Emergent Ghettos: Black Neighborhoods in New York and Chicago, 1880-1940

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Abstract

This study studies in detail the settlement patterns of blacks in the urban North from before the Great Migration and through 1940, focusing on the cases of New York and Chicago. It relies on both new and rarely used data sources. Crucially 1880 census records have been geocoded to specific addresses, allowing segregation patterns and processes to be studied at any geographic scale. It is shown that segregation was much higher at an earlier time than was previously reported, that blacks were unusually highly isolated in 1880 given their small share of the total population, that neither higher class standing nor Northern birth had much effect on whether blacks lived within or outside black neighborhoods in 1880 or 1940, and that a trend toward class separation within black neighborhoods was in evidence already in 1880. The processes that created large black ghettos by 1940 were already in place several decades before then.

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Studies of black-white segregation in the early 20th Century are mostly concerned with the phenomenon of creation of black ghettos in Northern cities. One common view is that before the Great Migration blacks in the urban North did not experience the segregating processes that later became common. In this view a new neighborhood form was constructed after the First World War, as a result of the initial influx of black migration, re-emergent white racism, restrictive covenants and redlining spearheaded by government agencies. This perspective is stated most directly by Massey and Denton (1993, p.17): "There was a time, before 1900, when blacks and whites lived side by side in American cities. In the north, a small native black population was scattered widely throughout white neighborhoods … In this lost urban world, blacks were more likely to share a neighborhood with whites than with other blacks… No matter what other disadvantages urban blacks suffered in the aftermath of the Civil War, they were not residentially segregated from whites." A more recent summary of the historical literature (Flamming 2006) reaches the same conclusion. The northward migration of the better educated and more ambitious African Americans during 1890-1915 "filtered into small, loosely knit communities that were, in large part, middle class …There was some racial segregation, but there were no black ghettos to speak of" (p. 45). But following World War I, provoked by the first wave of the Great Migration, whites panicked: "They erected residential boundaries, through violence and law … thereby penning the migrants into black-only districts that proved to be embryonic ghettos" (2006, p. 46). A similar interpretation is offered by quantitative analyses of ward-level census data by Cutler, Glaeser, and Vigdor (1999, p. 456), who find that "1890 to

1940 saw the birth of the ghetto … Where only one city had a ghetto by our definition in 1890 (Norfolk, Va.), 55 cities had a ghetto by 1940."

Some historians argue that distinctive features of the black ghetto were present even before the Great Migration. Spear (1967) emphasizes that "in Chicago, at least, the great migration did not create the Negro ghetto. The southern Negroes who flocked to Chicago to work in the packinghouses and steel mills during the wartime boom found an already well-developed black enclave on the South Side" (p. ix, see also Philpott 1978). This study offers new support for that view. We base our evaluation on two key criteria. The first is the sheer level of segregation across residential areas of cities. To what degree and at what spatial scale were blacks segregated from whites? We show that black-white segregation in major northern cities was substantial even in 1880 when we take into account its actual spatial scale at that time. The second is the locational process resulting in segregated patterns. Specifically how did variation in social class standing among blacks affect their residential outcome? We rely on census data to examine how race combined with other background factors, especially social class, to place blacks in particular locations within cities. We show that having higher class standing was no more associated with living outside of identifiable black neighborhoods in 1880 than in 1940, but that class differentiation within black neighborhoods had appeared already in 1880.

Discussion of the black ghetto is heavily influenced by the great size and racial isolation of places like Harlem or South Side of Chicago in the 1940s and 1950s. Such places of course could not have existed prior to the Great Migration, when Northern cities were so overwhelmingly white. To avoid debate over terminology, we refer to the black neighborhoods

that we find at an earlier time as ghettos in formation, or emergent ghettos. But we will argue that they were ghettos, nonetheless, by the criteria that we examine.

I. Segregation as a process

There is a considerable literature on both criteria that we use to examine segregation. Let us consider first the conceptual question of why blacks live separately from whites. To what extent is segregation the result of the processes of racial exclusion that for many scholars define the ghetto? In the theoretical model of *spatial assimilation* that has often been applied to white ethnic groups (Massey 1985) immigrants' ethnic neighborhoods mainly arise from their residents' limited market resources and ethnically bound cultural and social capital. But these are transitional neighborhoods, and they represent only a practical and temporary phase in the incorporation of new groups into mainstream society. Their residents search for areas with more amenities as soon as their economic situations improve, their outlooks broaden, and they learn to navigate daily life in a more mainstream setting. Ethnic minority zones are left behind by immigrants with more experience and by the second generation. Separate ethnic neighborhoods in this context have been called 'immigrant enclaves' to emphasize their function as springboards for future mobility, in contrast to the ghetto that tends to be an absorbing state (Logan et al. 2002). A test of the process of spatial assimilation, therefore, is the extent to which residential mobility flows from increasing socioeconomic standing or to the difference between migrants and the second generation.

The situation of African Americans has been treated as an exceptional case from this perspective, since numerous studies over the years demonstrate that more affluent blacks do not live in neighborhoods comparable to their white peers. Another point of view is offered by the *place stratification* model (Logan and Molotch 1987) which posits that the urban development

process is heavily influenced by collective efforts to create and defend spatial privilege, resulting in a fairly rigid hierarchy of places. Whatever the effective social boundaries in a given society, whether by race, nativity, national origin, religion, or class, the hierarchy of social groups is likely to be reproduced in the composition of advantaged vs disadvantaged places. Hence the historical black ghetto was not an exception but an illustration of normal processes, and although locational outcomes are likely to vary with individuals' human capital and housing preferences, it should not be expected that people of different groups will necessarily live in comparable places as their peers in other groups. For example much contemporary research shows that blacks are less likely than comparable whites to escape poor neighborhoods (South and Crowder 1997).

The location of the black middle class is an important element in current thinking about the ghetto. Wilson (1987) famously linked the problems of the contemporary inner city underclass neighborhood to the abandonment of those neighborhoods by newly mobile blacks in the stable working class and middle class. Recent discussions of the black ghetto now take for granted that it is defined not only by racial composition but also by concentrated poverty (see, for example, Small 2008). What is less clear is whether there remain barriers to residential mobility by middle class blacks who have left these inner city areas (Alba, Logan and Stults 2000). To the extent that upwardly mobile blacks now live in more racially integrated neighborhoods and in communities that mirror their own class standing, this would represent a fundamental weakening of segregating processes and a marked contrast with the situation of the mid-20th Century.

These issues have been discussed in a historical context. Unlike today, the ghetto sixty or more years ago was understood to include blacks of all social classes. Summarizing research on

the 1930s and 1940s (see, for example Frazier [1937] on Harlem and Duncan and Duncan [1957, pp. 237-98] on Chicago), Massey and Denton report that the relatively modest black middle class tended to move toward the edge of the black settlement area, where they were eventually followed by other blacks, but not beyond it. This dynamic process led to "a distinct class gradient in the ghetto, with the poorest families being concentrated toward the center … and the middle and upper classes progressively increasing their share of the population as one moved from the core toward the periphery" (1993, p. 39). Hence we can use the inability of the black middle class to escape black neighborhoods and spatial differentiation by social class within them as markers of the emergence of the ghetto as it existed in the mid-20th Century.

When did these phenomena appear? Massey and Denton argue that it was only as the ghetto was being created in the early 20th Century that "[w]ell-educated middle-class blacks of the old elite found themselves increasingly lumped together with poorly educated, impoverished migrants from the rural south; and well-to-do African Americans were progressively less able to find housing commensurate with their social status" (1993, p. 30). Other researchers offer a less sanguine view of the situation before the Great Migration. One study of Chicago (Philpott 1978) contrasted the black ghetto with the ethnic slum mainly on the basis of his observation that the slum could be escaped while the ghetto could not. Philpott cited early work by Comstock (1912, p. 255), who concluded that "[t]he strong prejudice among the white people against having colored people living on white residence streets, colored children attending schools with white children, or entering into other semi-social relations with them, confines the opportunities for residence open to colored people of *all positions in life* [our emphasis] to relatively small and well-defined areas." Another early study of the "color line" in Chicago housing (Breckinridge 1913, p. 574) observed that "the problem of the Chicago Negro is quite different from the white

man and even that of the immigrants. With the Negro the housing dilemma was found to be an acute problem, not only among the poor, as in the case of the Polish, Jewish, or Italian immigrants, but *also among the well-to-do*." Dubois' (1899, p. 348) study of Philadelphia, while emphasizing that blacks were more dispersed in Philadelphia in the 1890s than they had been in the mid-1800s, noted that "it remains true that as a rule they must occupy the worst houses of the districts where they live. The advance made *has been a battle for the better class of Negroes* [our emphasis]." Undoubtedly some affluent blacks lived in high quality housing in predominantly white neighborhoods in Northern cities in the late 19th and early 20th Centuries. However there is little systematic evidence on how black residential outcomes were related to their social class.

There is also early but fragmentary evidence of class-differentiated patterns. Comstock (1912, p. 241) noted that in Chicago's black belt "older and poorer dwellings are as a rule found grouped in the section west of State Street, following the two lines of rail-road tracks. Many of the colored people who desire a better neighborhood have moved east of State Street." Spear (1967, p. 25) dates this process to before 1900, suggesting that "the streets east of State, which had become the mecca of the Negro middle class in the late 1890s, began to decline by 1905." DuBois's (1899) survey of Philadelphia's Seventh Ward in 1896 emphasized the class gradations among the black community, distinguishing "the criminals, the poor, the laborers, and the well-to-do" ((p. 311), but he describes a patch-quilt spatial pattern in which very high and very low status blocks were scattered through the Ward. The "worst Negro slums of the city" could be found near the corner of Seventh and Lombard, but further up Lombard beyond Eight Street and on Rodman to the south are several blocks where "some of the best Negro families of the ward live." To the west, from Sixteenth to Eighteenth "is a dangerous criminal class," but north of Lombard and beyond Seventeenth "is one of the best Negro residence sections of the city,

centering about Addison street" (pp. 58-61). His account suggests that blacks' class differentiation would be in evidence only at a very fine spatial scale within the black zone at this early time.

In our analysis of segregating processes, we will focus mainly on the role of social class. A related issue is the impact of migration from the South. From the perspective of assimilation theory, these phenomena are of equal importance. Black migrants from the South should have experienced the disadvantages of being newcomers to the city and of having rural backgrounds not well suited to urban occupations. These disadvantages might result in greater residential segregation, which is of interest in itself. And because migrant status may have been correlated with class standing, we need to control for its effects. The existing literature points in contradictory directions. Osofsky (1993, p. 43) suggests there was antagonism between Northern and Southern-origin blacks in New York after 1900 but does not comment on their residential patterns. Drake and Clayton (1945) describe a class structure within the black community in which low income and education were especially associated with Southern birth. Tolnay (2003, p. 220) concludes, however, that black migrants enjoyed some advantages with respect to both employment and family structure, possibly due to selectivity in migration. Tolnay, Crowder and Adelman (2002), using ward-level data for a large sample of Northern and Western cities in 1920, found evidence of a slight advantage for Northern-born blacks in the percent of neighbors who were native white and the percent of homeowners. Taeuber and Taeuber (1964) reported that in Chicago by 1950 there was no difference in segregation from whites between migrant and non-migrant blacks, and they conclude that the "immigrant" interpretation of black segregation is invalid.

II. Spatial Scale of Segregation

Aside from the sources of segregated living, the degree of residential segregation is another natural criterion for evaluating residential separation, and for some it is the sole criterion for use of the term "ghetto." Massey and Denton (1993, pp. 18–19) define a ghetto as "a set of neighborhoods that are exclusively inhabited by members of one group, within which virtually all members of that group live." Cutler, Glaeser and Vigdor (1999, p. 456) agree with this assessment, asserting that "[f]or the vast majority of blacks, the neighborhood has come to mean an area that is nearly exclusively black, which we refer to as a ghetto." Other researchers are less clear in their definition, but their accounts of the formation of black ghettos lean strongly on evidence that an initially dispersed black population became highly concentrated over time into a small set of disproportionately black neighborhoods.

