

**An Examination of the Culture of South Side Chicago Neighborhoods and its
Relationship with College Enrollment in Public High School Students**

Rimsha Nazeer



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Preceptor: Samatha Steinmetz

Faculty Advisor: Professor Sorcha Brophy

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Abstract

Behavioral economics continues to seek evidence-driven research as well as solutions about how individuals can improve their financial decision-making. In the City of Chicago, this approach is a novel method in observing the relationship between residence and postsecondary enrollment rates in the neighborhood, while focusing on the culture and environment of the neighborhood. Prior literature indicates that primarily low-income status, household income, and race identity factor into these results, but no effect alone is strong enough to explain how the culture of a neighborhood can lead to low college enrollment rates. Further research, especially at a local level like South Side Chicago provides a deeper understanding as to how residence in a neighborhood affects a student's likelihood to enroll in a postsecondary opportunity. Moreover, this can ultimately help improve college enrollment rates in CPS, a challenging issue for all public high schools in the city.

Through an analysis of neighborhood characteristics such as walkability, crime rate, household income, and CPS public data about current higher education enrollment rates, this paper explores why three neighborhoods in Chicago—Kenwood, Washington Park, and Woodlawn—have varying college enrollment for students and what the possible underlying explanations are for these low rates in the context of neighborhood social culture and environment. This paper finds that neighborhood residence does relate to how people view and proceed with the possibility of college and that criminal activity may be the priority focus to solve this issue.

Following this, the city should be aware that not all neighborhoods are the same; some require different treatment in terms of budgeting, prioritization, and resources for students beyond high school graduation in order for the South Side and CPS overall to achieve a more successful higher education attainment rate for the future generation.

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I. Introduction

Behavioral economics is defined as the integration of economic theory, psychology insights, and other related disciplines such as anthropology, sociology, political science, and neuroscience.¹ The main objective for this interdisciplinary field of study is to better understand human behavior, such as decision-making. Each discipline has its own set of assumptions regarding human nature—conventional economic theory always defines individuals as rational and optimizing agents who know what they prefer—and integrating these disciplines along with their assumptions together allows for flaws of human behavior, such as irrationality and asymmetric choices, to be taken into account. By deviating from orthodox models, behavioral economics has shed light on how individual choices are sometimes logically unsound despite having access to information which should make their choice making skills more efficient and overall good for them. For example, behavioral economics has shown that individuals prefer spending their disposable income today rather than investing and saving for a higher disposable income tomorrow, despite great amounts of research showing that future planning, especially for financial decisions, is better for the economic agent.²

The idea of economics merging with fields such as psychology is not new. Starting as early as 1955, economists have incorporated insights from psychology into economic models. Loss aversion, the idea that individuals tend to avoid losses exponentially more than obtaining gains, is often cited in economics research even though it is largely based in psychological theory. The implication of this idea has been monumental, as it illustrates why people rather

¹ Samson, Alain. "An Introduction to Behavioral Economics." The BE Hub, January 22, 2020. <https://www.behavioraleconomics.com/resources/introduction-behavioral-economics/>.

² Chetty, Raj. (2015). "Behavioral Economics and Public Policy: A Pragmatic Perspective," American Economic Review, American Economic Association, vol. 105(5), pages 1-33.

not risk losing money or possessions even if the potential reward is greater. It largely explains the psychology behind the aforementioned irrational behavior observed in people.³ These ongoing studies of behavioral economics have greatly contributed to the public sector and policy formation.

Applications from behavioral economics into public policy allows for the use of novel tools to influence behavior. Such tools include changing default options (opt-in versus opt-out programs) and framing opportunities as losses instead of gains (having to forego rather than earn money), all which allow for newer outcomes of success for policy.⁴ Not only does behavioral economics prove effective in policy design, but also in policy analysis. The field provides better predictions and understanding about existing policy and its impact.

Additionally, behavioral economics opens a new approach to how people think about welfare programs regarding education, healthcare, and retirement. Research in the field demonstrates how biases, like hindsight and inattention, produce different perspectives between policymakers who are creating the welfare legislation, and the individuals affected by such legislation. Accounting for these differences by examining decision-making processes across stakeholders, behavioral economics can improve predicted outcomes and effects of these policies.

While a lot of behavioral economics has been conducted in the areas of tax policy, retirement savings, and performance improvements, the field has yet to fully look into implications between financial incentives and education. Many studies have been conducted in

³ Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263-291.

⁴ List, John A. 2004. "Neoclassical Theory Versus Prospect Theory: Evidence from the Marketplace." *Econometrica*, 72(2): 615–625.

schools to support past behavioral economics theories about decision-making in terms of both student and teacher performance, but very few specifically observe these theories in terms of high school and college decisions.⁵ *In future research*, I want to observe and study how and why individuals make the decisions they do when it comes to higher education, especially the processes adults go through in order to decide how to save and invest in their children's education.

Among those that are academically qualified for higher education (as in, they met the minimum requirements), 89% of high income students completed a Bachelor's Degree within eight years in comparison to 59% of low-income students.⁶ Studies show the primary barrier is financially related. It is often the lack of savings and investment in schooling that cause this divide.⁷ While many reasons have been suggested for this gap, I wish to pursue how the culture of a neighborhood can be observed and utilized so that more residents find their neighborhood less socially isolated and more socially organized such that they are able to make decisions that benefit themselves and their children (see Theoretical Framework). The ultimate focus of this research will be exploring the college enrollment rate for high school students in a given neighborhood.

More specifically, my thesis will look into three neighborhoods in the South Side of Chicago—Kenwood, Washington Park, and Woodlawn—in which considerable money has been invested to ensure larger success rates for children going into higher education. Through public

⁵ Levitt, Steven D., John A. List, Susanne Neckermann, and Sally Sadoff. 2016. "The Behavioralist Goes to School: Leveraging Behavioral Economics to Improve Educational Performance." *American Economic Journal: Economic Policy*, 8 (4): 183-219.

⁶ Adelman, C. *The Toolbox Revisited: Paths to Degree Completion From High School Through College*. Washington, D.C.: U.S. Department of Education, 2006.

⁷ Lynch, Kathleen, and Claire O'riordan. "Inequality in Higher Education: a Study of Class Barriers." *British Journal of Sociology of Education*, Vol. 19, No. 4, 1998, pp.445–478.

records of CPS, crime databases of the Chicago Police Department, and reports by the Chicago Metropolitan Agency for Planning, I will be observing, at the neighborhood level, what factors are being influenced into the culture of a neighborhood and how that environment is related with the college enrollment rate⁸ for high school students in the area. My research will aim to not only explore this culture and relationship, but recommend through past behavioral economics literature, how we can alter this social culture so that it is more likely that a resident of a disadvantaged neighborhood will consider and pursue a higher education.

II. Literature Review

One of the most extensively produced conclusions in the field of behavioral sciences is the strong association between socioeconomic status and higher education attainment in which low socioeconomic status students will be less likely to enroll in college (Bowles and Gintis, 1976; Sewell and Hauser, 1975; Jencks, 1979; Duncan et al., 1972). Hence, income level is the first factor to observe when exploring college enrollment rates among or against other variables. Despite the relationship between income brackets and college attendance being largely intertwined with varying degrees of correlations, a large body of research continually has examined this relationship (Rouse, 2014; Pelavin and Kane, 1990; Christensen, Melder, and Weisbrod, 1975). It is noted that as family incomes rise, the percent of students who attend four-year colleges does as well (Baird 1984). Results have indicated significant differences between low-income and higher-income families in college enrollment as well completion (King 1996).

⁸ College enrollment rate, for the purposes of this paper, is defined as the percentage of 18- to 24-year-olds (referred to as “young adults”) enrolled as undergraduate or graduate students in 2- or 4-year institutions.

Of three factors typically considered—student ability, cost of college, and socioeconomic status of parents—the cost of college was the weakest influence due to the low income elasticity of demand (Christensen, Melder, and Weisbrod 1975). Most striking of findings is how low-income seniors are more likely than their peers to choose an option other than attending a four-year college such as a technical school or two-year college. Only 66 percent of low-income students include a four-year college program in their future planning, compared to almost 80 percent of the entire sample observed in King’s research (1996). This sample was provided by the College Board and consisted of 900 high school seniors who had taken the SAT.

In a landmark case, *Grutter v. Bollinger*, it was upheld that affirmative action in relation to college admissions is a constitutional mechanism for reaching diversity in student communities given certain situations. “We expect that 25 years from now, the use of racial preferences will no longer be necessary to further the interest approved today.” This statement originates from the opinion of Justice O’Connor who presided over the case. This statement was tested in research by Krueger, Rothstein, and Turner (2006) that focused on the role of black–white family income gaps. It concluded that economic progress is improbable to single-handedly mitigate the race-based achievement gap, especially in the scope of black and white race student populations, that was once predicted in the 2003 Supreme Court case.

In addition to this, a large body of research cites race and ethnicity as confounding and important variables when exploring the strong relationship between income level and college education attainment (Bowen and Bok, 1998; Bowen, Kurzweil, and Tobin, 2005; Elliot and Friedline, 2012; Cox, 2016; Krueger, Rothstein, and Turner, 2006). Even in a longitudinal study across three years, the strongest pain point for 30 high school students interested in pursuing

post-graduation plans was financial exigencies, including cost of transportation, state versus other college (such as community or trade) financial aid offerings, and pressure to provide for the family (Cox, 2016).

