The Changing Geography of Metropolitan Opportunity: The Segregation of the Poor in U.S. Metropolitan Areas, 1970 to 1990

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Abstract

This analysis uses census tract data to measure the segregation of the poor in U.S. metropolitan areas in 1970, 1980, and 1990. Two measures of segregation are used: the indices of dissimilarity and isolation.

In 1990 the mean dissimilarity of the poor in the 100 largest U.S. metropolitan areas was 36.1, which is substantial but below the 60.6 dissimilarity of blacks. The 1990 isolation of the poor was 21.0. From 1970 to 1990, the dissimilarity of the poor increased by 11 percent, and the isolation of the poor rose by 9 percent; in contrast, racial segregation declined. Exploratory regression analyses reveal that income segregation in metropolitan areas was significantly greater in 1990 and increased more from 1970 to 1990 in the Northeast than in the South and West. Midwest areas generally were not significantly different from Northeast areas in 1990 segregation levels or in changes from 1970 to 1990.

Introduction

Concern has grown in recent years about the negative consequences for low-income people of living in isolated, poor neighborhoods. Distressed neighborhoods can do much to undermine individual motivation and family support.[1] In neighborhoods of concentrated poverty, positive role models are scarce, and service providers, such as schools, are often underfunded and of inferior quality. Good jobs may be nonexistent or located far away. On the other hand, crime and drugs are typically close at hand. And

[1] Researchers have not entirely untangled the effects of individual, family, and neighborhood influences on an individual's success. Peterson and Harrell (1992) discuss the evidence on this issue. On the evidence about "neighborhood effects," in particular, see Galster and Killen (1995).

the more segregated the poor are, the worse their situation seems to be.[2]

How isolated, in fact, are the poor—defined here as persons below the poverty line—from the nonpoor in U.S. metropolitan areas? How has the segregation of the poor changed since 1970? The purpose of this article is to consider these and related questions and to present information that may be of use to policy makers wrestling with the problems of isolated, poor neighborhoods. Recently, officials have become increasingly interested in programs such as the Gautreaux program in Chicago that help poor people move out of distressed neighborhoods to middle-class areas (Davis 1993; Rosenbaum 1995). Without judging the feasibility or wisdom of such a course of action, the analysis in this article allows us to estimate the number of poor people—5.7 million—who would have to move to different neighborhoods in the same metropolitan area to achieve an even distribution of the poverty population within the 100 largest U.S. metropolitan areas.

Measures of segregation and data

Researchers generally employ one of two basic approaches in gauging the concentration of poverty in a metropolitan area. One approach measures the concentration of the poor by counting the number of census tracts that have high poverty rates or meet some other criteria for distress or by adding up the number of poor people—or all people—who live in such tracts (e.g., Hughes 1990; Jargowsky 1994; Jargowsky and Bane 1991; Kasarda 1993; Ricketts and Sawhill 1988; Wilson 1987). Kasarda (1993) reports that in 1990 nearly 70 percent of the poverty population in the 100 largest central cities lived in poverty tracts (i.e., tracts with poverty rates of 20 percent or higher) and almost 30 percent of the poor lived in extreme poverty tracts (i.e., tracts with poverty rates of 40 percent or higher).

The second approach to assessing the concentration of the poor uses the indices of dissimilarity and isolation. These indices, described below, have been used by some researchers to measure income segregation (e.g., Harrison and Weinberg 1993; Massey and Eggers 1990, 1993) but have been employed even more frequently in studies of racial and ethnic segregation

[2] At least this is the logic of the conceptual model developed in Galster and Killen (1995).

(e.g., Harrison and Weinberg 1992; Massey and Denton 1988, 1993; Taeuber and Taeuber 1965).

Choosing between the two methods is difficult because, as Jargowsky and Bane (1991, 239) point out, the measures involved in the two approaches are highly correlated and "appear to reflect the same underlying reality." In this article, we have chosen to use the dissimilarity and isolation indices as measures of income segregation. By using these indices, we are able to avoid the somewhat arbitrary definition of poverty tracts (i.e., tracts with 20 or 40 percent poverty rates) used in the first approach, convey information about the evenness of the distribution of the poor, and identify the percentage of the poor that would have to move to eliminate segregation.

The *dissimilarity index* measures the *evenness* of the distribution of the poor in a metropolitan area.[3] Specifically, the dissimilarity index indicates the percentage of members of a particular group (e.g., the poor) that would have to move from one neighborhood—defined here as a census tract—to another to achieve an even distribution of group members throughout a metropolitan area, with the number of persons moving being expressed as a proportion of the number that would have to move under conditions of maximum segregation (Massey and Denton 1988).[4] When the dissimilarity index is 100, segregation is maximized (i.e., 100 percent of the members of the group in question would have to relocate to achieve an even distribution); when the index is 0, segregation is minimized. When a group is evenly distributed throughout a metropolitan area, each neighborhood has the same proportion of group members as the metropolitan area as a whole.

The *isolation index* measures the extent to which members of a particular group are *exposed*, in their neighborhoods, only to

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[3] Massey and Denton (1988) give the following formula for dissimilarity:

$$D = \sum_{i=1}^{n} \frac{t_i |p_i - P|}{2TP(1 - P)},$$

where t_i and p_i are the total population and minority proportion of areal unit i, and T and P are the population size and minority proportion of the whole city, which is divided into n areal units. We present dissimilarity values as whole numbers rather than fractions in this article (i.e., we multiply D by 100), except in the regression analyses.

[4] Census tracts have an average population of 4,000 and are used by many researchers as an approximation for neighborhoods.

members of their own group.[5] In particular, for the poor in any metropolitan area, the isolation index indicates how poor (e.g., 25, 50, 75 percent) the neighborhood of the average poor person is. The isolation index also varies between 0 and 100, with 100 signaling the complete isolation of a particular group—that is, a neighborhood completely filled with members of the same group.[6]

Like many but not all researchers who study income segregation, we use the metropolitan area rather than the central city as the primary unit of analysis. We chose the metropolitan area as the unit of analysis because its boundaries identify the geographic area that is economically integrated, which is the relevant focus for a study of income segregation.