There is considerable time-series information on segregation levels. Spear (1967, p. 7) states that in Chicago in 1890 "[m]ost Negroes, although concentrated in certain sections of the city, lived in mixed neighborhoods." The Chicago Commission on Race Relations (1922, p. 106) aggregated enumeration district data to an area defined as the Black Belt in 1910 (an area extending from 12th to 55th Streets and from Wentworth to Indiana). In this major area of black concentration, Negroes were about 10% of the population. Osofsky (1963, p. 13), found that in 1890s New York "no single large neighborhood was an all-Negro community. Handfuls of small and densely populated ghettos, usually a block or two in length, were found throughout Manhattan Island … Thirty-seventh and Fifty-eighth Streets, between Eight and Ninth Avenues, were Negro blocks. They were surrounded by white people …" Bodnar, Simon and Weber (1982, p. 71), studying Pittsburgh in 1900, wrote that "[t]he heavy concentration of blacks in the city's Hill District, however, did not result in the creation of an isolated ghetto. Black clusters …

were interspersed with sections of Russian Jews, Italians, Syrians, Hungarians, and a few Germans and Irish remaining from earlier days." Lieberson (1980) found that black isolation – the black population share in wards where the average black person lived – averaged only .067 in 1890.

A limitation of these reports, acknowledged by all of their authors, is that these census data were mostly tabulated at the level of wards, which were very large areas. Chicago, for example, had only 35 wards in 1900, averaging nearly 50,000 persons per ward. The strongest critique of relying on ward data was voiced by Philpott (1978, pp. 120-121), who complained that the 1900 ward map for Chicago "shows blacks scattered over all of the Southwest Side, most of the South Side, and much of the West Side as well." In fact, he argued, "the residential confinement of the blacks was nearly complete at the turn of the century … Actually, the blacks were hemmed in tightly from the start."

A small number of studies provide measures of segregation at a finer spatial scale. The Philadelphia Social History Project (Hershberg et al 1979) provides the most consistent time series documentation of black segregation, tabulating data for very small areas in 1850, 19880, and 1900, and aggregating these data to match comparably-bounded census tract areas in 1930 and 1970. The black-white Index of Dissimilarity (D) was .47 in 1850, rising to .52 in 1880. In 1930, when the black share of the city population had more than tripled to 11.3%, D rose to .61. By 1970, when blacks were 33.6% of the population, D was near its peak at .75. Another measure, the Isolation Index, shows that blacks were always disproportionately represented in their neighborhoods in Philadelphia, though because of their relatively small numbers they remained a minority in the early decades of the century. The average black lived in a tract that

was 11% black in 1850 and 12% black in 1880, but 35% black in 1930. By 1970 isolation by this measure had reached 74%.

Race data for small areas in Chicago have also been reported for early years, including a precinct-level census conducted in 1898 by the Chicago Board of Education (1899). These are the data used below in Figure 2b. Wallace (1952, plotting these data to 1910 tract boundaries) showed that in 1898 11% of blacks lived in areas that were more than 75% black and just over a quarter of blacks lived in areas that were more than 50% black. On the other hand, 31% lived in areas that were more than 95% white. Philpott (1978) analyzed unpublished estimates of the black/white population in 1910 created by Otis and Beverly Duncan (allocated to 1920 census tract boundaries). He reported that while no Negroes lived in wards more than 25 percent black in 1910, almost a third of the city's blacks lived in majority-black tracts (p. 115). These results suggest two conclusions. First, at this period before the Great Migration the average black resident of Northern cities lived in a *disproportionately* black but not *predominantly* black neighborhood, whether at the level of wards or tracts. Second, at the level of tracts, a substantial share of the black population lived in majority-black neighborhoods as early as 1898 in Chicago, and this share was growing through 1910.

Much can be learned from studying trends in the level of segregation, including both the evenness of distribution of blacks and whites across the city (which the Index of Dissimilarity, D, measures) and the racial composition of areas where blacks lived (such as the Isolation Index p^*_{bb}), while also taking into account the relative size of the city's black population. These are the measures most often employed in past research. In addition, research should be sensitive to spatial scale. Although it is sometimes necessary to use a rule of thumb to guess how segregation at one spatial scale (such as a ward) is related to segregation at another scale (such as

a tract), such estimates are less convincing than working with actual data at different scales, and neither the ward nor the tract is necessarily the appropriate scale for a given group and time period. Social scientists are becoming more aware of the spatial nature of segregation, and recent work demonstrates that cities vary in the spatial scale at which minorities are segregated (Lee et al 2008) and that the spatial scale may change over time (Reardon et al 2009). We suspect in particular that minority groups are unlikely to establish large homogeneous ethnic settlements when they represent only a tiny proportion of the city population, as was the case of blacks in Northern cities prior to World War I. At an early point in the growth of a minority community, residential patterns may be organized on a very local scale, as group members occupy specific buildings or streets – emergent ghettos – only later extending to whole neighborhoods. To study segregation in such a changing context requires flexibility in the scale at which it is measured.

III. Research plan

We will examine these questions using a combination of rarely used and newly available data for New York City and Chicago, the two most important destinations of the Great Migration in the early 20th Century. The analysis begins in 1880, earlier than most prior studies and early enough to provide a clear baseline of residential patterns before the eventual massive influx of Southern blacks. It extends through 1940, when by all accounts the ghettos in these and other major Northern cities were well established, although the size of the black population and its degree of residential segregation would continue to rise for another two or three decades.

Sources and variables

This study relies on information gathered in the decennial censuses in the period 1880-1940 at the level of individual microdata and aggregate small area data.

1. Small area data

Our data source for 1880 is uniquely suited to our purpose. We draw on the 100% transcription of records from the 1880 federal census, harmonized by the Minnesota Population Center (MPC) and available for public use through the North Atlantic Population Project (NAPP, http://www.nappdata.org/napp). These records have been mapped and geocoded to the address level for New York and Chicago by the Urban Transition Historical GIS Project (www.s4.brown.edu/utp, described in Logan et al 2011). Consequently we have complete population information at the finest possible geographic level and we are able to aggregate it to any spatial scale.

Tract-level census data for 1940 have been available for many years as a result of transcriptions organized by Don and Elizabeth Mullen Bogue. We make use of the tract maps for 1940 prepared by the National Historical GIS Project (http://www.nhgis.org) for Chicago. Because NHGIS provides only health district maps for New York in 1940, we prepared New York tract maps independently. We draw on other sources for small-area data for the decades 1900-1930. Most researchers have relied on ward-level statistics published by the Census Bureau for all cities in this period. However New York and Chicago are among the very few cities for which additional published sources are available. For New York City in 1900 the Tenement House Department (1903) published block-level data on race and nativity of residents of multifamily buildings. The Board of Education of the City of Chicago (1899) organized a census at the level of police precincts in 1898 and published counts of residents by race and nativity. For 1910-1930 the Census Bureau provided data at the census tract level to several cities, and these data are available for New York City in each of these decades (Laidlaw 1912, 1922, 1932) and for Chicago in 1920 and 1930 (Burgess 1931, 1933). Although the Chicago

Commission on Race Relations obtained data at the finer level of enumeration districts in 1910 and 1920, we have been unable to locate the original data. Similarly although the 1910 tract data for Chicago have been analyzed and mapped in several studies (Duncan and Duncan 1955, Wallace 1952), we have not located these data.

2. Microdata in 1880 and 1940

In addition to the 100% census microdata for 1880, MPC has provided us with a recently available version of the 1940 IPUMS microdata sample that for the first time includes an ED identifier for residents. We linked EDs to census tracts, creating a data set with information on individuals and households and tract identifiers. The following individual-level measures are included as predictors in our models of neighborhood location.

We use a black-white dichotomy in this study. The census's race question in 1940 asked people's "color or race" and gave alternatives of "white, Negro, Chinese, Japanese, etc." The 1880 census included a race category of mulatto, and we found that many blacks (identified as Negro in the census) were married to or lived in households with people classified as mulatto. We treat both Negro and mulatto as black, and we include this dichotomy in locational attainment models for 1880.

In 1880 the only indicator of socioeconomic standing is the socioeconomic index (SEI). This index assigns a score to an occupation based on the mean income and education level of persons with that occupation in 1950. The SEI can be expected to be robust over time because it conforms to conventional distinctions among major occupational strata, including the less precise rankings that have been used by many historians (with non-manual occupations ranked above manual labor; professionals and managers ranked above clerks and salesmen; craftsmen ranked above operatives and laborers). Sobek (1996) has studied this question directly, comparing the

average income of men in each of 140 occupations in 1890 (using various historical sources) to the income of men in those occupations in 1950. The correlation between the two (weighting occupations by their 1890 size) is .93, showing very little change in occupations' relative standing. Featherman and Hauser (1978, pp. 25-27; see also Hodge 1981) reached the same conclusion, that the SEI is "strong and persistent enough" to be used in the study of trends in vertical social mobility.

When used as a predictor, we use the highest SEI value among family (or subfamily) members to represent the family's standing. Unrelated adults in the household are treated as separate cases. In 1880 the median SEI of white families and unrelated persons measured in this way was 19 in both Chicago and New York, compared to the black median of only 15 in Chicago and 12 in New York. The most common occupations for blacks were porter (SEI<5), servant, laborer, hostler (SEI between 5 and 8), and cook, coachman, janitor, laundress (between 9 and 15). By 1940 the median SEI for whites had risen to 33 (Chicago) and 34 (New York), but fell to 9 (Chicago) and 9 (New York for blacks. The most common occupations at the lower end remained similar: porter, private household worker, laborer, janitor, and waiter.

The 1940 census was the first to include multiple indicators of class standing. In addition to SEI we use educational attainment (highest grade completed of unrelated individuals or of family members) and wage income (of unrelated individuals or the sum across family members, on the assumption that all contribute to housing costs). Home ownership is the final class indicator in 1940. If the household head was a home owner, we treated all family members as home owners and all unrelated persons as renters

Another potentially important occupational characteristic is the category of domestic servant working in a white-headed household. Very few blacks appear in the 1940 census as

servants living in the home of a white employer, but this category accounted for upwards of 10% of black workers in 1880. We include it only in 1880.

Place of birth is used to distinguish Northern from Southern born blacks. The categories in our models are: born in the South, born in the state of residence (New York or Illinois), and born elsewhere (other states and foreign countries).

Demographic control variables are gender, marital status, and household composition. Household composition distinguishes people who live alone from those who live with relatives or only with non-relatives. In 1880 the category of servant in a white household is included as another category of household composition.

3. Aggregating microdata in 1940

As noted above, racial composition is provided in the publicly available 1940 tract files. As an indicator of class composition at the tract level, we have aggregated data on individual and family characteristics from the 1% IPUMS sample. The sample is sparse for this purpose (we used data for tracts with five or more reporting households, with an average sample size ranging from 21 households for SEI in Chicago to 55 households for education in New York). However, this allows us to conduct a preliminary exploration of the class composition of neighborhoods within the black zones of each city, and we believe the data are sufficient to create a simple dichotomy of "better" and "worse" census tracts. This dichotomy is based on the following criterion: "better" tracts are those that were above the median within identified black neighborhoods in two of the following three class measures: median SEI, median family income, and median years of education.[1] Different cutoffs were used in the two cities, because the median values of all three indicators were higher in New York than in Chicago. The resulting

variable divides tracts into two approximately equal numbers, with a small number of tracts for which there are insufficient sample data.

Research approach

Our purpose is to use these sources to examine residential patterns in New York and Chicago over 1880-1940 with a particular focus on our two main research questions: 1) to what degree and at what spatial scale were blacks segregated from whites and 2) how did variation in social class standing among blacks affect their residential outcome? The analysis includes several descriptive and analytical steps.

First, we replicate previous analyses of segregation trends in Northern cities (and specifically New York and Chicago) at the level of wards in 1890-1940. We then add new information on the trend at the tract level in New York and Chicago, including 1880 for the first time, to assess segregation at this finer spatial scale. We also use spatial statistics (the Moran's *i* measure of local spatial clustering) to identify and map black neighborhoods for each decade using data aggregated to the census tract level. The results of neighborhood identification allow us to describe segregation trends more fully in terms of the location of black neighborhoods, the density of black residents within them, and the proportion of each city's black population that lived in every neighborhood over time. For 1880, taking advantage of geocoded locations of all residents of New York and Chicago, we calculate segregation at scales as fine as the household, building, and street segment to assess the residential pattern at that time.

