



Gentrification in Chicago

A STUDY OF DEMOGRAPHIC CHANGE

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Introduction

The beginning of gentrification in Chicago dates back to urban renewal in the 1950s and 1970s during which time an exodus of white middle-class families (known as “white flight”) left the urban core for the suburbs.¹ While Whites were flocking to the suburbs, Black and Latino residents moved into a variety of neighborhoods in the inner city previously inaccessible to them due to socioeconomic barriers. However, in the past few decades, many neighborhoods in the urban core have been experiencing substantial change, particularly some areas in the Near North, West, and to some degree on the Near South Side.² Much of this change takes the form of rising rents and property taxes leading to the eventual displacement of existing, often lower-income residents. This issue is of paramount concern not only in Chicago, but in cities across the country whose urban cores, which are often home to minority and low-income communities, are being priced out of their own neighborhoods by more affluent residents. The process described here, known as gentrification, and the solution to it, as well as even defining exactly what it is, is a fiercely debated issue.

Definitions of gentrification range from those that focus purely on economic impacts, such as rising rents and property taxes leading to the displacement of existing residents, to ones which incorporate more demographic factors, such as the influx of more college-educated, white, and owner-occupied households.³ Many of these changes occur as the result of investment in a neighborhood (revitalization) in the form of infrastructure improvements (i.e. road/sidewalk/streetlight repair, new parks, etc.) which can carry benefits to existing residents, but can also make the neighborhood more attractive for others to move in leading to upward pressure on rents and property values. Gentrification, rather than

¹ Betancur, John. "Gentrification and community fabric in Chicago." *Urban Studies* 48, no. 2 (2011): 388.

²Koziazar, Jay. "New affordable housing initiative to curb gentrification headed to Chicago City Council." *Curbed Chicago*. September 05, 2017. Accessed December 08, 2017. <https://chicago.curbed.com/2017/9/5/16255468/gentrification-affordable-housing-ordinance>.

³ Chapple, Karen. "Mapping susceptibility to gentrification: The early warning toolkit." *Berkeley, CA: Center for Community Innovation* (2009).

revitalization, is when the result of this investment in the neighborhood is the displacement of existing lower-income (often minority) residents by more affluent (often white) residents.⁴

Methodology

The objective of this research project is to develop and analyze a composite index which can identify neighborhoods in Chicago that have undergone change characteristic of gentrification. In addition to a general examination of the city at large for signs of gentrification, special attention will be paid to three neighborhoods (Humboldt Park, Pilsen, and Bronzeville) which the literature claims have undergone significant gentrification in the last decade (see Figure 1).⁵ The most common characteristics found in the literature which indicate gentrification are housing market changes, economic status changes in a neighborhood that alter its character.⁶ The inclusion of race in a gentrification index is somewhat controversial, however a significant portion of the research does so and interesting trends can be seen when analyzing gentrification trends through a racial lens.⁷ In light

Chicago Study Area (census tracts)



Source: ACS 2015/2011 5-year estimates
 Figure 1: Map of Relevant Neighborhoods

⁴ Bates, Lisa K. "Gentrification and Displacement Study: implementing an equitable inclusive development strategy in the context of gentrification." (2013). p. 4.
⁵ Anderson, M.B. and Sternberg, C., 2013. "Non-White" Gentrification in Chicago's Bronzeville and Pilsen: Racial Economy and the Intraurban Contingency of Urban Redevelopment. *Urban Affairs Review*, 49(3), pp.435-467.
⁶ Bates. 9.
⁷ Hwang, J. and Sampson, R.J., 2014. Divergent pathways of gentrification: Racial inequality and the social order of renewal in Chicago neighborhoods. *American Sociological Review*, 79(4), pp.726-751.

of this, the most relevant variables for analysis are: 1) Percentage point change in White/Black/Hispanic residents; 2) Percentage point change in residents 25 years and older with a Bachelor's degree or higher; 3) Percent change in median household income; 4) Percent change in median home value; 5) Percent change in median gross rent; and 6) Percentage point change in owner-occupied units.