To calculate dissimilarity and isolation indices for 1970, 1980, and 1990, we use census tract and metropolitan area data from the Under Class Data Base, which was developed at The Urban Institute using information collected by the U.S. Bureau of the Census in the decennial census (Tobin 1993). The cross-temporal analysis is complicated by changing definitions of particular metropolitan areas. For example, from one census to the next, counties may be added to or subtracted from a metropolitan area, or more drastic shifts may be made (e.g., a county may be assigned to one metropolitan area in one census and to another in the next census). To facilitate comparisons across time, we use the 1980 boundaries of the metropolitan areas as the starting definition of the areas for 1970 and 1990 as well. We then add and subtract counties from the 1980 boundaries to match as closely as possible the 1970 and 1990 census definitions of the areas. Another option would be to hold the boundaries constant over time (i.e., to use 1980 boundaries for 1970 and 1990, without allowing additions and subtractions of counties). However, we believe that the changing boundaries of metropolitan areas

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[5] Massey and Denton (1988) give the following formula for isolation:

$$ {}_xP_x^* = \sum_{i=1}^{n} \left[\frac{x_i}{X} \bullet \frac{x_i}{t_i} \right], $$

where x_i and t_i are the numbers of group members and the total population of areal unit i, and X is the number of group members citywide. We present isolation values as whole numbers rather than fractions in this article (i.e., we multiply ${}_xP_x^*$ by 100), except in the regression analyses.

[6] For further discussion of the indices of dissimilarity and isolation, see Massey and Denton (1988).

generally reflect real changes in the way the areas are organized and should be incorporated into the analysis.[7]

Segregation of the poor: 1990

We first examine the mean level of segregation of the poor in the 100 largest metropolitan areas in 1990 and then analyze patterns across the metropolitan areas.

Mean levels of segregation

As shown in table 1, the mean value for the dissimilarity index in the 100 largest U.S. metropolitan areas was 36.1 in 1990, and the mean value for the isolation index was 21.0, without any weighting for population.

A mean value of 36.1 for the dissimilarity index implies that 36.1 percent of poor persons would have to move out of their current neighborhoods to achieve an even distribution of the poor in the average metropolitan area. This percentage figure translates into a total of 5.7 million poor people who would have to relocate to different neighborhoods within the same metropolitan area to even out the distribution of the poor in the 100 largest metropolitan areas in 1990.[8] A dissimilarity of 36.1 is far from the maximum of 100 but still quite substantial.

A mean value of 21.0 for the isolation index indicates that the neighborhood of the average poor person is 21.0 percent poor, which also is substantial but far from the maximum of 100.

Compared with the segregation of the poor, the segregation of blacks was much greater in the 100 largest U.S. metropolitan areas in 1990. As shown in table 2, the dissimilarity for blacks was 60.6, compared with the 36.1 dissimilarity for the poor. The

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[7] Similarly, Jargowsky (1994) does not hold metropolitan area boundaries constant over time but allows them to expand.

[8] The number of poor people who would have to move to eliminate segregation completely can be calculated according to the following formula:

$$N = DTP(1 - P),$$

where the variables are defined as in footnote 3. Alternatively, income segregation could also be eliminated by having nonpoor people move into poor neighborhoods. The 5.7 million figure was calculated by adding up the number of poor required to move in each metropolitan area.

Table 1. **Dissimilarity, Isolation, Number of Poor Persons, and Number of Poor Persons Needing to Move to Eliminate Segregation, 100 Largest U.S. Metropolitan Areas, 1990**

Metropolitan Area	Dissimilarity of Poor	Isolation of Poor	Number of Poor	Number of Poor Needing to Move to Eliminate Segregation
Akron, OH	39.7	22.9	77,383	26,997
Albany-Schenectady-Troy, NY	34.9	15.6	73,524	23,442
Albuquerque, NM	34.0	22.0	78,697	22,820
Allentown-Bethlehem-Easton, PA	34.5	14.3	48,126	15,420
Anaheim–Santa Ana–Garden Grove, CA	35.3	14.3	200,860	64,854
Atlanta, GA	39.6	22.4	279,507	99,572
Austin, TX	37.6	24.8	115,330	36,720
Bakersfield, CA	32.3	23.7	89,157	23,909
Baltimore, MD	46.0	24.3	233,498	96,688
Baton Rouge, LA	36.1	29.2	96,718	28,359
Birmingham, AL	35.5	25.2	135,854	40,873
Boston, MA	37.4	16.2	242,146	83,124
Buffalo, NY	44.8	24.9	138,889	54,780
Charleston–North Charleston, SC	32.0	23.5	73,536	19,981
Charlotte-Gastonia, NC	31.9	17.0	99,482	28,722
Chattanooga, TN-GA	30.1	21.8	57,512	14,947
Chicago, IL	49.8	28.7	808,401	356,572
Cincinnati, OH-KY-IN	43.0	27.6	162,771	61,999
Cleveland, OH	51.4	29.9	212,730	96,366
Columbia, SC	33.1	20.1	49,764	14,546
Columbus, OH	43.6	26.2	157,185	60,363
Dallas–Fort Worth, TX	37.3	21.7	454,510	149,680
Dayton, OH	40.2	23.0	114,240	40,526
Denver-Boulder, CO	39.2	19.5	179,635	63,524
Detroit, MI	50.1	29.1	557,775	243,647
El Paso, TX	30.4	35.4	155,298	34,513
Flint, MI	40.1	26.7	77,331	26,127
Fort Lauderdale–Hollywood, FL	32.0	17.0	126,311	36,289
Fresno, CA	32.9	29.6	140,447	36,344
Gary–Hammond–East Chicago, IN	43.5	24.9	72,506	27,683
Grand Rapids, MI	37.5	17.3	55,681	19,134
Greensboro–Winston-Salem–High Point, NC	29.3	15.9	91,529	24,117
Greenville-Spartanburg, SC	30.3	18.1	69,440	18,702
Harrisburg, PA	35.7	16.5	44,486	14,622