Second, we carry out a more detailed examination of these two cities, using individual-level data to study how individual blacks' residential locations were associated with their class standing and other background characteristics. In 1940 we use multinomial logistic regression, predicting whether black persons lived in a "worse black neighborhood" (the reference

category), a "better" black neighborhood, or a non-black neighborhood. We repeat the analysis for 1880 with a logistic regression to predict whether blacks lived in a black neighborhood and ordinary least squares regression (OLS) to predict the mean SEI of neighbors within identified black neighborhoods. We estimate the OLS models at multiple spatial scales, ranging from individual buildings to combinations of adjacent street segments that are comparable to census tracts.

Our intention, in short, is to provide a clearer assessment of the emergence of the black ghetto in Northern cities during 1880-1940, including both its intensity and spatial extent and the entrapment of higher status blacks within it, which is theoretically one of its outstanding features. The principal question is to what extent patterns observed by 1940 had already appeared many decades earlier in some form.

IV. Long-term trends in segregation at the ward and tract levels

We begin with an overview of the population data at the ward level on which much historical analysis of segregation is based. We begin by looking at the ten Northern cities with the largest black populations in 1940.[2] In 1890 nine of the cities with the largest black populations were found in the South (the exception was Philadelphia with 39,000black residents). By 1940 the absolute numbers and the rankings had changed drastically. New York (458,000) and Chicago (277,000) were now the cities with the largest black populations. City population figures by race for each decade are from Gibson and Jung (2005). Segregation measures were calculated from ward-level data assembled by Cutler, Glaeser and Vigdor (1999) and downloaded through Internet Archive WayBack Machine from http://trinity.aas.duke.edu/~jvigdor/segregation.

Figure 1 shows the close association between growing black populations and increasing segregation measured at the ward level for the average of the ten cities weighted by the size of their black population. It depicts the total share of blacks in the population along with the average values of the Index of Dissimilarity and the Isolation Index.

Figure 1 about here

The figure reveals why historical studies have described segregation as moderate in the earlier decades. The average value of D in these cities was only .44 in both 1890 and 1900, similar to contemporary segregation at the tract level between Asians and non-Hispanic whites. Based on the isolation index ($p^*_{bb)}$ the average black lived in a ward that was disproportionately black, about 9% compared to the typical city's black share of less than 3%. But blacks certainly lived in wards where a great majority of their neighbors were white. The drastic change in both segregation measures over time and especially between 1920 and 1940 has been used to support the conclusion that black ghettos had not been formed prior to the First World War.

Figures 2a and 2b extend the time frame a decade earlier to 1880 for New York and Chicago. They show measures for wards and for tracts for each city. In 1880 tracts are created by aggregating the 1880 microdata to the 1940 tract boundaries in each city. The 1900 measures are based on the originally reported counts of household heads for Manhattan blocks and population for Chicago police precincts described above, both of which are smaller units than tracts. [3] To increase comparability to the other years, we have aggregated these units to areas similar to tracts in subsequent years. The levels of segregation and isolation are considerably higher for tracts than for wards and support different conclusions about timing. Philpott (1978, p. 125) previously made this point forcefully in the case of Chicago: "The first thing to notice is how much segregation the 1910 ward tabulation concealed. While [ward data] show no Negroes

living in areas more than 25 percent black in 1910, [tract data] indicate that almost a third of the city's blacks lived in areas more than 50 percent black."

Figures 2a-2b about here

In 1880 black-white dissimilarity at the level of census tracts was .57 in New York and .72 in Chicago. (As a point of comparison, the metropolitan average value of D in 2010 was .59.) D rose to .68 and .76 in these cities by 1900, but values were only .46 and .59 at the ward level. This disparity of about 20 points remained fairly constant through 1940.

Black isolation ($p^*_{bb)}$ in 1880 was low by the standards of later years: .07 in New York and .11 in Chicago. But it rose sharply between 1910 and 1920 in New York, from .18 to .43 at the tract level. Blacks were already nearly a majority in their tract by 1920 (when the black overall population share was under 3%), a finding that was missed at the ward level where the 1920 isolation value was only .18. In Chicago blacks were in fact a majority of the population (p^*_{bb} =.52) in 1920 in their census tract though just over a third of the population in their ward (p^*_{bb} =.36).

These results suggest to us that blacks did in fact experience a considerable degree of segregation as early as 1880 as measured by D, well before the Great Migration. Black isolation was high at the tract level by 1920 when the Great Migration was just beginning and the overall black population share was still only 3-4%. We now take several steps toward a more complete examination of black residential patterns in New York and Chicago than can be accomplished with summary segregation measures alone.

V. Charting and mapping the full distribution of local area data on race

The dissimilarity index shown in Figures 2a and 2b is derived from a comparison of the distribution of whites and blacks across census tracts, but it is difficult for a single measure to

convey the extent of segregation. The distribution can be represented more fully in a Lorenz curve, similar to the curves that are more familiar to many social scientists as the basis for calculating the gini index of income inequality. If we list tracts in order from highest to lowest percent black, we can then plot the cumulative distribution of the total black population against the cumulative distribution of the total white population, from 0 to 100%. As with the gini index, a perfectly even distribution would be represented as a straight line with a slope of 1, and in that case the value of D would be 0. Figure 3 presents these plots for 1880 tracts.[4] The red line is for New York and the blue line is for Chicago. These curves show how extreme the distribution of population was in Chicago – over half of the black population lived in a single tract that included less than 3% of the city's white population, though because the black population was so small, blacks were outnumbered by whites about four to one even in this tract. while more than half the census tracts in Chicago had no black residents. Over 40% of whites lived in these all-white sections of the city. This distribution yields a gini coefficient of .86. The New York distribution has similar characteristics but the curve is a bit closer to the reference line and the gini is .74. Half of New York's blacks lived in tracts that included less than 10% of the white population. There were fewer tracts with no black population. However about 60% of New York's whites lived in tracts that were less than 0.5% black.

Figure 3 about here

Figure 4 shows comparable data for 1940 when segregation was much higher in both cities. The gini had risen to .99 in Chicago (close to the theoretical maximum) and .94 in New York.

Figure 4 about here

The spatial distribution of people is another aspect of the residential patterns in these cities that cannot be fully captured in a single measure or even in the complete Lorenz curve. As an initial step in this direction we present thematic maps of the black neighborhoods in each city at three points in time: 1880, 1920, and 1940. These maps are based on an analysis of spatial clustering at the tract level, following a procedure described by Logan and Zhang (2004). Local Moran's *i* is used to establish which local clusters of tracts with relatively high black concentrations are statistically significant. Then tracts with comparable black shares adjacent to these "core" areas are added to the neighborhood. This method provides an objective criterion for identifying black neighborhoods without making a priori judgments about what cutting point qualifies as "disproportionately black." As will be seen, there is considerable variation over time and across neighborhoods in their degree of black concentration.

The maps showing the largest black neighborhoods in New York are presented in Figure 5. Two characteristics of black New York stand out: 1) there appear to be several black neighborhoods in different parts of the city, and 2) their location changes substantially after 1880. One black area in Brooklyn (Bedford-Stuyvesant) and one other in midtown Manhattan (San Juan Hill) are identifiable in all three years. Other black areas visible in 1880 (in Lower Manhattan and Queens) disappear, while new areas (Harlem, as well as Morrisania in the Bronx and Jamaica in Queens) emerge.

Figure 5 about here

Table 1 provides more information about the most prominent of these areas. Though larger than the "small and densely populated ghettos, usually a block or two in length" mentioned by Osofsky (1963), data on these neighborhoods emphasize the arrangement of blacks in several small clusters in 1880. The Tenderloin (New York's Red Light District at the time)

had the largest black population in that year, with nearly a fifth of New York's blacks but a black share of only 14.2%. Greenwich Village, better known as a center of Irish population, included an area that was 12.5% black and comprised almost as many black residents as the Tenderloin. Bedford-Stuyvesant was the third largest black district, with 8.3% of the city's blacks but in an area that was only 6.8% black. Still, taken together these areas included less than half the city's black residents.

Table 1 about here

By 1940 the situation was much changed. Harlem alone, with 275,000 black residents in an area that was 71.2% black, accounted for almost 60% of the city's black population. Bedford-Stuyvesant's black population had soared to 84,000, though the area was not yet majority black. San Juan Hill on Manhattan's West Side, the area with the largest black population in 1910 though never more than 25% black, was slowly declining, while Jamaica (Queens) was beginning to develop.

Chicago's black neighborhoods are shown in Figure 6 with population data in Table 2. In sharp contrast to New York, in 1880 there was already one predominant area of black settlement in the South Side. This section of the city held over 70% of Chicago's small black population in 1880, though the area was less than 10% black. Over time it expanded in area and population size to include 220,000 blacks in 1940, when it was very close to all-black and include 80% of the total black population. There was just one other identifiable black community in 1880, the small West Side neighborhood, only 8% black in 1880 but over 76% black by 1940. Other small black neighborhoods appeared by 1940, including the Maxwell Street area, Morgan Park, North Side, Englewood and Lilydale. But the South Side black belt dwarfed these outlying clusters.

Figure 6 and Table 2 about here

VI. The spatial scale of segregation

These results show that blacks in New York and Chicago were already highly segregated from whites as early as 1880, but that their neighborhoods – built up from tract-level data – nevertheless were predominantly white until 1920 or later. We now take a closer look at this latter point, exploiting the geocoded population data from 1880 to examine the composition of areas at ever finer spatial scales. The complete maps cannot be shown here, but we offer some representative street segment information from major black neighborhoods in Chicago and New York.

The most densely black core of Chicago's South Side was a group of three street segments in close proximity to one another. Two blocks of 4th Avenue between Harrison and Taylor housed a total of 846 blacks and 458 whites (64.9% black), and one block of 3rd Avenue between Polk and Taylor housed 521 blacks and 125 whites (80.7% black). Thus close to a third of the South Side black population was concentrated in these three majority-black street segments. In New York's Greenwich Village the single street segment with the largest black concentration was Sullivan Street between West 3rd and Bleecker (517 black residents, 515 whites). In the Tenderloin area it was West 26th Street between Sixth and Seventh Avenues, with 448 blacks and 470 whites.

Yet the larger neighborhoods around these street segments were less than 15% black. A common situation was for a street segment to include 15-25 buildings, of which a majority were predominantly white but the remainder – often clustered together on a portion of the blockface – were predominantly black. We use the 1400 block of South State Street, on the edge of the South Side as we define it in 1880, to illustrate this arrangement. As shown in Figure 7, one building (#1407, near the northeast corner) had two white and two black residents. The black

residents (Emma Hawkins and Henry Morris) were domestic servants of Mary Waltermeyer. Other buildings with black residents were clustered together on the east side of the street. Next to the all-white boarding house at #1423 was an all-black boarding house with 8 residents at #1425. At #1427 lived two white couples, one of whom had a black servant. Next door, #1429 housed four black households with a total of 16 persons, including four boarders. Two doors down, #1433 was a predominantly black building with three all-white households (seven persons) and three all-black households (21 persons). The remainder of that side of South State was all white. On the other side of the street, there was just one racially mixed building; this was #1418 with one white household (7 persons) and one black household (six persons) that included three boarders and a servant girl.

Figure 7 about here

Whether the street segment was majority black or majority white, common elements were that households (except for black servants) and buildings tended to be either all-white or predominantly black, and on many streets the black or mixed buildings were near to one another, so that most white buildings were adjacent to other white buildings.