To accurately determine neighborhood change at a granular level in, census tracts were chosen as the unit of analysis. Data was collected from the American Community Survey 5-year estimates for 2011 and 2015 using Social Explorer. I chose to use data from 2011 because the literature indicated that a majority of the change began around 2010. 2015 was the most current year for which data was available at the census tract level.

Before I was able to conduct any analysis of the data, I first had to download a shapefile of the census tracts in the city limits of Chicago from the City's open data portal. I next had to join the census tract shapefile to the data for my two years of ACS data. This was not entirely straightforward because the shapefile had a leading zero in front of some of the census tracts which only had 7 digits (the rest had 8 and no zero) while the census tract geocode in my ACS data had no leading zeros. Despite adding a new field with a leading zero in Excel and adding it to my shapefile, the data would still not populate the map in ArcGIS Pro so I was forced to perform the join in ArcMap and then export my shapefile to Pro. This process would be repeated for each year, as well as for the shapefile that contained the percentage point change between 2011 and 2015.

The first step in my analysis was to view the percent change between 2011 and 2015 for each of the above metrics to better understand the way in which the neighborhoods are changing. I converted the nominal values for each year into a percentage point change between each study year. This method was more statistically accurate and measurable for my purposes than measuring the percentage change between 2011 and 2015. For a number of variables there were values of 0 in one year (dividing by 0) or miniscule changes from 0.3% to 0.9% of median household income, that if the percentage difference were calculated, it would indicate a far more significant change (200% increase) than what actually occurred (0.6% percentage point increase).

After obtaining the percentage point changes in each of the variables, the next phase of my analysis was to determine the degree of gentrification which had occurred in each census tract by creating thresholds for change for each metric that would indicate that substantial change took place. Finally, I created a composite index of gentrification which included my above variables. The gentrification score was based on the Nathalie Voorhees Center for Neighborhood and Community Improvement Center at the University of Illinois at Chicago (UIC) study on neighborhood change in Chicago, which found a positive correlation between gentrification and the variables listed in Table 1.⁸ The score calculation also includes elements from Lisa Bates' computation of Vulnerability and Demographic

Change Scores to create a measure to capture the change associated with gentrification. In her study she scored a tract with either a "1" or "0" depending on whether a variable changed by a certain percentage, which is be correlated with substantial neighborhood change suggesting gentrification was occurring.⁹ This calculation was performed in GIS using the field calculator to reclassify each newly created field with a short Python script according to the algorithm described above.

Table 1: Gentrification Score Calculation (Percentage point change: 2011-2015)	
Variables	Type of Association with Gentrification
% White	If Increase ≥ 10%, 1 point given
% With Bachelor's Degree or Higher (25 and older)	If Increase ≥ 15%, 1 point given
Median Household Income	If Increase ≥ 20%, 1 point given
% of Units Owner-Occupied	If Increase ≥ 10%, 1 point given
Median House Value	If Increase ≥ 10%, 1 point given
Median Gross Rent	If Increase ≥ 25%, 1 point given
% Black	If Decrease ≤ -5%, 1 point given
% Hispanic	If Decrease ≤ -5%, 1 point given

⁸ Nathalie P. Voorhees Center for Neighborhood and Community Improvement. "The Socioeconomic Change of Chicago's Community Areas." University of Illinois at Chicago. 2014. p. 4.

⁹ Bates. 60.

The higher the score, the more gentrification occurred in that census tract. The highest possible score was 8, but the highest found was 7. Table 2 outlines a neighborhood typology describing the degree of gentrification that occurred based on the number of demographic changes emblematic of gentrification that took place.

