Sprawl, Concentration of Poverty, and Urban Inequality*

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Abstract

Over the past several decades, central cities for the most part have experienced considerable outmigration, growing areas of urban blight, and increasing concentration of poverty. Urban sprawl, at least in the banal sense of rapid suburban development, is also an undeniable reality. This chapter explores the connections between the two trends, and argues that sprawl and central city decline are both manifestations of a metropolitan development process that leads to higher levels of economic segregation. Finally, this chapter sketches the implications of this pattern of metropolitan development for poverty and inequality. I argue that urban sprawl and the concentration of poverty are two sides of the same metropolitan development process, and that the operation of this process increases poverty and limits equality of opportunity.
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I. INTRODUCTION

Two trends have dominated the evolution of metropolitan areas in the second half of the twentieth century. First, at least until the recent economic boom, the majority of the central cities of major U.S. metropolitan areas had been in a decades-long period of decline relative to the suburbs. Second, metropolitan areas simultaneously experienced rapid development in their outer suburban rings. These two central facts, in themselves, are uncontroversial. Nevertheless, there is a lively debate about the causes of these trends and about their social and economic significance. Some argue that the recent suburban explosion is simply a manifestation of growth, rising incomes, and a general preference for suburban living. Others argue that growth is out of control and results from foolish government policies and perverse incentives to local governments, developers, and homeowners.

Disagreement also persists about the causal ordering of these two central facts. Did the decline of the central cities inspire suburban sprawl, by giving the middle class ample reason to flee the frightening poverty and social disorder of the inner city? Or did suburban sprawl erode the tax base and siphon off middle class families and institutions, and thereby destabilize central city neighborhoods and cause their decline? Finally, the ultimate significance of the pattern of suburban growth and central

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1Metropolitan areas, in concept, include one or more major central cities and the nearby suburbs that are closely tied to those cities’ spheres of influence. In practice, the Census Bureau defines metropolitan areas by a complex set of criteria regarding population size, density, commuting patterns, and other factors.
city decline for poverty and inequality is poorly understood and subsequently under-weighted in policy debates about metropolitan development.

The driving forces behind suburban sprawl deliver new developments which are both disproportionately aimed at the highest tier of the income distribution and geographically distant from the urban core. In its wake, this development process leads to concentrations of poverty that are both physically and socially isolated from the mainstream of society and the bulk of educational resources and employment opportunities. These spatial disparities increase poverty in the short run and also reduce equality of opportunity and therefore contribute to inequality in the long run. The low density, environmental impact, and aesthetic aspects of new suburban neighborhoods are important facets of the sprawl debate, but such issues are not central to the concern over sprawl’s role in poverty and inequality.

The goal of this paper is to demonstrate and explore sprawl’s equity dimension. I begin with an examination of the decline of central cities relative to suburbs, as well as surge in concentration of poverty at the urban core. The following section develops the links between suburban development patterns and the fortunes of the central city. The final section addresses the implications of the bifurcated pattern of metropolitan development for poverty, inequality, and equality of opportunity.

II. CENTRAL CITY DECLINE

The nation’s major cities have always served the function of integrating low-income persons into the national economy. Waves of immigrants from Europe, Asia, and elsewhere have passed through the inner-city neighborhoods of many large urban areas. While most people associate cities
like New York, San Francisco, Los Angeles and Miami with immigration, in fact almost every major 
city has or at least once had neighborhoods associated with ethnic immigration. Moreover, large cities, 
especially in the North, attracted waves of the rural poor, white and black, as the nation shifted from an 
aricultural to an industrial economy. Thus, while urban areas have always been characterized by 
concentrations of poor persons and poor neighborhoods, they also served the function of helping the 
poor to assimilate into a new country and a new economy (Hicks 1994).

Following World War II, a number of factors converged to change the nature of the 
relationship between urban centers and poverty. First, the proliferation of the automobile reduced 
workers’ reliance on proximity to employment centers and public transportation systems. Second, the 
GI Bill and economic prosperity made it realistic for non-agricultural middle-class persons to aspire to 
own detached single-family homes, surrounded by grass and trees. Third, a heightening of racial 
tensions in the wake of the northward migration of southern blacks, culminating in the race riots of the 
1960s, led many whites to flee as far as they could from the burgeoning and seemingly insoluble 
concentration of social problems at the urban core. A related point is that school desegregation made 
it harder to avoid contact with minority groups and economically disadvantaged persons merely by 
living in a middle-class or higher-income neighborhood; families believed they had to relocate outside 
the central city school district altogether to avoid the threats, real or perceived, that school integration 
posed to their children. Fourth, as discussed elsewhere in this volume, a myriad of public policies 
provided additional incentives and subsidies that encouraged suburbanization.

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2 Increasing the level of home ownership had been a goal of federal policy since the Hoover 
Commission of the 1930s (Jackson 1985: 193-194), in part to stave off the Communist menace.

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The cumulative effect of these developments was a sea change in the role of cities in the American class system. Historically, movements of poor persons into the urban core, seeking a port of entry into the American mainstream, led to the concentration of urban poverty. But by 1970, a different dynamic began to develop. The white middle-class, followed by the black middle class, began to leave the inner-city for suburban destinations. Selective migration of the non-poor out of the central city replaced selective migration of the poor into the central city as a key mechanism leading to increases in the concentration of poverty (Jargowsky and Bane, 1991; Wilson 1987). A number of cities, particularly in Texas and California, continue to have significant streams of poor people migrating in from abroad (Frey 1993). Only in these cities are the populations of central city residential neighborhoods growing. For most metropolitan areas, however, the primary trend has been deconcentration. As Berry and Gillard (1977: 1) noted, “counter-urbanization has replaced urbanization as the dominant force shaping the nation’s settlement patterns.”

Some central cities were able to use expansion and annexation to partly retain dominion over their population and tax base, but many were constrained by existing suburbs which locked their boundaries in place. As a result, central cities have declined relative to suburbs in both population and economic status. The population of the central cities of the 100 largest metropolitan areas grew by 9.2 percent between 1970 and 1998, while the suburbs of the those metropolitan areas grew by 59 percent (calculated from Exhibit 1-8, HUD 2000: 23). Central cities lag in job growth generally, and high-tech job growth in particular (HUD 2000: 5, 40). Central cities have much higher poverty rates than

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3Here the term suburbs is being used broadly to refer to all parts of metropolitan areas outside the central cities as defined by the Census Bureau.
suburbs. In 1999, for example, the poverty rate of central cities was 16.4, compared to 8.3 percent in suburban areas (Census 2000).