Studies of residential segregation have typically focused on larger areas than buildings or street segments, which are the scales at which we find high levels of racial concentration in 1880. Though this practice has been imposed by the lack of data at spatial scales smaller than census tracts or block groups, it has a theoretical justification. A "neighborhood" of as many as 3,000-5,000 residents, which is the usual range for a contemporary census tract, is large enough to constitute a market for goods and services, and to support institutions like a school or church. We would argue that other spatial scales also have substantive meaning, and that it is not desirable to impose an a priori scale on the analysis of neighborhood phenomena (Spielman and

Logan 2013). The street segment, for example, is the scale that Grannis (2009) considers the basis of neighborhood social networks and face-to-face interaction. The multi-household building in 1880 likely involved even more personal contact, as co-residents typically shared a backyard privy or a toilet at the end of the hallway, sat together on the stoop on hot summer nights, and heard one another's quarrels through thin walls. The building also represented a common landlord and a shared interest. The landlord was a gatekeeper who determined who (by race or class or family composition) was allowed to live there. The landlord was also the person who collected rents and provided (or failed to provide) basic building services, a factor that established a degree of common interest among tenants.

Table 3 provides summary measures of segregation at various spatial scales. For this purpose we first aggregated the point data to the finest possible units, households and buildings. We created three larger levels of non-overlapping areas based on street segments. One is the street segment itself, which includes all of the residents of a single street between two intersections. Another is what we label first-order segment groups. These were constructed to include a focal street segment as well as all of the segments directly connected with it (with which it shares an intersection). A considerably larger area is the second-order segment group that starts with a focal street segment, adds the connected segments, and then adds the segments connected to those. Table 3 also provides measures for the familiar areal units of tracts (as defined in 1940) and wards (as defined in 1880).

Table 3 about here

The tract level measures here are the same as in Figure 2, except that now we have omitted from the calculations those black persons who lived in a white-headed household and had the occupation of domestic servant. Live-in black servants were common in 1880,

accounting for about 10% of the black workforce in Chicago and 15% in New York. The Index of Dissimilarity (D) was high at the ward and tract levels, as noted above. D was considerably higher in second-order street segment groups, higher still in first-order segment groups, and above .80 in both cities at the level of street segments. At even finer spatial scales, it was above .95 in both cities. Segregation of buildings was almost complete, quite similar to the level of segregation across households, which we expected to be extreme in a period when racial intermarriage was rare and lodgers were almost always of the same race as the household head. These measures confirm our observation that segregation (unevenness of distribution) was already substantial in 1880, but they demonstrate that it varied greatly by spatial scale.

Table 3 also provides new information about black isolation at different spatial scales. As reported above and despite high levels of D, blacks lived in wards and census tracts where they were on average a small share of the residents, generally between 5% and 10%. At finer spatial scales they were more isolated, over 20% in New York and 34% in Chicago at the level of street segments, but still a minority of residents. This means that even at the scale of encounters in daily life, as people might see one another outside their homes, the average black person lived in a very racially mixed environment. However the picture is quite different at the scale of buildings. In their own building, the average black person's "neighborhood" was over 70% black – not as black as their own households (around 90%), but well over a majority.[5]

The exclusion of blacks from large parts of both New York and Chicago resulted in high levels of unevenness (reflected in D) even at the ward or tract level, and segregation within the racially mixed sections created yet higher segregation at finer spatial scales. Nevertheless, whites so greatly outnumbered blacks in both cities in 1880 that even in the mixed areas the average street segment was majority white. Black isolation reached levels that are associated in

later years with the black ghetto at the scale of buildings and in some specific street segments at the core of black neighborhoods.

VII. Location of the black middle class

The last step in our analysis is to evaluate how class standing and other personal background factors affected blacks' residential outcome at the beginning and the end of the period of study. Were blacks with higher class standing able to translate their position into access to a wider range of neighborhoods in 1880 and had they lost this possibility by 1940? Or were they entrapped in black neighborhoods throughout these decades? Within black neighborhoods were there zones of higher and lower class standing in 1940, and were such variations already measurable by 1880?

Table 4 presents results for 1940 of multinomial logistic regressions predicting whether blacks lived in a "worse" tract within a black neighborhood (the reference category), a higher status tract within a black neighborhood, or in a non-black neighborhood. Logistic regression is used here because our measure of tract class standing is based on relatively sparse (1%) sample data, and we believe these data are insufficient to make finer class distinctions. Figure 8 provides a map of these categories for both cities (see Duncan and Duncan [1957, pp. 279-290] for similar maps of Chicago in 1950). Table 5 presents a comparable logistic regression model for living in a black or non-black neighborhood in 1880. The remaining tables present OLS models for New York (Table 6) and Chicago (Table 7) predicting neighbors' SEI in 1880 at multiple spatial scales. Treating neighbors' SEI as an interval scale is justified by the interval nature of the underlying individual-level variable and by the fact that the assessment of neighbors is based on a 100% sample. We considered also presenting OLS models for the black percentage in the neighborhood in both years, but this dependent variable is far from normally

distributed, and racial composition is better represented by the dichotomy between black and non-black neighborhood that we developed above.

Figure 8 and Tables 4-7 about here

In all of these models the sampled persons include only black adults age 18 and above. They include the household head, one adult selected randomly from every subfamily within the household that is unrelated to the head, and any other adult who is not related to another household member. Members of the same family or subfamily have interdependent locational choices, and where possible (measures of class standing in both years) the predictor is based on the member with the highest value. Unrelated adults are treated as separate cases. Standard errors reported here are corrected for clustering within households.

Findings in 1940. In 1940 there are four social class predictors: education, income, SEI, and home ownership. One of these predictors has a positive and significant effect in Chicago; families with higher income are more likely to live outside the black neighborhood. The effect is modest. Compared to a person/family with the average income of $591 (and average or modal values on all other variables) having $500 higher income (nearly double) increases the predicted probability of living in a non-black neighborhood from 0.030 to 0.035. A different predictor is positive and significant in New York; persons/families with a higher SEI are more likely to live in a non-black neighborhood. The predicted probability is 0.102 for the mean SEI (16.7) and 0.107 with a 5-point higher SEI, which would place the person at the 80^{th} percentile of the black occupational distribution. These modest effects of a large change in SEI support the conclusion that class standing had minor impact on living outside the black zone of these cities in 1940.

On the other hand, Table 4 shows that higher status blacks lived in better sections of black neighborhoods in 1940. In both cities there are highly significant positive effects of education, income, SEI, and home ownership.

Our other substantive interest is the effect of people's geographic origin. In the Chicago model migrants from the South were no less likely to live outside of black neighborhoods than those born in the local state (Illinois) or in other places. In the New York model , however, those born in New York were more likely to live outside black neighborhoods. Birthplace does have significant effects on living in a better black neighborhood, but these are contradictory between the two cities, and the significant distinction is not between Southern and local birth. Rather, those born in other non-South places were more likely to live in a better black neighborhood in Chicago, but in a worse black neighborhood in New York.

Among control variables there are some scattered significant coefficients. Women were less likely to live in a non-black neighborhood in New York. Older persons were more likely to live in a better black neighborhood in New York. Married persons were more likely to live in a better black neighborhood in Chicago. Being a black servant in a white-headed household is so rare that we omitted it from the model. Compared to persons living alone, those living with others (relatives or non-relatives) were more likely to live in a better black neighborhood in New York.

Findings in 1880

As shown in Table 5, in 1880 the single measure of social class, SEI, is unrelated to living in a black neighborhood of Chicago, but it is negatively associated with living in a black New York neighborhood. This effect, though significant, is small. The predicted probability for a person/family to live in a black neighborhood in New York, given SEI at the black mean of

15.3 and mean or modal values on other characteristics, is 0.633. Given 5 points higher SEI (at the 85th percentile of the black distribution), this probability declines very slightly to 0.626.

Place of birth is unrelated to race of neighborhood in Chicago, but there is a moderate association in New York predicting Southern-born persons to be more likely to live in a black neighborhood than those born in New York or any other non-South location. A New York black adult with average/modal characteristics born in the South has a predicted probability of 0.633 of living in a black neighborhood, compared to 0.594 for New York-born and 0.609 for those born elsewhere.

Among the control variables, women and older persons are less likely to live in black neighborhoods in New York; widowed and divorced persons are more likely (compared to single persons). There is a very strong effect of being a servant in a white-headed household, demonstrating the importance of controlling for this situation in the 1880 sample. Otherwise household composition has contradictory effects. Compared to living alone, those living with non-relatives are more likely to live in a black neighborhood in Chicago, but less likely in New York.

There is one other predictor in this model that is not available in later years. This is the distinction between mulatto and Negro. For persons with average or modal characteristics on other variables, the predicted probability of living in a black neighborhood is 0.869 for mulattos and 0.835 for Negroes in Chicago, 0.738 for mulattos and 0.633 for Negroes in New York. These are large differences. There has been some speculation in the literature that mulattos might be lighter skinned and therefore have locational advantages, but the result seems to be the opposite. An alternative interpretation would be that this racial distinction was a subjective judgment for an enumerator to make, and it is possible that light-skinned blacks outside black

neighborhoods were simply assumed by the enumerator to be white, or they were presenting themselves as white, whereas those in black neighborhoods were judged to be mulatto.

Tables 6 and 7 present results of models where the dependent variable is the mean SEI of neighbors (not including the sampled person's household) at these spatial scales: the building, street segment, first order and second order segment group. We found above that racial segregation is most evident at the finer scales, but there are no precedents for studying class composition at these different scales. We find that results vary between New York and Chicago.

Persons/families with higher SEI lived in higher SEI contexts at the building level in New York and Chicago, but also at every other spatial scale in New York (though the stronger coefficients are for the building and street segment. Birthplace has no significant associations in Chicago, but at higher scales in New York (first and second order segment groups) those born in New York or other non-South places live in significantly lower SEI contexts. This is the opposite of the "Southern migrant disadvantage" that has been mentioned in the literature, and more consistent with the notion that migrants from the South at this early time were highly selected for education or other traits that are not measured in the 1880 census. Mulattos lived in lower SEI neighborhoods in Chicago and New York for first and second order segment groups and also at the street segment level in New York. Hence mulattos could be thought of as having a locational disadvantage both in terms of being constrained to black neighborhoods and also to living in the poorer sections of those neighborhoods.

Among control variables, women lived in higher SEI areas at most scales in both cities; older age was associated positively with neighborhood SEI in Chicago (except at the building level), but lower SEI in New York (again except at the building level). In both cities widowed persons (compared to single adults) lived in lower SEI settings. As we saw in the previous table,

servants in white-headed households lived in very distinctive environments, determined by the class standing of their employers. Of other household composition measures, persons living with non-relatives (compared to single persons) lived in lower SEI areas at the level of second order segment group in Chicago, but in higher SEI areas at every scale except the building in New York.

VIII. Conclusion

Let us summarize the many findings presented above. Most previous research has relied on ward data to measure segregation (using D, the Index of Dissimilarity), which reached high levels (close to or above .60) in many Northern cities in the 1920-1940 period. Our data from 1880 show for the first time that even at the ward level and even at this early time blacks experienced a high level of segregation in New York (the value of D is .663, well above the average metropolitan region in 2010, a level that most researchers consider high). We have also shown that reliance on ward data, especially in the period when blacks were less than 1.5% of the city population, misses substantial segregation at finer scales. Consider especially the Chicago case. Ward-level segregation in Chicago in 1880 (.455) was in the moderate range, but at the more commonly measured tract level it was .614, above the threshold of what is now considered high. At the level of the street segment, it was .829. And at the building level it was above .95 in both New York and Chicago. These results suggest that black-white segregation in New York and Chicago was intense already in 1880.

Whether high segregation had created isolated black neighborhoods at this time is a different question, whose answer also depends greatly on spatial scale. The usual way to address this question is by asking whether blacks lived in majority black settings. At the ward level the average black in New York lived in an area that was on 18% black in 1920, rising to 39% black

in 1930 as the Great Migration nearly doubled the black share of the population. But at the tract level isolation reach 43% already in 1920. In Chicago at the ward level isolation jumped from 13% in 1910 to 36% in 1920 (already a large increase) and reached as high as 68% in 1930. But at the tract level the timing was different, with isolation reaching a majority-black level (52%) already in 1920, and then continuing to increase. Making use of finer resolution data in 1880 we found that blacks at that time lived in predominantly black environments at the scale of buildings. We also noted that some street segments in the core of Chicago's South Side were well above 50% black. Because multi-household buildings in 1880 required such dense personal interaction – before the era of the elevator-driven high-rise apartment house – we argue that isolation at the building level actually mattered to people's social networks. And highly segregated buildings suggest that there was some sort of steering process separating blacks from whites even when they lived on the same block.