Aside from racially motivated findings, another avenue of research studies the underlying psychology that discourages many from achieving in college and, for some, even hinders them from college altogether (Marcia, 1994; Lubrano, 2004; Granfield, 1991; Lamont, 2000; Ethier and Deaux 1994; Crocker and Major, 1989). Concepts such as social stigma, class identity, reconstruction of self, and cultural capital are all investigated under this scope of research in which behavioral science plays a critical role. Lower-income students are found to have an acute awareness of their class against their peers which engendered sentiments of intimidation, incompetence, uneasiness, exclusion, and powerlessness (Aries and Seider, 2005). These feelings only exacerbated in elite colleges where socioeconomic divide is more pronounced than in state colleges (Aries and Seider, 2005).

This divide causes internal tension due to the upbringing of lower-income students being incompatible and unhelpful with the higher-income student groups and greater college community in which there are unspoken rules of how to navigate society and the workforce (Hoyt, 1999; Lamont, 2000). Many lower socioeconomic status students come from families that are classified as “complicated” and “untraditional” which leads to pressures, expectations, and worries that are unknown and foreign to other status students (Cox 2016). When students come out of these turbulent family dynamics and pursue friendships and other social relationships, in college, their social status potential is restricted due to the class identity they present in their interactions (Baxtor and Britton, 2001). This leads to problems with self-esteem

and self-confidence—in addition to self-improvement—that translate into resistance to perform well in college, if attend college at all (Ethier and Deaux 1994).

This strong association between college attendance and income status levels is also explained through the lens of gender roles. A small, though steadily growing, body of research points to how influences from the family and society in the context of gender expectations can create differences in college plans in male versus female students, especially in terms of characteristics like family income and parental encouragement (Stage and Hossler 1989; Carpenter and Fleishman 1987). It can even affect how (low-income) women select a spouse as many have a certain range of income and education attainment that they find suitable, and will not be comfortable, or prefer to select someone who is under or above this range (Chadwick and Solon 2002).

This problem is not unique to the United States, as many other nations have literature focused on the effects of socioeconomic status to the pursuit of higher education. Irregardless of whether one is studying developed or developing countries, or even the diversity of the culture, the question of how to curb the effects of socioeconomic status, such as the race-based achievement gap, is being researched across various nations such as Brazil, Philippines, Australia, and Mexico (Bursztyn, 2015; Carpenter and Fleishman 1987; King and Lillard, 1987; Kaufmann, 2009). A number of policies have been implemented to curb these effects, however nothing has been proven to be replicable or highly successful.

The study and application of economics has prevailed in the education sector for decades. Researchers have applied economics policy to understand and even recommend education policies that can reduce inequality and provide equal opportunity for all despite any

demographic or category. Economics in this context has been argued to have been used too conservatively and does not take advantage of interdisciplinary opportunities of economics, mainly the rising field of behavioral economics (Jabbar 2011). In doing so, educational policymakers can incorporate other knowledge about human behavior to enhance and extend economic models of decision making.

A lot of literature in related fields review some of the behavioral concepts in economics that are most likely to inform education research and policy—prospect theory, framing effects, status quo bias, the paradox of choice, and intrinsic motivation—and suggest directions for further research. Jabbar’s (2011) research provides a more clear and greater landscape of the role of behavioral economics in relation to the larger conversation of educational reform and policy. It also demonstrates that individual based decisions on education alone can change the game on low-income student participation in college. This suggests that a broad sweeping reform policy is not necessarily the cure-all needed to solve higher education inequality; instead, human interactions with financial decisions can perhaps influence economic agents just enough to provide the substantial change needed to help provide greater access and attendance to higher education.

The original purpose of this paper relates to several strands of the literature. First, this work is related to a large literature on behavioral economics being used as a method to provide positive indirect reinforcement in order to influence financial behavior and decision making of individuals (Banerjee, Chandrasekhar, Duflo, and Jackson, 2011; Duflo and Saez, 2003; Beshears, Choi, Laibson, Madrian, and Milkman, 2011). It continues to investigate how groups and individuals can be suggested to make more promising and possibly better decisions for

their future financial state. This work joins literature that studies debt and financial spending (Agarwal et al, 2009; Bertrand and Morse, 2011; Zinman, 2015). Most notable, Guiso, Sapienza and Zingales (2013) investigate how financial decisions contribute to varying daily budgeting for households. Though previous literature examines financial decisions more broadly, this work examines a single financial decision—higher education planning for children.

The current research focuses more broadly on the role of schools and neighborhoods in influencing educational performance and attainment (Oreopoulos 2003, Jacob 2004, Kling, Liebman, and Katz 2007, Dobbie and Fryer 2011, Fryer and Katz 2013). A growing body of literature observes the effects of schools and neighborhoods on educational outcomes of poor and minority students (Banerjee, 1992; Bikhchandani, Hirshleifer, and Welch, 1992; Berry, 2012). While these previous papers relate to several empirical studies on household decision making, many of them observe this question in the context of developing countries.

Countries like Brazil and the Philippines have been ideal to begin the foundational understanding of how people decide and think about educational spending, especially when in a lower income bracket (Bursztyn, 2015; Carpenter and Fleishman 1987). However, U.S. domestic research has not been conducted, especially in urban environments like Chicago. This paper aims to focus on three neighborhoods (Kenwood, Washington Park, and Woodlawn) of the city with varying levels of higher education enrollment and median income in order to examine the specific barriers existing in urban areas of developed countries.

This work also follows other models of social interactions (Akerlof 1997; Becker and Murphy 2000; Durlauf and Ioannides 2010; Postlewaite 2011), in particular those that explore the dynamic of income level on future planning. This paper adds to the literature by providing

direct evidence on the importance of behavioral thinking in relation to residence and income issues (that might pose as barriers), in particular with respect to the schooling decision.

The financial cost to accessing and attending higher education is seen as the largest barrier to increasing working-class participation (Lynch and O’Riordan 1998). While educational institutions are equipped to employ strategies to improve information and clarity that can increase participation, this study claims the barrier of cost is entirely dependent on central government policy. Similar research underlines how financial costs are still an issue for students and must be addressed first and foremost (Woodrow 1999). Not only this, studies mention a set of options and choices that each student and their family must understand and deal with before ultimately deciding to attend college. This adds to the collection of research that identifies certain hurdles on the individual level that hinder families from making financial commitments to higher education. This is coupled with higher-level obstacles built by the government and institutions—such as admission, books, —that contribute to why some communities are more marginalized when it comes to higher education access than others.

A lot of research explores the relationship between money and access to higher education, especially through the lens of minority and low-income students. Despite numerous legislation mandating equal access and opportunity to education (including college), minority and low-income access is declining. One study blames this on historical accounts of policymakers fighting over student aid in the 1980s and following decades (Orfield 1992). While listing many opponents such as inadequate outreach and bureaucratic red tape, the study pinpoints institutions prioritizing themselves through tuition increases without accurately assessing the consequences. Other research indicates a substantial link between dollars and

college attendance including many policies that have made it worse for those who come from federally characterized low-income homes (Stromquist 2005, MacDonald, Botti, and Clark 2007).

III. Theoretical Framework

This research is grounded in two theories: social isolation and social organization (Wilson, 1987, 1996). The former underlines the social connections between neighborhood members and society overall while the latter emphasizes the culture and environment of the neighborhood. These theories aim to explain the effects of the neighborhood on individual outcomes, such as college enrollment based on social expectations governed by the neighborhood (Wilson 1987, 1996; Wong, 2002). Despite research stating that factors related to the individual, family, and school heavily weigh into schooling decisions, there has been research that illustrates a relationship between residing in a disadvantaged neighborhood and education level (Wong, 2002; Sewell and Armer, 1966; Duncan et. al., 1994; Harding, 2003, 2009; Vartanian 1999). Furthermore, literature on residence of neighborhoods consistently finds relationships between the characteristics of a neighborhood, such as the percent of single parent households, and educational outcomes, such as highest education received and college aspirations (Plotnick and Hoffman, 1999; Ainsworth 2002; Duncan et al., 1994; Vartanian, 1999; Harding 2003).

Social isolation theory stems from the concept that the social networks of residents in a neighborhood, typically one that is disadvantaged, will not be as strong or consist of many people that belong that are living above the poverty level as well as other mainstream social

groups (Wilson 1987). Unemployment plays a role in social isolation since it removes the individual from the labor market which is essential for connecting with others (Wilson, 1996). If a society faces high levels of unemployment, then its societal pressures and norms shift away from the social mainstream ones. It is theorized that neighborhoods enduring poverty begin to deem habits such as discontinuing their education as acceptable (Harding, 2003, 2009). Research exploring social isolation theory finds that the disadvantages of the neighborhood, such as low educational attainment and employment levels, are associated with decisions involving college outcomes (Rankin and Quane, 2000; Fernandez and Harris, 1992; Kunz et. al., 2003; Vartanian and Gleason, 1999).