Even in the 1990s, when metropolitan economies were strong and many downtowns were booming, the central cities continued to lag the suburbs in population growth. The 2000 Census showed that the population of central cities rose 9.7 percent over the 1990s, compared to 22.4 percent for the suburbs. The suburbs share of the U.S. population rose from 46.2 percent in 1990 to 50 percent in 2000, for the first time reaching half the total U.S. population. Over the same period the central city share of the U.S. population actually fell, from 31.3 percent to 30.3 percent. As a share of the metropolitan population, the central cities declined even faster, from 40.4 percent in 1990 to 37.7 percent in 2000.

The most visible manifestation of this trend has been the rapid expansion of high-poverty ghettos and barrios at the center of large metropolitan areas and the decline of middle-class residential areas within the confines of the central city. The poor, especially the minority poor, are increasingly isolated in depopulated urban wastelands. Such neighborhoods often exhibit severe signs of economic distress, including vacant and dilapidated housing units, high levels of unemployment, high rates of single parenthood, problems with gangs and violence, and widespread drug and alcohol abuse. The elevated levels of social problems in these neighborhoods should not be misinterpreted to imply that all or even most neighborhood residents share such characteristics, an error known as the “ecological fallacy” (Robinson 1950; Myers 1954). However, it is true that all residents of neighborhoods with disproportionate levels of social problems are exposed to and must cope with the social environments that result.
Nationally, the number of poor persons residing in high-poverty neighborhoods very nearly doubled between 1970 and 1990, rising from 1.9 million to 3.7 million.\(^4\) The concentration of poverty, defined as the percentage of all poor persons living in poor neighborhoods, increased from 12.4 to 17.9 percent. Poverty concentration is much higher for minority groups. For example, 33.5 percent of the black poor and 22.1 percent of the Hispanic poor lived in high-poverty neighborhoods in 1990, compared to 6.3 percent of the white poor.

Some metropolitan areas experienced huge increases in the concentration of poverty among both blacks and Hispanics. For example, in Detroit, a relatively low 11.3 percent of blacks lived in high-poverty areas in 1970; by 1990, the figure nearly quintupled, rising to 53.9 percent. Thus, by 1990 more than half the black poor in Detroit had to contend with both low family income and severely disadvantaged neighborhood context as well. Other cities experienced devastating increases in the concentration of poverty among blacks, including New York (+27), Chicago (+21.4), and Pittsburgh (+21.7). There were also a number of cities with huge increases in the Hispanic concentration of poverty, including New York (+18.8), Philadelphia (+48.4), and Detroit (+33.8). The vast majority of cities had increases in either black or Hispanic concentration of poverty or both. The exceptions are places like Boston, Phoenix, and Washington, cities that experienced strong economic growth between

\(^4\)As of this writing, the 2000 Census data for income and poverty have not been released, and so the concentration of poverty figures for 2000 are not yet available. Census tracts serve as proxies for neighborhoods (White 1987). High-poverty neighborhoods are defined as census tracts with poverty rates of 40 percent or higher. The figures reported here track 239 U.S. metropolitan areas, including all major metropolitan areas and 91.6 percent of the entire metropolitan population in 1990 (Jargowsky 1997: Table A.1). The remaining areas had not yet been designated as metropolitan areas as of 1970. Such areas were generally not divided into census tracts, and so for these areas it is impossible to identify the trend in concentration of poverty.
1970 and 1990. If the spatial context of daily living has an effect on the subjective experience of poverty, then what it means to be poor has changed for the worse in recent decades. In the vast majority of cities, the poor were increasingly isolated from the mainstream of society in high-poverty ghettos and barrios.

Poverty is concentrated in the United States for a number of different reasons. Historically, the single most important factor was racial residential segregation. African-Americans have poverty rates more than three times as high as non-Hispanic whites. At the same time, the vast majority of blacks live in relatively small number of highly segregated neighborhoods (Massey and Denton 1993). In this way, historic segregation by race has had the effect of concentrating poverty (Massey 1990; Massey and Eggers 1991). If the black population were evenly dispersed among the much larger white population, there would be virtually no concentration of poverty by the measures used above, because the poverty of blacks would be “diluted” by the larger number and lower poverty rate of the majority group.

On the other hand, racial concentration reached its peak in 1970, the base year for the comparisons made earlier. The cause of the increases in concentrated poverty between 1970 and 1990 cannot be racial segregation, which declined by small to moderate amounts across the vast majority of metropolitan areas during this period (Farley and Frey, 1994; Harrison and Weinberg 1992). If anything, the declines in racial segregation between 1970 and 1990, other things equal, 

\footnote{Massey and Eggers (1990) argue that an interaction between the level of racial segregation and increases in poverty is a primary acts to concentrate poverty. While this interaction effect could operate even in the context of moderate declines in racial segregation, their model testing this hypothesis is mis-specified (Jargowsky 1997: 142-143). Further analyses testing for an effect this type interaction...}
would have led to lower levels of concentration of poverty.

The state of the local economy has a profound effect on poverty concentration. As the economy declines, the overall poverty level of course rises. However, it is not necessarily true that an increasing metropolitan poverty rate will lead to higher concentration of poverty. In fact, the opposite could occur. Suppose that the high-poverty area contains the non-working poor, and that the newly unemployed poor created by an economic downturn reside in other neighborhoods scattered throughout the city. In that case, the concentration of poverty could actually fall as poverty itself rises. But in fact what happens is that, as the overall poverty level rises, the effect is felt disproportionately in the high-poverty areas and the “borderline” neighborhoods in the immediate vicinity of the existing poverty concentrations. These neighborhoods are borderline in two senses: they physically border the existing high-poverty areas, and they tend to have poverty rates in the 30 to 40 percent range. In a downturn, these neighborhoods see their poverty rates rise above the 40 percent level, and so there is an expansion of the high-poverty zone and all of the residents of the larger area are numbered among the concentrated poor.

Despite the importance of the labor market in explaining the concentration of poverty, the economy is not the only factor that affects the concentration of poverty. On average across all metropolitan areas, there was a substantial increase in the concentration of poverty between 1970 and 1990. Yet, again on average, the economies of these metropolitan areas actually improved, which should have led to decreases in the concentration of poverty, other things equal. Obviously, other

on the concentration of poverty found no evidence for it (Jargowsky 1997: 181-183).
things were not equal.