Table 1. **Dissimilarity, Isolation, Number of Poor Persons, and Number of Poor Persons Needing to Move to Eliminate Segregation, 100 Largest U.S. Metropolitan Areas, 1990** *(continued)*

Metropolitan Area	Dissimilarity of Poor	Isolation of Poor	Number of Poor	Number of Poor Needing to Move to Eliminate Segregation
Hartford, CT	52.8	25.7	56,702	27,711
Honolulu, HI	33.5	14.0	60,093	18,648
Houston, TX	36.0	23.7	510,896	156,523
Indianapolis, IN	39.9	19.1	117,526	42,349
Jacksonville, FL	32.5	20.0	107,349	30,711
Jersey City, NJ	24.0	19.2	81,171	16,611
Johnson City–Kingsport–Bristol, TN-VA	19.6	18.8	67,804	11,148
Kansas City, MO-KS	39.6	19.8	150,472	53,796
Knoxville, TN	27.3	21.2	83,420	19,521
Lancaster, PA	32.7	15.3	32,637	9,830
Lansing–East Lansing, MI	35.0	23.7	59,010	18,026
Las Vegas, NV	28.5	16.1	76,737	19,540
Long Branch–Asbury Park, NJ	32.7	11.4	52,830	16,329
Los Angeles–Long Beach, CA	34.9	23.1	1,308,255	387,885
Louisville, KY	39.3	25.8	118,664	40,676
Memphis, TN-AR-MS	42.9	33.4	174,955	61,356
Miami, FL	31.3	26.2	341,261	87,736
Milwaukee, WI	55.1	32.3	162,150	78,990
Minneapolis–St. Paul, MN-WI	39.9	19.5	194,980	71,573
Mobile, AL	35.5	32.3	93,260	26,516
Nashville-Davidson, TN	33.4	21.1	108,164	32,014
Nassau-Suffolk, NY	29.7	7.1	108,581	30,829
New Brunswick–Perth Amboy–Sayreville, NJ	36.4	10.0	41,996	14,621
New Haven–West Haven, CT	46.0	19.1	41,914	17,705
New Orleans, LA	38.2	35.2	257,729	77,652
New York, NY-NJ	43.0	29.4	1,494,666	538,453
Newark, NJ	48.2	20.7	166,124	73,575
Newport News–Hampton, VA	32.4	20.2	45,476	13,104
Norfolk–Virginia Beach–Portsmouth, VA	38.6	23.5	153,177	52,370
Northeast Pennsylvania, PA	20.6	13.6	74,496	13,715
Oklahoma City, OK	32.6	21.8	129,557	36,345

Table 1. **Dissimilarity, Isolation, Number of Poor Persons, and Number of Poor Persons Needing to Move to Eliminate Segregation, 100 Largest U.S. Metropolitan Areas, 1990** *(continued)*

Metropolitan Area	Dissimilarity of Poor	Isolation of Poor	Number of Poor	Number of Poor Needing to Move to Eliminate Segregation
Omaha, NE-IA	40.3	19.9	57,917	21,081
Orlando, FL	27.2	16.1	104,057	25,494
Oxnard–Simi Valley–Ventura, CA	30.9	11.2	47,897	13,705
Paterson-Clifton-Passaic, NJ	38.0	13.6	76,487	27,330
Philadelphia, PA-NJ	47.9	25.4	493,212	211,475
Phoenix, AZ	36.5	21.7	257,359	82,241
Pittsburgh, PA	34.4	21.1	269,223	81,344
Portland, OR-WA	27.1	14.7	143,395	35,047
Providence-Warwick-Pawtucket, RI	36.2	17.1	90,051	29,529
Raleigh-Durham, NC	35.3	18.5	71,748	22,755
Richmond, VA	44.0	23.3	81,708	32,465
Riverside–San Bernardino–Ontario, CA	24.7	16.4	306,417	66,597
Rochester, NY	42.0	21.6	94,438	35,831
Sacramento, CA	31.0	18.3	171,694	46,963
St. Louis, MO-IL	43.6	23.9	257,899	100,287
Salt Lake City–Ogden, UT	30.0	15.1	102,679	27,905
San Antonio, TX	37.6	30.0	247,661	74,971
San Diego, CA	31.9	18.1	271,355	76,779
San Francisco–Oakland, CA	36.0	16.5	331,844	108,533
San Jose, CA	31.3	12.3	109,806	31,748
Seattle-Everett, WA	29.8	13.1	147,762	40,673
Springfield-Chicopee-Holyoke, MA-CT	41.6	25.3	63,720	23,284
Stockton, CA	31.5	22.5	73,163	19,415
Syracuse, NY	41.3	23.2	65,948	24,398
Tacoma, WA	27.8	18.9	64,068	15,796
Tampa–St. Petersburg, FL	31.0	19.1	230,722	63,459
Toledo, OH-MI	40.3	24.3	96,829	34,088
Tucson, AZ	34.5	25.9	111,880	31,997
Tulsa, OK	29.2	19.4	97,771	24,701
Vallejo-Fairfield-Napa, CA	25.5	10.1	31,785	7,502
Washington, DC-MD-VA	38.1	14.0	246,583	87,796
West Palm Beach-Boca Raton, FL	34.4	16.6	78,909	24,592
Wichita, KS	33.9	18.4	49,960	15,137

Table 1. **Dissimilarity, Isolation, Number of Poor Persons, and Number of Poor Persons Needing to Move to Eliminate Segregation, 100 Largest U.S. Metropolitan Areas, 1990** *(continued)*

Metropolitan Area	Dissimilarity of Poor	Isolation of Poor	Number of Poor	Number of Poor Needing to Move to Eliminate Segregation
Wilmington, DE-NJ-MD	34.6	15.5	44,210	14,079
Youngstown-Warren, OH	37.1	24.8	67,120	21,463
Mean	36.1	21.0	170,996	57,023
Total			17,099,588	5,702,278

Source: Based on data in The Urban Institute's Under Class Data Base.