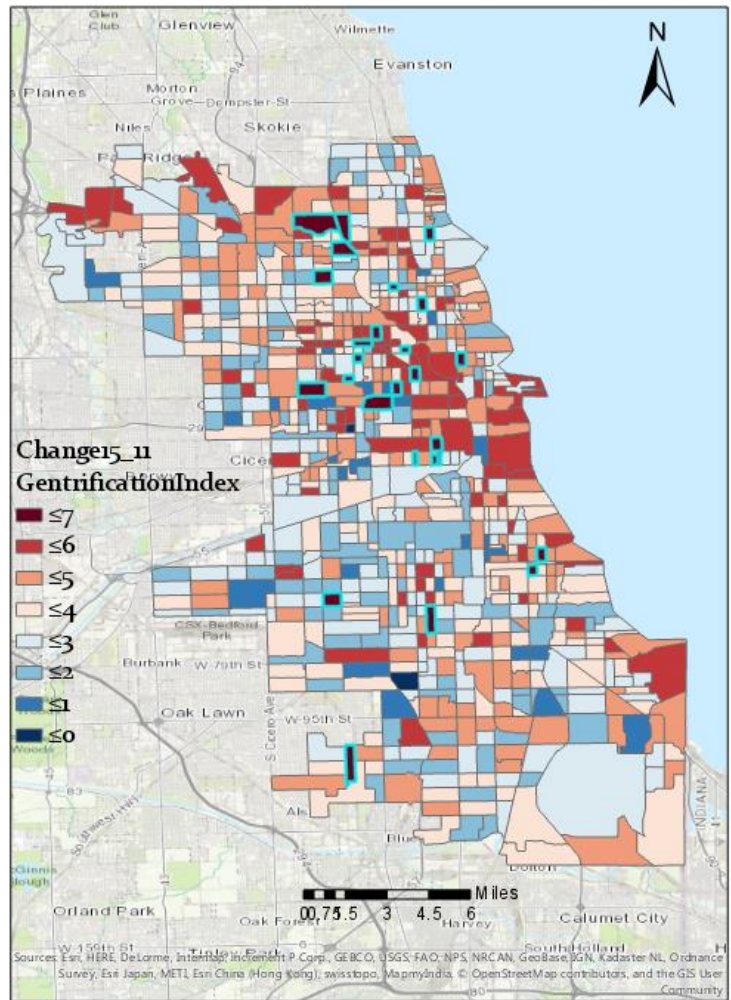
The use of a composite gentrification score helps to account for the nuanced nature of gentrification which cannot be captured in the change in one solitary variable. To better highlight the difference between areas that had gentrified and those that had not, I chose to symbolize the index with a blue-red pattern rather than one with the red-orange pattern. The resulting map showed a nuanced picture of how gentrification has affected Chicago in recent years.

Findings

Figure 2 shows that most of the extreme gentrification has occurred primarily on the Near North, Northwest, and West sides of town, with a few isolated tracts also occurring on the South and Southwest side. This trend is further confirmed by Figure 3 which shows both moderate and extreme gentrification. Large

Score	Meaning
7	Extreme gentrification
6	Moderate gentrification
5	Minimal gentrification
4	Some indications/vulnerable
3	Potentially vulnerable
2	Minimal change
1	Not gentrifying
0	Not gentrifying