Social organization theory, on the other hand, centers around the idea of being able to loosely, without strict governance, regulate the actions of members in a neighborhood or society (Wong, 2002; Sampson et al., 1997). The theory supports that neighborhood characteristics like racial diversity, mobility, and socioeconomic status are associated with social cohesion and control (Sewell and Armer, 1966; Duncan et. al., 1994; Wilson, 1996). This theory argues that stronger institutions and governance leads to stronger social unity among residents in a neighborhood. This strength allows for a community to build and enforce societal norms and expectations which many willingly follow (Vartanian, 1999; Sampson et al., 1997; Ainsworth 2002).

IV. Methods

Overview: First, the average likelihood of college enrollment in a neighborhood will be determined to answer the primary question between residence and postsecondary opportunity. Then, drawing from the theoretical framework of social isolation and social organization, the following characteristics of a neighborhood will be recorded, compared, and assessed in order to distinguish the unique cultural and environmental elements of each neighborhood: crime rate, walkability, level of education, median household income, percent of single parent families, unemployment rate, and racial composition.

College Enrollment of Each Neighborhood

In order to calculate the postsecondary enrollment rate of the neighborhoods, each neighborhood needed a set of definite and clear boundary lines. While there is an informal understanding from residents about which neighborhood lies where,⁹ a clear map of Kenwood, Washington Park, and Woodlawn will be drawn to accurately determine their higher education standing as well as culture. Each neighborhood was assigned an official and unique area using a combination of Google Maps and Nextdoor, a social networking platform that serves hyperlocal areas such as urban and suburban neighborhoods and apartment complexes. These areas were then demarcated and charted onto a map of Chicago's South Side through ArcGIS to illustrate the exact areas being observed.

⁹ "Chicago Neighborhoods." City of Chicago, 2006.
https://www.chicago.gov/content/dam/city/depts/doit/general/GIS/Chicago_Maps/Citywide_Maps/City_Neighborhoods_1978_11x17.pdf.

After a neighborhood was distinctly defined, the high schools designated to that area were found. This is difficult since CPS does not assign high schools by neighborhood, but by geography of the entire school district. Through the CPS school locator, each corner point and midpoints of the neighborhood's borders¹⁰ were searched to obtain all possible high schools that students in the area are attending. By using all major points of the outermost boundaries of a neighborhood, it is ensured that no CPS high schools were missed. Each high school's attendance boundary line was then plotted onto the previously created neighborhood map through ArcGIS to describe which areas were being accounted for through the examination of the three neighborhoods and which were, unfortunately, unable to be considered due to the discrepancy between the attendance boundary lines of CPS high schools and the borders of the three neighborhoods.

CPS releases annual profile page reports on each high school in their system. To find the college enrollment success rate, the most recent reports were used to obtain the 2019 data. This rate is defined as the percentage of 2018 graduates that enrolled in college during the 2018 to school year. To account for variation in each high school's structure, leadership, student body, and overall progress, the college enrollment data for each high school was taken from the last five years.¹¹ This data was collected through the Illinois Report Card, an official database for information on all public schools in the state. Once these numbers were collected, an average college enrollment rate for each high school was created. Since some neighborhoods had more than one high school in their area, a composite average of the high

¹⁰ Thankfully, the Chicago street grid system makes it geometrically easy to detect corner points and midpoints of a neighborhood since they are typically in some form of a rectangle.

¹¹ This consists of school years 2015-16, 2016-17, 2017-18, and 2018-19 through the Illinois Report Card as well as 2019-20 through the CPS annual reports.

schools' average postsecondary enrollment numbers over the last five years was formulated and assigned to each neighborhood. These numbers were then compared to each of the three neighborhoods to assess, on average, the likelihood of enrolling into college based on a student's residence in the South Side of Chicago. These figures were also compared to those of the city and nation.

Limitations: These college enrollment figures about each neighborhood have two major limitations. Firstly, the information from the high schools only includes public schools—not private, charter, special needs, or performing arts schools. The information about these other types of schools is not readily available to analyze. Though this will cast a different perspective since attending public versus other schools can affect whether a student will enroll in a postsecondary opportunity, strictly observing public schools allows for the results to be directly applied to education policy recommendations in the city since other kinds of schools must meet and follow different expectations and regulations.

Secondly, while all the public school students in each neighborhood are accounted for in each of the observed high schools, students who attend these same high schools but do not live in the three neighborhoods will also contribute to the college enrollment number. This is because CPS does not demarcate attendance boundaries of each school by neighborhood, making it implausible to detract those students who are living outside of the three neighborhoods while still residing in the attendance boundary areas of the observed high schools. Mapping of the high schools' attendance boundaries alongside the neighborhood's area demonstrates this mismatch. It also demonstrates that a majority of the attendance

boundary is still covered by the neighborhoods in question. Most of the areas of incongruity are parks, cemeteries, or other such landmarks that do not heavily intervene with the research.

While the determined college enrollment rate of each neighborhood is not a precise metric, it does provide the general direction and magnitude of the issue. To avoid misappropriately drawing from this data when analyzing and forming policy recommendations, other factors, such as the unemployment rate and education level in each neighborhood, will be used to supplement this data.

Crime Rate of Each Neighborhood

To check for safety in each neighborhood, the number of reported crimes in the area was totalled through the Chicago Data Portal and Chicago Police Department's Citizen Law Enforcement Analysis and Reporting system. In order to protect the privacy of crime victims addresses are shown at the block level only. The reported crimes include property crime such as burglary, petty theft, motor vehicle theft, and arson as well as violent crime such as robbery and aggravated assault. These reports did not include murder as that is prioritized by victim rather than location.

The data portal pinpoints the locations of the report and identifies various incidents in the same location from 2001 to 2019 onto a map, making it possible to determine which reports are within a specific neighborhood over the course of two decades. This count of criminal activity throughout the streets, parks, and other areas of each neighborhood indicate how safe it is for residents to move around freely. The tally of incidents reported was then averaged over 20 years and presented as a figure of average crime reported annually per 1,000

residents. The Community Data Snapshots from the Chicago Metropolitan Agency for Planning provided the neighborhood populations to calculate this figure. These crime reports per 1,000 people were then confirmed with a crime heat map by RentHop, a site that sorts apartment listings and also uses the Chicago Data Portal. The crime rates were compared to help explain the culture and environment of each of the neighborhoods.

Limitations: Though it is considered robust to have data from over two decades since that is a large enough time period to account for spikes and anomalies, the college enrollment data of each neighborhood is recorded over five years. Thus, having an average crime rate of over 20 years in the same neighborhood does lend itself to some inconsistency. However, because the purpose of the crime rate is to compare to the other neighborhoods, which have crime rates determined by the same method, this inconsistency is rather minimal. Additionally, the crime rate counts all reports and incidents, regardless of repetition and end results (i.e. arrests, false alarms, etc.).

Walkability of Each Neighborhood

Aside from feeling safe to move around the neighborhood, residents must also have the accessibility to do so. Using Walk Score, an online platform that assigns a walkability score to an area, each neighborhood was given a value from 0 to 100, with 70 or above being very walkable. This score is determined by analyzing walking routes to nearby amenities. The score rises when the distance to amenities in categories like grocery stores or fitness gyms is smaller. The scores lessens when amenities are further away, with no points being awarded to over 30 minute walks to the nearest amenity. It also looks at traffic, population and vehicle density, and

length of blocks to account for pedestrian friendliness. Using Walk Score allowed for an efficient way to understand the walkability of a neighborhood and provide insight to whether residents of different neighborhoods have the ability to move to spaces, such as restaurants, parks, and grocery stores, outside of their homes. While these spaces were noted, others nearby such as laundromats, liquor stores, salons, retail stores, and small businesses were not included since they do not share the same *accessibility* as well as *universality* as grocery stores, restaurants, and parks.

Nearby Amenities: Certain amenities in each neighborhood were noted through Google Maps and Yelp. Grocery stores in an area were recorded if the retail place sold produce. Pharmacies were taken into account due to the consistent amount and obvious need in each neighborhood. Opportunities to walk outside of the household and eat food from cafes, casual diners, and fine dining places, were counted and categorized as restaurants.

Parks: Through the Chicago Park District mapping system, designated parks in each neighborhood were determined. Additionally, the number of miles of the Chicago Lakefront Trail within the neighborhood's area of land were included, if applicable. Aside from parks, other public areas such as beaches, sanctuaries, community gardens, and observatory points were also taken into consideration.

Community Data Snapshots of Each Neighborhood

Community Data Snapshots are a series of data profiles of community areas that largely source from the American Community Survey 5-Year Estimates from 2013 to 2017. Other additional sources include the U.S. Census Bureau, Illinois Environmental Protection Agency, Illinois Department of Employment Security, Illinois Department of Revenue, and the Chicago Metropolitan Agency for Planning. The data from the snapshots of Kenwood, Woodlawn, and Washington Park were reviewed and the following information was tabulated in order to make an easier comparison of the social organization and isolation of each neighborhood: level of education (i.e. some college, Associate's Degree, Bachelor's Degree, Graduate Degree), percent of single parent families, median household income, percent of population living under a median income of less than \$25,000, unemployment rate, and racial composition (i.e. White non-Hispanic, Hispanic or Latino, Black non-Hispanic, Asian non-Hispanic, and other).

Limitation: This dataset covers a number of factors that go into a neighborhood's culture and environment, but is outdated compared to the other datasets used in this research. No drastic change has occurred in these three neighborhoods to greatly vary the information in the snapshots. Since the snapshots use an amalgamation of data sources and consist of a neighborhood's area in its entirety (no incongruity of any kind), the credibility and coverage of the data is prioritized over the lack of recency.

