United Supreme Court in *San Antonio Independent School District v. Rodriguez* in which Rodriguez challenged that his son's equal protection was violated when he was districted into a school significantly poorer than its counterpart across town. The Court decided there was nothing in the Constitution that provided Rodriguez' son with the right to a particular quality of education (remember Thomas Jefferson's recommendation was omitted from the final draft), and therefore, there was nothing unconstitutional about the districting decision (*San Antonio Independent School District v. Rodriguez* 1973).

The Court backed up its indifferent position on socioeconomic results of zoning in *Warth v. Seldin*. In this case, the Court decided a zoning plan that created a socioeconomically homogeneous neighborhood in New York by excluding the poor did not directly harm the excluded poor in such a way as to give them standing to sue (*Warth v.*

Seldin 1975). In conjunction with *San Antonio*, the Court has ruled it constitutional for communities to zone undesirables out of wealthy school districts, creating wealth silos in some areas, and relegating others to cyclical underfunding and poor performance.

De Facto Segregation in America

Racial tensions in the United States have worsened funding issues. Individual discriminatory housing practices date back to the founding of the United States, but government sanctioned discrimination in housing is generally understood to have come about with the establishment of the Federal Housing Authority (FHA) during Franklin Delano Roosevelt's New Deal.

Especially relevant to the discussion of gentrification, the FHA's redlining is responsible for much of the housing segregation in cities that persists today. Redlining was used by a number of banks over the course of the 20th Century. It involved determining neighborhoods that contained "unsafe" housing investments, and then refusing to provide loans to purchase homes within those neighborhoods. The quality of "unsafe" was occasionally based on real investment deficiencies, but much more commonly it was given to racially diverse communities. As a result, the home values in redlined (read: black) areas were artificially lowered, leading to those with the money to live elsewhere (read: white people) abandoning their investments in the area and creating housing segregation in cities across the United States (Johnson 2012).

In addition to redlining, the FHA also encouraged new homeowners outside of redlined neighborhoods to include specific language in their deeds that excluded nonwhites and Jews from ever owning the home. On occasion, the FHA even threatened to refuse mortgages to homebuyers who declined the discriminatory language. The FHA defended this practice for years, "claiming the need to protect property values" (Johnson 2012).

This contributes to the issue at hand in this paper: white Americans saw no difference in their education as high property values, and thus high property tax revenues, moved to the suburbs with them. Conversely, black Americans saw devalued inner city homes contribute to decreased inner city property tax revenue and reduced funding for schools (Thattai 2001, 2008). The repercussions of the differences in funding are felt along race lines across America; as Liu points out, "the average white student attends a school that is nearly 80% white...The average black student attends a school that is over half black, even though blacks comprise only one in six pupils nationwide" (Liu 2007, 277). This statistic, in conjunction with the siloing of neighborhoods in terms of education taxing and spending, creates a system that has wealthy whites enjoying quality education with other wealthy whites while poor students of color are relegated to underfunded and usually poorer performing schools. This race- and location-based educational inequality is the focus of the paper: white Americans return to the inner city in the process of gentrification and experience the poor education resulting from low property wealth. Gentrification is discussed further below.

Gentrification

A phenomenon that has swept the nation over the past quarter century, gentrification is a hot topic in urban policy discussions. Loretta Lees defines gentrification

as "the transformation of a working-class or vacant area of the central city into middleclass residential and/or commercial use" (Lees *et al* 2008, xv). This definition may be correct in the abstract, but gentrification in the United States carries with it particular racial overtones with people of color continually being displaced from their communities to quench a growing middle-class thirst for the urban chic.

As previously discussed, housing throughout the mid- and late-twentieth century trended increasingly towards segregation: white families settled the suburbs and minorities took up inner-city living. In the 1990's, the housing pattern appeared to make an abrupt about-face. Now, white families were fighting to move back to the inner city. While gentrification is not always perpetrated by whites, "gentrifiers tend to be White and middle-class...whereas the communities they enter tend to be overwhelmingly minority and poor" (Davis and Oakley 2013, 87). Given the United States' troubling history on the topic, gentrification's division of communities along racial lines increases the importance of the discussion of its impacts on cities undergoing its changes.

Gentrification comes with a number of implications for cities. In the past, it has been encouraged by local and state governments as a method of economically "revitalizing undercapitalized neighborhoods" (Hankins 2007, 115). Much of inner-city America is occupied by poor minorities (a result of "White Flight" in the 1970's and 80's) and many cities are circling the economic drain as city productivity decreases and those who acquire the means to do so leave for a more comfortable suburban lifestyle. As a result, governments face pressure to improve the economic prospects of their urban environments, which usually means trying to attract wealthy families and reverse the patterns of the late-20th century.

Gentrification tends to follow a pattern similar to the one described above, but the origin of gentrification varies from city to city. This paper borrows Via Ley's classifications of gentrification's origins, as described by Richard Morrill, to capture said variance in origin. According to Ley, gentrification tends to originate in one of two ways. The first, labeled Gentrification A, is publicly fostered. Gentrification A involves large-scale investment on the part of the government to make the inner city more attractive to the wealthy who might otherwise settle in the suburbs. In contrast, Gentrification B is the result of decisions of individual buyers and private parties acting in accordance with economic forces. Gentrifiers that move as a result of Gentrification B tend to be chasing the affordable living that usually exists in areas affected by redlining. Morrill points out that Gentrification A typically attracts families while Gentrification B frequently brings in "young singles and couples, empty nesters who prefer or want to try high-rise living" (Morrill 2008, 45). These two types of gentrification are referenced in the later discussion and application of the model.

The desires of the wealthy families that city governments hope to attract back to urban neighborhoods have been grouped into two broad categories for the most part. First, as Hankins puts it, "gentrifiers in the 2000s are buying not just property in the city, but the idea of an urban community" (Hankins 2007, 126). These 21st century gentrifiers are seeking tight-knit communities with corner stores and public parks, what Hankins refers to as "a romanticized notion of the place-based community." Sullivan also recognizes this ambition of gentrifiers, stating that they are often "drawn to a neighborhood's 'bohemian chic', which is an attraction to diversity, urban grit, and the illicit" (Sullivan 2006, 597). What is noteworthy, as Sullivan points out, is that stability is vital to the development of a

community (Sullivan 2006). In other words, by resettling inner city areas, gentrifiers inadvertently create an environment antithetical to community growth. It is ironic, then, that community is what they seek. They are disenchanted with the perceived impersonality of city life, and lose interest in moving to urban areas if it means giving up connections with neighbors, local businesses, and schools. This brings us to the second broad interest of the wealthy potential gentrifiers: quality education for their children. Where we stand now, moving to an urban area and demanding quality public schooling is almost paradoxical, as good schools are not a service that the inner city is known for providing (put lightly) (Hankins 2007, 115).

These two overarching demands, for community and for exceptional education interact to motivate a push for charter schools. Interestingly, charter schools come about in two ways: either the city reorganizes public education to include these charter schools to attract potential gentrifiers, or gentrifiers work to found the schools on their own once they arrive. Either way these charter schools have problematic implications for communities. Anderson says "the demand for charter schools as an alternative to failing traditional public schools has advanced the process of gentrification in previously under-resourced communities, and exacerbated social class divisions" (Anderson 2012, 364). That is, rather than building community, the development of these charter schools contributes further to the social, economic, and in some instances physical segregation that accompanies gentrification.

The Shift Away From Public Schooling

Parental involvement in the public education has changed dramatically over the history of the United States. We can assume that parents share a common goal in wanting the best education attainable for their children, and recently more options have become available for parents who are dissatisfied with the education their child is receiving. While alternatives to public schools have existed in the United States in some form or another since its founding, enrollment ratios between public and private schools moved from 13:1 in 1950 to 9:1 in 2000 (National Center for Education Statistics 2017). Additionally, the number of charter schools in the United States increased by 200 percent between 2000 and 2013, and student enrollment in charter schools increased fivefold in the same time (National Center for Education Statistics 2017). Clearly demand for alternative education is increasing.