Gentrification Score (7): Extreme Gentrification

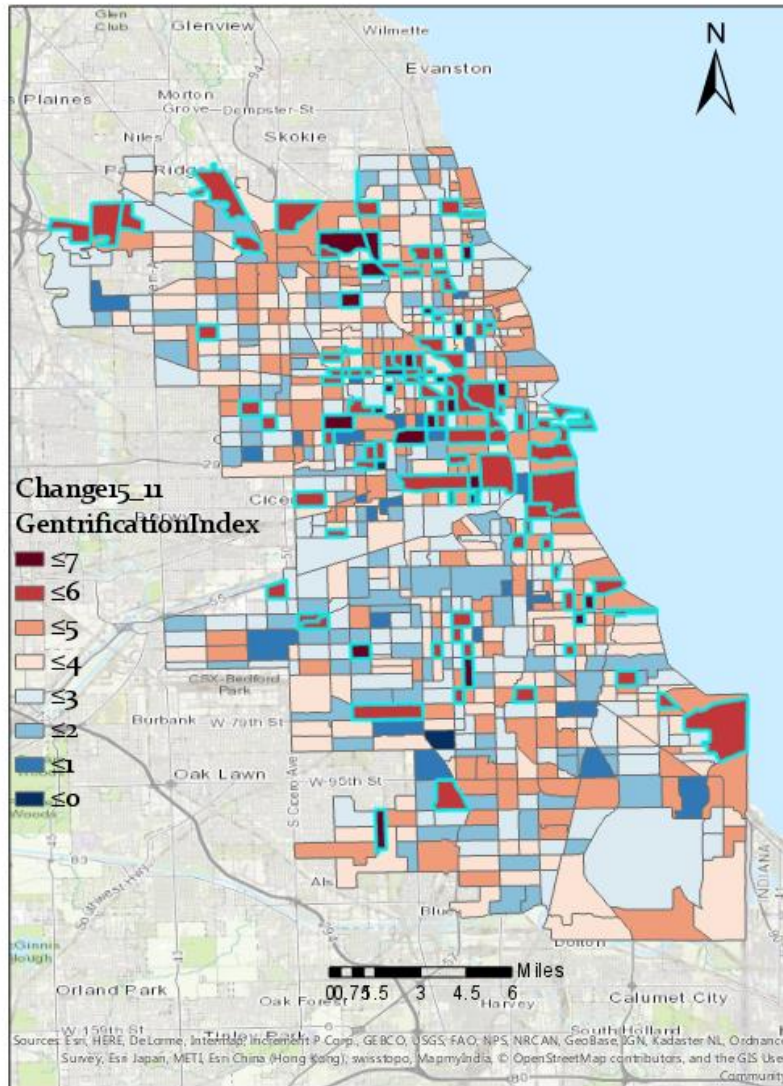


Source: ACS 2015/2011 5-year estimates

Figure 2: Extreme Gentrification

clusters of gentrified tracts are visible, especially in the northern and western portions of the city.

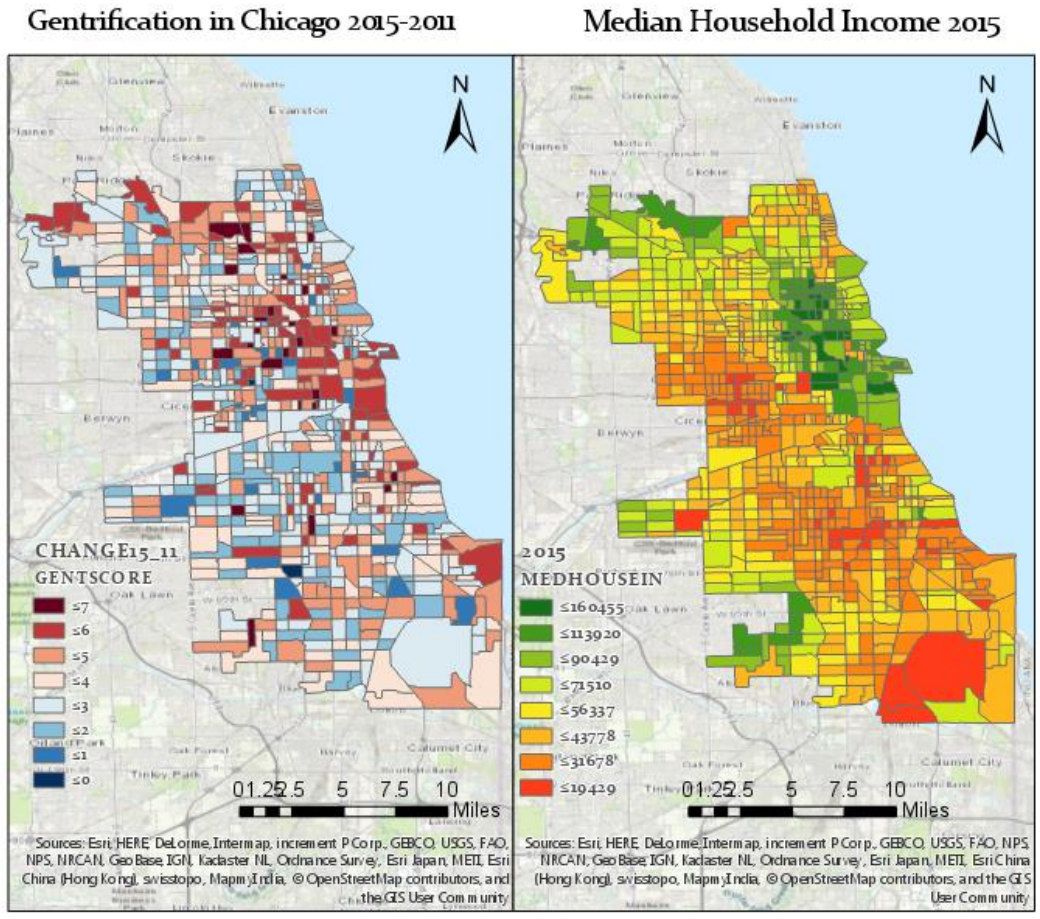
Gentrification Score (6 & 7): Moderate and Extreme Gentrification