Table 2. **Mean Dissimilarity Indices and Correlations with Dissimilarity of the Poor, 100 Largest U.S. Metropolitan Areas, 1990**

Dissimilarity Index	Metropolitan Area Average Dissimilarity	Correlation with Dissimilarity of Poor
Poor	36.1	
High school dropouts	35.2	0.53
Foreign born	29.7	0.11
Female-headed families	30.7	0.81
Welfare recipients	34.3	0.92
Unemployed	22.1	0.79
Limited English proficiency	39.6	0.38
Blue-collar workers	21.4	0.29
Blacks	60.6	0.59
Hispanics	39.1	0.44

Source: Based on data in The Urban Institute's Under Class Data Base.

dissimilarity for Hispanics was 39.1. The isolation in 1990 was 42.4 for blacks and 17.2 for Hispanics (not shown in table).

Because it is possible to define "the poor" and measure their segregation in many different ways, the numbers derived in any one analysis of the segregation of the poor should be interpreted with some restraint. In this study, we divided the population into two classes, poor and nonpoor, to measure the segregation of the poor. Massey and Eggers (1993) are also concerned with income segregation in large metropolitan areas, but they divide families into four income classes: poor, lower middle, upper middle, and affluent. They compute a dissimilarity of 47.0 for affluent versus poor families for the average of 60 metropolitan

areas in 1980 and an average dissimilarity across the four income classes of 29.4. The difference between the dissimilarity of 36.1 reported in this article and the dissimilarities calculated by Massey and Eggers appears to have more to do with differences in the way the measures were computed than with other factors, such as time period or metropolitan areas covered. Obviously, how the segregation of the poor is calculated affects the amount of segregation that is found.

A related concern that some readers may have is that the definition of the poor that is used in this study skews the segregation indices downward because it includes a broad range of people who have suffered only a short-term, one-year drop in income and who may be dispersed throughout a metropolitan area rather than concentrated in distressed neighborhoods. According to this line of thinking, restricting attention to the long-term poor would result in a finding of higher levels of segregation. Since it is not possible to measure the segregation of the long-term poor directly using the Under Class Data Base, we use female-headed families and high school dropouts as proxies for the long-term poor and calculate their dissimilarities. As indicated in table 2, the dissimilarities for female-headed families (30.7) and high school dropouts (35.2) are in the same general range as the dissimilarity for the poor (36.1), which includes both short- and long-term poor. This finding indicates that considering the segregation of only the long-term poor might have raised the dissimilarity only slightly, if at all.

Trends across metropolitan areas

The dissimilarity for the poor in the 100 largest metropolitan areas in 1990 ranged from 19.6 to 55.1. As shown in table 3, the highest dissimilarities were recorded in Milwaukee (55.1), Hartford (52.8), Cleveland (51.4), Detroit (50.1), and Chicago (49.8). The lowest dissimilarities were in Johnson City–Kingsport–Bristol, TN-VA (19.6); Northeast Pennsylvania (20.6); Jersey City (24.0); Riverside–San Bernardino–Ontario, CA (24.7); and Vallejo-Fairfield-Napa, CA (25.5).

Isolation for the poor in 1990, which ranged from 7.1 to 35.4, was highest and lowest in somewhat different metropolitan areas. By definition, the isolation index for the poor is sensitive to the relative size of the poor population, with the poor more isolated

Table 3. **Hundred Largest U.S. Metropolitan Areas Ranked by Dissimilarity of the Poor, Top and Bottom 10 Areas, 1990**

Rank	Metropolitan Area	Dissimilarity of Poor
1	Milwaukee, WI	55.1
2	Hartford, CT	52.8
3	Cleveland, OH	51.4
4	Detroit, MI	50.1
5	Chicago, IL	49.8
6	Newark, NJ	48.2
7	Philadelphia, PA-NJ	47.9
8	Baltimore, MD	46.0
9	New Haven–West Haven, CT	46.0
10	Buffalo, NY	44.8
91	Las Vegas, NV	28.5
92	Tacoma, WA	27.8
93	Knoxville, TN	27.3
94	Orlando, FL	27.2
95	Portland, OR-WA	27.1
96	Vallejo-Fairfield-Napa, CA	25.5
97	Riverside–San Bernardino–Ontario, CA	24.7
98	Jersey City, NJ	24.0
99	Northeast Pennsylvania, PA	20.6
100	Johnson City–Kingsport–Bristol, TN-VA	19.6

Source: Based on data in The Urban Institute's Under Class Data Base.

in areas with higher poverty rates.[9] As shown in table 4, in 1990 the poor were most isolated in El Paso (35.4), New Orleans (35.2), Memphis (33.4), Mobile (32.3), and Milwaukee (32.3) and least isolated in Nassau-Suffolk, NY (7.1); New Brunswick–Perth Amboy–Sayreville, NJ (10.0); Vallejo-Fairfield-Napa, CA (10.1); Oxnard–Simi Valley–Ventura, CA (11.2); and Long Branch–Asbury Park, NJ (11.4).

Exploratory regression analysis

It is beyond the scope of this article to answer fully the question of why the segregation of the poor is higher in some metropolitan areas than others. However, as a first step toward an explanation of segregation trends, we use multiple regression to explore the relationship between the 1990 segregation of the poor in the 100 largest metropolitan areas and several other variables, including 1990 population, percentage change in population from

[9] Massey and Denton (1988) point out that while the isolation index depends on the relative size of the population being assessed, the dissimilarity index does not.