As noted above, inner-city neighborhoods are also embedded in metropolitan housing markets in which the dominant trend is deconcentration. Suburbs at the far edge of metropolitan areas are developed and typically cater to higher-income families. As this group moves from the inner-ring suburbs, middle-class families take their places, moving themselves from central city residential neighborhoods. This process of selective out-migration systematically reduces the income level of the residents left behind in the neighborhoods near the center of the metropolitan area. As a result, more neighborhoods have sufficiently high poverty rates to be considered high-poverty neighborhoods.

Figure 1 shows the expansion of high-poverty area in the Detroit metropolitan area, while Figure 2 shows the expansion of the high-poverty zones in the Houston metropolitan area.\(^6\) Consistent with the discussion above, the physical size of the high-poverty neighborhood in these two cities expanded dramatically. A far greater proportion of the land area of both of these central cities consisted of high-poverty neighborhoods by 1990. In the case of Detroit, this occurred through a combination of increasing poverty and out-migration of non-poor persons, resulting in a higher poverty rate in the “borderline” census tracts. In Houston, poverty actually declined in the 1980s, so the increase in the number of high-poverty tracts was driven mostly by newly arriving Mexican immigrants and the out-migration of the non-poor from those neighborhoods. Thus, cities in very different economic trajectories both experienced a large expansion of their blighted area.

\(^6\)Since the poor neighborhoods tend to a relatively small area at the center of the much larger expanse of the metropolitan area, both maps have smaller key maps showing county and city boundaries to provide a sense of the location of the high-poverty area within the larger area.
Further evidence on this point is provided by Table 1, which compares the growth of high-poverty neighborhoods by several different measures between 1980 and 1990. The first measure is the percentage change in the square kilometers of the high-poverty area, and thus represents the change in the geographic extent of the high-poverty census tracts. The second measure given is the percentage change in the total population living in high poverty neighborhoods. The final measure is percentage change in the number of high-poverty census tracts.\(^7\) In most of the metropolitan areas listed, the physical size of the high-poverty neighborhoods grew faster than the population living in such areas. In other words, the ghettos and barrios of these cities were larger, but less dense in 1990 than they were in 1980. Even places where the total population of high-poverty areas *declined* between 1980 and 1990, such as New York and Washington, had large *increases* (51 and 52 percent respectively) in the size of the high-poverty zones.

There were a few exceptions, places where the population grew faster than the size of the impoverished area. These are Los Angeles, Dallas/Ft. Worth, and Houston. Each of these areas was experiencing substantial immigration of Mexicans. Nevertheless, these cities did follow the pattern of a large increase in the geographic extent of the high-poverty area.

Racial segregation and the labor market both have important effects on the concentration of poverty, but neither of these variables can explain the rapid rise in the concentration of poverty between 1970 and 1990. Segregation was declining and the economy was improving over this period. Instead,

\[^7\text{All of the figures represent net changes.}\]
the long term trend toward increases in the concentration of poverty has to do with a spatial restructuring of metropolitan areas that leads to a hollowing out of the central cities and larger areas of urban blight. This process seems to move on in good times and bad, working quietly in the background to undermine the central city and increase economic segregation.

In the last half of the 1990s, many central cities have been experiencing a renaissance. When the income and poverty data for the 2000 Census are released, we may well see declines in the concentration of poverty in the areas with the strongest economic growth. It is certainly what would be expected given the analysis presented above: a strong economy differentially benefits central cities just as much a weak one differentially hurts. Assuming, however, that the current economic peak cannot be maintained indefinitely, it is fair to ask how much of the current boom in the central city will survive the next recession. To answer this question, we have to look more closely at the connections between central city decline and urban sprawl, which has continued and even accelerated during the current economic boom.

III. Urban Sprawl and Central City Decline

Arguably, the United States is unique among western industrial nations in the extent of concentration of poverty. This claim is difficult to verify empirically, because neither the poverty rate nor the census tracts that serve as proxies for neighborhoods can be replicated in any consistent way across nations. Nevertheless, it seems clear that most European cities are not nearly as segregated by race and class as is common in the U.S. (Musterd and Ostendorf, 1998; van der Wusten and Musterd,
Obviously, European nations are far from classless societies. Class distinctions are maintained in a variety of ways. The point is that there is less racial and class segregation in their residence patterns.

The U.S. is also unique in that “affluent and middle-class Americans live in suburban areas that are far from their work places” (Jackson 1985: 6). In the previous sections, we examined the concentration of poverty. This section addresses the issue of suburban sprawl and argues that these two types of American exceptionalism are not unrelated.

There are many different and sometimes contradictory conceptions of the term sprawl extant in the literature. The current ambiguity regarding the meaning of sprawl is reminiscent of the discussion of the underclass in the mid-1980s. The latter term was brought to the fore by a series of widely read research papers by William Julius Wilson, culminating in the publication of *The Truly Disadvantaged* (1987). In Wilson’s conception, the term underclass referred to persons residing in neighborhoods so socially isolated and economically disadvantaged that they became enveloped in a “tangle of pathology.” However, the term was also adopted by social conservatives as a way to refer to persons caught up in a permissive cultural climate, and who therefore acted irresponsibly and caused their own poverty (Magnet 1993). Liberals and urban advocates used the term as a loose synonym for the urban poor, one which placed an emphasis on their relationship to the larger class structure of American society. Further difficulties ensued when researchers attempted to operationalize the term for measurement purposes (Ricketts and Sawhill, 1988; Abramson and Tobin, 1994). Researchers, policymakers, and advocates adopted a trendy term and elided its meaning in convenient directions, ultimately destroying its usefulness.

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8 Obviously, European nations are far from classless societies. Class distinctions are maintained in a variety of ways. The point is that there is less racial and class segregation in their residence patterns.
The debate about sprawl has some of the same characteristics, and faces a similar danger.

However, to understand the implications of sprawl for poverty and inequality, it is necessary to assign some concrete meaning to the term. Gregory Squires, in the introduction to this volume, offered the following definition:

Sprawl can be defined as a pattern of urban and metropolitan growth that reflects low-density, automobile dependent, exclusionary, new development on the fringe of settled areas often surrounding a deteriorating city (p. xx).

According to this definition, sprawl is not a fixed set of characteristics of a region’s housing stock, but rather a characterization of the area’s growth over time. The definition identifies several different characteristics that comprise sprawl, which have differing potential effects on poverty and inequality.