Source: ACS 2015/2011 5-year estimates
Figure 3: Moderate and Extreme Gentrification

Since first and foremost, gentrification is defined as more affluent residents moving into to a lower-income neighborhood and forcing out existing residents, it is illustrative to look at the median household income in the neighborhoods where gentrification was most prevalent. Figure 4 highlights the concentration of wealth in Chicago’s north side and lower-income populations in the south and west side, which makes those communities potentially

susceptible to displacement. The maps show however, that gentrification has largely not occurred on the city's south side.

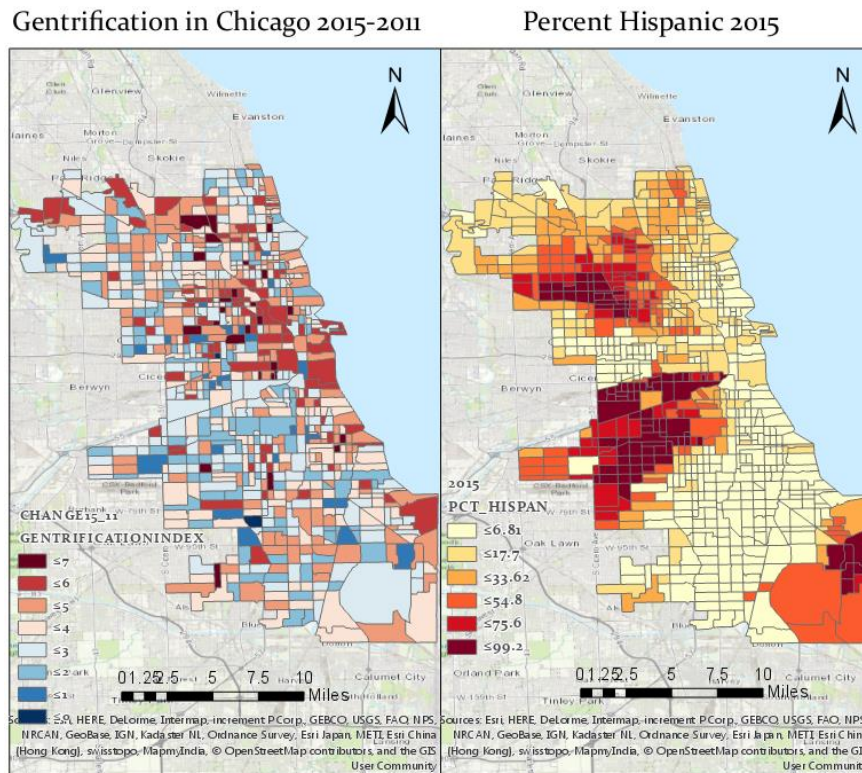
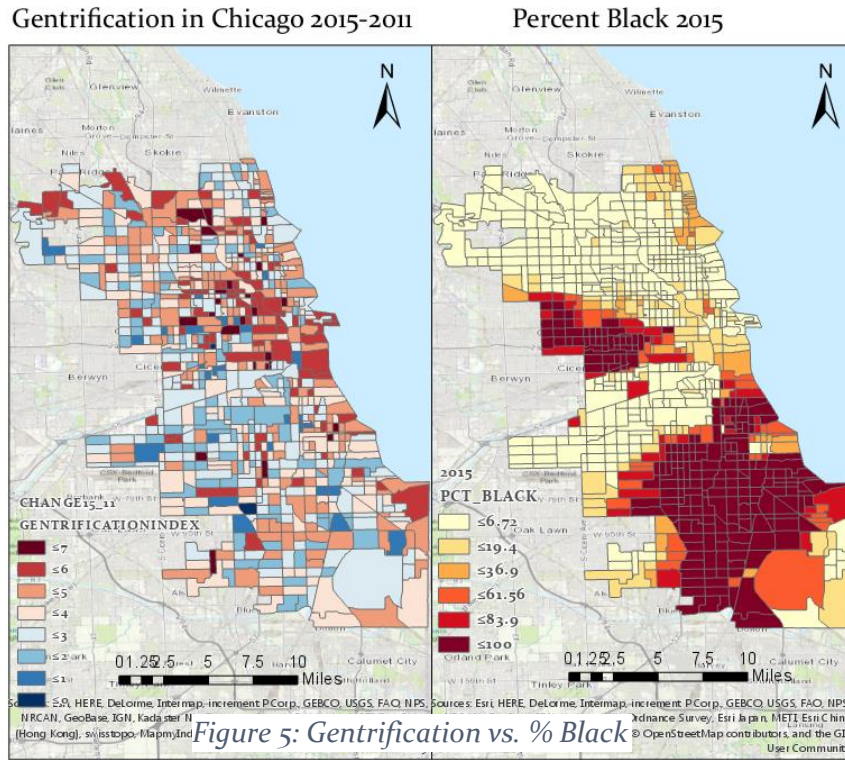