Table 4. **Hundred Largest U.S. Metropolitan Areas Ranked by Isolation of the Poor, Top and Bottom 10 Areas, 1990**

Rank	Metropolitan Area	Isolation of Poor
1	El Paso, TX	35.4
2	New Orleans, LA	35.2
3	Memphis, TN-AR-MS	33.4
4	Mobile, AL	32.3
5	Milwaukee, WI	32.3
6	San Antonio, TX	30.0
7	Cleveland, OH	29.9
8	Fresno, CA	29.6
9	New York, NY-NJ	29.4
10	Baton Rouge, LA	29.2
91	Honolulu, HI	14.0
92	Paterson-Clifton-Passaic, NJ	13.6
93	Northeast Pennsylvania, PA	13.6
94	Seattle-Everett, WA	13.1
95	San Jose, CA	12.3
96	Long Branch–Asbury Park, NJ	11.4
97	Oxnard–Simi Valley–Ventura, CA	11.2
98	Vallejo-Fairfield-Napa, CA	10.1
99	New Brunswick–Perth Amboy–Sayreville, NJ	10.0
100	Nassau-Suffolk, NY	7.1

Source: Based on data in The Urban Institute's Under Class Data Base.

1970 to 1990, 1990 poverty rate, change in poverty rate from 1970 to 1990, 1990 percentage black population, and region.

As shown in table 5, percentage black population, change in poverty rate, and region are all significantly related to the dissimilarity of the poor in the 100 largest metropolitan areas in 1990. What are possible explanations for these significant relationships?

Percentage black population. The poor are more segregated in areas with larger percentages of blacks in the population. Blacks constitute a disproportionate share, though not a majority, of the poor population in many areas. Thus, the level of black segregation in an area is apt to have some effect on the level of segregation of the poor in the area.[10] And, since the segregation of blacks appears to be greater in areas with larger percentages of blacks in the population (Massey and Denton 1993), the poor are also likely to be more segregated in such areas.

[10] Note in table 2 the correlation of 0.59 between the dissimilarities for the poor and for blacks.

Table 5. **Regression of Selected Metropolitan Area Characteristics on Dissimilarity of the Poor, 100 Largest U.S. Metropolitan Areas, 1990**

Independent Variable	Coefficient	*t* Statistic
Intercept	0.358	18.49***
1990 population	5×10^{-9}	1.50
Percent change in population, 1970–90	–0.0002	–0.23
1990 poverty rate	–0.226	–1.34
Change in poverty rate, 1970–90	0.533	2.05*
Black share of population, 1990	0.372	4.79***
South region dummy	–0.051	–2.86**
Midwest region dummy	0.022	1.37
West region dummy	–0.044	–2.86**
Regression statistics		
Adjusted R^2	0.49	
F value for regression	12.78	
Observations	100	
Mean of dependent variable	0.361	

Source: Based on data in The Urban Institute's Under Class Data Base.
Note: Default region is Northeast. Dependent variable is dissimilarity of the poor, 1990.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

Change in poverty rate. The dissimilarity of the poor in 1990 is higher in areas that experienced larger increases in poverty rate from 1970 to 1990. Small increases in a metropolitan area's poverty rate may not disturb the area's pattern of income segregation very much; however, large increases may have differential impacts on neighborhoods—with vulnerable, poor neighborhoods experiencing the largest increases in poverty—and may result in higher levels of income segregation in the area.[11]

Region. Compared with the dissimilarity of the poor in the Northeast, the dissimilarity of the poor is not significantly different in the Midwest but is significantly lower in the South and West. In metropolitan areas in the Midwest and Northeast, inner-city residents are likely to have been impoverished and isolated by the decline in manufacturing jobs in central cities and the net shift of jobs to suburban areas (Peterson and Vroman 1992). Moreover, metropolitan areas in the Midwest and Northeast may have ecological structures that are more

[11] Note, however, in table 12 that the change in poverty rate from 1970 to 1990 is not significantly related to the change in the dissimilarity of the poor in that period. Thus, the relationship between change in poverty rate and dissimilarity of the poor is perhaps not as simple as it is described in the text. One possibility is that there is a time lag before changes in poverty rate show up as changes in the dissimilarity of the poor.

conducive to segregation: older central cities with dense cores and working-class neighborhoods built up around old factories (Massey and Denton 1987, 1993).

As shown in table 6, the pattern of relationships between the isolation of the poor in 1990 and other variables is similar to the pattern for the dissimilarity of the poor, except that the isolation of the poor in 1990 is significantly related to 1990 poverty rate—by definition, as noted above—but not significantly related to the change in poverty rate from 1970 to 1990. In addition, the poor are significantly more isolated in Midwest areas than in Northeast areas.

Table 6. **Regression of Selected Metropolitan Area Characteristics on Isolation of the Poor, 100 Largest U.S. Metropolitan Areas, 1990**

Independent Variable	Coefficient	*t* Statistic
Intercept	0.062	6.09***
1990 population	2×10^{-9}	1.03
Percent change in population, 1970–90	–0.0002	–0.35
1990 poverty rate	1.110	12.47***
Change in poverty rate, 1970–90	0.222	1.62
Black share of population, 1990	0.198	4.84***
South region dummy	–0.020	–2.15*
Midwest region dummy	0.019	2.24*
West region dummy	–0.025	–3.03**
Regression statistics		
Adjusted R^2	0.81	
F value for regression	53.01	
Observations	100	
Mean of dependent variable	0.210	

Source: Based on data in The Urban Institute's Under Class Data Base.
Note: Default region is Northeast. Dependent variable is isolation of the poor, 1990.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

Changes in the segregation of the poor: 1970 to 1990

How did the segregation of the poor change in large metropolitan areas during the past two decades? In this section we examine mean changes in segregation from 1970 to 1990 in the 100 largest metropolitan areas and consider differences among these areas in the amount of segregation change.

Overall changes: 1970 to 1990

On average, the poor became somewhat more segregated between 1970 and 1990 in the nation's 100 largest metropolitan areas.[12] The mean dissimilarity of the poor increased by 3.5, or 11 percent, in these areas over the two decades (table 7). The isolation of the poor rose by 1.8, or 9 percent, during the same period (table 8).