The first characteristic of sprawl is low-density. Density refers both to the average number of persons per acre in new developments, but also to the discontinuous nature of the developments themselves. Transportation planners and environmentalists are particularly concerned with this aspect of sprawl. Low-density residential areas are inherently difficult to serve with public transportation in a cost-effective manner, resulting in nearly total reliance on individual automobiles for transportation. The resulting air pollution, traffic congestion, and land consumed by highway construction are negative externalities, the cost of which is not factored into either the developers or home-buyers economic calculus. On the other hand, waves of suburban movers have shown a marked preference for lower density, indicating that there are benefits as well.

There is no question that the density of cities has been declining for decades, for a variety of reasons. For one thing, changes in transportation and communication have made lower density
possible. For another, increasing real incomes have resulted in greater demand for space, both larger housing units and greater spacing between units. Thus, as far as sprawl is concerned, the question is not whether densities are declining but whether they are declining more rapidly than can be explained by the underlying economics.

Squires’ definition also stresses that sprawl is rapid growth at the periphery of a city or metropolitan area. In the provocatively titled, *The Dark Side of the American Dream*, the Sierra Club defined sprawl as “low-density development beyond the edge of service and employment” (Sierra Club, 1998). On the other hand, growth at the periphery of existing developed areas is exactly what one would expect. Sprawl, in the sense of peripheral development, is certainly not a new phenomenon. By this definition, all cities and metropolitan areas have been sprawling throughout history. One can map the developed areas of London or Chicago or any major city over many decades or centuries and, except for the occasional catastrophe, cities expand over time and the fastest rate of growth of the housing stock takes place in the fringe of the developed area. Between 1810 and 1820, the suburbs of New York grew faster than the central city, though at that time, well before New York’s great consolidation, the “suburbs” included places like Brooklyn that we now consider the central city. Areas outside Philadelphia County grew faster than the county in that decade as well. The growth in Boston’s suburbs first outpaced the growth of the city itself in the 1830s; Cleveland and St. Louis in the 1840s (Jackson 1985: 316).

The term sprawl, as it is generally used, is loaded with pejorative connotations that go beyond Squires’ definition. Sprawl is said to be unplanned and illogical development. It is criticized for being ugly, dehumanizing, and socially isolating. Popular books have denounced sprawl for producing “jive-
plastic commuter tract-home wastelands” that are a “wasteful, toxic, agoraphobic-inducing spectacle” (Kunstler 1993). Movies such as Blue Velvet and American Beauty play up the idea that the conformity and monotony of suburban neighborhoods socially isolates people, generating perversity and hypocrisy in equal and complimentary degrees. There are perhaps a dozen other ways to think about the meaning of sprawl that have been bandied about in the literature (Galster et al. 2000).

There is no necessary connection between urban sprawl, in the senses defined above, and poverty, inequality, or the concentration of poverty. If the new suburbs developed with a complete menu of housing types, from gated communities to low and moderate income housing, segregation by income could actually decline as the city expanded. Rapid peripheral growth could, after all, be a source of jobs and reduce poverty and inequality. Low-density development could in theory provide a higher quality of life for low-income persons then dense, dangerous neighborhoods in central-city housing projects. A jive-plastic tract home in a suburban wasteland might well be preferable to a jive-concrete housing project in the center of an urban wasteland.

Sprawl is related to poverty and inequality mainly because sprawl creates a greater degree of separation between the income classes. From the perspective of urban inequality, the key element of Squires’ definition is that the new growth is “exclusionary.” That is, if new development – whether planned or unplanned, ugly or beautiful, high-density or low density – accentuates segregation of the rich and middle-class from the poor, then and only then does it contribute to the concentration of poverty. Sprawl produces vast areas of concentrated wealth in the favored sectors of the city, while leaving the poor geographically and social isolated in the central city. While other aspects of sprawl have impacts on the poor as well, such as environmental degradation and low density, it is the
pronounced tendency towards economic segregation that is the most likely to have dynamic effects on
the income distribution.

The key question, therefore, is the relevance of sprawl to economic segregation and the
concentration of poverty. Figure 3 shows the temporal pattern of housing construction for
Minneapolis/St. Paul. The outer black boundary indicates the extent of the metropolitan areas as
defined by the Census Bureau. The inner black boundaries are the city boundaries of the central cities
of the metropolitan area. The balance of the area can be thought of as the suburbs. The boundaries of
individual suburban places and towns, as well as census tract boundaries, have been omitted to avoid
unduly cluttering the map. In looking at the map, however, it is important to keep in mind that the
procedure used by the census bureau to create metropolitan area definitions operates at the county
level. Thus, whole counties are either added or excluded. Thus, the non-central city areas include
some largely vacant and unincorporated land.

The shadings indicate the median year built of census tracts. Neighborhoods in the central cities
of the metropolitan area were largely constructed prior to 1949. Undoubtedly, there are newer units in
all these neighborhoods, a product of infill development or new construction on the site of razed units.
And older units may have been substantially renovated one or more times since their construction.
Nevertheless, at least half the housing units in these neighborhoods were originally constructed prior to
1950.

At the fringes of the central cities and in the immediately contiguous suburbs, there is a ring of
neighborhoods in which the median year built is between 1950 and 1959. There are also a number of
small “islands” of construction during this period at non-contiguous locations. These were small towns
that were essentially separate communities rather than suburbs of Minneapolis and St. Paul. Later, these become absorbed into the suburbs as the metropolitan area expands. Further rings of suburbs are constructed in the 1960s, 1970s, and 1980s. These data are from the 1990 Census, so in the last category of neighborhoods the median housing unit was constructed within 10 years of the Census date. These are basically new neighborhoods. Consistent with the notion that suburban sprawl is occurring at the periphery of the metropolitan area, the new neighborhoods form a ring at the far edge of the developed part of the metropolitan area.

Minneapolis/St. Paul is a very graphic illustration of the pattern of sequential rings of suburban development. Figures 4 and 5 show the median year built zones for Detroit and Houston respectively. There are some differences. For example, there are far fewer neighborhoods in the Detroit metropolitan area that were built primarily in the 1980s. All three metropolitan areas, despite their regional and economic differences, exhibit a striking “bulls eye” pattern of concentric rings of development. However, as noted above, it is not surprising that as the population of an areas grows that new development takes place at the periphery. John Dillinger, when asked why he robbed banks, reportedly replied, “because that’s where the money is.” Newer suburbs are build in concentric rings because that’s where the land is.