The pull away from public education is better illustrated in the figures below, particularly in the years 2008-2014. Figures 1 and 2 seem to demonstrate increased faith in public school: both lines appear to be trending slightly up. This is not a result of "normal" public school enrollment, however. Rather, the upward trend is a result of the data capturing increased charter school enrollment as public school enrollment. In Figure 3, we see that it is charter school enrollment, and not public school enrollment as a whole, that is increasing. Figure 4 shows little to no fluctuation in public school enrollment when we remove charter enrollment from the data. It is clear that a trend of parents opting out of public education has emerged. Why is this? There are two broad answers to this question. The first is a sharp decline in the perceived quality of American public education. The 1983 publication of the Reagan Administration report *A Nation At Risk* decreased

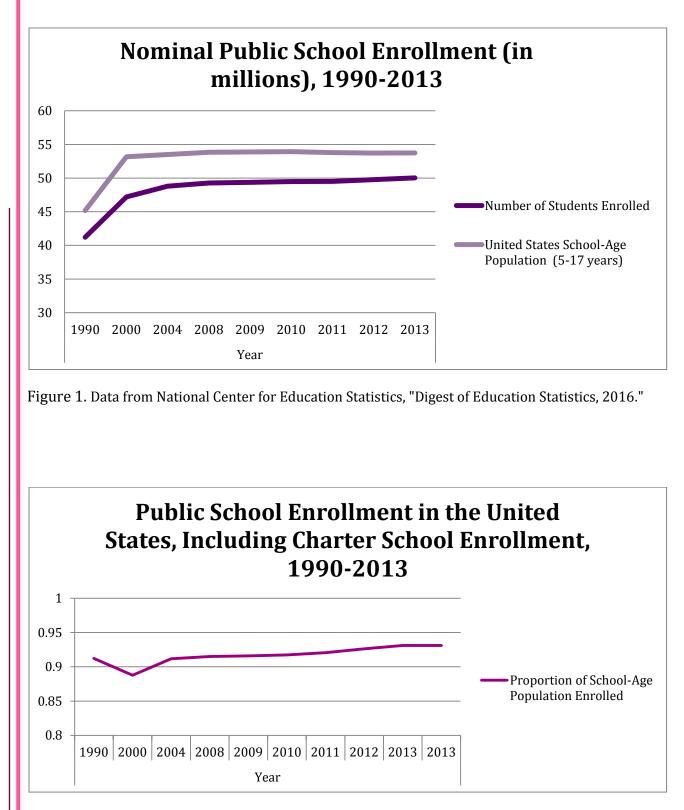


Figure 2. Data from National Center for Education Statistics, "Digest of Education Statistics, 2016."

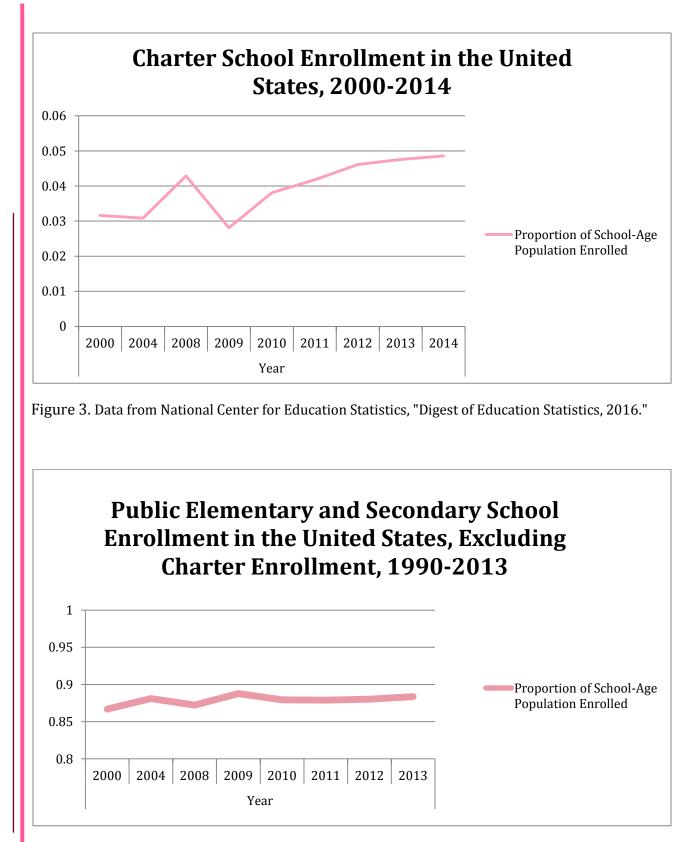


Figure 4. Data from National Center for Education Statistics, "Digest of Education Statistics, 2016."

confidence in the public school system. The report's findings included such statements as

the following:

Declines in educational performance are in large part the result of disturbing inadequacies in the way the educational process itself is often conducted.

Secondary school curricula have been homogenized, diluted, and diffused to the point that they no longer have a central purpose.

[in other industrialized nations] the time spent on [mathematics, biology, chemistry, physics, and geography]...is about three times that spent by even the most scienceoriented U.S. students, i.e., those who select 4 years of science and mathematics in secondary school. (National Commission on Excellence in Education 1983)

Once these findings came out, worry spread throughout the American public that the United State's lack of a common set of standards by which to measure the education of children would cause student performance in the United States to lag behind that of European schools. There were a number of responses on the part of the government to the loss of reliability of public schools, the most considerable of which was the passage of the No Child Left Behind Act nearly two decades later under President George W. Bush, that encouraged standardized testing for students in elementary and secondary schools amongst other things (Aron 2006).

As mentioned above, sending a child to a public school was met with decreasing returns particularly towards the end of the 20th century. The rising importance of a college education to future quality of life was a likely contributor to Americans' negative reaction to the downward trend of public school quality. During this time, the wage gap between those with a college degree and those without steadily increased (R.A. 2011). Employers cite evolving positions that require higher skilled labor, as well as a labor

market flooded with supply and lacking in demand as justification for demand college degrees from applicants. These conditions make college a necessity rather than an option. Educational requirements for employment have steadily risen for a number of years now: "thirty-seven percent of companies say they hire college graduates for position that in the past were primarily held by people with only high school degrees" (Elejalde-Ruiz 2016). The necessity of a college education has clearly been on the rise, and a lack of faith in traditional public education's ability to prepare students for higher education spurred a number of families to jump ship in favor of schools that offer prestigious college-prep programs.

The second reason parents may opt out of public education is the presence of viable alternatives, namely private and charter schools. American private school have been around since before the Revolutionary War. In fact, in many areas private education was the only education supplied in the colonies and early America. Commonly in America, a private school is a privately funded educational institution operated by a corporation or religious group. Private schools are exempt from public oversight beyond the most basic regulations. They serve as an attractive alternative to those dissatisfied with public education's catch-all approach, as private schools are able to provide a highly specified education, a religious one, or both to their pupils (Glenn 2013).

Heralded by Wells as the result of a "neoliberal transformation" of American public education , a charter school is a publicly funded, privately run alternative to traditional schooling. Charter schools can be operated by various private entities including corporations, teachers, and activists. The most common operators of charter schools,

however, and the operators most relevant to the discussion in this paper, are parents and community groups (Hankins 2007, 116).

The emergence of charter schools can be attributed in part to urban revitalization: municipalities looking for young, middle-class families to settle within city-limits create amenities to attract them to the inner-city. Quality options for educating their children are among these amenities (Davis and Oakley 2013, 87). Because of their capacity for parent involvement, and because of a growing distrust of public schools, charter schools seem to meet the demand for quality education options by providing gentrifiers control over their children's education. Charter schools are public schools that are established via an agreement between a community group and the agency in charge of local education. In some states, applicants are required to apply directly to the state, while in others it is sufficient to apply to the city or local school district. As long as they continue to abide by the agreement, charter schools are free to make many decisions without abiding by regulations regular public schools are tied to. These regulations include restrictions on "staffing, curriculum, school calendar, resource, allocation, governance, and school/classroom sizes" (Huerta 2012). When Huerta was writing in 2012, an estimated 3 percent of all public school enrollment belonged to charter schools (Huerta 2012).

Huerta believes the popularity of charter schools is a result of the autonomy they provide parents over the education of their children. This fits with what Davis and Oakley believe gentrifying parents are looking for. Charter school autonomy is touted as a positive facet of the new education options because of a widely held belief that parents best know the needs of their children. Despite this, there has been no definitive evidence that charter school students perform better on the whole than their public school counterparts, bringing that belief into question. Huerta points out that the decentralization of education can be positive, as it allows schools to cater to the specific needs of their communities. However, Huerta contends that decentralization must take place over time, claiming that empowerment is "a *process* that must account for local economic and political conditions that influence that ability of local actors to activate public authority" (Huerta 2012).

Huerta makes it clear that the decentralization that has taken place over the last two or three decades has failed to empower communities to take control of their education in a productive way by neglecting to account for those economic and political conditions. He claims that charter schools are some of the most segregated public schools, and that the only charter schools that admit students of color are those that are targeted at said students, stating "70% of Black charter students attend schools where at least 90% of students are minorities, twice the percentage enrolled in traditional public schools" (Huerta 2012). Evidently, rather than being used to create schools that address the needs of the community as a whole, decentralization has been manipulated as a tool to return public schools to pre-*Brown* levels of segregation that reflect the segregated urban communities they are housed in.