V. Research Findings & Analysis

Overview

In this study, I collected information and data about three neighborhoods in the South Side of Chicago in order to observe and analyze their similarities and differences in relation to college enrollment rate of high school students. Each neighborhood—Kenwood, Washington Park, and Woodlawn—has been demarcated with distinct borders. Note that Washington Park and Woodlawn share opposite sides of portions of E. 60th Street and S. Dr. Martin Luther King Drive. Washington Park is also 0.13 miles away from Kenwood while Kenwood is 1.11 miles away from Woodlawn. The largest diagonal between the neighborhoods is 3.6 miles between Woodlawn and Kenwood. All three neighborhoods are encompassed in an area of 11.06 square miles.¹²

Figure 1: Map of the location and boundaries of the neighborhoods in question



¹² This figure is calculated with the length as 3.49 miles (the southernmost part of Woodlawn to the northernmost of Kenwood) and width as 3.17 miles (the easternmost part of Woodlawn and the westernmost of Washington Park).

CPS Assigned High School

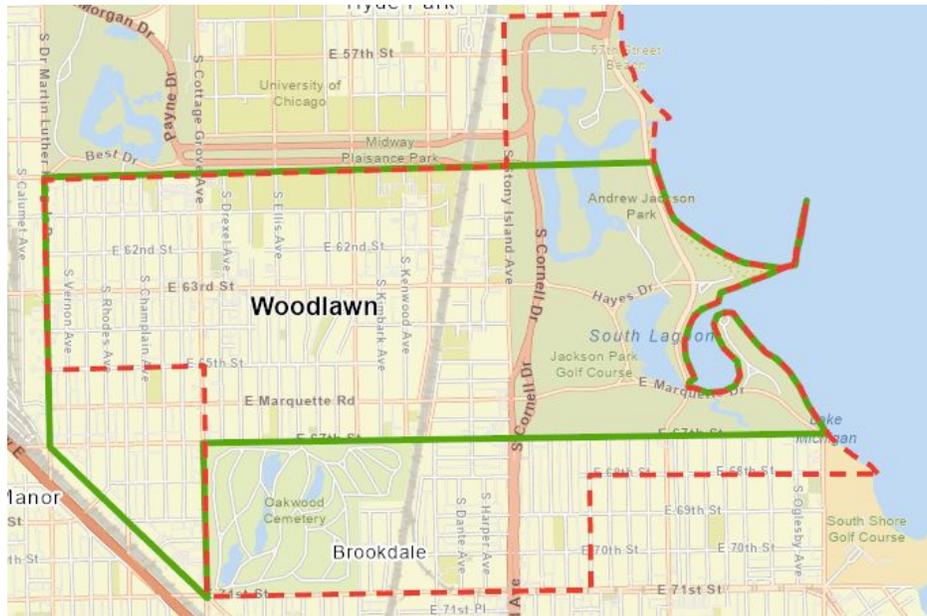
Each neighborhood has roughly one public high school assigned by CPS. Kenwood primarily has the Kenwood Academy High School. A mapped out attendance boundary alongside Kenwood's borders portrays that the school serves most of Kenwood and Hyde Park. It contains Hyde Park since the neighborhood hosts the University of Chicago. As a result, more students and faculty reside in the area than high school students. In 2016, the attendance boundary of Walter H. Dyett High School for the Arts was expanded to include northern parts of Kenwood. However, due to its recency, there is no published or released data about how the school is performing in terms of postsecondary enrollment. As such, the performing arts high school was not included in this study as there was no information to include and its effects on the community are still unknown.

Figure 2: Map of the attendance boundary of Kenwood Academy High School



The Hyde Park Academy High School largely serves the neighborhood of Woodlawn. A map of the high school's boundaries with the neighborhood's area exhibits how the school encompasses most of the neighborhood except for a small portion in the southeast. Emil G. Hirsch Metropolitan High School has been assigned to this part. However, since Hirsch High School's attendance boundaries include other neighborhoods like Auburn Gresham and Chatham, this school was excluded from the research and the focus was directed towards Hyde Park Academy. The extra sections of the high school's area that does not overlap with the neighborhood's land contain the Oak Woods Cemetery as well as the high-traffic S. Cornell Drive.

Figure 3: Map of the attendance boundary of Hyde Park Academy High School



Washington Park was the most challenging neighborhood to ascribe to an assigned high school. Although Wendell Phillips Academy High School serves all of the neighborhood, it includes segments of neighborhoods like Bronzeville, Chinatown, South Loop, Fuller Park, and Armour Square. While this is not ideal, the information about Phillips High School will be used in context with Washington Park since the attendance boundary does cover the entire neighborhood, despite extra fragments of different neighborhoods. While the map depicts a lot of excessive areas of the high school's borders that are not included in the Washington Park bounds, large pieces of this area actually consist of the Dan Ryan Expressway, S. Michigan Avenue, S. Lake Shore Drive, and Amtrak railways, and Metra train lines.

Figure 4: Map of the attendance boundary of Wendell Phillips Academy High School



College Enrollment Rate

Once each high school was selected and its attendance boundary was mapped, the higher education enrollment rate had to be calculated for the high school and thereby neighborhood. Graphed across five years, the data illustrates that Kenwood ultimately does better in terms of postsecondary pursuit than the other two neighborhoods. Kenwood consistently has a college enrollment ranging between 77% to 84%. The composite average for the neighborhood results in 80.8%, which is 13.6% greater than CPS's college enrollment rate overall. Meaning, more than three fourths of seniors in Kenwood will likely go on to enroll in

college. Based on the five year trend, the enrollment rate in this area appears to have been steadily rising until 2018 where it began flattening around 82.5%. The postsecondary enrollment rate of Woodlawn hovers around a composite average of 54.4%. While Woodlawn started off in 2015 at near 60%, the area has seen a drop in students going to college. Interestingly, Woodlawn experienced an almost 6% decline in students attending college after high school graduation over the last five years whereas Kenwood saw a 6% increase.

Figure 5: Timeline of college enrollment rates in the three neighborhoods across five years

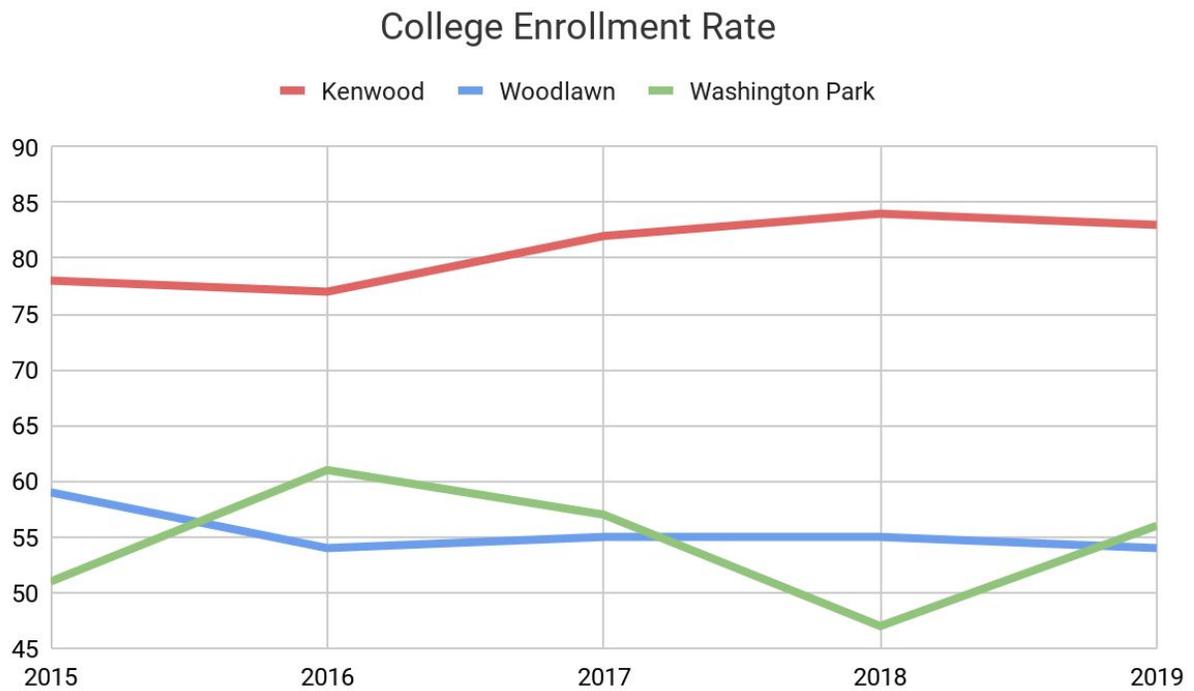


Figure 6: Chart of composite averages of college enrollment across the three neighborhoods

Neighborhood	Composite Average
Kenwood	80.8%
Washington Park	54.4%
Woodlawn	55.4%

Washington Park, as suspected in the Methods section, proved to be the most volatile. Despite having a composite average for college enrollment rate similar to that of Woodlawn, Washington Park ranges from 47% to 61% in just over half a decade. The graph presents Woodlawn's rises and declines, and how they intertwine with the more constant enrollment rate of Woodlawn. While the steadiness trend of postsecondary pursuit of Kenwood can be seen similar to that of Woodlawn, the composite average and overall values are shared more closely by Woodlawn and Washington Park. This will be further considered and discussed later in this section.