For this pattern to be troublesome from the point of view of poverty and inequality, there must be an interaction between this new growth and the household income of residents. If new suburbs were built, replete with new schools, parks, and other amenities, and the benefits of these new places were equally accessible across the economic spectrum, sprawl would not perpetuate poverty and reduce access to opportunity. Indeed, the housing stock of newer suburbs could in principle be a force for
racial and economic integration so long as it is more spatially accessible than the existing pattern of the housing stock in the metropolitan area, not a tough criterion to meet.

Ultimately, whether sprawl is involved in the concentration of poverty is an empirical question, and depends on the regulatory environment and the characteristics of the housing market that generates the new development. In fact, as suburban development occurs in the U.S., it is linked very closely to the income distribution. The political and economic forces that shape suburban development are described in detail elsewhere in this book. From the point of view of urban poverty, the key issue is how the resulting pattern of economic development interacts with the income distribution.

Table 2 shows the mean, standard deviation, and coefficient of variation of neighborhood mean household income associated with the decade of development across all U.S. metropolitan areas. That is, for all U.S. metropolitan areas, metropolitan neighborhoods are categorized by the five categories of median year built illustrated in Figure 3: 1949 and earlier, 1950s, 1960s, 1970s, and 1980s. Each of these neighborhoods has a mean household income. The rightmost column shows values for metropolitan areas generally; that is, it includes all neighborhoods (census tracts), regardless of whether they are in a central city or suburban locale. Neighborhoods with a median year built of 1949 or earlier, on average across the nation, had a mean income of $35,000, compared with $49,000 for neighborhoods in which the median year built is in the 1980s. Neighborhoods whose median housing

--- Table 2 about here ---

9Census tracts are not nested within city, place, and town boundaries. Thus, it is possible for a given census tract to be partly in a central city and partly in suburb.

10All means and standard deviations are weighted by the number of households in the tract. To be clear, the number of housing units is not identical to the number of households because some units
unit was built in the intervening years, 1950-1979, had an intermediate mean household incomes, in the range of $40,000 to $43,000. There is a monotonic relationship between the decade of construction of the neighborhood’s median housing unit and the mean income of the households that occupy those units. Remember, as in Figures 3 to 5, these year built categories tend to be at the fringes of the metropolitan area, so that to a large extent the year built categories represent specific geographic zones.

The table also shows the mean incomes for neighborhoods categorized by central city or suburban location. We see, first of all, that controlling for median year built, central city neighborhoods have consistently lower mean incomes than the comparable cohort of suburban neighborhoods. The general pattern of correlation between the age of the median house and the mean income of the neighborhood is maintained both within central cities and within suburbs.

In addition to building housing units to attract higher income families, fringe suburbs use zoning and other devices to limit access to lower income families. The stock aerial photograph, symbolic of suburban conformity, shows mile after mile of virtually identical households. While nobody expects that the poor will live in the same neighborhoods as the rich, the aspect of suburban development that increases economic segregation is that entire sectors of the metropolitan area are devoted exclusively to

are vacant. Vacant units are included in the median year built calculation, but obviously not included in the mean household income calculation.

11As noted earlier, some census tracts span the central city and the suburbs. For such tracts, the median year built is determined for the whole tract, and this median is mapped on to both parts of the tract. The households in the part of the tract in the central city are included in the central city mean for the given age cohort, and the part not in the central city is included in the suburban group for that cohort.
one type of housing.

One way to evaluate the extent of such segregation is to look at the standard deviation of neighborhood mean incomes by cohort of year built, as shown in the second panel of Table 2. The standard deviation of household income seems to follow an inverted “U” pattern, first rising, then falling as we move from older to newer neighborhoods. As expected, the lowest values are found in the newest neighborhoods. Disaggregating the central cities and suburbs reveals the pattern even more clearly. Within the suburbs, the standard deviation of the neighborhood mean incomes generally decreases as the median year built becomes increases. Thus, the mean increases and the variance decreases the more recently the suburb was built. Within central cities, there is much less difference between neighborhoods by median year built, and no clear direction in the relationship.

The differences in the variability of neighborhood mean incomes by median year built are even larger than the standard deviations imply. Generally, when distributions have different means, it is appropriate to normalize the standard deviation by the mean. This quotient is referred to as the coefficient of variation (CV), and is shown in the bottom panel of Table 2. The “U” pattern disappears once the mean is controlled. There is a consistent pattern of less variability in neighborhood mean incomes as measured by the CV, both in central cities, in the suburbs, and overall. In the suburbs, the CV is 40 percent lower in the newest neighborhoods compared to the oldest. Clearly, whether measured by the standard deviation directly or by the CV, the newer suburban neighborhoods are more homogeneous than the older cohorts of neighborhoods. The newer neighborhoods are also more homogeneous in terms of race and ethnicity. Looking across all metropolitan areas in 1990, the oldest neighborhoods were about 60 percent non-Hispanic white, and therefore about 40 percent
minority. As the neighborhood vintage becomes more recent, the proportion non-Hispanic white increases. The most recent neighborhoods, those in which the median housing unit was constructed in the 1980s, were 80 percent non-Hispanic white. However, when disaggregating by central city vs. suburb, it turns out that all suburban neighborhoods, regardless of era of construction, are about 80 percent non-Hispanic white. Clearly, racial segregation in the suburbs is not a new pattern, and the older suburbs were constructed at a time when racial discrimination in housing was even stronger than it is today. Within central cities, the percent non-Hispanic white varies from just about half in the older neighborhoods to 75 percent in the newest neighborhoods.

Suburbanization has been going on since cities were invented. At first suburbanization was limited by the transportation capacities of the foot and the horse. Once transportation infrastructure made longer commutes possible, suburbs began to appear along streetcar lines (Warner 1962). The automobile and the construction of modern, high-speed roads opened up the suburbs even further. Suburbanization has always been about two different things. In the first place, people move to the suburbs to translate their economic success into desirable neighborhood amenities, such as single family homes, yards, and good schools (Gans 1967: 31-41). Second, as Park (1926) argued long ago, urban environments are shaped by the attempts of successful and mobile groups of persons to translate social distances between themselves and lower status groups into physical distances that protect them from the real and perceived threats posed by the lower status groups.