Whether there was a segregating process is as important to urban theory as the level of segregation. Using the terminology developed by Duncan and Duncan (1957) to describe this process, blacks tended to "invade" the worst white-occupied housing in many small Chicago and New York neighborhoods during the period when their population was growing slowly from 2% to 3% or 4% of the city total. Their demographic potential to "succeed" as the predominant group in much larger areas came only with the massive growth produced by the Great Migration, beginning on a small scale after the First World War and continuing well into the 1950s. As the black zone expanded, the better housing was found in areas recently abandoned by whites, and it was occupied by blacks of higher class standing. But in the 1940s higher class blacks did not typically move beyond the black zone. The ghettoization process in this respect refers to class differentiation within the black area but without opportunities to move outside of it. This is what

we found in 1940. All indicators of class position (education, income, SEI, and home ownership) were associated with living in a "better" black neighborhood, but only one (income in Chicago and SEI in New York) was associated with living in a non-black neighborhood, and these effects were very small.

Results were similar in 1880. We found a significant tendency of blacks with higher SEI to live outside the boundaries of black neighborhoods only in New York, and again it was a very small effect. Yet there was already some evidence of class differentiation within the black zone – a significant effect of SEI on neighbors' SEI in Chicago at the building level and in New York at every level. To this extent it was true (more clearly true in New York) that blacks who could "achieve success in some profession or trade were generally able to improve their housing condition and acquire a residence befitting their status" (Massey and Denton 1993, p. 20). But this did not extend to living in outside the black zone.

Our approach to the history of black settlement in Northern cities is relevant to current debates about the use of the term "ghetto." Like many scholars we examine both the levels of segregation and isolation and the processes that place blacks in disproportionately minority areas. For example Wacquant (1993) provoked considerable discussion through his contrast of Chicago's 'Black Belt' with the French 'Red Belt' outside of Paris. The Black Belt today is a ghetto, in his view. But the Parisian case is not, he argues, first because of its *lower level of segregation*. He depicts France's immigrant communities as ethnically heterogeneous, with most immigrants dispersed across neighborhoods where the majority of residents are native French. Many researchers rely only on this criterion in their assessment of U.S. cities, past and present. A second consideration is the set of *processes that determine people's location*. Wacquant suggests that in France, unlike the United States, residential segregation is attributable

to class differences rather than race or ethnicity. The immigrant second generation, he believes, is assimilating successfully in terms of culture, social position and living conditions, with a "closing of the economic, social and cultural distance between immigrants and the . . . native working class stuck in the banlieue" (1993, p. 379). Events in the last decade around Paris suggest that this conclusion may have been premature. But the theoretical insight here is to emphasize "the underlying and interrelated social processes that produce and maintain ghetto areas" (Chaddha and Wilson 2008, p. 384; see also Blokland 2008, Small 2008), rather than defining ghettos solely by the racial or class composition of neighborhoods.

By these criteria – the high level of segregation, the high degree of racial isolation evident at a fine spatial scale, the entrapment of middle class blacks within the black zone, and a degree of class separation within the black zone – we conclude that there was an emergent ghetto in both New York and Chicago in 1880. It is noteworthy that these two cities do not fit into a single mold. Our data at the tract level show that Chicago was the more segregated city by 1900, both in terms of evenness of distribution and in terms of black isolation. The differences were modest in 1880 and 1900, but became more pronounced in 1930-1940. Chicago stands out as a city with two black neighborhoods that were established early on in the South Side and West Side that then persisted into the future, while New York's early black neighborhoods in lower Manhattan gave way to newer and larger black zones. It was not until 1920 that one neighborhood – Harlem – stood out as majority black and containing a near-majority of the city's black residents.

We also noted that blacks' class standing was substantially higher in New York than in Chicago in 1940. It was in New York rather than Chicago that SEI was a significant predictor of living outside of black neighborhoods in 1880, and it was in New York rather than Chicago that

SEI also was a significant predictor of neighbors' class standing at every spatial scale in that year. It is also in New York that we found an advantage for blacks who were born locally rather than migrating from the South – less likely to live in a black neighborhood in 1880 and 1940 (but also likely to have neighbors with a lower class standing in 1880).

Because both of these cities were so central in the Great Migration to the North, and because the South Side and Harlem play such prominent roles in our understanding of black ghettos, the real differences between them are a warning that there was not a single uniform template for black-white segregation in the North. Yet the experience of each city supports these conclusions: segregation was a powerful force in black residential patterns in Northern cities shortly after the Civil War and well before the Great Migration, and blacks' individual socioeconomic mobility had little relevance to their residential assimilation with whites. These are features that became more salient as black populations in these cities irrupted in the 1930s and beyond, and they are features that remain recognizable today.

Footnotes

1. "Better" tracts are defined as those that are above the following thresholds on at least two of the three measures. If the value is available for only one or two of the measure, the tract is "better" if it above the threshold on at least one measure. SEI of all employed persons: New York 17.0, Chicago 15.0. Education level of persons over 25: New York 7.5, Chicago 7.0. Median income of families or unrelated persons: New York $800, Chicago $400. Of 173 tracts in black neighborhood of New York, 75 are classed as worse, 86 as better, and 12 have missing data on all three measures. Of 95 tracts in black neighborhood of Chicago, 46 are classed as worse, 42 as better, and 7 are missing.

2. These ten cities are New York, NY; Chicago, IL; Philadelphia, PA; Detroit, MI; St. Louis, MO; Cleveland, OH; Newark, NJ; Pittsburgh, PA; Cincinnati, OH; and Indianapolis, IN.

3. The 1900 values of D and Isolation (p^*_{bb}) for Manhattan blocks (n=2060 vs. 256 tracts reported in Figure 2) were .82 and .25. The corresponding values for Chicago precincts (n=1108 vs. 455 aggregated precincts reported in Figure 2) in 1900 were .76 and .30. These values are considerably higher than the tract-level measures. This is further evidence of the relevance of choice of geographic units in measuring segregation, a point we will return to below.

4. Lorenz curves on racial composition are little used today but have previously been published for Chicago in 1910 (Wallace 1952) and in 1920-1950 (Duncan and Duncan 1957).

5. A typical building in either city included 5-10 households, but there were also many small single family buildings in sections of each city including the black sections. Omitting these latter buildings from the analysis makes little difference in the results.

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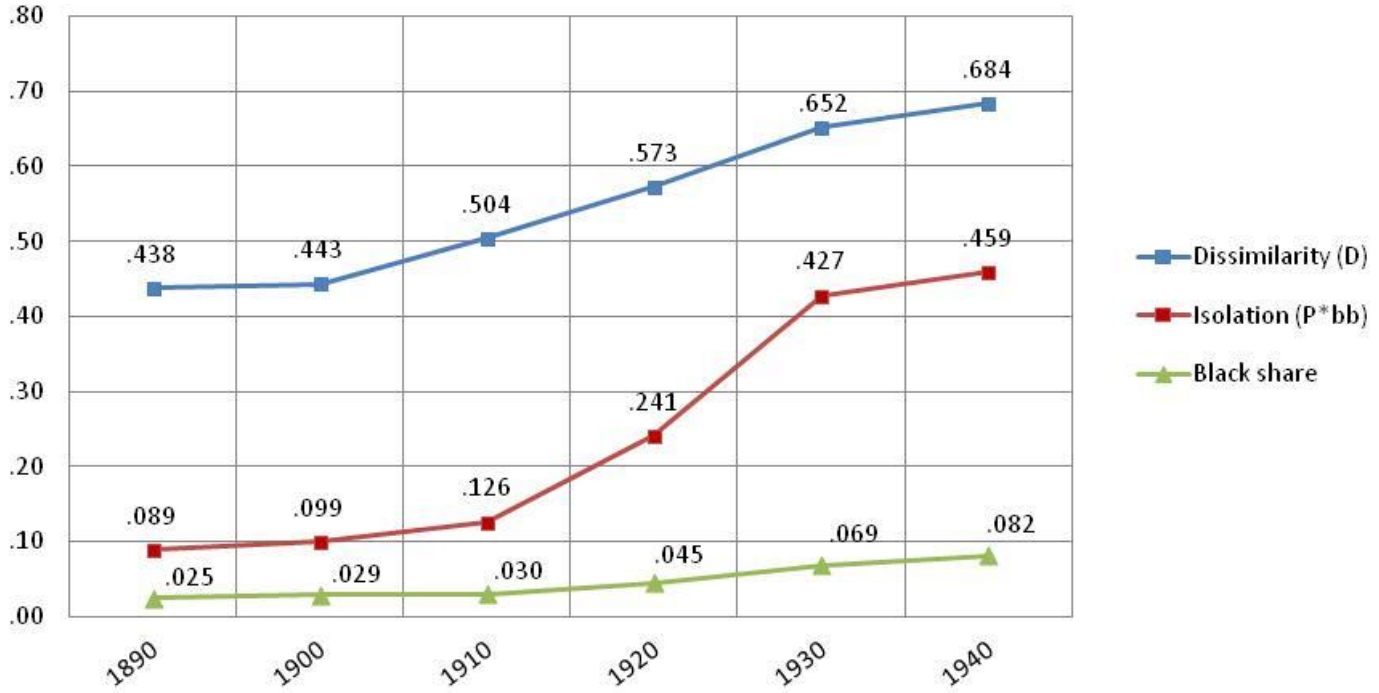
Figure 1. Segregation and black population share: weighted average in ten Northern cities with the largest black populations in 1940.

Data source: Cutler, Glaeser and Vigdor (1999)