Crime Rate

In amassing the number of incidents reported in each neighborhood over the last two decades, it is evident that Washington Park faces the most suspected crime. For every 1,000 people in Washington Park, about an average of 321 of them have made a statement to the police about some form of crime. These crimes include property and violent crimes, with the exception of murder. This number also reflects the fact that on average, almost a third of Washington Park's population deals with crime, and thereby the police, every year. On the other hand, Kenwood is the safest among the three with regards to crime reported in the neighborhood. Only approximately 12% of its residents have to involve the police on an average yearly basis.

Figure 7: Chart of average yearly crime reported per population of 1,000 people since 2001

Neighborhood	Avg Yearly Crimes /1,000 Pop
Kenwood	123.6
Washington Park	321.4
Woodlawn	290.1

Residents of Woodlawn experience crime at a rate of about 290 reports per 1,000 people. While this number is not substantially lower, it does mean that on average 29% of the members of Woodlawn have reported to the police about possible criminal activity per year. This particularly emphasizes the high crime rate in Washington Park when the land of the neighborhoods is considered. Woodlawn is larger both in area by 0.60 square miles and in population by nearly 12,000 people than Washington Park (see Figure 9).

This crime rate is important to factor with relation to the social culture surrounding the neighborhood. Even though it is crime being reported, the action of reporting indicates that some criminal activity occurred or suspicion of criminal activity was felt in the neighborhood. This ties to the safety of a neighborhood which is crucial when observing the environment of a space. A larger portion of people reporting a crime in an area conveys that people who have reported, and those that hear about the reporting, are less likely to freely move around the neighborhood. As a result, people are less able to form social networks and spend time with one another within the neighborhood.¹³

This notion of social network relates back to the social isolation theory. The theory proposes that people who are disadvantaged when creating a network, such as with friends, family, coworkers, and acquaintances, encourages poor habits and decision-making and

¹³ Wilson, William Julius. *When Work Disappears: The World of the New Urban Poor*. New York: Knopf, 1997.

discourages good behaviors and choices. Such decisions would include the choice of pursuing higher education or not from both parents and children. Furthermore, lower criminal activity leads to higher gains in education.¹⁴ It has been shown that improving a neighborhood culture to reduce crime, such as by reducing the number of vacant and abandoned properties, lowers the crime rate by 29% which is associated with an extra half of a year in schooling for a student. The extra time could be the push a student needs to graduate from high school and enroll into college. This could explain Washington Park's lower college enrollment rate, especially in the context of its fluctuation. Since criminal activity is not consistent, certain years can shift the safety level in a neighborhood which can then lead to an atmosphere of fear, meaning higher education schooling is unlikely to be prioritized or supported. As such, an inverse relationship could be suggested since Woodlawn's higher crime rate observes a lower postsecondary enrollment rate while Kenwood has less criminal activity reported and has a higher postsecondary enrollment rate.¹⁵

Walk Score

Walkability across all three neighborhoods was found to be fairly consistent with Washington Park and Kenwood earning a 69 while Woodlawn received a 65. Regardless of the disparity, falling within the range of 50 to 69 places the area as "somewhat walkable" in which some errands can be accomplished on foot. With Washington Park and Kenwood on the brink of "very walkable" in which most errands can be accomplished on foot, they are slightly better

¹⁴ Sharkey, Patrick. *Stuck in Place: Urban Neighborhoods and the End of Progress toward Racial Equality*. Chicago: The University of Chicago Press, 2013.

¹⁵ More data on criminal activity and education attainment is needed for conclusive evidence, but these initial findings propose this correlation.

situated than Woodlawn. These scores translate to the three neighborhoods being deemed fairly pedestrian friendly with Woodlawn slightly behind. Due to the lack of variation and consistency across neighborhoods, walkability is not suited for considerations in relation to college enrollment. However, these Walk Scores demonstrate how each neighborhood has more or less an equal playing field in residents being able to walk around due to amenities and activities nearby. This means that each neighborhood does have the potential to have its residents move and *create* sociality and culture; yet, does not *explain* what is the culture of these neighborhoods.

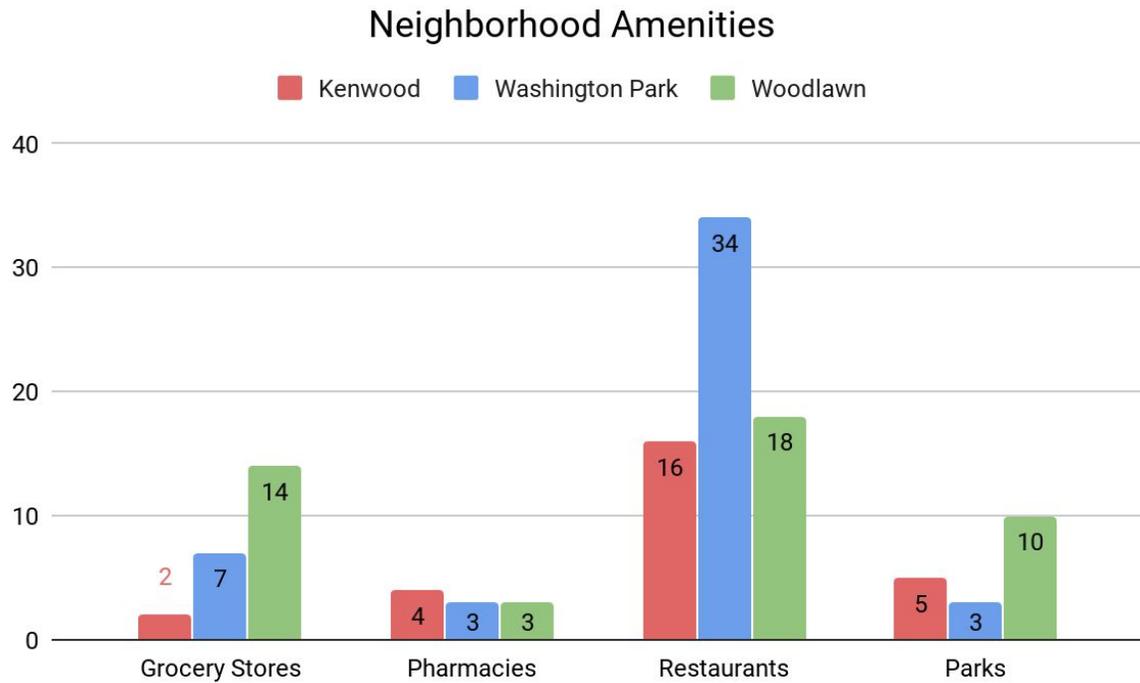
Nearby Amenities

Amenities that are considered accessible and universal such as grocery stores, pharmacies, restaurants, and parks were recorded in each neighborhood. These amenities are a sample of many that each neighborhood provides. They also serve as motivation for residents to move around and interact with the neighborhood, thereby contributing to the makeup of the area.

Grocery stores were most prevalent in Woodlawn, which until recently, had been designated as a food desert zone by the United States Department of Agriculture.¹⁶ On the contrary, Kenwood had the least amount of grocery stores. However, this is misleading as multiple stores surround Kenwood's borders and are in walkable distance from the neighborhood.

¹⁶ "Go to the Atlas." Economic Research Service. United States Department of Agriculture, October 31, 2019. <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>.

Figure 8: Graph of number of amenities located in each neighborhood



While pharmacies were about the same for all three neighborhoods in question, there was variation in restaurants and parks. Washington Park had the most stores that sold food, such as cafes, casual diners, and fine dining places, having nearly twice as many as the other two neighborhoods. While this is a striking observation, it is important to note that these restaurants are not all necessarily healthy and beneficial to the community members. Some of these stores are corner stores or fast food places, a last resort for those who do not have the means or awareness to practice healthy eating.¹⁷

Woodlawn contains the most parks, including historic Jackson Park, 63rd Street Beach, and 1.3 miles of the Lake Front Trail. This is a slight misdirect since about one third of

¹⁷ Gittelsohn, Joel, et al. "The Impact of a Multi-Level Multi-Component Childhood Obesity Prevention Intervention on Healthy Food Availability, Sales, and Purchasing in a Low-Income Urban Area." *International Journal of Environmental Research and Public Health*, vol. 14, no. 11, Oct. 2017, p. 1371., doi:10.3390/ijerph14111371.

Washington Park comprises a city recognized park of the same name in addition to two other parks in the neighborhood. Similarly, Kenwood contains 1.25 miles of Lake Front Trail and five parks. The area also has the 49th Street Beach and Burnham Nature Sanctuary.

These amenities present more opportunities for members of the neighborhood to engage outside their homes and walk around. This leads to a greater chance of forming social networks and participating in a neighborhood culture, whether it is intentional or not. Having a sense of agency to move around one's house and run essential errands such as getting groceries, picking up prescriptions, and enjoying the outdoors through parks allows for a society that is more cohesive. With this theory,¹⁸ none of the neighborhoods overcome the other while explaining their college enrollment rates. Washington Park and Woodlawn have low college enrollment rates relative to the city and the nation,¹⁹ yet had the most restaurants and grocery stores, respectively. While having amenities nearby is beneficial for members of a neighborhood, it does not seem to correlate with postsecondary college enrollment rates with the research.