Suburbanization has, therefore, always involved both the “pull” of desirable suburban characteristics and the “push” of undesirable central-city characteristics. This dual nature of suburbanization did not start with the riots of the 1960s, with the dramatic increases in crime in the
central city in the 1970s, or with the emergence of the particular set of development patterns now called sprawl. To argue, as I have in this chapter, that sprawl is related to central city decline, is not to argue that sprawl is what causes central city decline. It clearly does play a role, but it is just as valid to argue that central city decline is what causes sprawl. The “pull” of the suburbs is enhanced by the construction of large modern homes in ethnically and economically homogenous suburbs, perhaps with walls and a private security force. The “push” of central cities is exacerbated as higher-income families leave and the fiscal condition of the central cities worsens and the quality of public services, particularly education, declines.

The process is a spiral, and the relative balance of push and pull clearly varies over time. At the time of the riots, push clearly predominated. In the late 1990s, as families move from one distant suburb to an even more distant suburb, the pull of the amenities offered by the latest housing developments is probably relatively more important. It is pointless to argue about which of the two factors is the driving force in a fundamentally circular process of sprawl and decay.

Arguing that sprawl and central city decline are related does not imply that developers who construct housing units demanded by the market, or the families who choose suburban units with a wonderful complement of amenities, are evil people. Both groups are making decisions based on the incentives and the rules of the game as they exist in our metropolitan areas. Those incentives result from a complex set of tax rules, zoning rules, development subsidies, and governmental institutions that are detailed elsewhere in this volume. These policy rules and mechanisms reflect both local preferences and the political power of development interests. They fundamentally shape the current pattern of development.
Sam Bass Warner argued that the decline of the central cities and the suburban explosion are part of a “chronic urban disease” that feeds on “a healthy body of everyday behavior and aspirations” (1972: 154). From the point of view of current suburbanites, the term “disease” may seem a bizarre description of a process that results in highly desirable housing developments. But the result of the process is the spatial separation of racial and income classes, the implications of which are addressed in the next section. The social, economic, and political costs of this development pattern, which accumulate slowly over many decades need to weighed and evaluated. If such costs are onerous, then a change in the rules and policies within which the development process occurs may well be justified.

IV. THE SOCIAL SIGNIFICANCE OF POVERTY CONCENTRATION

William Julius Wilson (1987) called attention to the connection between the increasing spatial isolation of the poor and the “tangle of pathology” extant in the modern ghetto: high levels of drug and alcohol abuse, low levels of attachment to the mainstream labor force, out-of-wedlock child-bearing, gang violence, and other troubling manifestations of self-destructive behaviors. Although these social conditions had not escaped the notice of journalists or Hollywood movie producers, the academic community had been reluctant to address such issues in the aftermath of the furor over the “Moynihan Report.” Daniel Patrick Moynihan (1965) called attention to the rise of out-of-wedlock childbearing among blacks in the inner city, and was vehemently attacked for “blaming the victim.”

Wilson’s work was notable for connecting the social conditions of the inner city to quantitative assessments of the concentration of poverty. Wilson showed that there was a significant increase in the degree of spatial isolation of the black poor in Chicago, and an expansion in the geographic size of the
high-poverty neighborhoods in that city. He linked the changing social conditions to a combination of decreases in the real opportunity, brought about by deindustrialization and the suburbanization of employment, on the one hand, and the social isolation of the poor. In other words, the black poor were increasingly spatially and thus socially isolated from both the white community and even the black middle-class.

Figure 6 indicates a series of linkages and interactions through which urban sprawl and the spatial isolation of the poor affect poverty and inequality in the short run, and equality of opportunity in the long run. Volumes could be and have been written about each of the arrows in the diagram. In the previous section, I presented evidence that the current development process affects the neighborhood environment by concentrating poverty. The discussion below is not meant to provide an exhaustive discussion of the remaining links, but rather to highlight how the current patterns of metropolitan development, including sprawl and the concentration of poverty, help to generate poverty and worsen inequality.

The labor market/housing link. Ultimately, whether an individual person is poor is determined by how much income he and the members of his family can command in the labor market. While that is primarily determined by the individual’s skills and attributes in combination with the characteristics of the labor market, it is also affected by the pattern of racial and economic segregation in a number of ways.

In the first place, most new jobs are being produced in the suburbs (Kasarda 1985, 1988). While a solid core of jobs remain in the downtown business district, the suburbs are home to new office parks and mini-downtowns at the intersection of major thoroughfares. Moreover, as new suburbs are
constructed at greater and greater distances from the urban core, many jobs connected to this prosperous residential base – in grocery stores, restaurants, dry-cleaning, yard work, swimming pool maintenance, domestic help, and other services – must move in tandem. At the same time the analogous jobs in the central city wither, as the households remaining in the central city neighborhoods consist increasingly of poor households with less spending power.

The divergence between the centralized pattern of residence for the poor, particularly the minority poor, and the increasingly distant location of the new job base produces a spatial mismatch. The spatial mismatch hypothesis as first proposed by Kain (1968), concerned blacks trapped in the inner-city by racial discrimination in housing markets, leading to a segregated and centralized pattern of black neighborhoods. The existence of constraints on movement is a central part of the spatial mismatch story. Without constraints, households would simply shift their residence pattern to match the location of employment opportunities, much the same way regional migrations and world-wide immigrant flows have done throughout history.

While the racial constraints on mobility have arguably been relaxed, they still hold considerable force. In addition, the phenomenon of sprawl has strengthened the barriers to movement based on economic status, which differentially impacts minority groups. Through the mechanisms described in Section III and elsewhere in the this volume, explicit legal discrimination against low- and moderate-income households prevents them from moving to the areas with the fastest growth in the employment. Low-income blacks and Hispanics face both types of constraints, but as the size and homogeneity of the outer suburbs grow, it would be a mistake to underestimate the extent to which poor whites are also constrained from making optimal relocation decisions.
Given constraints on housing mobility, there are at least four reasons why the spatial mismatch between the inner-city poor and suburban jobs may matter (Ihlanfeldt and Sjoquist 2000: 116-117). In the first place, it may be difficult for the poor to get jobs because of the lack of public transportation or the difficulty and expense of reverse commuting by car. Long commuting time and high commuting costs both reduce the effective wage rate, especially if the base pay rate is low to begin with. Second, information about jobs may not reach into inner-city neighborhoods that have few social, political, or economic ties to the suburbs. Third, employers in the suburbs may exercise more racial discrimination in hiring because they operate in the virtually all white environment of the suburbs. Even if the employer would not mind hiring minority workers, the employer may wish to indulge customers who are not comfortable dealing with minorities or poor whites from the central city. Fourth, the central city workers may fear they will be treated unfairly in the largely white suburban labor market. This may be based on past experience in terms of wages, working conditions, and promotions, reducing the incentives to seek out suburban jobs and endure long commutes.