Source: ACS 2015/2011 5-year estimates

Figure 4: Gentrification and MHI

Chicago is a very economically, as well as racially divided city. The Black population is concentrated in the city's south, and to a lesser extent, west side. The Hispanic community is concentrated primarily on the northwest and southwest side of town. A side-by-side comparison of gentrification and the spatial distribution of Blacks and Hispanics in the city

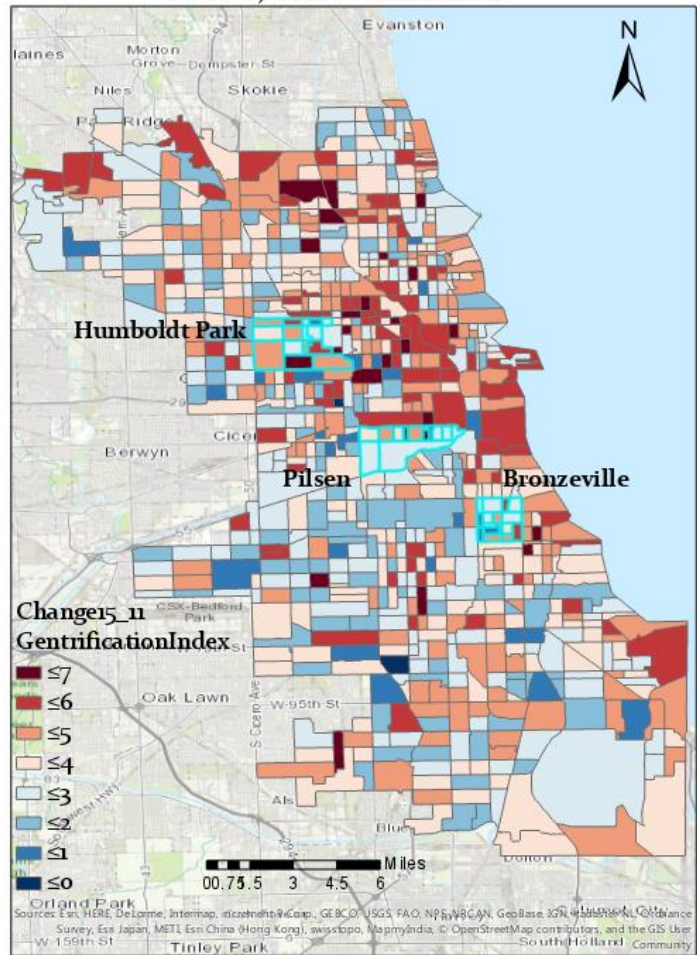
provides valuable insight into which communities appear to be most vulnerable to displacement (see Figures 5 and 6).