This method of urban revitalization is problematic when it necessarily intersects with gentrification. In attracting wealth to inner-cities, policymakers intentionally displace the communities that have developed there, worsening social class divisions (Anderson 2012, 364). These divisions become apparent when the so-called "parent-gentrifiers" opt out of engaging with the community by sending their children to schools that the children of their new neighbors do not have the means to attend. Ball refers to this choice as a "circuit of schooling,"—parents enjoy participating in the community in some ways, but

withdraw from certain aspects of the community that do not meet particular standards. Butler adds that the circuit maintains social exclusivity and weakens the community fabric that gentrifiers often claim to be seeking by relocating (Butler 2003, 2478).

Exacerbating the distinctions between public and charter school tracks are the barriers that place attending charter school programs out of reach for some students. Many charter schools invent their own arbitrary, unregulated admissions processes (Simon 2013). While public schools generally require minimal paperwork and personal documents to be admitted (e.g. immunization records, emergency contact forms, and proof of custody), charter often have a much more involved admission process. Student applicants may be asked to submit lengthy research papers, obtain recommendations from previous teachers, garner references from "religious or community leaders," sit through interviews, and pass examinations, while their parents are often also interviewed, sometimes asked to donate money or volunteer time to the school (Simon 2013). The charter school application process all but requires resources that many students just don't have access to. Studying for an examination or writing a paper takes time and requires experience that students may lack depending on their previous institution. A tutor might beef up test scores or iron out research wrinkles, but will also ask for a check or two in the process.

The time and money involved in the application process only paints a partial picture of charter school exclusivity. According to Simon, a number of charter schools avoid providing subsidized lunches to their students, excluding families that rely on free and reduced lunch programs to feed their children. Additionally, it is common practice for charter schools to require parents to volunteer hours to running the school, something nearly impossible for single-parent households, or families with two working parents. As these types of households tend to be below the poverty line (Simon 2013), it would appear that at least some of the barriers erected by charter schools are thinly veiled attempts to limit enrollment to certain socioeconomic classes.

Can we blame parents with means for pulling their children from urban public schools? After all, urban public school performance has become something of a joke in the past half-century. As in the pool of public education funding continues to dwindle, schools are left trying to patch up the leaks with anything they can. Mathematics and science courses are taught by instructors with no credentials in the field because of a shortage of qualified teachers. Students in urban public schools in particular are limited to outdated textbooks, computers, and other resources. Hudley tells of students attempting to replicate science experiments without laboratory equipment or supplies (Hudley 2013). Faced with a choice between these urban schools and a fully funded and stocked charter or private school, the decision facing parents becomes a no-brainer. This issue is perhaps best summed up in the title of Judith DeSena's article, "What's a Mother to Do?" It is unfair to place the blame for the pattern of ditching public schools on the individual parents that opt out—if a better option for their children exists, who can fault them for choosing it?. Rather, it is important to pursue policy options that encourage community reinvestment in public schools, particularly in struggling urban areas.

As we have seen, charter and private schools have emerged over the last 20-30 years as an increasingly appealing solution to growing discontent with traditional public schools in the United States. While this growth is not inherently troubling, social exclusivity and discriminatory enrollment practices turn these schooling alternatives into a problematic escape for those who hope to avoid socioeconomically heterogeneous education contexts. Below, we build a model to predict which communities may opt out of traditional education in an attempt to isolate the root cause of public school abandonment on the city and community level.

III. Model Building

In determining why parents educate their children the way they do, and to predict their choices in the future, it is important to examine factors specific to communities in which gentrification has already taken place and education decisions have already been made. Indeed, Robson and Butler cite the necessity of case studies, "in particular the interaction between local educational infrastructures and the varying middle-class strategies designed to exploit them" (Robson and Butler 2001, 72).

Now we will use a qualitative case study methodology to construct a model. Qualitative case study is a tool "for researchers to study complex phenomena within their contexts" (Baxter and Jack 544, 2008). In our case, we apply it to determine the gentrification-education contexts in several areas, build our model, and test it on two new cities. Accordingly, we examine the interaction between gentrification and the choice of education in five communities below in an attempt to identify common factors that contribute to community education decisions that we can add to our model.

Greenpoint, New York

A suburb of New York city, Greenpoint experienced large scale gentrification from the mid-1980's through 2006 when DeSena wrote about the community. During Greenpoint's resettlement, the new residents of the community opted to found a new charter school as an alternative to the failing public institution that had been the center of the community prior to the influx of wealth and diversity that gentrification brought. DeSena cites several community aspects contributing to this decision.

First, she points to the privilege of the gentry. Particular to Greenpoint are a number of avenues for parent direction in schools. For those lacking the means to navigate the community's education options (namely the original, low-income residents of color in the area), changing the system was not an option. Prior to Greenpoint's gentrification, most residents settled for Greenpoint's local public school. Those with the time and resources might enroll their children in public schools outside Greenpoint but reform of Greenpoint's schools seemed to be a fruitless task. Even lower-middle-class residents find it "easier to commute children to and from school...than it is to mobilize change within the New York City public school system" (DeSena 2006, 254). Meanwhile the newly arrived gentry has options not available to their low-income neighbors, for example exploiting Greenpoint's voucher or lottery systems, and opting into what DeSena refers to as "specialized schools" (DeSena 2006, 253). Thus, DeSena believes greater access to means and knowledge of the options available within the school district contribute to a greater push for alternative means of education, though she notably does not distinguish between alternative public and alternative private options.

A second factor in the decision of the gentrifiers to opt out of public education is the existence of a common social identity among them. DeSena looks at an implicit desire to reinforce "social class and social status" as a motivator for gentrifying parents' decision to pull their children from Greenpoint's floundering public school. Greenpoint's new arrivals enjoyed careers as "artists and professionals," an identity not shared by the original residents of the community. DeSena claims that gentrifiers in Greenpoint were determined to continue the distinction by maintaining some choice in the education of their children (DeSena 2006, 254). In this way, the desire of parents to socially distinguish themselves also encourages educational alternatives.

DeSena speaks to the effects these educational alternatives have on their communities. She points out that, by choosing alternatives, gentrifiers reject previously established community institutions and identities. Schools have long been gathering spaces, often serving as a community center to smaller neighborhoods. By refusing to engage with subpar schools, gentrifiers reject the community identity in favor of their own beliefs as to what inner-city life should be. This rejection a community identity speaks to a larger rejection of the individuals themselves. Despite what many see as a broader push for diversity and political liberalism in the United States (at least in 2006), gentrifiers still "remain cautious about social integration with working-class, immigrant, and low-income residents" (DeSena 2006, 255). As a result, Greenpoint shows us that while wealthy Americans are willing to live with underprivileged peoples geographically, there remains a distinct opposition to engage culturally or socially, particularly when said engagement threatens the lifestyles of themselves or their children.

Grant Park, Georgia

Grant Park is a neighborhood near Atlanta, Georgia. As a state, Georgia spent much of the 1980's and 1990's encouraging gentrification "as a process to 'revitalize' undercapitalized neighborhoods" (Hankins 2007, 115). In many cases the state provided local governments with incentives to attract wealth out of the suburbs and back to innercity environments, creating an interesting dichotomy among neighborhoods with massive gaps in income between neighbors. Grant Park was no different. A predominately poor and

black neighborhood prior to gentrification, Grant Park saw wealthy families flock to the neighborhood as a result of the state policies. Before gentrification took place, Grant Park's high school was performing below state and national standards. Much like in Greenpoint, it was common for those with above-average means to commute to superior public schools in neighboring districts. Even when parts of Grant Park were modernized to attract wealth, the schools were left out and it was common practice for those with the means to travel outside of the district for quality education. Many new arrivals to the area, quick to recognize that Grant Park's public school was not quite up to snuff . were equally dissatisfied with the idea of their children commuting outside of the neighborhood for education. Soon after arrival, these parents began to advocate for educational alternatives (Hankins 2007, 120).

Among the five cases selected for study in this paper, unique to Grant Park is the abandonment of the *entire* secondary public education system. Indeed , over a number of years, new parent gentrifiers in the Grant Park neighborhood dismissed the failing public high school in favor of both private and charter options. Today there are three secondary school options within Grant Park, (Wesley International Academy, Kingfisher Academy, and St. Nicholas Orthodox Academy) zero of which are publicly operated.

So what motivated the wholesale desertion of public education in Atlanta? Hankins believes that, as in Greenpoint, it can be partially chalked up to the rejection of the existing community identity; gentrifiers with no ties to the area displaced those that had been connected to the school for decades. With no one left attached to it, the school became an artifact of the old neighborhood, which Hankins believed made it disposable to Grant Park's gentrifiers (Hankins 2007, 121).