The finding that the segregation of the poor increased from 1970 to 1990 is generally consistent with other studies that examined somewhat different time periods, used different measures of income segregation, or reported on different geographic areas. From an analysis of the 100 largest central cities, Kasarda (1993) concludes that urban poverty concentration and neighborhood distress increased from 1980 to 1990. Similarly, Jargowsky (1994) finds ghetto poverty increasing among blacks in metropolitan areas in the 1980s. Massey and Eggers (1993) review 1970 and 1980 data for 60 metropolitan areas and demonstrate that, on average, the poor and affluent became more highly segregated in these areas in the 1970s.

While the segregation of the poor has increased in recent times, the segregation of blacks, and nonwhites more broadly, has declined.[13] In particular, the dissimilarity for blacks fell by 7.2, or 11 percent, from 1980 to 1990, and the dissimilarity for nonwhites fell by 15.8, or 23 percent, from 1970 to 1990.[14] It is not entirely clear why the trends in income segregation and racial segregation are moving in opposite directions. One explanation may be that fair housing laws have permitted some higher income blacks to move to more integrated suburban areas from poorer minority city neighborhoods, thereby simultaneously decreasing residential racial segregation and increasing income segregation.

As with the cross-sectional analysis, we urge restraint in interpreting the numbers derived from a single cross-temporal analysis. Seemingly benign methodological choices that researchers

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[12] Data were missing for 5 of the 100 largest areas, as indicated in table 7.

[13] Farley (1993) also reports a decrease in the segregation of blacks in the 1980s.

[14] The data for blacks cover the 100 largest metropolitan areas. The data for nonwhites cover the 90 largest metropolitan areas for which data are available. Note that the dissimilarity of the poor rose by 1.6, or 5 percent, in the 100 largest metropolitan areas from 1980 to 1990.

Table 7. **Dissimilarity of the Poor and Change in Dissimilarity of the Poor, 100 Largest U.S. Metropolitan Areas, 1970–1990**

Metropolitan Area	Dissimilarity of Poor			Change,
	1970	1980	1990	1970–90
Akron, OH	32.6	38.3	39.7	7.1
Albany-Schenectady-Troy, NY	27.4	32.8	34.9	7.6
Albuquerque, NM	36.2	32.8	34.0	–2.2
Allentown-Bethlehem-Easton, PA	23.6	29.5	34.5	10.9
Anaheim–Santa Ana–Garden Grove, CA	22.7	28.6	35.3	12.6
Atlanta, GA	39.8	38.5	39.6	–0.2
Austin, TX	34.1	37.1	37.6	3.5
Bakersfield, CA	34.2	29.1	32.3	–1.9
Baltimore, MD	40.1	45.3	46.0	6.0
Baton Rouge, LA	39.5	36.9	36.1	–3.4
Birmingham, AL	29.1	34.8	35.5	6.4
Boston, MA	31.2	35.7	37.4	6.2
Buffalo, NY	33.1	40.3	44.8	11.7
Charleston–North Charleston, SC	36.9	32.7	32.0	–5.0
Charlotte-Gastonia, NC	37.8	33.3	31.9	–5.9
Chattanooga, TN-GA	35.2	32.0	30.1	–5.1
Chicago, IL	41.5	48.5	49.8	8.3
Cincinnati, OH-KY-IN	36.5	40.3	43.0	6.5
Cleveland, OH	42.5	47.7	51.4	8.9
Columbia, SC	33.3	32.9	33.1	–0.2
Columbus, OH	38.6	42.7	43.6	5.0
Dallas–Fort Worth, TX	38.3	38.4	37.3	–1.0
Dayton, OH	33.1	37.9	40.2	7.1
Denver-Boulder, CO	35.9	36.4	39.2	3.3
Detroit, MI	39.4	44.5	50.1	10.8
El Paso, TX	32.0	31.2	30.4	–1.6
Flint, MI	31.9	34.2	40.1	8.2
Fort Lauderdale–Hollywood, FL	29.8	33.0	32.0	2.2
Fresno, CA	29.5	30.3	32.9	3.5
Gary–Hammond–East Chicago, IN	33.7	38.5	43.5	9.8
Grand Rapids, MI	31.3	34.1	37.5	6.2
Greensboro–Winston-Salem–High Point, NC	30.4	30.0	29.3	–1.1
Greenville-Spartanburg, SC	23.0	28.9	30.3	7.3
Harrisburg, PA	33.0	32.6	35.7	2.7
Hartford, CT	38.9	47.8	52.8	13.9
Honolulu, HI	29.1	30.1	33.5	4.5
Houston, TX	37.4	35.5	36.0	–1.4
Indianapolis, IN	34.4	37.4	39.9	5.5
Jacksonville, FL	36.7	32.7	32.5	–4.2
Jersey City, NJ	24.1	24.4	24.0	–0.1
Johnson City–Kingsport–Bristol, TN-VA	N/A	20.8	19.6	N/A
Kansas City, MO-KS	36.4	39.2	39.6	3.2
Knoxville, TN	30.2	31.2	27.3	–2.9
Lancaster, PA	26.8	30.7	32.7	5.9
Lansing–East Lansing, MI	25.7	30.3	35.0	9.3
Las Vegas, NV	29.6	26.9	28.5	–1.2
Long Branch–Asbury Park, NJ	N/A	34.9	32.7	N/A

Table 7. **Dissimilarity of the Poor and Change in Dissimilarity of the Poor, 100 Largest U.S. Metropolitan Areas, 1970–1990** *(continued)*