¹⁸ Plotnick, Robert D., and Saul D. Hoffman. "The Effect of Neighborhood Characteristics on Young Adult Outcomes: Alternative Estimates." *Social Science Quarterly* 80, no. 1 (1999): 1-18. www.jstor.org/stable/42863870.

¹⁹ CPS has a college enrollment rate of 67.2% and the U.S. has one of 69% according to the U.S. Department of Education and the National Center for Education Statistics.

Neighborhood Characteristics

Figure 9: Chart of various neighborhood characteristics

	Kenwood	Washington Park	Woodlawn
Population	17,189	11,502	23,268
Area	1.09 mi ²	1.48 mi ²	2.07 mi ²
Race and Ethnicity			
<i>White non-Hispanic</i>	16.9%	0.7%	8.8%
<i>Hispanic or Latino</i>	2.3%	2.4%	3.0%
<i>Black non-Hispanic</i>	68.2%	93.5%	82.9%
<i>Asian non-Hispanic</i>	9.2%	0.1%	3.1%
<i>Other</i>	3.3%	3.2%	2.3%
Unemployment	10.8%	23.2%	17.6%
Household Income			
<i>Median</i>	\$44,088	\$25,385	\$25,122
<i>Percent Under \$25,000</i>	35.9%	49.6%	49.8%
Single Parent Family	9.2%	27.8%	18.3%
Level of Education			
<i>High School Graduate</i>	12.2%	31.2%	22.0%
<i>Some College</i>	17.5%	27.9%	27.5%
<i>Associate's Degree</i>	16.7%	5.2%	9.8%
<i>Bachelor's Degree</i>	24.2%	12.4%	13.9%
<i>Graduate Degree</i>	31.9%	5.6%	12.6%

The aggregated chart of characteristics through various sources and information helps assess the culture of the three neighborhoods, aside from the already analyzed crime rate, walkability, and nearby amenities data. In terms of area, Woodlawn has the largest area of all three neighborhoods, despite 32% of the land being renowned Jackson Park. Woodlawn also has the highest population of all three neighborhoods. This is particularly important since fewer residents means less people to involve in a neighborhood makeup. The crime rate can also play a part in this as one additional homicide can lead to as much as 70 fewer residents.²⁰ With a larger population, Woodlawn has the opportunity to provide a more positive and encouraging

²⁰ Cullen, Julie & Levitt, Steven. (1999). Crime, Urban Flight, And The Consequences For Cities. The Review of Economics and Statistics. 81. 159-169. 10.1162/003465399558030.

environment. However, with a composite average of 55.4%, Woodlawn does not appear to be taking advantage of this feature.

Washington Park has the least racial diversity followed by Woodlawn. The theory of social organization that Wilson (1996) argues about suggests that cultural heterogeneity causes a lack of social cohesion. As a result, social pressures and informal control over the youth of an area are lacking. While racial and ethnic composition of Washington Park and Woodlawn should then lead to better educational attainment outcomes since they are largely homogenous and thereby are able to regulate their societal expectations better, this is not the case since these two neighborhoods have unsatisfactory postsecondary rates. This does not necessarily disprove the theory as the interactions of neighborhood residents with other residents throughout the city is not taken into account and it can influence the heterogeneity of an area.

Another missing element which factors into social heterogeneity is unemployment. Almost a fourth of the members of Washington Park are unemployed while Kenwood experiences unemployment with nearly tenth of its population. Despite the apparent financial concerns and issues,²¹ unemployment lends itself to social isolation.²² Joblessness disconnects residents of neighborhoods, especially those that are considered poor, from the conventional labor market which is considered a vital connection to the culture of prosperous well-being.²³ With regards to poverty levels of neighborhoods, Kenwood has the highest median household

²¹ Lynch, Kathleen, and Claire O'riordan. "Inequality in Higher Education: a Study of Class Barriers." *British Journal of Sociology of Education*, Vol. 19, No. 4, 1998, pp.445–478.

²² William H. Sewell, and J. Michael Armer. "Neighborhood Context and College Plans." *American Sociological Review* 31, no. 2 (1966): 159-68. www.jstor.org/stable/2090901.

²³ Wilson, William Julius. *When Work Disappears: The World of the New Urban Poor*. New York: Knopf, 1987; Wilson, William J., David Huizinga, Robert J. Sampson, Amanda Elliott, and Bruce Rankin. "The Effects of Neighborhood Disadvantage on Adolescent Development." *Journal of Research in Crime and Delinquency* 33, no. 4 (November 1996): 389–426. doi:10.1177/0022427896033004002.

income among the three while Woodlawn and Washington Park share similar household incomes. One fourth of all households in both Woodlawn and Washington Park are below a median income of \$25,000. As a result, these people are likely unable to easily assimilate with mainstream society and its expectations such as higher educational attainment. This relates back to the theory of social isolation in that it is difficult for the unemployed to access information to job opportunities due to the lack of a social network that includes employed people and connections. A lack of employed residents can also alter the motivation and inspiration for students to enroll in college which can also account for Washington Park's low college enrollment rate.

Another contrast to note is that Washington Park has the highest percentage of single parent households at 27.8%, preceded by Woodlawn at 18.3%, and then Kenwood with 9.2%. A missing parental figure can often prompt inaccessibility to society and culture of the neighborhood as stated by the social isolation theory.²⁴ In a more economically depressed household, the children are less likely to be financially independent and more likely apply for welfare programs to sustain themselves in the future.²⁵ With more than one fourth of its population in a single parent structure, Washington Park's low college enrollment rate supports the idea of social isolation in a neighborhood and its negative effects on higher education of high school students.

Lastly, we look at the levels of education in each neighborhood. Washington Park has the least educated population with 23.2% obtaining an Associate's Degree or higher while

²⁴ Vartanian, Thomas P. "Childhood Conditions and Adult Welfare Use: Examining Neighborhood and Family Factors." *Journal of Marriage and Family* 61, no. 1 (1999): 225-37. doi:10.2307/353896.

²⁵ Vartanian, Thomas P. "Childhood Conditions and Adult Welfare Use: Examining Neighborhood and Family Factors." *Journal of Marriage and Family* 61, no. 1 (1999): 225-37. doi:10.2307/353896.

Kenwood has the most educated with 72.8%. Woodlawn falls in between with 36.3%. While a well educated population fosters the future generation to also be well educated,²⁶ it helps to observe the some educated population as well. The populations of both Woodlawn and Washington Park have nearly 27% who identify as having some college education. The more striking numbers are that 31.2% of Woodlawn's residency and 22% of Washington Park's residency have earned a high school diploma. This is salient because it means that there are a number of students who complete their high school studies but do not advance into the some college bracket.

When moving towards crafting feasible and efficient policy recommendations, the objective should be to advance the high school educated group further. If this section of people who would typically earn a high school education can be pushed towards enrolling into college, then eventually, the aim can be reasonably redirected to push them forward into the Associate's Degree or higher categories. This also draws back to how bettering the culture of a neighborhood to lower criminal activity can lead to decreasing incidents by 29% which is shown to have an inverse correlation with schooling in that students are likely to pursue or continue an extra half of a year of education.²⁷

²⁶ Shapiro, Jesse. "Smart Cities: Quality of Life, Productivity, and the Growth Effects of Human Capital," September 2005. <https://doi.org/10.3386/w11615> and Berger, Noah, and Peter Fisher. "A Well-Educated Workforce Is Key to State Prosperity," August 22, 2013.

²⁷ Sharkey, Patrick. *Stuck in Place: Urban Neighborhoods and the End of Progress toward Racial Equality*. Chicago: The University of Chicago Press, 2013.

Discussion & Further Analysis

Despite having similar attributes with Woodlawn, Washington Park appears to be the most disadvantaged in comparison to the three neighborhoods in question. Washington Park has a greater unemployment level, more single parent households, less racial diversity, and a smaller portion of the population has beyond a high school education. While the neighborhood features more amenities related to food than the others, Washington Park and Woodlawn experience the similarities in college enrollment rate, household median income, percentage of population earning less than \$25,000 in median household income, racial composition, and the portion of resident who have either some college education or a Bachelor's Degree. Kenwood, on the other hand, appears to be the most successful across most of the analyzed characteristics and attributes contributing to neighborhood culture.

The greatest gap between Woodlawn and Washington Park, and for this matter Kenwood as well, was found in the crime rate data. Washington Park had the highest yearly average amount of crime reported per 1,000 residents. With this divergence from Woodlawn, the members of Washington Park endure increased dangers and fear in their neighborhood culture which does not lead to a positive association with beneficial choice making, such as the decision to pursue higher education. While this does not explain why both neighborhoods—Woodlawn and Washington Park—have similar postsecondary enrollment rates, it can explain the greater variation in higher educational attainment exhibited by Washington Park. For this reason, crime rate will be considered when designing the policy recommendations from this research.

Another avenue to examine is why Kenwood is successful across neighborhood characteristics for its residents and overall college enrollment for its students. Despite having minimal grocery stores and restaurants, the neighborhood experiences a greater deal of prosperity than the other two neighborhoods that are barely a mile away. The culture of Kenwood does reveal a more educated community, higher household median income, lower unemployment level, and less crime related incidents reported. These attributes indicate that social isolation is not highly prevalent and social organization can be employed, resulting in a higher well being and culture of a neighborhood to encourage positive behaviours and decisions, like enrolling into college. As such, policy recommendations will include further research and focus promoting greater wealth of a neighborhood alongside occupational attainment. These factors, along with crime, seem to provide a solid direction in how to go about neighborhood culture and higher education.