As we saw with Greenpoint, another facet of the issue is the identity disparity between community members. In Grant Park, parents advocating for a charter school were ninety percent white and middle-class (Hankins 2007, 122). When they first applied for a charter, it was granted to them on the condition that they expanded the attendance zone to include two ethnically diverse and lower-income neighborhoods. The parents rejected this request (Hankins 2007, 123). This rejection is evidence of several things. First, the parents fighting for the charter school saw this as a community endeavor: allowing students from outside the community to attend the school would defeat the purpose of establishing a community identity around the school (Hankins 2007, 123). The rejection also demonstrates a link, either real or imagined, between class and race and school quality. The link is reminiscent of attitudes in Greenpoint; Americans are willing to live in diverse communities as long as the schools they send their kids to remain socioeconomically homogeneous.

Chicago, Illinois

The third largest city in the United States by population, Chicago serves as our largest study of educational responses to gentrification. Gentrification and urban redevelopment in Chicago was encouraged by Mayor Richard Daley beginning in 1995. Daley sought to combat the downward economic trend he saw in many of Chicago's poor, and coincidentally black, neighborhoods by enacting city-wide policy to attract wealth out of the suburbs and into these neighborhoods. While Mayor Daley used a number of strategies to achieve this goal, his most comprehensive by far was the "Renaissance 2010" plan (Davis and Oakley 2013, 84). Reflecting its name, Renaissance 2010 aimed to use

education reform to bring Chicago's lagging neighborhoods up to speed with the rest of the city by the year 2010. In addition to being poor, each neighborhood that the plan sought educational change in was predominately black (Davis and Oakley 2013, 85). Davis and Oakley described the educational overhaul as "closing 60-70 public schools in the city and opening 100 new schools (some of which would be charter schools)" (Davis and Oakley 2013, 85).

In Chicago we find a partial shift to charter schools versus the indiscriminate jump we saw in Greenpoint and Grant Park. The difference in magnitude can be attributed to the source of the educational reform and gentrification, the government. Rather than occurring as a happy coincidence as in our other two studies, Chicago's gentrification was planned, intentional, and government sponsored. This is the result of city policy shifts in Chicago that handed extensive control over education policy to the mayor's office (Davis and Oakley 2013, 84). Government sponsorship has two opposing effects on the educational decisions made: first, the government is more likely to have faith in public education and trust the ability of public schools to improve. On the other hand, the government backing gives reformers the power to change the system at its core—Renaissance 2010's planners could have opted to make all of the schools in Chicago charter schools, as they are the ones to issue the charters, allocate funding, determine zoning and districting, and so on. Chicago's incomplete move towards alternative education suggests that the government reformers' faith in public schools may have been more compelling than the community members' confidence in our other cities of study.

Philadelphia, Pennsylvania

In a similar vein to Chicago, study of Philadelphia provides us with information on large scale community decisions around education. Also similar to Chicago, Philadelphia had failed to gentrify on its own and the city government sought gentrification to correct the pessimistic economic outlook for the urban situation. Where Chicago and Philadelphia differ is in the city government's autonomy. In Chicago, the mayor's office was given autonomy over urban development decisions, including education. By contrast, at our time of study the Pennsylvanian government was looking to take over the education reigns from Philadelphia's city government as a result of "dismal" student performance (Davis and Oakley 2013, 86).

The local and state governments were both interested in oversight of Philadelphia's education system, but for different reasons: city government sought control to use improvements in education to attract middle-class families to the city-center, while state government was interested in education management for the potential to sell operation of Philadelphia's education to private providers. In the end, the state government won the struggle and Pennsylvania Governor Ridge commissioned Edison Schools to "evaluate Philadelphia district schools and make recommendations for improving the financial and education organization) (Davis and Oakley 2013, 86). At Edison's suggestion, the state government opted to privatize Philadelphia's school system. In 2002, "contracts to oversee 70 schools were awarded to seven private providers" (Davis and Oakley 2013, 86).

Philadelphia holds an interesting position among our cases of study: while *operation* of the schools was sold off to for-profit organizations, oversight of the schools was still left

largely in government hands. This privatization is distinct from other areas as the government opted for private aid in education reform and closely supervised the privately operated schools, rather than turning the entire responsibility of education over to private organizations. Because of these distinctions, Philadelphia is treated as an example of public education reform.

From study of Philadelphia and Chicago we gather two important pieces of information. First, we add to our factors for predicting community choice in solving educational issues. We find that gentrification encouraged by the government as part of urban redevelopment results in public, rather than private, avenues of change. This may be because of a lack of a community group or organization to take control of the educational initiative, or may be the result of the government's certainty in its own ability to turn the system around. Second, we see that education rehabilitation in some cases operates as a means to encourage community resettlement rather than an end in itself. This is important because it provides us some insight as to which reform route communities will take and whether or not the government will involve itself when we attempt to predict choices in communities that have not yet gentrified.

Fort Greene, New York

Fort Greene is a neighborhood in Brooklyn, New York. Originally a prosperous business community, nationwide economic downturn and several underperforming development projects led to the withdrawal of investments and general abandonment of Fort Greene by the 1980's. Housing prices fell and many of Fort Greene's units remained vacant for years. The reduced costs of living provided valuable low-income housing to several communities. Notable in Fort Greene is the relative racial heterogeneity both before and after the economic drop-off. While the majority of residents were poor, there were sizable black, white, and Latino populations in the area (Anderson 2012, 370). Amongst our cases of study, this racial diversity is unique and increases the robustness and prediction power of the model we hope to develop.

While it created housing opportunities for underprivileged communities, the abandonment of Fort Greene had negative impacts on the area as well, namely the rise of gang violence and what Anderson refers to as a "criminal epidemic" accompanying the neighborhood's resettlement. Demands for government action to assure safety in the neighborhood arose and the city of Brooklyn increased policing in the neighborhood. The city government soon realized the high cost of constant policing and, in 2003, elected to resettle the area in hopes of displacing gangs (Anderson 2012, 369-370).. After the city had come to this decision, but before redevelopment could be fully implemented, we find our situation of interest, the transformation of the education in the area.

Fort Green's community was centered around its only school, PS 67, for decades. PS 67 was erected in the mid-1800's as Brooklyn's first school for colored children. The school was desegregated along with the rest of the United States following *Brown v. Board*. From integration through the turn of the century, PS 67 served as the only option for education in Fort Greene (Anderson 2012, 363). 2006 saw the founding of the Community Roots Charter School. While it was labeled as a community-wide effort, Anderson chalks the new school's emergence up to Fort Greene's small but wealthy body of new arrivals. Dissatisfied with PS 67's underperformance, the newest residents of Fort Greene sought other options.

Particular amongst our studies, is the coexistence of the public and charter schools in one location. Because of financial limitations, the Community Roots Charter School shares a building with PS 67. This created problematic community dynamics. First, PS 67's socioeconomic heterogeneity was lost with the new development as the two schools created race-based stratifications. At the time of Anderson's 2012 study, 90% of PS 67 was black while that number hovers around roughly 40% of the Community Roots Charter School (Anderson 2012, 364). While entrance to the Community Roots Charter School is based on a lottery drawing, Anderson noted that it was mostly Fort Greene's white families who could attend lottery meetings and drawings, and who were able to meet the school's volunteer requirements (Anderson 2012, 364). Anderson reports mixed feelings in the community around the charter school primarily based on who is and is not admitted. Those admitted tended to advocate for the school, and those left out questioned the investment of community resources in a "school within a school" (Anderson 2012, 375).

From Fort Greene, as in Greenpoint, we gather that social justice and socioeconomic identities influence a community's feelings about alternative means of education. While the community as a whole requested something be done about the rampant crime problem, the racial stratification and the appearance of new policy favoring members of particular racial identities lost the city government community approval. In terms of predicting decisions of communities in the future, the situation in Fort Greene seems to suggest that racially heterogeneous groups may be less tethered to that identity when it comes to education choice. While the community had not experienced large-scale gentrification at creation of the Community Roots Charter School, it seems as though the only calls for the new school came from those who saw a need to split the community, a group that Anderson claims has quite a bit of overlap with Fort Greene's newcomers.

Improving Public Schools or Opting Out: The Model

Analysis of the case studies reveals several common themes in the decision to privatize education. Identifying these common themes allows us to create a model to predict the future behavior of cities. There are some aspects of these cases, however, that limit our ability to causally link gentrification and the emergence of charter schools in these areas

The first of these aspects is the purpose of charter schools. Davis and Oakley state "a key assumption [about charter schools] is that they primarily serve middle-class White people seeking refuge" and "even though charter schools are attractive to middle-class White families, many charters aim to serve poor, minority students" (Davis and Oakley 2013, 88). In our analysis, it may be difficult to determine if the emergence of a particular charter school is the result of gentrifiers seeking better opportunities for themselves and their children or if it is intended to keep poor minority students engaged in their community and competitive with their new wealthier counterparts.