The neighborhood/individual link. “Poor neighborhoods are poverty machines,” writes David Rusk (1999: 123), the former Mayor of Albuquerque, succinctly capturing the popular view that disadvantaged neighborhoods diminish the life chances of their residents. The view is widely held and deeply believed. People who “escape the projects” are viewed as minor miracles, and their success is viewed as somehow more virtuous, or at least less probable, than someone raised at the local country club. Because people believe that distressed neighborhoods affect outcomes, especially for children, people with high aspirations for themselves or their children will move out, even if it requires a substantial financial sacrifice.
Neighborhood effects on individual outcomes, in a general sense, could be due to race, space, or class, as well as interactions among these dimensions. Effects related to the racial composition of a neighborhood are commonly called “segregation effects.” For example, segregation by race yields black neighborhoods that are more cut off from information about jobs, both because the jobs may be located in white neighborhoods or because the information about job openings does not easily cross the racial divide. The previous section discussed effects due to the physical location of a neighborhood relative to sources of opportunity – the “spatial mismatch.” Commonly, however, people use the term “neighborhood effects” to refer to hypothesized effects of the wealth and/or poverty of a neighborhood’s residents – or closely related variables, such as family structure or joblessness – on the outcomes for specific individuals within the neighborhood, other things equal.

The class composition of a neighborhood might influence individuals, even after controlling for their own economic status, through a number of different mechanisms. A concentration of poor neighbors might lead people, especially teens, to emulate negative behaviors, resulting in worse outcomes even after controlling for the influence of a person’s immediate family and personal characteristics. This is the so-called “contagion” or “epidemic” model (Crane 1991). Alternatively, or perhaps simultaneously, high-poverty neighborhoods could lack role models and adults who, working through neighborhood institutions like churches and community groups, act as “social buffers” against the effects of deprivation (Wilson 1987). Poor neighborhoods might be under served by institutions, public and private, that would be available to assist a poor person living in a better-off neighborhood (Jencks and Mayer 1990). While the empirical evidence on neighborhood effects is mixed, more recent studies and common sense argue that neighborhoods can make a big difference in resident’s
quality of life, their ability to compete effectively in the labor market, and their success in raising children.

The dangers of an isolated and impoverished neighborhood environment may be particularly strong for adolescents, whose search for personal identity makes them more vulnerable to negative influences than adults regardless of their neighborhood and family situation. Elijah Anderson notes that even in so-called underclass neighborhoods, teens are exposed to and lured by multiple visions of how to behave:

The stable “decent” family with its belief in upward mobility and options for the future provides one. The street culture, which revolves around violence, drugs, sex, having babies out of wedlock, and other problem behavior, provides the other....Virtually all teenagers are at risk and vulnerable to the alluring street culture, and most will dally with the experience; ultimately, many successfully resist. Those who are not well supervised and raised with optimism toward the future may linger in the street culture and may eventually succumb to its standards. (1991: 397)

It is an exaggeration to say that high-poverty areas create a rigid underclass locked in self-perpetuating culture of poverty. Children can and do navigate the temptations of the street and succeed in life. But every day in a child’s life there is a chance that he or she can make a bad choice or take a risk that turns out badly. The concentration of poverty increases the number and allure of the negative possibilities and increases the probability that ghetto and barrio youth will fall into a downward spiral.

The special role of the connection to schools. When poor families are clustered geographically, and then a grid of school districts and school attendance zones is also imposed geographically, poor children will also be clustered in school. Schools in poor neighborhoods have greater needs and a lower tax base than suburban schools. It is harder to hire and retain high quality

-28-
teachers in the inner city when pay and working conditions are better in suburban districts. In some cases, teachers who continually deal with children from troubled families develop low expectations for students (Farkas 996; MacLeod 1995). Given the importance of human capital in the modern economy, lower quality education for the children of the poor will, at the least, perpetuate poverty and is likely to contribute to widening income inequality over time (Levy 1995). Farkas (1996) makes a similar argument concerning what he calls “cultural capital” – the skills, habits, and styles that help to determine a child’s ability to succeed in the mainstream economy. Schools also play a role in parents decisions about where to live, creating a feedback loop between school quality and neighborhood quality.

The political dimension. In his classic work, Suburbia (1959), Robert Wood called attention to the fragmentation of governance within metropolitan areas:

This superimposition of provincial government on cosmopolitan people provides a strange pattern of incongruity. Within a single economic and social complex...hundreds and hundreds of local governments jostle one another about. Counties overlie school districts, which overlie municipalities, which overlie sanitary and water districts, which sometimes overlie townships and villages. ...By ordinary standards of effective, responsible public services, the mosaic of suburban principalities creates governmental havoc. (pp. 9-10).

If governmental fragmentation is so debilitating, surely governments would consolidate and merge in response to public demand. “Yet,” Grant continues, “with extraordinarily few exceptions the ranks of suburban governments hold fast” (11). Indeed, despite occasional city/county consolidations, suburban fragmentation has continued unabated in the decades since Grant wrote these words.

The incredible staying power of fragmented government stems from the fact that there are some
important things it does very well. First of all, highly differentiated local governments provide a wide array of choices. Individuals can choose the local jurisdiction which provides the optimal package of housing and public amenities given the housing cost and tax burden (Tiebout 1956). In particular, wealthier families can indulge a taste for placing physical distance between themselves and lower socioeconomic groups (Park 1926). The ability of whites to flee to newer suburbs also may help to maintain racial segregation, as middle-income blacks move into resegregating inner-ring suburbs.\textsuperscript{12}

At the same time that spatial separation of income groups compounds poverty and contributes to the growth of inequality, it also reduces public support for policies that might address this cycle. Wealthier segments of society no longer share a common local government with other income groups, and they have little contact with the poor. Stereotypes and distrust are likely to grow, and the capacity to undertake large scale changes in public policy is likely to diminish. While there is no clear empirical evidence on the point, it is certainly plausible that economically and politically polarized metropolitan areas will find it more difficult to make sustained investments in neighborhoods, education, transportation and other areas. Rather than making such investments in the future, many wealthier people are simply retreating into suburban enclaves and voting for legislators who promise to lower their taxes. The walls around many new suburban developments probably have little or no effect on crime, but they are a potent symbol of the process that is unfolding in our nation.