Metropolitan Area	Dissimilarity of Poor 1970	1980	1990	Change, 1970–90
Los Angeles–Long Beach, CA	31.1	34.0	34.9	3.8
Louisville, KY	38.0	37.7	39.3	1.3
Memphis, TN-AR-MS	43.9	42.4	42.9	–0.9
Miami, FL	33.2	32.2	31.3	–1.9
Milwaukee, WI	38.8	45.9	55.1	16.3
Minneapolis–St. Paul, MN-WI	34.6	34.2	39.9	5.4
Mobile, AL	33.7	36.4	35.5	1.8
Nashville-Davidson, TN	37.1	32.6	33.4	–3.7
Nassau-Suffolk, NY	26.6	28.9	29.7	3.1
New Brunswick–Perth Amboy–Sayreville, NJ	N/A	36.2	36.4	N/A
New Haven–West Haven, CT	36.2	44.1	46.0	9.8
New Orleans, LA	40.5	41.9	38.2	–2.3
New York, NY-NJ	38.0	43.0	43.0	5.0
Newark, NJ	41.9	49.8	48.2	6.4
Newport News–Hampton, VA	33.8	32.3	32.4	–1.5
Norfolk–Virginia Beach–Portsmouth, VA	35.4	36.4	38.6	3.2
Northeast Pennsylvania, PA	14.8	18.6	20.6	5.7
Oklahoma City, OK	35.5	32.4	32.6	–2.9
Omaha, NE-IA	33.4	35.1	40.3	6.8
Orlando, FL	33.0	32.3	27.2	–5.8
Oxnard–Simi Valley–Ventura, CA	27.8	26.6	30.9	3.1
Paterson-Clifton-Passaic, NJ	38.6	48.8	38.0	–0.5
Philadelphia, PA-NJ	38.4	43.8	47.9	9.5
Phoenix, AZ	36.1	33.9	36.5	0.4
Pittsburgh, PA	29.8	33.9	34.4	4.6
Portland, OR-WA	25.2	26.0	27.1	1.9
Providence-Warwick-Pawtucket, RI	29.5	31.7	36.2	6.7
Raleigh-Durham, NC	N/A	34.8	35.3	N/A
Richmond, VA	39.2	39.8	44.0	4.9
Riverside–San Bernardino–Ontario, CA	N/A	22.3	24.7	N/A
Rochester, NY	33.4	37.2	42.0	8.7
Sacramento, CA	27.1	25.8	31.0	3.9
St. Louis, MO-IL	39.4	43.3	43.6	4.1
Salt Lake City–Ogden, UT	27.2	27.3	30.0	2.8
San Antonio, TX	38.8	37.6	37.6	–1.2
San Diego, CA	23.7	26.7	31.9	8.2
San Francisco–Oakland, CA	33.0	34.7	36.0	3.0
San Jose, CA	29.2	28.8	31.3	2.1
Seattle-Everett, WA	26.9	27.2	29.8	2.9
Springfield-Chicopee-Holyoke, MA-CT	30.7	37.2	41.6	10.9
Stockton, CA	30.5	28.3	31.5	1.0
Syracuse, NY	28.6	35.2	41.3	12.8
Tacoma, WA	22.7	25.8	27.8	5.1
Tampa–St. Petersburg, FL	28.4	30.5	31.0	2.7
Toledo, OH-MI	31.7	36.9	40.3	8.6
Tucson, AZ	31.4	32.5	34.5	3.1
Tulsa, OK	35.2	29.3	29.2	–6.0

Table 7. **Dissimilarity of the Poor and Change in Dissimilarity of the Poor, 100 Largest U.S. Metropolitan Areas, 1970–1990** *(continued)*

Metropolitan Area	Dissimilarity of Poor 1970	1980	1990	Change, 1970–90
Vallejo-Fairfield-Napa, CA	19.5	25.4	25.5	6.0
Washington, DC-MD-VA	37.2	39.8	38.1	0.9
West Palm Beach–Boca Raton, FL	35.0	35.0	34.4	–0.6
Wichita, KS	32.2	31.7	33.9	1.7
Wilmington, DE-NJ-MD	34.7	32.4	34.6	–0.1
Youngstown-Warren, OH	32.8	35.6	37.1	4.3
Mean*	32.9	34.8	36.4	3.5

Source: Based on data in The Urban Institute's Under Class Data Base.
Note: N/A refers to data unavailable for 1970.
* All means exclude five metropolitan areas missing data for 1970.

make in carrying out these analyses can affect their findings in important ways. For this article, we allowed metropolitan area boundaries to expand over time, and to the maximum extent possible, we report on 1970 dissimilarities for the 1970 boundaries, 1980 dissimilarities for the 1980 boundaries, and 1990 dissimilarities for the 1990 boundaries. Another option would have been to hold boundaries constant and report on 1970, 1980, and 1990 dissimilarities using the 1980 boundaries of the metropolitan areas for all three years. To examine how the choice of approach affects dissimilarities, we ran a test on the 40 largest metropolitan areas. As indicated in table 9, we generally find a smaller increase in dissimilarity by allowing the boundaries to expand than by holding them constant. New counties that are added to a metropolitan area tend to be less segregated than the old counties, and the addition of new counties brings dissimilarities down. Analyses, like this one, that allow metropolitan areas to expand from one period to the next may find smaller increases in segregation over time than analyses that hold metropolitan areas to constant boundaries.

Trends across metropolitan areas

Different metropolitan areas experienced very different changes in the segregation of the poor from 1970 to 1990. The largest increase in the dissimilarity of the poor, 16.3, was recorded in Milwaukee; the largest decrease, 6.0, was reported for Tulsa (table 10). Milwaukee experienced the largest increase in the isolation of the poor, 15.3; Charleston, SC, registered the largest decrease, 12.2 (table 11).