The other issue inhibiting our analysis is that there are a number of obstacles to starting a charter school that may limit the access that even wealthy gentrifiers may have to influencing their children's education. Charter legislation varies from state to state, so it may be difficult to isolate when red tape around the creation of a charter school was the main reason that particular city opted for a more public route. As Davis and Oakley point out, "if middle-class White gentrifiers are using charters to flee traditional public schools...state charter legislation may thwart their goals" (Davis and Oakley 2013, 89). As a result, a particular community's education decision will likely be impacted by state, and possibly city, policy regardless of that community's specific educational desires.

We have already established that the public schooling provided in urban environments tends to be subpar, and we know that parents are increasingly seeking strong education programs for their children. What remains unclear are the next steps taken: in some cases, gentrifying parents and/or city governments seek public solutions to the education problem, while in others the public route is abandoned entirely for private, typically charter, education. Below, we attempt to establish an additional set of factors that will be useful in predicting which option a particular area may turn to when faced with gentrification. Understanding the factors relevant to community choice will give us an understanding of likely community reactions to policy implementation, which will be helpful in discussion of potential future policies.

We will examine city-specific factors. The racial history and settlement patterns of a city are important to determining its attitude towards public solution. With some outliers, the observable pattern predicts that cities and neighborhoods that are experiencing *de facto* socioeconomic and racial segregation will turn to the public route, while areas that are more integrated in those aspects will opt for at least partially private solutions. Frederick Boal corroborates this pattern, claiming that strong cultural, racial, or ethnic differences impede community organizing efforts because the sub-groups' commitment internal commitment tends to be greater than its commitment to the community around it (Boal 2000).

The intersection between segregation and education reform route plays out in Chicago and Philadelphia. Both cities were largely segregated at the time of gentrification, and both cities used large scale public school restructuring to improve their education systems without founding new charter schools. Notably, in neither case was educational reform pushed by gentrifiers. In fact, both cities attempted to turn around their failing schools in order to attract wealthy families that would otherwise overlook settling there(Davis and Oakley 2013). On the other hand, we have Fort Greene, a mostly integrated neighborhood in Brooklyn. While Fort Greene's community did not completely abandon public education options, they did invest significant resources in a charter school that only served a subsection of the population (Anderson 2012, 364). This corroborates what DeSena says about gentrifiers with some exposure to integration: "they remain cautious about social integration with working-class, immigrant, and low-income residents and are unwilling to fully engage in the community with them" (DeSena 2006, 255).

A second factor specific to cities is the type of gentrifier they are attracting. As we pointed out above, there are largely two objectives gentrifiers have when moving to the inner city, community building and family development. Butler believes we can simply look at which of those weighs heavier for gentrifiers to predict their actions. If the gentrifiers are primarily interested in community building, they tend to try to integrate with their new neighbors and work within the established system to improve it. On the other hand, if their primary interest is in their own children, they tend to choose the socially exclusive schooling circuit (Butler 2003, 2478). Thus we can broadly predict that young and single gentrifiers would look for public solutions while family-based gentrifiers might seek out the private route.

There is also extensive evidence that the cause of gentrification is critical to understanding the plan of action following resettlement. When gentrification happens on its own (Morrill's Gentrification B), there tends to be a greater demand for charter schools and immediate solutions to the public school problem, while when gentrification is pushed by businesses, developers, or the city itself (Morrill's Gentrification A), large scale public school reform is much more likely. This is presumably the result of these groups having the resources to overhaul the entire education system. We see this pattern play out in the gentrification of Fort Greene, Chicago, and Philadelphia. In Fort Greene, gentrification mostly took place on an individual basis and the result was private education reform.

On the other hand, gentrification in Chicago and Philadelphia was sought out by the government as a solution to economic growth problems, and in each of these, publicly overseen education reform was the favored method. In Chicago, the school district was already under the control of the mayor, which made government-led education reform that much easier. When the city opted for reform, the Mayor introduced a plan known as Renaissance 2010, which "called for closing 60-70 public schools in the city and opening 100 new schools" (Davis and Oakley 2013, 85). Much of the action of Renaissance 2010 took place in predominately African American neighborhoods, which demonstrates the Mayor's desire for gentrification. Indeed, "the mayor's vision for successful economic development included the ability of the school system to attract middle-class families from the suburbs and maintain the confidence of corporate executives who might otherwise relocate" (Davis and Oakley 2013, 85).

We find a similar situation in Philadelphia. While the city choosing to turn education over to private, for-profit companies is at best a questionable public method of improving

schools, we will treat it as such for our analysis for two reasons. First, the private providers were overseen by the city government, a process that is at least more public than we find in charter schools. While charter schools are subject to public oversight during their application period, once the charter is awarded operation of the school becomes a private affair. In some instances, this means years of unsupervised operation. Secondly, Philadelphia did not open any new private or charter schools during the period of reorganization, the primary subject of study here. Gentrification was also the goal in Philadelphia, with Davis and Oakley claiming "Philadelphia business leaders...used school reform to spur the movement of middle-class White families back to the city" (Davis and Oakley 2013, 86).

In summary, the racial history of a city, the type of gentrifiers they are attracting, the origins of gentrification, and access to alternative education means all contribute to our prediction of the process through which gentrifying cities will seek education reform. As we saw, the cities most likely to seek out charter schools and private education solutions are those with somewhat racially and socioeconomically integrated residents, whose gentrifiers are primarily interested in achieving quality education for their children, and whose gentrifiers arrived on their own, rather than being "recruited" by government policies designed to attract wealthy residents.

IV. Case Studies and Model Application

To test our model, we apply it to two cities that are no strangers to gentrification, Portland, Oregon, and Seattle, Washington. These cities were selected as part of American gentrification's "wild west": each experienced rapid gentrification starting at about the same time and lasting for roughly the same duration. Because of the similar experience with gentrification among the two cities, their disparate reactions on the education front provide valuable insight as to the robustness of our model. Below we explore the history and development of each city to create a city profile. We compare this profile to our model and make a prediction as to whether the city will opt for public or private solutions to their education problems. We then contrast our prediction with the actual results in these cities.

Portland: History

Located in Northwest Oregon along the Columbia and Willamette rivers, Portland's first settlement by Europeans occurred in 1844 (Gibson and Abbott 2002). Many of Portland's first settlers moved West to escape interaction with non-whites—indeed, the original Oregon state constitution included language forbidding many non-whites from existing in the area. Attitudes towards diversity at the time can be summed up by a quote from one settler, claiming he moved to Oregon to "get rid of saucy free negroes" (Portland Bureau of Planning 1993, 3). Oregon's racially exclusive laws were not just on paper, either: James Vanderpool was arrested and expelled from Oregon in 1851 for violating the state's black exclusion laws (Portland Bureau of Planning 1993). Vanderpool's expulsion is just one example of the racist attitudes common in Oregon at the time.

The racism of Oregonians also had an impact on the establishment of public education in the state, and in Portland in particular. In 1867, Portland's public education consisted of two public elementary schools. Until that time, attendance at the schools was limited to white children. That year, black Portlander William Brown tried to enroll his children in the local elementary school and his children were sent home. Brown appealed his children's rejection to the public school board of directors and his request was again denied. In response to Brown's appeal, the board published the following statement:

It costs us \$2.25 per quarter for each child in school. Now, we will allow the colored people \$2.25 for each child they send to school each quarter, and they can get a house and hire their own teacher. (Portland Bureau of Planning 1993, 11)

The school board's statement not only reflects the anti-integration attitudes of the time, it also established alternative options, rather than reform, as the solutions to disappointment with public education. Even though the public school board of directors agreed to admit black students to Portland's public schools in 1872 (Portland Bureau of Planning 1993), it appears a precedent had been set establishing alternative education as a viable option. It is noteworthy that Portland is still experiencing the effects of that precedent a century and a half later.

Portland's settlement and expansion by whites and blacks alike in the late 19th and early 20th centuries was largely the result of the existence of industry and labor jobs in the area (Portland Bureau of Planning 1993). Portland's proximity to the Pacific Ocean made it a prime shipbuilding city and it profited intensely from the industry during World Wars I and II (Gibson and Abbott 2002).

To accommodate the influx of laborers during World War II, the black and bluecollar city of Vanport was established between Vancouver, Washington and Portland (hence the name) (Gibson and Abbott 2002). In 1948, the city of Vanport was washed away when the Columbia River flooded its banks. The destruction displaced 16,931 residents, nearly all of whom were black. These populations resettled in communities and neighborhoods all around Portland, but their settlement was controlled by Federal Housing Authority regulations and the redlining that was in full swing by that time. The result was stark segregation in the city that was readily apparent until the 1990's, and traces of which still exist today (Portland Bureau of Planning 1993).