\textsuperscript{12} Actually, whites don’t have to actively flee. All that is required is a decline in the rate of replacement by whites of housing units that experience normal turnover.
V. CONCLUSION

Sprawl and central city decline are part of one unified process of metropolitan change, played out in the context of population growth, higher incomes, fixed political boundaries, and local autonomy. This process generates metropolitan areas in which the poor, especially the minority poor, live at a great remove the areas of fastest job growth, and leaves the poor socially isolated as well. The poor are harmed directly for a number of reasons. They are less likely to learn about suburban job opportunities and to have the skills necessary to be a realistic candidate for them. Even if they have the requisite skills, find out about suburban jobs, and are able to navigate inefficient public transportation systems to go out to apply for them, as virtual foreigners in the suburbs, they face a higher degree of discrimination in hiring and promotion. The concentration of the poor leads to a concentration of social problems. Residents may be harmed directly, by falling victim to violent crime, or indirectly, by being drawn into counterproductive activities.

Neighborhoods, then, have a myriad of direct and indirect effects on poverty, and on the distribution of intellectual and social capital that determines, at least in part, the degree of inequality in our society. Sprawl, at least as it currently operates, is clearly part of a larger process that leads to more spatial, racial, social, and economic distance between neighborhoods. These multiple dimensions of difference between lower income central-city neighborhoods and affluent exurban neighborhoods contribute directly to poverty in the short run by reducing the capacity of the inner city poor to find out about, to obtain, and to remain in jobs in the high-growth sectors of the metropolitan area. These differences also hinder the development of human and cultural capital in the next generation, setting the stage for greater poverty and inequality for generations to come. Finally, the political aspect of sprawl
weakens the collective capacity to respond to the challenges of poverty and inequality. For all of these reasons, the public debate about sprawl needs to move beyond the ugliness of strip malls, traffic jams in the suburbs, and disappearing farmland. Instead, the country needs to comes to terms with the ways in which sprawl slowly but steadily increases inequality and reduces social and economic mobility.
BIBLIOGRAPHY


Table 1: Change in Several Measures of the Size of High-Poverty Areas, Ten Largest Metropolitan Areas and Minneapolis/St. Paul, 1980-1990

<table>
<thead>
<tr>
<th>Metropolitan Area</th>
<th>Geographic Area</th>
<th>Population</th>
<th># Census Tracts</th>
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<tbody>
<tr>
<td>New York</td>
<td>51</td>
<td>-4</td>
<td>-11</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>107</td>
<td>123</td>
<td>40</td>
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<tr>
<td>Chicago</td>
<td>108</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>48</td>
<td>-9</td>
<td>1</td>
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<tr>
<td>Detroit</td>
<td>307</td>
<td>248</td>
<td>192</td>
</tr>
<tr>
<td>Dallas/Ft. Worth</td>
<td>51</td>
<td>135</td>
<td>100</td>
</tr>
<tr>
<td>Washington</td>
<td>52</td>
<td>-43</td>
<td>0</td>
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<tr>
<td>San Francisco</td>
<td>136</td>
<td>37</td>
<td>8</td>
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<tr>
<td>Houston</td>
<td>232</td>
<td>243</td>
<td>292</td>
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<tr>
<td>Boston</td>
<td>39</td>
<td>36</td>
<td>25</td>
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<tr>
<td>Minneapolis/St. Paul</td>
<td>563</td>
<td>224</td>
<td>200</td>
</tr>
</tbody>
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Notes: *Calculated from 1980 and 1990 Census Tract Boundaries by J.D. Kim, University of Texas at Dallas.

Source: Author’s tabulations from 1980 and 1990 Census data.
Table 2: Neighborhood-Level Household Income Characteristics by Median Year Built, Census Tracts, 1990

<table>
<thead>
<tr>
<th>Median Year Built</th>
<th>Mean Household Income</th>
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<tr>
<td></td>
<td>Central City</td>
<td>Suburbs</td>
<td>All</td>
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<tr>
<td>1949 and earlier</td>
<td>32,500</td>
<td>42,501</td>
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<tr>
<td>1950-1959</td>
<td>34,336</td>
<td>44,854</td>
<td>40,240</td>
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<td>1970-1979</td>
<td>38,829</td>
<td>43,915</td>
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<td>1980-1989</td>
<td>44,873</td>
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<td>49,037</td>
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<table>
<thead>
<tr>
<th>Median Year Built</th>
<th>Standard Deviation of Tract Means</th>
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<tr>
<td></td>
<td>Central City</td>
<td>Suburbs</td>
<td>All</td>
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<tr>
<td>1949 and earlier</td>
<td>17,174</td>
<td>24,267</td>
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<tr>
<td>1950-1959</td>
<td>18,441</td>
<td>21,921</td>
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<td>1960-1969</td>
<td>19,097</td>
<td>20,194</td>
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<tr>
<td>1970-1979</td>
<td>16,400</td>
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<td>1980-1989</td>
<td>16,609</td>
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<td>Suburbs</td>
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<td>1970-1979</td>
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<td>1980-1989</td>
<td>0.37</td>
<td>0.34</td>
<td>0.35</td>
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</table>

Notes: Census tracts are proxies for neighborhoods. Tracts which are partially in central cities and suburbs have the parts counted separately in their respective categories, except the median year built is determined once at the full tract level.

Source: Tabulations by the author and J.D. Kim, from 1990 Census STF 3C.
Figure 1: The Expansion of the Detroit Ghetto

Census Tracts by Poverty Rate, 1980 and 1990
Figure 2: Expansion of Houston’s Ghettos and Barrios

Census Tracts by Poverty Rate, 1980 and 1990

- 20 - 40%
- 40% or above

1980

1990
Figure 3: Median Year Built by Census Tract

Minneapolis Metropolitan Area, 1990
Figure 4: Median Year Built by Census Tract

Detroit Metropolitan Area, 1990

Legend:
- MSA / Central City Boundaries
- Median
  - Before '50
  - 50s
  - 60s
  - 70s
  - 80s
Figure 5: Median Year Built by Census Tract

Houston Metropolitan Area, 1990
Figure 6: Spatial Linkages to Poverty and Inequality

- **Neighborhood Social and Environmental Characteristics**
- **Housing Market: Racial and Economic Segregation**
- **Schools**
- **Individual Skills and Attributes**
- **Labor Market: Poverty and Inequality**

Arrows indicate the flow of influence between the categories.