This finding highlights a conclusion drawn by Robert Sampson, which was that gentrification does not affect Hispanic and Black communities in the same fashion. He found that neighborhoods in the early stages of gentrification continued to do so only if the white population was at least 35%.¹⁰ Most interestingly, neighborhoods in which the black population was 40% or greater stopped gentrifying completely.¹¹ His research focused on Bronzeville, a historically black neighborhood, and Pilsen, a historically Latino neighborhood. Qualitative interviews with developers, planners, and residents confirmed that stereo typical conceptions of both Blackness and Latinoness were at the core of the varying development trends. Many respondents expressed that Hispanics seemed more “family-oriented” and “hard-working” compared to black populations who suffered from long-held stigmas regarding poverty and violence, which limited gentrification in those neighborhoods.

Figure 7 highlights Humboldt Park and Pilsen, two Hispanic neighborhoods undergoing some gentrification within and adjacent to their communities. In contrast, Bronzeville, a Black neighborhood, has seen marginal gentrification both inside its borders and in the neighboring areas to the south, which are also predominantly Black communities.

Gentrification in Humboldt Park, Pilsen, and Bronzeville



Source: ACS 2015/2011 5-year estimates

Figure 7: Gentrification in Select Neighborhoods

¹⁰ Hwang, J. and Sampson, R.J.

¹¹ Ibid.

Limitations

Creating a gentrification index is an incredibly challenging task in large part because there is no agreed upon definition of what gentrification is or how it is caused. The index used in this paper was created using thresholds that were loosely based on research by Bates and the University of , but one could easily raise valid claims about what constituted a change and was worth of receiving a point for any of the variables. With respect to the variables chosen, this was also a difficult undertaking. The study done by UIC also included variables such as % families below poverty, % manager occupations, % female households, and % private school attendance. Other studies, such as the one done by UC-Berkeley focused much of their research on the effect of transit, particularly the effect of new transit stops into disadvantaged communities.¹² Had this been a more intensive social science research study, extensive analysis including variable regression would have been conducted to determine the inclusion of each and every variable in the study. This was outside the scope of this project and not performed because this study was intended as more of an opportunity to learn ArcGIS Pro rather than to advance the field of gentrification research in a substantive way.

Mapping gentrification using ACS 5-year estimates from 2015 and 2011 is also an inherently flawed process. The ACS collects a very small sample of all possible households over 5 years leading up to 2015, and when measured at the census tract level, the margin of error is very large. The most accurate data set, yet somewhat outdated at this point, would be use only the decennial census. The comprehensive analysis of demographic change conducted by UIC also benchmarked each of their variables against the trends of the city as a whole to understand the totality of the changes that were occurring. This was also deemed to be beyond the scope of this project.

Policy Implications and Recommendations

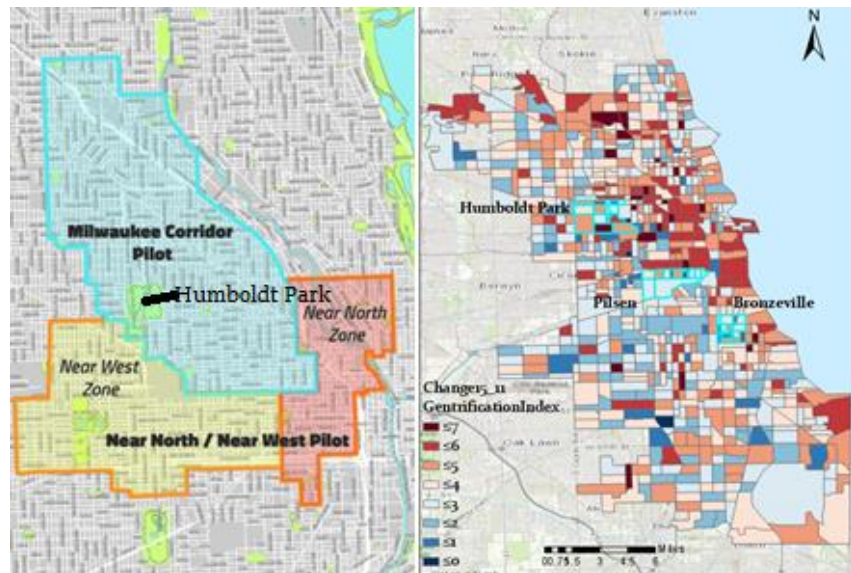
By mapping of gentrification, policymakers can target specific neighborhoods that are gentrifying, or beginning to gentrify and thus allocate resources to the correct