Lastly, a reminder of the potential objections and issues with the findings. The college enrollment rates are not entirely reflective of the neighborhood since the high schools from which this information was taken included students who lived outside the three neighborhoods in question. Washington Park faces the highest impact from this fault since the attendance boundary for its high school incorporated many other neighborhoods, rather than a few small pieces like Woodlawn and Kenwood. With more time and resources, this could be solved by surveying students in the observed high schools and only examining the data of those who reside in the three neighborhoods. Additionally, when observing neighborhood culture, the research strictly observed the communities through the borders determined by the City of Chicago. While this narrowed the scope of the research, it does not fully take into consideration

non-residents who influence the culture since they may work nearby, have family or friends in the area, or walk through the area to reach amenities. While this assumption is necessary to be able to assess neighborhood culture in a contained area, it does omit the fluidity of who is able to contribute to the culture of a neighborhood.

Further Research

This section is devoted to the original behavioral economics study that was to be included in this research. However, due to the Covid-19 pandemic, the data was unable to be properly collected. The study aimed to observe and study how and why individuals make the decisions they do when it comes to higher education, focusing specifically on the processes adults go through in order to decide how to save and invest in their children's education. By specifically investigating how financial decisions and incentives to save and invest in the future of children's education can be crafted, the purpose of the study was to observe how policy can be implemented for people in underserved areas like South Side Chicago to find it possible to save today's dollars in order to invest in tomorrow's future.

When launching this independent study in collaboration with the Center for Decision Research at Booth School of Business in the future, the study will observe, at the individual level, what decision making processes and heuristics occur for parents when considering financial decisions involving higher education for their children. Ultimately, the research should aim to not only explore these processes, but recommend through past behavioral economics literature, how we can alter this behavior so that it is more likely that a parent in disadvantaged

neighborhoods like Washington Park and Woodlawn will save and invest in their children's higher education instead of other items and/or expenses.

The behavioural economics study (BES) was to be launched with the Center for Decision Research at the Booth School of Business. The BES is split into two parts which attempt to fully analyze the decision making processes involved with parents. The first part involves a simple survey asking participants to answer questions about financial decisions. This includes a part where they prioritize their expenses in categories like groceries/gas, bills, shopping, luxury/leisure, mortgages/loans, and other while completing another part that has them order how they typically spend in such categories. This first part of the BES will also request demographic information (age, race, ethnicity, occupation, neighborhood residence, income level, etc.) from the participants.

The second part will include a series of hypothetical scenarios involving financial decisions. The scenarios will have the participants imagine they are in charge of a certain budget. They will then select how they would like to spend their money. A problem will arise in the simulation for which the participants must change how they originally decided to spend their money (i.e. sudden home or car repair, injury or medical issue). At this stage, participants will have full control of their money and decide where to cut and re-prioritize to resolve the problem. Two other problems will arise for which similar actions must be taken.

The four conditions in the study will be how much hypothetical money is given to the participants in the beginning (i.e. acting as various median household income levels) and whether a set budget is given beforehand (i.e. acting as various financial planning in effect). The original sum on the first condition will be much larger than the other. The next two conditions

will either already set how much money the participant can have in each category or give the participant full freedom to decide. These conditions can be interchanged—a participant can have full/partial control of their hypothetical money and a small/large amount of money—so that there are four different types of participants. While recruiting participants that are also parents is ideal, the study can be conducted on any adult since adults are ultimately the demographic that makes these decisions. The data will then be collected and analyzed to supplement the neighborhood level research in this thesis as well as continue forth the discussion about college enrollment rate.

VI. Policy Recommendations

Policy Recommendation #1 (Large Scale)

The City of Chicago should employ varying methods when allocating funds to neighborhoods for education. It is clear that some neighborhoods perform better than others, and while the funds are being distributed proportionally, this method does not serve well when some neighborhoods have to overcome more barriers to resolve the same problems that all the neighborhoods are facing. For instance, two neighborhoods, Woodlawn and Washington Park, are experiencing a greater gap in high educational attainment compared to their counterparts. When residents of a neighborhood are unable to provide for their household and experience a culture of fear due to a relatively high crime rate, it leads to more social isolation and less cultural organization which can explain a reluctance for higher education in the neighborhood. This could drive students into being unable to enroll or even envision a future passed high school graduation. Due to this occurrence, neighborhoods, such as Washington Park and

Woodlawn, that show consistently poor college enrollment rates and disadvantages in traits like median household income, unemployment, and education level should be prioritized to a higher degree to ensure that students are being treated such that they are equally able to compete and apply in the college enrollment process.

The budget of the city attempts to be fair and impartial when it comes to dividing the nearly \$7.7 billion in the CPS budget. This budget is distributed across a system of thirteen “networks” that comprises all schools under CPS jurisdiction. Each network has its own leadership structure, complete with a Chief of Schools, Deputy Chief, and Executive Assistant. The network employs ten staff members, totalling to 130 people dedicated to the network system alone.²⁸ Each network consists of several elementary²⁹ and high schools.

On average, each major school network receives \$1.49 million.³⁰ This is across neighborhoods with median income levels ranging from \$25,000 to \$115,000. In other words, the average per capita income of these networks can be anywhere from \$10,402 to \$88,669. This inequality indicates that not every place in Chicago is struggling with the same problems and not every place is succeeding in the same ways, most pointedly seen in the disparities among Kenwood, Washington Park, and Woodlawn. Residents who are compelled to send their children to the assigned high school of a given network are disadvantaged because each network receives relatively the same funding despite the need of neighborhoods being vastly different from one another.

²⁸ “Network Support.” Chicago Public Schools.

https://cps.edu/About_CPS/Departments/Pages/NetworkSupport.aspx.

²⁹ Elementary schools in CPS are considered as those schools that serve students in primary through 8th grade levels.

³⁰ “CPS Fiscal Year 2020 Budget.” Chicago Public Schools, 5 Nov. 2019; Rhodes, Dawn. “How Much Money Are Illinois Colleges Getting in the New Budget? 'It's Definitely Good News for Colleges and Universities.'” *Chicago Tribune*, 19 June 2019; “Federal Spending: Where Does the Money Go.” *National Priorities Project*.

It is important to note that CPS reports issues of being underfunded, according to Illinois' own funding adequacy targets. Currently, CPS receives allocations that are \$1.9 billion below the proper target. CPS constantly depends on extra cushioning from the state as well as federal departments in order to adequately provide for all its students. As such, these neighborhoods, and thereby schools and networks, should be receiving varying amounts of funding in education that go beyond the standard equal distribution that has been a continuing tradition for the City of Chicago and CPS. In this manner, the underfunding problem could potentially be resolved as well.

With a more methodological approach to how CPS and the city government choose to allocate funds and students being elevated according to their needs and deficiencies, CPS can focus on improving equity such that “all students receive the same opportunities for a high-quality education, regardless of their race, zip code, country of origin, or diverse learning needs.”³¹

Policy Recommendation #2 (Medium Scale)

A less time and resource bounded approach to redistribution of the CPS budget across a myriad of diverse neighborhoods is a focus on the CPS network system. Since each network takes on multiple schools from varying communities, the network is difficult to manage as one entity. Attention is challenging to divvy for a network since the issues it must address are not necessarily the issues of the entire network. *CPS should restructure the network system so that*

³¹ “U.S. Education Secretary Announces Guidance to Ensure All Students Have Equal Access to Educational Resources.” U.S. Department of Education, October 1, 2014. <https://www.ed.gov/news/press-releases/us-education-secretary-announces-guidance-ensure-all-students-have-equal-access->.

each network reflects a singular culture of a few neighborhoods rather than multiple interests and needs of many. The network system has been changed a few times in the last decade and reports have not declared whether these changes have helped. With the reduction of the number of networks in 2013, each remaining network took on more responsibility over a greater study body. Instead of increasing the size of a network, each network should be redesigned to better incorporate neighborhoods and its students.

Currently, it is not entirely clear how networks are arranged. CPS claims that they are created based on city geography; however, in mapping out attendance boundaries and viewing the network map, no geographic pattern is apparent. For instance, the high schools of Kenwood and Woodlawn are roughly situated in the same network. Despite being 0.1 miles away from Kenwood and sharing a border with Woodlawn, Washington Park is in an entirely different network. Given the research found in this paper, it is more compatible to join Woodlawn and Washington Park, rather than Woodlawn and Kenwood. While CPS should promote transparency of the network system, it should also have clear guidelines as to how each network obtains community areas. Further research can support this argument as well as present other neighborhoods that are well matched. While the number of networks may not have to change and can be adjusted based on the budget, the areas that these networks cover must be altered to better serve its students and families.

In fact, a complete revamping of the network system is not needed to begin implementation. Unlike the past in which the entire network system has been restructured, CPS can take two or three networks and gradually alter the network system map. This way, each network and its faculty have time to adjust and understand whether the new jurisdiction is well

suited and appropriate. This also helps ease any alterations in staffing so that many people are not let go, or in some cases hired, at the same time. This could lead to higher public favorability for the school district rather than scathing headlines, as well as better informed decisions on how to regulate the CPS district, a combination of 421 elementary schools and 93 high schools.