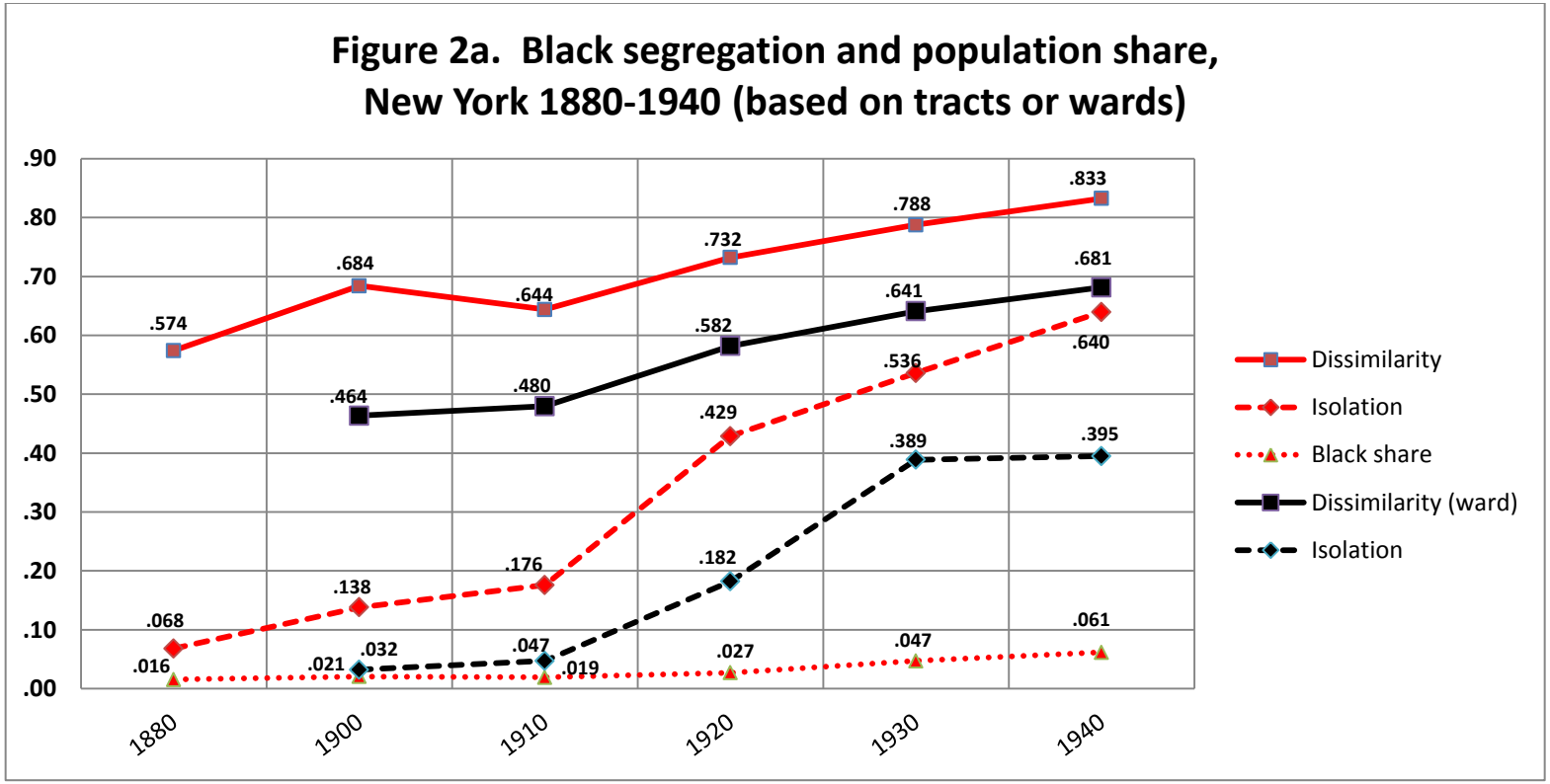


Figure 2a. Black segregation and population share, New York 1880-1940 (based on tracts or wards)
.90
.80
.70
.60
.50
.40
.30
.20
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.00
1880
1900
1910
1920
1930
1940
.574
.684
.644
.732
.788
.833
.464
.480
.582
.641
.681
.068
.138
.176
.429
.536
.640
.016
.021
.032
.047
.019
.027
.047
.061
.182
.389
.395
Dissimilarity
Isolation
Black share
Dissimilarity (ward)
Isolation

Figure 2b. Black segregation and population share, Chicago 1880-1940 (based on tracts or wards)

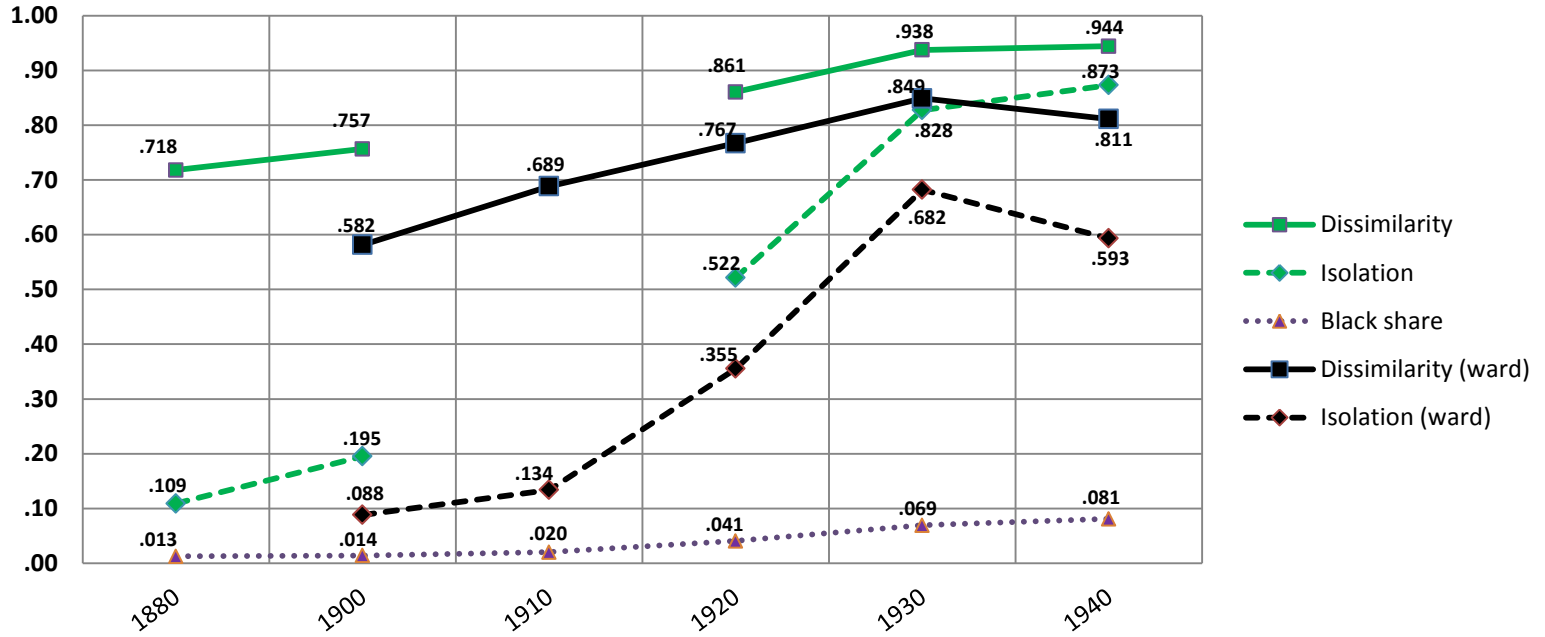


Figure 3. Lorenz curves: distribution of black and white population, 1880 (tracts)

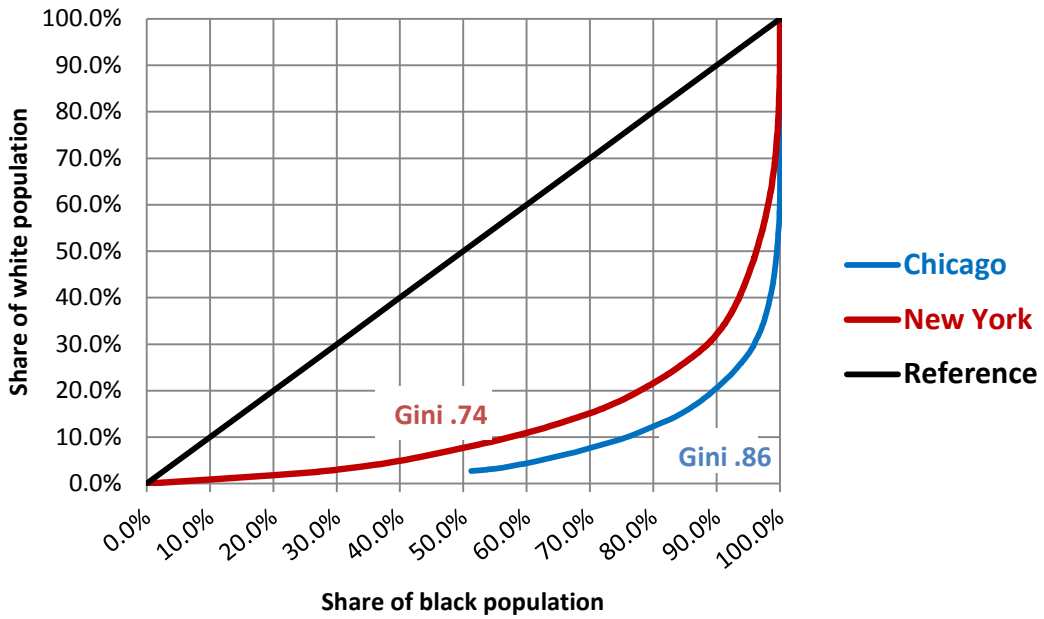
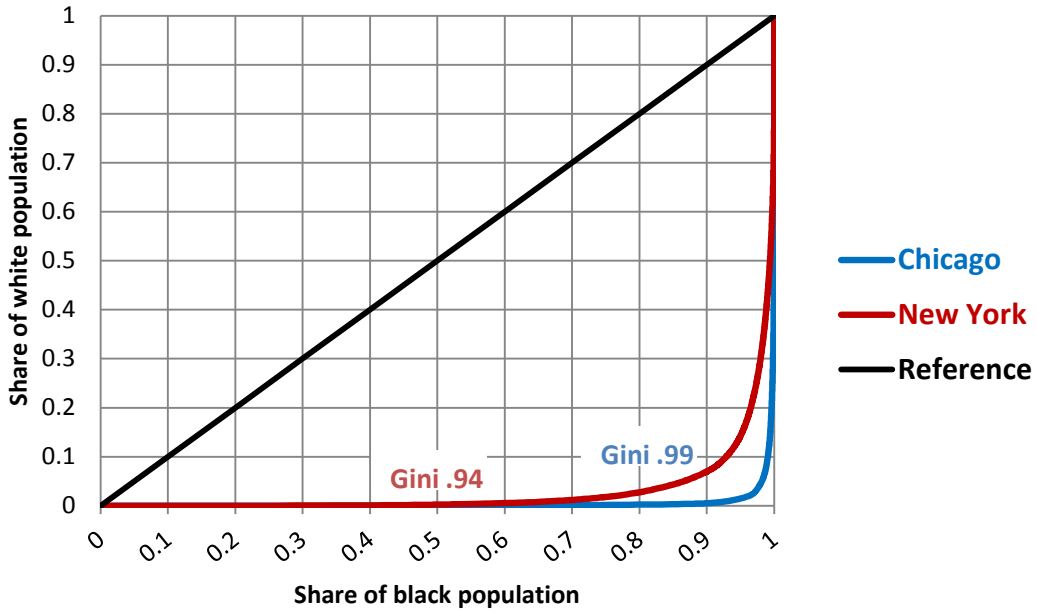


Figure 4. Lorenz curves: distribution of black and white population, 1940 (tracts)