The relegation of blacks to redlined neighborhoods in Portland can be traced back to the racist attitudes that Oregon was founded on. The city of Portland is bisected by the Willamette River. Today, the West side is primarily wealthy and white, while the East side remains non-white and poor (Gibson and Abbott 2002). This was not always the case, however. During the early settlement of Portland, many blacks were allowed to settle and purchase land wherever they pleased. It is unclear whether this was favored by Portland's white residents, if there weren't enough black residents for there to be issue, or if the legislation to forbid it did not exist. Regardless, the result was a diverse and colorful city. Things changed with the flow of Southern and Eastern European immigrants into the area during the early 20th century. When the new arrivals elected to settle on Portland's East side, the area was informally determined to be the non-white neighborhood. At this point, Portlanders limited non-white settlement patterns in the area with the aid of the FHA, as discussed earlier in this paper (Portland Bureau of Planning 1993).

Over the course of the 20th century, Portland's communities of color, and eventually the entire residential inner city were abandoned by city planners who encouraged the development of the Metropolitan area instead. Downtown Portland was deemed "unsalvageable" and a "blighted area" according to a report in the 1960's (Portland Bureau of Planning 1993). Instead, entire low income residential neighborhoods downtown were demolished to make room for a revitalized downtown area. The redevelopment included the creation of Portland State University's downtown campus, Emanuel Hospital, Memorial Coliseum, the Civic Center, and Lloyd Center shopping mall. Each of these projects was intended to transform downtown into a source of entertainment and education rather than residential community (Portland Bureau of Planning 1993). The repurposing of the downtown area created a number of problems when gentrification began to take hold of the city and was exacerbated by a lack of housing.

At the beginning of Portland's gentrification in the 1990's, socioeconomic integration in Portland was a joke. 7.7 percent of the city's residents were black, and 80 percent of them lived in Northeast Portland (Portland Bureau of Planning 1993). Other substantial communities on the East side included Hispanic and East Asian immigrant groups that together comprised around 10 percent of Portland's total population. Portland's West side remained predominately white, with most of the city's wealth concentrated in the area (Gibson and Abbott 2002).

Portland: Gentrification

Gentrification in both Portland and Seattle is, at least in part, the result of unique state land use regulations in Oregon and Washington. Both cities are contained by urban

growth boundaries. Urban growth boundaries are mandated limits to geographical city expansion, intended to prevent urban sprawl. In each state, a land use department determines certain density goals a city must meet before it can expand its urban growth boundary and continue development. The density goals are typically intense in an effort to preserve the natural environment in each state, something valued by many residents in each state. On the other hand, the boundaries have unintended consequences for low income residents of the cities. By artificially limiting the supply of land in general, and housing in particular, available for development, urban growth boundaries push the cost of living up (Fair *et al.* 2014). This effect is exacerbated when demand for housing in the area increases (Gibson and Abbott 2002). Living in the city becomes a money game that many residents cannot afford to play and resident turnover is accelerated. While urban growth boundaries are not entirely relevant to our model (after all, none of the case studies the model was derived from are affected by urban growth boundaries) they are important contributors to gentrification in Portland and Seattle and have thus been included here.

The statistics tell a story of gentrification in Portland between 1990 and 2015. The population in the Portland Metro area increased by more than a quarter between 1990 and 2000 (Gibson and Abbott 2002). From 2000 to 2015, the median home price in Portland increased 129.7 percent, jumping to an astonishing \$340,000 (Home & Gardens Northwest 2017). While this number is impressive by itself, it becomes even more staggering when the housing bubble and Great Recession are taken into account. From 2010 to 2015, Portland saw around 300 people move to the region every day. Even offset by the 234 leaving daily, that's still a net growth of over 120,000 (Theen 2016). Clearly Portland has been the center of a population explosion. Theen claims that his explosion has had adverse

effects on Portland's communities of color, with non white residents continually being pushed further East to clear room for wealthy and white newcomers (Theen 2016).

Portland's desirability as a destination can be attributed to several factors. Today, Portland's investment in technology created numerous skilled jobs and attracted professionals from all over the country. In conjunction with Portland's status as Oregon's economic hub, the industry investments attracted a number of businesses to open headquarters and offices in the area. These factors have brought wealth to the area.

Portland: Relation to the Model

With knowledge of Portland's development into the city it is today, we can move to examining its relationship with our model. Recall that the model's prediction of city behavior is based on four criteria: the racial history of the city, the type and origin of gentrification in the city, and the ability of citizens to access alternative means of education.

We have already touched on the extensive and complex history of race in Portland. As we saw, Oregon's development as a white escape from people of color limited the settlement of nonwhites in the area for many years. Both the racist attitudes of many white Portlanders and the racially biased housing policies determining the settlement of newcomers to the community have created a racially, and socioeconomically segregated urban area. Using this racial history as the only input, our model predicts that Portland will opt for a public solution to its education problems.

Portland's lack of racial diversity is noteworthy in our discussion of gentrification in the area because of the importance of identity preservation to many gentrifiers. Sullivan even argues that Portland's anomalously small minority population " limit the

generalizability of the findings," going on to say that Portland's experiences with race should lead one to "expect to find less racial tension and perhaps more social interaction between white and black residents" (Sullivan 2006, 604). While we agree that Portland's relatively low levels of diversity may add an asterisk to our predictions for broader patterns of gentrification, we do not think they are so outlandish as to be omitted entirely. In many other respects, Portland is the quintessential example of modern gentrification: indeed, both Portland's years of hosting money-poor and culturally rich communities in tandem with its rapid expansion and development as a result of investment in technology industries mirror situations in numerous urban environments around the United States.

The characteristics of the city's gentrification are also relevant to this discussion. Portland has proven to be an attractive destination to educated young people (Theen 2016). This is in keeping with Portland's recent investment in technology industries, creating thousands of jobs that entice fresh college graduates and those looking to start families. The type of gentrification the city is experiencing is more difficult to determine. While there have not been outright statements by the City of Portland stating an intent to attract wealth to the inner-city, it seems clear by the investment patterns of the city that Portland is a case of Morrill's Gentrification A.

The city has spent several million dollars on the Northeast Portland neighborhood of Alberta alone, an area that has been historically black. City funds have gone to redeveloping the area as an arts district, complete with galleries, art walks, and afterschool arts programs for students (Sullivan 2006). Beyond Alberta, Portland has also invested nearly \$200 million on city-wide development and revitalization over the last fifteen years. Much of this money has gone to developers who "leveraged that city cash into

multimillion-dollar apartment projects" (Parks 2016). Furthermore, The city has put an additional \$159 million into the Interstate Corridor Urban Renewal Area, focusing on redeveloping the area adjacent to I-5 as it passes through Portland (Parks 2016). It would appear that city has engaged in large scale investments that have, by strong coincidence, if not intention, increased the city's charm to young professionals looking to start a families. Based on the characteristics of Portland's gentrification, our model again predicts Portland will turn to a public solution to its education problems.

In addition, Oregon in particular has practically legislated itself out of its own education funding. In 1990, Oregonians passed Measure 5 limiting local property taxes (Sokolow 1998, 175). Since the passage of Measure 5, Oregonians have had difficulties raising education funds. This trend has persisted through the most recent election cycle with the failure of Measure 97. Measure 97 was a proposed corporate tax increase, adding to state revenue pools from which education, health care, and other state services draw from (Borrud 2016). Its failure on the 2016 ballot demonstrates the inability of Oregonians to legislate public education funding back into place. This inability has contributed to Oregon's rapid drop through the nation's public education rankings.

The final, and perhaps most influential aspect of the model is the ease of access to alternative education in the city. Oregon has a centralized, state-wide education department that determines schooling options for all cities, Portland included. Oregon's State Department of Education lists three options for schooling beyond the public route: alternative schools, private schools and charter schools. Alternative schools provide options for students with educational or behavioral issues that would prevent them from participating in a traditional classroom (Oregon Department of Education 2017). While

technically an "alternative" means of education, this paper does not discuss alternative schools because, unlike charter and private schools, a student's enrollment in alternative schools is less a reflection of parent choice and has more to do with the student's ability and behavior.

Beyond alternative schools, Oregon lists private schools and charter schools as student's other education options. In Oregon, private schools operate with little to no supervision from the state. Indeed, "private schools do not have to register with the State of Oregon, unless they are contracting with the public school district for services" (Oregon Department of Education 2017). This means no monitoring, no checkups, no enrollment regulations, and no requirements for founding a school. The lack of oversight not only makes private schools an freely accessible alternative when Oregon residents become dissatisfied with their local public education, it also creates opportunities for discrimination, as parental reporting is the only way a poorly operated private school would be found out. Families that do not have the means to navigate reporting systems can easily be excluded by gentrifiers hoping to maintain community homogeneity.