Policy Recommendation #3 (Small Scale)

Once a student arrives at high school, the primary objective for CPS is to have that student graduate high school. There has been steadily increasing success in this endeavour, but certain neighborhoods are still performing below satisfactory standards. While attention on students is understandable, *CPS should begin rolling out a strategy for parent involvement*. This stems from the neighborhood culture of single parent households and the high unemployment rate in the disadvantaged neighborhoods like Washington Park and Woodlawn. To shift the social isolation and lack of social organization in these areas, the adult population must be engaged. To have the parents of a household engaged means that there is greater understanding between their and their children's interests in terms of educational attainment. While resolving the matter of single parent families is outside the purview of this research, the high unemployment rate can be targeted.

A small scale approach is to hold career fairs for students as well as neighborhood residents (including parents) so that they are able to create a social network that allows them the opportunity to not only seek a job, but also meet with other people. This can be arranged through collaborations with nonprofit organizations, small businesses, and large corporations. The purpose of this initiative is to encourage students to look beyond their high school career

while helping to promote the careers of parents and other adults in the community. In this way, with more unemployed neighborhood residents having the resources to learn and apply for jobs, these same residents can help curb the financial burden for postsecondary education for their children.

Policy Recommendation #4 (Large Scale)

Outside of CPS promoting a college enrollment initiative, the school system should also specify and earmark funds towards college enrollment. Right now, it is unclear how much money is being used for this goal and even less transparent how it is being used throughout schools and networks. As such, it would be more efficient and easier to discern if the funds were a part of the publicly made budget and given a certain amount or percentage. This ensures that CPS can push for this initiative in the form of in-school programming, collaborations with external organizations, after-school programming, and other resources.

Since the research has centered around CPS involvement, it is appropriate to place this task upon CPS rather than employ a different organization or persons. This allows for the creation of a basic framework, or pipeline, that can send students from middle school completion to 9th grade readiness assessments for high school to high school graduation to college enrollment.

While specifically putting aside funds may complicate providing for general items such as administration, organization, and human resources, the benefit of having a fund that compels CPS officials to implement more college oriented programming may outweigh the costs of having to curb other allocations. Therefore, this is a large scale recommendation to

employ college enrollment initiatives across CPS with a heavy focus on disadvantaged neighborhoods.

Policy Recommendation #5 (Large Scale)

Crime rate of the neighborhoods and its relationship with college have been a repeated pattern in this research. Washington Park saw the most fluctuating college enrollment rate compared to Woodlawn who experienced the same composite average postsecondary rate as Washington Park. Meanwhile, Kenwood outperformed both neighborhoods in this regard. The largest difference observed between these three neighborhoods that presently can explain this divergence is criminal activity. Washington Park endures more reports of criminal incidents on average every year. The research seems to indicate that there is a possibility that the variation in higher education attainment in high school students in Washington Park versus those in a contemporary setting like Woodlawn or an opposite one like Kenwood can be attributed to the higher crime rate per 1,000 residents. While this is not fully confirmed, it is a working theory that explains why the culture of Washington Park does not lead to more of the population obtaining an education after high school.

In order to support this theory as well as the ones of social isolation and social organization, *the Chicago Police Department in collaboration with UChicago Urban Labs and CPS should conduct further research on the link between criminality in a neighborhood and the pursuit of higher education.* Urban Labs has conducted such partnership research before and involving CPS will provide insight on how students are affected by the higher crime rates in neighborhoods. This research can build off the framework provided by Professor of Sociology

and Public Affairs at Princeton University, Peter Sharkey, in which he observes the decline in crime rate in places like New York's Harlem neighborhood and southern Los Angeles in order to argue for the most successful proven strategies, such as improving on vacant and abandoned properties, in reducing crime as well as the benefits that arise when a community's culture limits its crime rate.

VII. Conclusion

The City of Chicago spends nearly 60 percent of its budget on improving Chicago Public Schools and city-wide education. In contrast, the state spends only 8.2 percent of its budget, and the country at large spends 6.8 percent of its discretionary spending on education.³²

Despite this, many Chicago neighborhoods, including some of the largest funding recipients, are unable to attain high college enrollment and acceptable college graduation rates. Among those that are academically qualified for higher education (i.e. they meet the minimum requirements), 89% of high-income students complete a Bachelor's Degree within eight years while only 59% of low-income students attain a Bachelor's Degree in this time frame.³³

Research studies in economics, psychology, and sociology all point to lack of social cohesion and supportive neighborhood culture as a potential marker for the varying levels of postsecondary enrollment.³⁴ As such, the Chicago Public School System should redirect their

³² "CPS Fiscal Year 2020 Budget." Chicago Public Schools, 5 Nov. 2019; Rhodes, Dawn. "How Much Money Are Illinois Colleges Getting in the New Budget? 'It's Definitely Good News for Colleges and Universities.'" *Chicago Tribune*, 19 June 2019; "Federal Spending: Where Does the Money Go." *National Priorities Project*.

³³ Adelman, C. *The Toolbox Revisited: Paths to Degree Completion From High School Through College*. Washington, D.C.: U.S. Department of Education, 2006.

³⁴ Gary Orfield (1992) Money, Equity, and College Access. *Harvard Educational Review*: September 1992, Vol. 62, No. 3, pp. 337-373.

efforts to focus on the neighborhood level, rather than the network and overall city level. The neighborhood level scaling is a middle ground between attending to a large network level and attending to a narrowed individual student level.

My research investigated the influence of neighborhood culture and environments upon educational outcomes of high school students as well as overall population in that area. I looked at three neighborhoods—Kenwood, Woodlawn, and Washington Park—which, despite similar levels of funding and proximity to one another, were not producing the same results with regard to college degree attainment. The former has a larger success rate for children admitted and enrolled in an undergraduate program than the latter two. Through collection and analysis of citywide public databases and reports, it is evident that residents of Kenwood are more likely to enroll into college than Woodlawn, followed by Washington Park.

In addition, Kenwood boasts a higher median income, approximately \$5,000 more annually, as well as more diversity than the other two neighborhoods in which the racial composition is largely African American. The most striking point was that Washington Park experienced the highest amount of crime reported and had a college enrollment rate that fluctuated greatly year by year. This paper focused on these three neighborhoods in the city with varying levels of higher education enrollment, median income, and crime rate, in order to examine the specific barriers to college enrollment existing in urban areas.

It is important to note that this research does not dismiss those who pursue career paths beyond high school completion, such as vocational school, gap years, or immediate entrance into the labor market. Research shows that a highly educated population will lead to a safer, more prosperous (i.e. higher median household income, lower unemployment), and a

more socially cohesive community (Bowen and Bok, 1998; Bowen, Kurzweil, and Tobin, 2005; Elliot and Friedline, 2012; Cox, 2016; Krueger, Rothstein, and Turner, 2006; Wilson, 1987, 1996). While non-college related career paths are acceptable and play essential roles in society, the purpose of this paper was to observe how to promote college enrollment in the South Side of Chicago, and other underserved neighborhoods.

This research found that not all neighborhoods are the same and therefore, should not be treated the same, especially in the context of higher educational attainment. The research indicates that the social culture and crime rate of a neighborhood can tie into the way in which high school students make college decisions. Hence, with regard to education policy, observing neighborhoods is critical. In order to see a significant uptick in college enrollment and success among students from disadvantaged neighborhoods, the city should account for cultural, safety related, and economic differences across neighborhoods. It also should designate funding to neighborhoods with drastically varying social cultures, with more money going towards schools in neighborhoods with fewer success in areas such as crime rate and median household income. As such, CPS can move towards a neighborhood level approach in combating the issue of low college enrollment in underserved neighborhoods in order to improve the culture and overall prosperity, starting with the South Side of Chicago.

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VIII. Appendix

Map of CPS Network System

Updated K-12 Network Map



Past structure

- 19 Networks with variation in number of positions per Network
- Total of 209 positions

Updated structure

- 13 Networks with 10 positions per Network
- Total of 130 positions

CPS Budget for Networks in FY2020 (Network 9 and 12 is where observed high schools lie)

FY2020 Network Budgets

Network	Personnel	Non-Personnel	FY2020 Budget
1	\$1,383,380	\$55,000	\$1,438,380
2	\$1,346,276	\$55,000	\$1,401,276
3	\$1,588,336	\$55,000	\$1,643,336
4	\$1,362,859	\$55,000	\$1,417,859
5	\$1,445,942	\$55,000	\$1,500,942
6	\$1,485,035	\$55,000	\$1,540,035
7	\$1,291,691	\$55,000	\$1,346,691
8	\$1,486,210	\$55,000	\$1,541,210
9	\$1,320,840	\$55,000	\$1,375,840
10	\$1,382,434	\$55,000	\$1,437,434
11	\$1,782,429	\$55,000	\$1,837,429
12	\$1,262,663	\$55,000	\$1,317,663
13	\$1,499,192	\$55,000	\$1,554,192
14	\$389,971	\$55,000	\$444,971
15	\$481,270	\$55,000	\$536,270
16	\$547,077	\$55,000	\$602,077
17	\$386,277	\$55,000	\$441,277
Total	\$20,441,882	\$935,000	\$21,376,882

Map of Attendance Boundaries of CPS High Schools