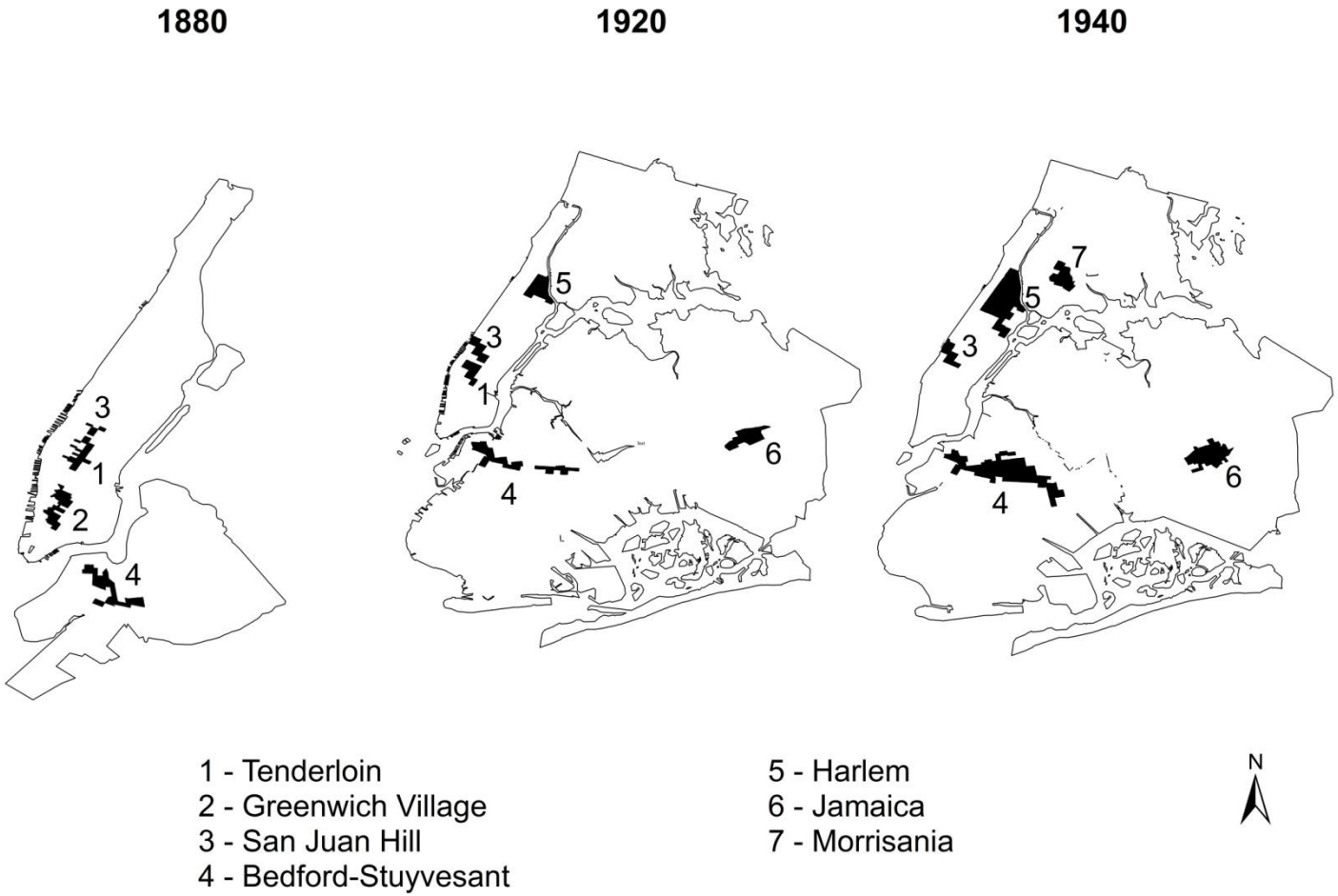


Figure 5. New York black neighborhoods in 1880, 1920, and 1940

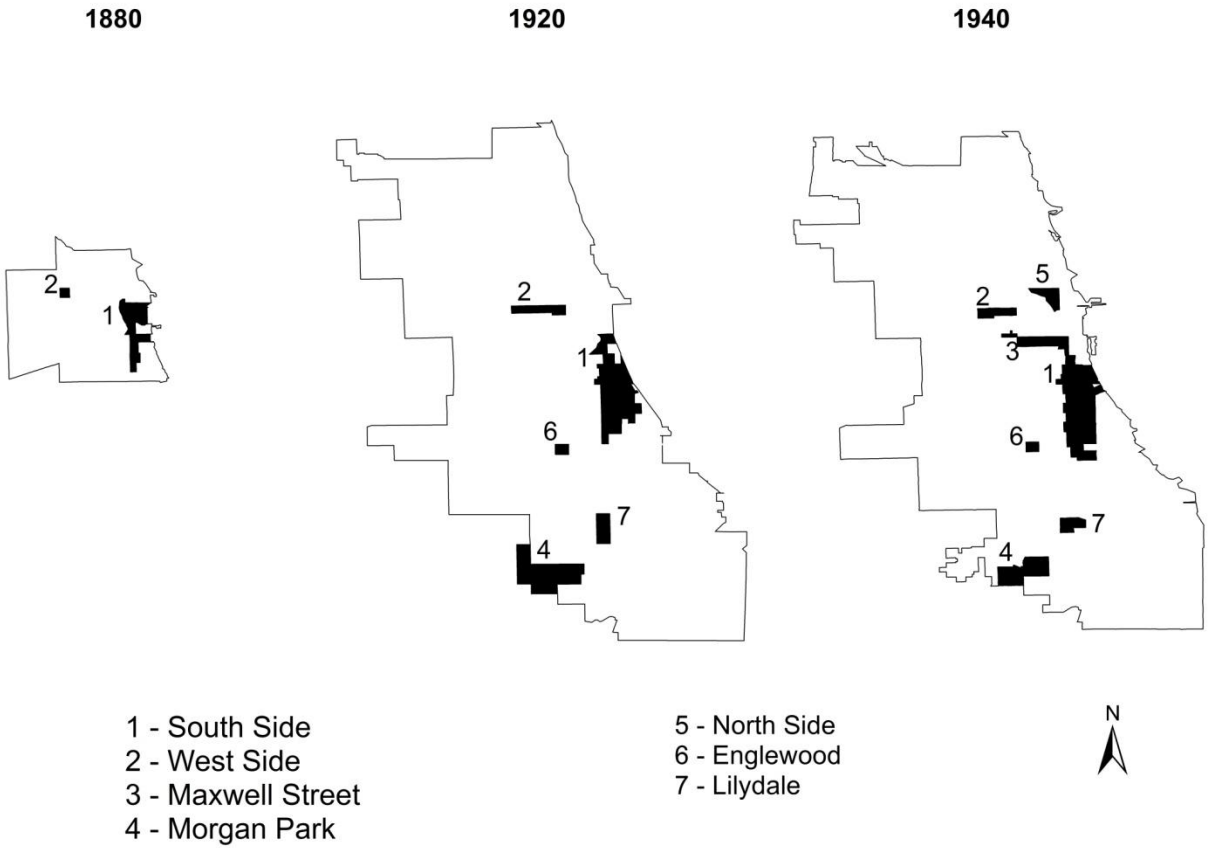


Figure 6. Chicago black neighborhoods in 1880, 1920, and 1940

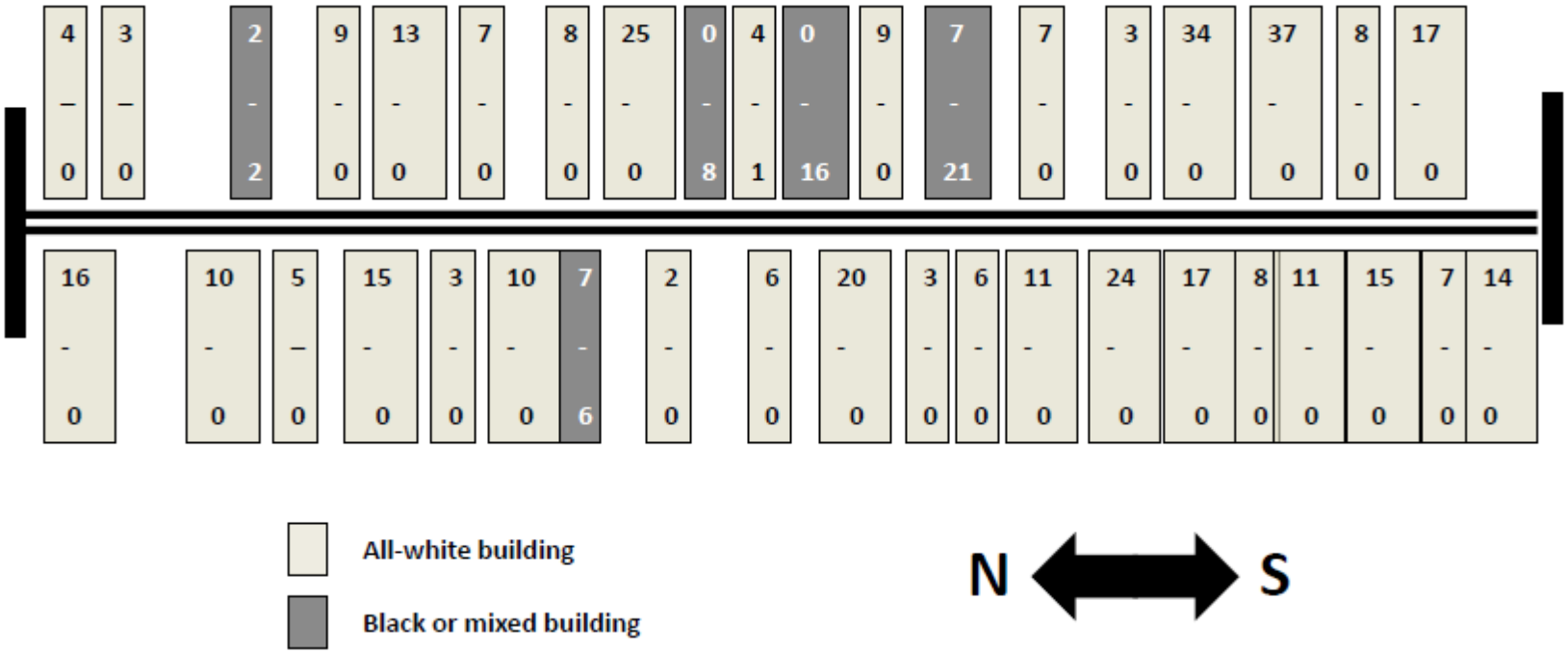


Figure 7. South State Street, Chicago, 1400 block (partial) in 1880, showing number of white residents (upper numeral) and black residents (lower numeral)

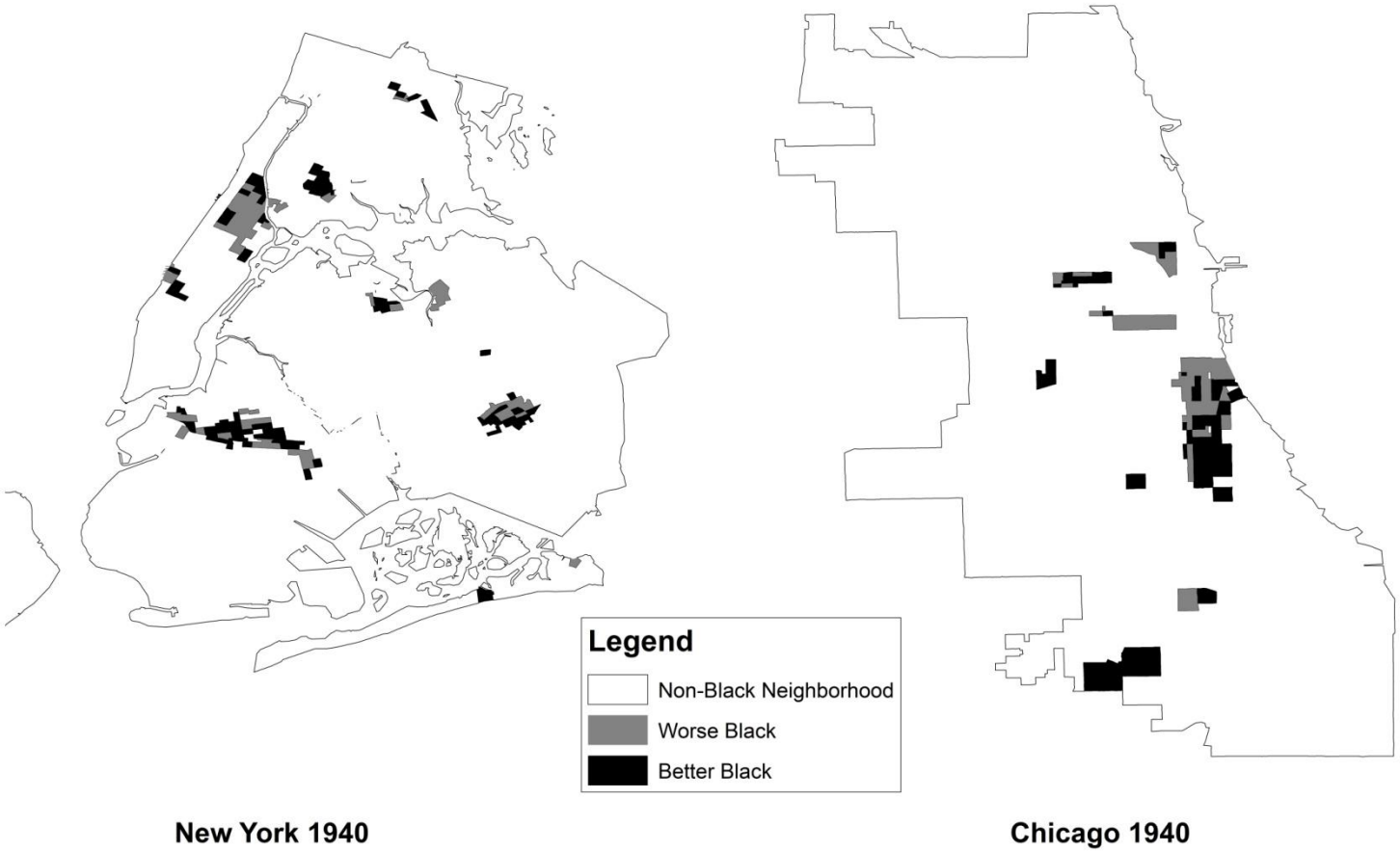


Figure 8. Black neighborhoods in New York and Chicago in 1940 by class composition