The final alternative education option available to Oregonians is a charter school. A charter school is subject to more oversight than a private school because the school is only given authority to operate via a charter between the school community and the local board of education. The charter often excludes certain rules from applying to the charter school as long as the school's operation remains consistent with the charter. In exchange for agreeing to oversight, charter schools enjoy access to public education funds. Charter schools are also funded from other sources though. Oregon currently has \$9 million to spend on the development of charter schools between 2015 and 2018. As a result, it is not

uncommon for charter schools to have as much as 3 times as much funding per student as their public counterparts (Oregon Department of Education 2017). As an open and transparent enrollment process may be one of the rules a charter school is released from, charter schools seem to be another means by which gentrifiers may continue to construct a community identity for themselves.

It is worth noting that there are drawbacks to creating a charter school. Unlike a private school, charter schools must undergo an application and review process by the local public school board. If the district disapproves of the proposed charter then the applicant can appeal to the state Board of Education., but if the application is rejected by the state, the applicant is left without recourse. Charter schools are also required to provide a financial management plan with their application that details how they will spend public money. Each year, charter schools are required to report their budget and spending, and face penalties as steep as charter revocation if they experience financial mismanagement (Oregon Administrative Rules). While Oregon's charter schools are afforded a fair amount of money and freedom, they are not given free reign over their operation, and establishing a school can be difficult.

Using the four aspects of our model, we can predict to Portland's behavior when it comes to public schools. With its racial history as the only input, our model predicts that Portland will opt for a public solution to its education problems. Its history of segregation and identities drawn from pronounced racial lines predict an investment in the community the includes a commitment to the health of the local public school. Both the city's type of gentrifier (young, single, and childless) and origin of gentrification (city influenced) also predict a public route. Both characteristics predict a more flexible community with more trust in the ability of the city to legislate and fund them out of the problem. On the other hand, given the ease of access to alternative education in Oregon, the model predicts Portland's gentrifiers will abandon public schooling. Because it is so easy to find and found other options, there seems to be little incentive for those dissatisfied with Portland's public education to continue to try to work the system, so to speak, to get what they want.

The mixed predictions of our model are reflected in the mixed results experienced in Portland. On the one hand, Portland's charter school growth seems to have a strong correlation with its gentrification. For example Multnomah County, one of the three counties that make up the Portland Metro Area, had zero charter schools in 1990. The county reported two charter schools in the year 2000, and 18 charter schools in 2015 (Oregon Department of Education 2017). Additionally, the State of Oregon has been allocated nearly \$9 million from the federal government to facilitate the continued development of charter schools between 2015 and 2018 (Oregon Department of Education 2017). Clearly some Portlanders are jumping from the public school ship. However, reinvestment in the Alberta neighborhood tells us another story. In addition to the art galleries and coffeehouses, the city has also invested in bettering the schools in the area. The arts programs at Alberta's Jefferson and nearby Grant high schools have been revived in recent years (Sullivan 2006). As Alberta is arguably the epicenter of gentrification in Portland, the funding of programs at the neighborhoods high schools demonstrates at least some community investment in the public institutions.

Seattle: History

Located in Northwest Washington on the Puget Sound, Seattle first developed as a supplier of lumber and other raw materials to other cities in the Midwest and along the West Coast. Between 1880 and 1890, Seattle grew more than tenfold, to over 40,000, as a result of its connection to several key rail lines and its presentation of a number of economic opportunities in the lumber, carpentry, shipbuilding, and masonry industries. Despite this rapid growth, by the year 1900 Seattle's black population had only reached 400 or less than 1 percent of the total population. During the time period, blacks were excluded from many of the industries that attracted Seattle's settlers. Without good job prospects, many blacks declined to move into what was at the time undeveloped territory (Taylor 1994).

Race relations in Seattle have been noteworthy since the beginning. Taylor describes early Seattle as a "paradox" for its black population. There were not enough blacks in the area for the white population to feel threatened, and as such Seattle's blacks enjoyed freedom from much of the segregation that the rest of the country was facing. However, because there were so few blacks it was difficult to mobilize and challenge racist hiring and housing practices. This left Seattle's blacks in a situation that was effectively worse than the rest of the country having to abandon the idea of a progressive, "liberal and egalitarian" Seattle (Taylor 1994). That is not to say that Seattle and Washington have not been on the forefront of some liberal policy movements: in 1949, the Washington State Law Against Discrimination was passed, the first fair employment practice law in the West (Taylor 2017). Additionally, in 1978, Seattle implemented a mandatory busing program to integrate schools without a court order. At the time, Seattle was the largest city to implement a similar program. The bussing program ran until 1997 (Taylor 2017).

Seattle continued to initiate voluntary desegregation efforts, even after it concluded its bussing program. In the early 2000's, Seattle was home to a desegregation initiative that assigned students to schools based on race classifications, seeking diversity. This initiative was challenged in courts by parents claiming that race-based classifications violated the 14th Amendment's Equal Protection Clause. The case, *Parents Involved in Community Schools vs. Seattle School District No. 1*, was eventually decided in favor of *Parents* and Seattle was forced to abandon its well-intentioned desegregation effort (*P.I.C.S. v. Seattle School District No. 1*).

While the history of race in Seattle has the potential to be explored in much greater depth, the concentration of its gentrification to one particular district in the city and the fact that it was not founded as a racist utopia both limit the history relevant to our discussion. Gentrification in Portland was concentrated in the Alberta neighborhood, but the East side as a whole has been up for resettlement over the past 20 years. This is not the case in Seattle. Much of gentrification in Washington's most populous city has been concentrated in the Central District (CD). This is largely because, as Taylor puts it, "Black Seattle through much of the twentieth century was synonymous with the Central District" (Taylor 1994, 5). In 1950 the CD was 76 percent black, a number that continued to climb until segregation in the area peaked around 1970 (Morrill 2013).

The concentration of Seattle's black residents in the CD is also the result of housing discrimination by individuals and the FHA (Beason 2016). In response to movements opposing housing discrimination, property owners would publish messages like the

following from the Apartment Operators Association in the 1960's: "[legislation against housing discrimination] would compel you to rend to...non white persons who could be prostitutes, criminals, and otherwise dangerous to you and your tenant" (Singler *et al.* 2011, 101).

Morrill claims that the city of Seattle abandoned the CD over the second half of the 20th Century, particularly with economic restructuring in the 1980's. The city pulling out support for the area exacerbated "historical discrimination in education and the labor market" (Morrill 2013, 327). As a result, black households in the CD experienced poverty at a higher rate and much of the CD fell into disrepair (Morrill 2013) Because the CD's is predominately poor and black its resettlement almost inherently constitutes gentrification. The CD's neglect seems to have come to an abrupt halt when Seattle began to undergo its gentrification.

Seattle: Gentrification

As discussed above, urban growth boundaries, enacted by Washington's state legislature in 1988 and implemented in 1990, played a role in exacerbating gentrification in Seattle as in Portland. Seattle's urban growth boundary in particular funneled gentrifiers into the CD as it was incredibly affordable compared to neighborhoods in similar proximity to the city center. Affordability was sought out, particularly after a three-way partnership between Paul Allen (owner of Microsoft), the City of Seattle, and the University of Washington created 20,000 more jobs in downtown Seattle.

Beyond the Central District, Seattle as a whole has experienced rapid growth in recent decades. Between 1990 and 2000, the Seattle Metro Area grew 20 percent,

accompanying a near 100 percent increase in median home value at the same time (Morrill 2008). In the same time, Seattle realized a sharp uptick in homeownership in the city primarily " by young and middle-aged professionals" a shift from the renter dominated market before 1990 (Morrill 2008, 60). These new professionals were not the black residents of the CD however: Seattle's black population has seen a near 50 percent decrease in median income between 2000 and 2013, while Seattle's white residents have enjoyed a 50 percent swing the other way (Beason 2016). As blacks are priced out of the market, they are forced into Seattle's suburbs while the CD is resettled (Morrill 2008). This resettlement has resulted in the CD going from over 70 percent black around 1980 to 8 percent black in 2010, while Seattle's black population has gone from .4 percent to 4 percent over the same time (Morrill 2013).

While it is clear that Seattle's blacks are being uprooted from their historical community in the CD, it should be noted that Seattle has become more diverse over the last 50 years. In 1960, Seattle was 92 percent white. By 2010 that number had dropped to below 70 percent. While its black residents are packing up and leaving, the CD is becoming home to a number of Hispanic and Asian communities (Berger 2016).

Seattle: Relation to the Model

We now compare Seattle's characteristics to our model in an attempt to predict the city's behavior. Again we will discuss the four criteria: the racial history of the city, the type and origin of gentrification in the city, and the ability of citizens to access alternative means of education.