¹² Chapple, Karen. "Mapping susceptibility to gentrification: The early warning toolkit." *Berkeley, CA: Center for Community Innovation* (2009).

communities. This often comes in the form of affordable housing creation and preservation, one of the most effective ways to mitigate the negative effects of gentrification. In addition to policymakers, local stakeholders, which may include neighborhood organizations and other non-profits involved with community development can organize and try to prevent widespread displacement of their communities before it's too late. Too often, a neighborhood begins to attract a few wealthier residents, developers take notice, and shortly thereafter housing prices and rents have risen astronomically.

Chicago is attempting to address their gentrification problem, which is evident from a recent overhaul of their Affordable Requirements Ordinance (ARO). The pilot program targets three areas that have experienced significant gentrification, which are the Near North, Northwest, and West side neighborhoods, which include Humboldt Park and Pilsen, as shown in Figure 8. Currently, 10% of units must be priced affordably in new projects

receiving zoning changes from the city. The new policy would increase the percentages to 15-20% for the three tracts based on a variety of factors.¹³ The policy is projected to add 1,000 new affordable units



in the three areas of this pilot program. *Figure 8: Affordable Housing Policy Pilot Program*

Fortunately, there are number of tools policymakers at every level of government, but especially local, can do to lessen the potentially deleterious consequences of growth. One of the first things they can do is to target reinvestment that will benefit the current population rather than incoming one such as affordable housing, and recreational facilities,

¹³ Korziarz, “New affordable housing initiative to curb gentrification”

both of which have been shown to mitigate displacement. Furthermore, although increasing density and oriented development around transit corridors can have many positive impacts for a city (i.e. environmental benefits), but it must be done with affordability in mind, or it can also lead to gentrification.¹⁴ Other policy tools that can be useful for combatting gentrification include rent stabilization which limits the amount a landlord can increase rents; inclusionary zoning, which requires that a portion of new residential units (often 20%-30%) be made affordable to families below a certain income level (i.e. below 60% of the Area Median Family Income). Two other strategies which can help preserve affordability are tax increment financing (TIF) and linkage fees. The former is used to create a special district where property tax increases are recaptured and reinvested in the district to spur growth, which can include affordable housing requirements. Linkage fees are fees developers have to pay which are typically \$4/\$12 for commercial/residential development).

Conclusion

As evidenced from the extensive mapping of neighborhood change in Chicago in this paper, it is clear that gentrification is occurring according to the methodology used. It is most pernicious in the Near North, Northwest, and West sides of town where the city is already directing more resources in attempt to prevent further displacement. Gentrification in and around the Humboldt Park and Pilsen neighborhoods is especially acute and those populations are at significant risk of continued displacement. The methods used to create the gentrification score are by no means perfect, but they do highlight the areas that are being most affected.

Current city policy should do more to help assure that residents can remain in their neighborhood using some of the policy tools outlined in the previous section. Future research on gentrification should seek to better assess the vulnerability of a given neighborhood to future gentrification. This would help policymakers to make interventions before land values rise too much, which restricts the amount of affordable housing that can be created with limited public and private dollars. Moreover, gentrification does appear to be affecting the Hispanic community more severely than the African American one. This could

¹⁴ Chapple, "Mapping susceptibility to gentrification."

be the subject of further research and may also indicate that policymakers should further invest in some of the African-American neighborhoods which have been the victim of years of disinvestment which has resulted in high concentrations of poverty and low opportunity. The onus is on the City of Chicago to invest in its lower-income citizens, in the form of affordable housing, particularly for its communities of color, or it can choose to be complicit as these populations are forced out of their communities by rising housing costs.