Table 1. Black neighborhoods in New York, 1880-1940

		Black population	% Black	% of city black total
New York declining black neighborhoods				
1 Tenderloin	1880	4,804	14.2	17.5
	1910	8,050	14.6	8.8
	1920	4,397	10.2	2.9
	1930	142	10.4	0.0
	1940	---	---	---
2 Greenwich Village	1880	4,655	12.5	16.9
	1910	---	---	---
	1920	---	---	---
	1930	1,254	17.7	0.4
	1940	---	---	---
New York persisting and post-1880 black neighborhoods				
3 San Juan Hill	1880	506	9.3	1.8
	1910	12,435	22.5	13.6
	1920	10,950	21.4	7.3
	1930	10,169	23.1	3.1
	1940	8,048	18.5	1.7
4 Bedford-Stuyvesant	1880	2,267	6.8	8.3
	1910	9,029	16.5	9.8
	1920	16,249	18.3	10.8
	1930	46,579	21.0	14.1
	1940	84,123	33.2	18.2
5 Harlem	1880	---	---	---
	1910	19,257	23.1	21.0
	1920	71,674	56.9	47.8
	1930	187,151	63.5	56.6
	1940	275,669	71.2	59.5
6 Jamaica	1880	---	---	---
	1910	---	---	---
	1920	967	10.3	0.6
	1930	8,649	33.5	2.6
	1940	13,587	38.6	2.9
7 Morrisania	1880	---	---	---
	1910	---	---	---
	1920	---	---	---
	1930	---	---	---
	1940	12,534	11.3	2.7

Table 2. Black neighborhoods in Chicago, 1880-1940

			Black population	% Black	% of city black total
	Chicago persisting black neighborhoods				
1	**South Side**	1880	4,580	9.1	71.6
		1900	16,138	16.5	62.6
		1920	87,148	48.5	79.6
		1930	186,079	87.3	79.6
		1940	220,268	93.9	80.0
2	**Westside**	1880	201	8.0	3.2
		1900	---	---	---
		1920	7,177	35.3	6.6
		1930	11,644	58.7	5.0
		1940	11,588	76.6	4.2
	Chicago post-1880 black neighborhoods				
3	**Maxwell Street**	1880	---	---	---
		1900	---	---	---
		1920	---	---	---
		1930	14,358	47.8	6.1
		1940	13,783	60.1	5.0
4	**Morgan Park**	1880	---	---	---
		1900	---	---	---
		1920	692	11.6	0.6
		1930	4,410	50.1	1.9
		1940	6,124	55.0	2.2
5	**North Side**	1880	---	---	---
		1900	---	---	---
		1920	---	---	---
		1930	2,943	19.1	1.3
		1940	4,018	30.0	1.5
6	**Englewood**	1880	---	---	---
		1900	---	---	---
		1920	1,206	20.3	1.1
		1930	2,418	30.5	1.0
		1940	3,681	42.2	1.3
7	**Lilydale**	1880	---	---	---
		1900	---	---	---
		1920	205	32.7	0.2
		1930	1,254	67.6	0.5
		1940	1,823	79.5	0.7

Table 3. Segregation at varying spatial scales, New York and Chicago 1880

	New York		Chicago	
	D	**Isolation**	**D**	**Isolation**
Household	0.987	0.890	0.989	0.931
Building	0.977	0.725	0.953	0.741
Street	0.867	0.328	0.829	0.230
Street Group (1st Order)	0.791	0.256	0.709	0.117
Street Group (2nd Order)	0.754	0.203	0.650	0.085
Tract	0.721	0.120	0.614	0.072
Ward	0.663	0.086	0.455	0.036

Table 4. Multinomial logit predicting black residential location in Chicago and New York, 1940 (compared to "worse black neighborhood")

	Chicago (N=1112)								NYC (N=1875)							
	Better black neighborhood				Non-black neighborhood				Better black neighborhood				Non-black neighborhood			
	b	SE	Z score		b	SE	Z score		b	SE	Z score		b	SE	Z score	
Intercept	-0.924	0.385	-2.40	*	-4.291	0.949	-4.52	***	-2.510	0.338	-7.43	***	-1.993	0.454	-4.39	***
Female	0.131	0.159	0.82		0.649	0.381	1.70		0.010	0.134	0.08		-0.547	0.202	-2.71	**
Age	-0.007	0.006	-1.16		0.013	0.014	0.93		0.011	0.006	1.98	*	0.015	0.008	1.95	
Marital Status (Reference=never married)																
Married	0.434	0.205	2.11	*	-0.073	0.546	-0.13		0.254	0.168	1.51		-0.185	0.232	-0.80	
Widowed	0.004	0.258	0.01		0.067	0.616	0.11		0.162	0.229	0.71		-0.246	0.327	-0.75	
Divorced	0.114	0.466	0.24		0.787	0.917	0.86		-0.296	0.595	-0.50		-0.180	0.788	-0.23	
Household Composition (Reference=live alone)																
Living with relatives	-0.297	0.179	-1.66		0.486	0.486	1.00		0.600	0.168	3.57	***	0.061	0.224	0.27	
Living with non-relatives	-0.161	0.193	-0.83		0.359	0.519	0.69		0.406	0.176	2.31	*	-0.410	0.245	-1.67	
Birthplace (Reference=South)																
Local state	0.341	0.270	1.26		0.541	0.595	0.91		0.253	0.192	1.32		0.833	0.246	3.38	**
Other places	0.653	0.220	2.97	**	0.838	0.445	1.88		-0.334	0.138	-2.42	*	0.010	0.194	0.05	
Grade of school	0.130	0.024	5.44	***	0.035	0.056	0.63		0.039	0.019	2.05	*	-0.044	0.027	-1.60	
Family total wage income, 1939	0.000	0.000	2.68	**	0.001	0.000	2.08	*	0.000	0.000	2.71	**	0.000	0.000	-1.21	
Highest SEI in family	0.015	0.005	3.01	**	0.008	0.012	0.67		0.007	0.003	2.07	*	0.014	0.005	3.05	**
Home owner	0.872	0.376	2.32	*	0.655	0.723	0.91		0.788	0.391	2.01	*	0.839	0.524	1.60	
Log likelihood	-824.5								-1483.4							
Chi-square	236.5	***							493.4	***						
df	28								28							

Note: * P < 0.05, ** P < 0.01, *** P < 0.001

Table 5. Logistic regression predicting living in a black neighborhood, Chicago and New York 1880

	Chicago (N=2971)				NYC (N=12474)			
	b	**SE**	**Z score**		**b**	**SE**	**Z score**	
Intercept	1.137	0.387	2.94	**	0.686	0.122	5.62	***
Mulatto	0.265	0.105	2.52	*	0.493	0.050	9.82	***
Female	-0.130	0.125	-1.04		-0.109	0.051	-2.14	*
Age	-0.007	0.005	-1.49		-0.004	0.002	-2.48	*
Marital Status (Reference: single)								
Married	-0.301	0.171	-1.76		0.061	0.069	0.88	
Widowed	-0.001	0.202	0		0.293	0.072	4.07	***
Divorced	-1.283	0.702	-1.83		0.737	0.369	2.00	*
Household Composition (Reference: living alone)								
Servant in white-headed household	-1.532	0.359	-4.26	***	-2.533	0.114	-22.24	***
Living with relatives	0.394	0.356	1.11		0.041	0.106	0.39	
Living with non-relatives	0.753	0.344	2.19	*	-0.276	0.100	-2.75	**
Birthplace (Reference: South)								
Local state	0.140	0.220	0.64		-0.164	0.046	-3.56	***
Other places	0.144	0.100	1.43		-0.100	0.052	-1.92	
Highest SEI in the family	-0.002	0.003	-0.54		-0.006	0.001	-4.25	***
Log likelihood	-1488.1				-7437.3			
Chi-square	314.3	***			2418.1	***		
df	12				12			

Note: * P < 0.05, ** P < 0.01, *** P < 0.001

Table 6. Predicting mean SEI of neighbors at various spatial scales, Chicago 1880

	Building			Street Segment			1st Order Segment Group			2nd Order Segment Group		
	b	SE		b	SE		b	SE		b	SE	
Intercept	20.51	2.97	***	24.31	1.77	***	25.38	1.46	***	26.91	1.26	***
Mulatto	0.83	0.70		-0.13	0.36		-0.60	0.30	*	-0.98	0.26	***
Female	2.34	0.96	*	0.92	0.45	*	0.49	0.37		0.64	0.32	*
Age	0.05	0.04		0.05	0.02	*	0.05	0.02	***	0.05	0.01	***
Marital Status (Reference: single)												
Married	-1.60	1.20		-0.16	0.62		-0.64	0.51		-0.18	0.44	
Widowed	-4.24	1.48	**	-1.75	0.72	*	-1.59	0.59	**	-1.27	0.52	*
Divorced	-10.12	5.50		1.45	2.79		1.32	2.30		-0.32	2.00	
Household Composition (Reference: living alone)												
Servant in white-headed household	19.99	3.13	***	10.15	1.72	***	9.24	1.41	***	7.19	1.22	***
Living with relatives	-1.37	2.71		-1.41	1.70		-1.07	1.40		-1.81	1.21	
Living with non-relatives	-0.69	2.63		-1.58	1.65		-1.93	1.36		-2.37	1.18	*
Birthplace (Reference: South)												
Local state	-2.06	1.49		-1.22	0.74		-0.25	0.61		-0.22	0.53	
Other places	0.19	0.68		-0.11	0.35		0.14	0.29		-0.12	0.25	
Highest SEI in the family	0.06	0.02	**	0.02	0.01		0.00	0.01		-0.01	0.01	
R-squared	0.083			0.144			0.179			0.184		
Adj R-squared	0.078			0.140			0.175			0.180		
Root MSE	14.226			8.680			7.146			6.203		
Number of cases	2,085			2,894			2,906			2,916		

Note: * P < 0.05, ** P < 0.01, *** P < 0.001

Table 7. Predicting mean SEI of neighbors at various spatial scales, New York 1880

	Building			Street Segment			1st Order Segment Group			2nd Order Segment Group		
	b	SE		b	SE		b	SE		b	SE	
Intercept	19.23	0.72	***	25.33	0.42	***	28.33	0.30	***	29.19	0.25	***
Mulatto	-0.09	0.30		-0.68	0.15	***	-0.40	0.11	***	-0.12	0.09	
Female	0.68	0.32	*	1.73	0.16	***	1.31	0.11	***	1.02	0.09	***
Age	0.01	0.01		-0.01	0.01	*	-0.01	0.00	**	-0.01	0.00	**
Marital Status (Reference: single)												
Married	-1.20	0.43	**	0.06	0.21		0.01	0.15		-0.05	0.12	
Widowed	-2.19	0.45	***	-0.79	0.22	***	-0.35	0.16	*	-0.35	0.13	**
Divorced	-0.28	2.07		-1.56	1.17		0.99	0.83		0.40	0.69	
Household Composition (Reference: living alone)												
Servant in white-headed household	20.45	0.69	***	7.25	0.38	***	4.25	0.27	***	3.29	0.22	***
Living with relatives	0.09	0.60		0.04	0.38		0.33	0.27		0.43	0.23	
Living with non-relatives	0.77	0.58		1.36	0.37	***	0.90	0.26	***	0.74	0.22	**
Birthplace (Reference: South)												
Local state	-0.20	0.27		-0.03	0.14		-0.25	0.10	*	-0.49	0.08	***
Other places	-0.09	0.31		-0.07	0.16		-0.31	0.12	**	-0.39	0.10	***
Highest SEI in the family	0.04	0.01	***	0.03	0.00	***	0.01	0.00	***	0.00	0.00	*
R-squared	0.216			0.189			0.142			0.123		
Adj R-squared	0.215			0.188			0.141			0.122		
Root MSE	11.241			6.790			4.799			4.028		
Number of cases	8,983			12,318			12,390			12,394		

Note: * P < 0.05, ** P < 0.01, *** P < 0.001