Seattle's CD exists in the South and East downtown area while the Seattle School District encompasses all of Seattle. Accordingly, comparisons within the school district reflect settlement patterns within the city. Liu points out that, in 2000-01 "84 percent of [the school district's] black students, 74 percent of its Asian students, and 65 percent of its Latino students lived in the South" while nearly two-thirds of the white students in the district lived in the North (Liu 2007, 287). While the school district has 1-2 white students per black student on the whole, Liu reports a 7:1 white:black ratio in the North and a .69:1 white:black ratio in the South (Liu 2007). Additionally, 29 of Seattle's 98 public schools are at least 80 percent students of color (Balk 2016) while 20 of them have nonwhite enrollment of 90 percent or more (Shaw 2008). While school district enrollment may not be a perfect reflector of the segregation of a city, based on the statistics above, it is clear that residential settlement in Seattle has been strongly influenced by race.

The type of gentrification seems to be clear. Morrill claims Seattle is a stark case of Gentrification B. He believes the city's rapid economic growth attracted individuals to the area and Seattle's reputation as a cultural hub made it appealing to young people looking to start a family. While the city was involved in the Paul Allen and UW deal, Morrill believes the city was not the instigator and points to the lack of other serious investments on the part of the city as evidence of potential lack of interest in gentrifiers on the part of the government (Morrill 2008).

Seattle's alternative education options are remarkably limited compared to what is available to Portlanders. While private schools have always been available to Seattle's families, establishing charter schools within the city has been a struggle for years. It wasn't until the passage of Initiative Measure No.1240 (also known as the Charter School Act) passed in November 2012 that the state of Washington began to recognize charter schools as a legitimate form of public education and grant charters to applicants. This is not the end of the story, however. In its League of Women Voters of Washington v. State decision, the Washington State Supreme Court struck down the Charter School Act on state constitutional grounds. The court's decision determined charter schools were not eligible for public funding because they were not under public control (Harvard Law Review 2016). This decision not only limited the creation of new charter schools, but also put the continued operation of extant charter schools in jeopardy. In April of 2016, a new law legalized charter schools again, making the Washington State Charter School Commission an "independent state agency," and allowing continued development of charter schools in the state (Washington State Charter School Commission 2017). The strikingly recent establishment of charter schools in the state, combined with the uncertainty of their permanent presence reduces their viability as an alternative option in Seattle. It is likely that even parents that may have opted for a charter school are reluctant to make the investment without the certainty that their legality will not be again challenged in the courts.

It is possible that the "rigorous" application process for the creation of a charter school in Washington has also limited the grip the schools have on the area. In addition to facing a similar application and review process as Oregon applicants, individuals looking to start a charter school or renew a charter in Washington must also complete an interview with the Charter School Commission and attend a public forum on the impacts their proposed school will have on the community (Washington Administrative Code). Once the school is established, the organization operating the school is required to submit annual performance reports to the Charter School Commission. The Commission is responsible for oversight of the schools, is held accountable for their performance, and is granted the authority to revoke charters if certain parameters are not met (Washington Administrative Code).

Finally, in Washington charter schools are limited to the same funding that their public counterparts receive. Recall Oregon's charter schools had access to special federal monies designated for the growth of charter schools in the state. By contrast, the Washington State Board of Education requires funding for charter schools be distribute "equitably with state funding for other public schools" (Washington State Board of Education 2017). In addition, regardless of the agreement outlined in the charter, schools must abide by "applicable reporting requirements to receive state or federal funding" (Washington State Board of Education 2017).

As opposed to the situation in Oregon, creation and management of charter schools in Washington is subject to intense scrutiny that may limit its appeal to parents who are looking for a simpler solution to their education problem.

Based on the information above, we can make a similar prediction to the behavior of Seattle. The city's blatant race-based settlement patterns suggest a community commitment that would foster more faith in the public schools in the area. While the gentrifiers attracted to the city predict a public route for education reform, the fact that gentrification has taken place without the aid of the city suggests that the city may be more likely to look for an alternative route to solve its education problems. On the other hand, limited access to alternative education in Washington pushes the prediction back in the

public direction. It seems the difficult application process and micromanagement of the end product would dissuade potential investors in charter schools.

The model predicts Seattle will take a public route to solve its education problems, and this appears to be consistent with the real story. Despite their unpredictability, charter schools have begun to establish a foothold in Washington: the Charter School Commission recognizes six charter programs operating in the state this year. Still, the city seems to overwhelmingly prefer the public route. While a few of the six listed are larger organizations with charter campuses in several cities, it appears there are fewer charter schools in the State of Washington than there were in Portland alone. Additionally, in 2014, less than 1 percent of Washington's public elementary and secondary school students attended charter schools (National Center for Education Statistics 2016). Only 4 of Washington's charter schools are located in Seattle proper (Washington State Charter School Commission 2017). Furthermore, Seattle seems to have adjusted public school enrollment options to help mitigate the dissatisfaction of parents. For example, the Seattle School District allows incoming ninth graders to choose their high school, the only restrictions being limits on overcrowding of schools. When more students apply than a school can enroll, students are subjected to tiebreakers such as having a sibling already attending the school, or demonstrated interest in programs provided by the school (Liu 2007). It appears gentrifiers in Seattle have opted for a public solution to their education issues, and the city is doing its part to facilitate that.

V. Further Discussion

A noteworthy addition to the discussion of alternative education options is the endorsement of private school attendance by state and federal voucher programs. First popping up in the 1950's, these programs fund privatization of education using taxpayer dollars. Parents sending their children to private (or in some cases charter schools) can apply for a voucher that reimburses the cost of attendance at the new school from the state or federal education budget, depending on the location and school (Carlson and Cowen 2015). The reimbursements push parents further from reinvesting in public schools over the alternatives, and the abandonment of public schools continues.

Interestingly, the voucher system does not seem to have the effect that many parents expect it to. A 2017 study of schoolchildren in Washington, D.C. revealed students participating in voucher programs actually have worse standardized test performance than their peers in public schools (Green 2017). It seems that, at least in Washington, when parents are given the freedom to choose, they choose wrong.

Another aspect of the education discussion is the future of public education under the new administration. For example, President Trump has already endorsed "tax credit scholarships," also known as neovouchers. This program allows private individuals and companies to "earn tax credits by giving money to nonprofit scholarship funds. Students can use the scholarships to attend private schools" (Kamenetz 2017). This system encourages parents to pull their students out of public schools, exacerbating the appeal of the "circuit of schooling" discussed above. Parents taking advantage of this program can make a tax-deductible donation to a particular private school that they want their children to attend, then enjoy reduced or waived tuition at the school.

Another interesting facet of these neovouchers is the possibility of double-dipping. The scholarships that their children get is the first reward for the donation, but donors are also able to claim a federal charitable tax exemption on their donation. The combination of the scholarship and the exemption add up to a 35 percent *profit* over sending children to public school for some individuals (Kamenetz 2017). At this point it becomes irrational not to take advantage of this system. It will be interesting to see the direction public education goes in response to this and similar policies under the new administration.

In January of this year, Betsy DeVos was confirmed as education secretary on a 51-50 vote. So far, the Trump administration has moved to give more authority to states in determining what their public education should look like. This states' rights approach is noteworthy because, as civil rights advocates have pointed out, a weaker federal presence will have difficulty correcting for "educational inequities of race and class" (Kamenetz 2017).

DeVos has stated that she is also a states' rights advocate, and hopes to lessen the federal role in education. Prior to her appointment, DeVos worked extensively with forprofit private and charter schools, including those that play a role in the above-mentioned neovouchers. Kamenetz points out that, because less than 10 percent of K-12 funding comes from the federal government, DeVos' critics may be overreacting to her appointment (Kamenetz 2017), but it's not all about money. DeVos' problematic policies that favor private schools and alternative education could pull students out of public schools. In conjunction with the neovoucher system, it would seem education is inexorably headed away from public means—at least for those who can afford it.

VI. Conclusion

As gentrification becomes an ever more prominent aspect of urban living in the United States, its study becomes increasingly important. Here we analyzed the inherent connection between gentrification and public education, finding that patterns of gentrification can predict education choice in some circumstances. After testing our model, we find that the most accurate predictor of choice between public and private solutions to the education problem is the type of gentrification experienced by the city. Gentrification A, encouraged by the government, tends to lead to a public route while market-influenced Gentrification B predicts private options. Further study on this topic may explore the impact that hybrid gentrification, a mixture of Gentrification A and B, has on the education decisions made by the community.

With this knowledge, we gain a better understanding of the impact that government-pushed gentrification will have in urban education contexts. Because Gentrification B results in increased investments in education alternatives, we recommend communities interested in avoiding growth of private and charter schools seek out government action on gentrification, as this seems to greatly limit the negative impacts brought about as a result of the gentrification.

We also recognize limitations to our testing capacity. Each community has a unique historical context and each comes with nuances that may push it in one direction or another regardless of its relation to any of the factors in our model. As study in this paper was limited to outcomes in a total of seven locations, we hardly believe this to be the comprehensive understanding of the potential impacts gentrification will have on public education in the area. Rather, this paper captures a loose trend that carries some predictive power. A more involved version of this study would likely have more applicable results.

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