Table 8. **Isolation of the Poor and Change in Isolation of the Poor, 100 Largest U.S. Metropolitan Areas, 1970–1990**

Metropolitan Area	Isolation of Poor			Change,
	1970	1980	1990	1970–90
Akron, OH	15.2	17.8	22.9	7.8
Albany-Schenectady-Troy, NY	13.0	16.0	15.6	2.6
Albuquerque, NM	25.9	20.5	22.0	–3.9
Allentown-Bethlehem-Easton, PA	10.8	12.6	14.3	3.6
Anaheim–Santa Ana–Garden Grove, CA	8.6	10.9	14.3	5.8
Atlanta, GA	23.5	24.3	22.4	–1.1
Austin, TX	25.9	23.8	24.8	–1.1
Bakersfield, CA	24.1	17.7	23.7	–0.4
Baltimore, MD	23.0	26.1	24.3	1.3
Baton Rouge, LA	29.8	23.8	29.2	–0.6
Birmingham, AL	25.9	24.7	25.2	–0.7
Boston, MA	14.9	16.9	16.2	1.3
Buffalo, NY	15.5	20.5	24.9	9.5
Charleston–North Charleston, SC	35.7	24.8	23.5	–12.2
Charlotte-Gastonia, NC	23.1	18.8	17.0	–6.1
Chattanooga, TN-GA	27.1	22.6	21.8	–5.3
Chicago, IL	20.2	27.6	28.7	8.5
Cincinnati, OH-KY-IN	20.3	23.1	27.6	7.2
Cleveland, OH	20.7	24.7	29.9	9.2
Columbia, SC	28.1	20.4	20.1	–8.0
Columbus, OH	20.5	23.8	26.2	5.7
Dallas–Fort Worth, TX	21.0	19.6	21.7	0.7
Dayton, OH	14.5	19.8	23.0	8.5
Denver-Boulder, CO	18.7	16.3	19.5	0.9
Detroit, MI	16.7	21.9	29.1	12.4
El Paso, TX	30.1	30.2	35.4	5.3
Flint, MI	13.4	17.0	26.7	13.3
Fort Lauderdale–Hollywood, FL	16.7	16.7	17.0	0.4
Fresno, CA	25.4	20.5	29.6	4.2
Gary–Hammond–East Chicago, IN	15.5	18.3	24.9	9.4
Grand Rapids, MI	13.9	14.5	17.3	3.3
Greensboro–Winston-Salem–High Point, NC	20.4	17.5	15.9	–4.5
Greenville-Spartanburg, SC	19.8	18.6	18.1	–1.7
Harrisburg, PA	15.2	15.2	16.5	1.3
Hartford, CT	17.0	24.0	25.7	8.8
Honolulu, HI	14.1	15.2	14.0	0.0
Houston, TX	21.4	17.8	23.7	2.3
Indianapolis, IN	15.4	17.7	19.1	3.7
Jacksonville, FL	28.1	23.9	20.0	–8.1
Jersey City, NJ	15.7	21.6	19.2	3.6
Johnson City–Kingsport–Bristol, TN-VA	N/A	18.4	18.8	N/A
Kansas City, MO-KS	17.4	17.8	19.8	2.5
Knoxville, TN	25.7	23.0	21.2	–4.5
Lancaster, PA	12.6	13.7	15.3	2.6
Lansing–East Lansing, MI	15.1	18.1	23.7	8.6
Las Vegas, NV	13.6	13.5	16.1	2.5
Long Branch–Asbury Park, NJ	N/A	14.8	11.4	N/A
Los Angeles–Long Beach, CA	17.5	20.8	23.1	5.6

Table 8. **Isolation of the Poor and Change in Isolation of the Poor, 100 Largest U.S. Metropolitan Areas, 1970–1990** *(continued)*

Metropolitan Area	Isolation of Poor			Change,
	1970	1980	1990	1970–90
Louisville, KY	22.4	23.5	25.8	3.4
Memphis, TN-AR-MS	36.1	33.9	33.4	–2.7
Miami, FL	21.5	22.8	26.2	4.6
Milwaukee, WI	16.9	20.2	32.3	15.3
Minneapolis–St. Paul, MN-WI	13.8	14.2	19.5	5.7
Mobile, AL	34.0	29.5	32.3	–1.7
Nashville-Davidson, TN	24.5	20.5	21.1	–3.4
Nassau-Suffolk, NY	7.8	9.1	7.1	–0.7
New Brunswick–Perth Amboy–Sayreville, NJ	N/A	12.9	10.0	N/A
New Haven–West Haven, CT	17.5	21.3	19.1	1.6
New Orleans, LA	35.0	32.6	35.2	0.2
New York, NY-NJ	22.3	29.7	29.4	7.1
Newark, NJ	18.5	26.5	20.7	2.2
Newport News–Hampton, VA	21.8	19.9	20.2	–1.6
Norfolk–Virginia Beach–Portsmouth, VA	27.9	25.1	23.5	–4.4
Northeast Pennsylvania, PA	12.9	11.9	13.6	0.7
Oklahoma City, OK	21.0	17.6	21.8	0.7
Omaha, NE-IA	17.0	17.7	19.9	2.9
Orlando, FL	22.5	19.8	16.1	–6.4
Oxnard–Simi Valley–Ventura, CA	14.3	11.4	11.2	–3.0
Paterson-Clifton-Passaic, NJ	16.2	26.2	13.6	–2.6
Philadelphia, PA-NJ	19.5	25.2	25.4	5.9
Phoenix, AZ	21.2	19.1	21.7	0.5
Pittsburgh, PA	15.7	16.6	21.1	5.5
Portland, OR-WA	14.0	13.1	14.7	0.7
Providence-Warwick-Pawtucket, RI	15.9	15.9	17.1	1.3
Raleigh-Durham, NC	N/A	19.6	18.5	N/A
Richmond, VA	23.4	22.5	23.3	–0.1
Riverside–San Bernardino–Ontario, CA	N/A	14.4	16.4	N/A
Rochester, NY	25.5	17.6	21.6	–4.0
Sacramento, CA	16.0	15.9	18.3	2.3
St. Louis, MO-IL	21.9	22.7	23.9	2.0
Salt Lake City–Ogden, UT	15.5	13.9	15.1	–0.4
San Antonio, TX	30.6	27.9	30.0	–0.6
San Diego, CA	14.5	15.6	18.1	3.6
San Francisco–Oakland, CA	16.5	16.9	16.5	0.0
San Jose, CA	12.3	11.2	12.3	–0.1
Seattle-Everett, WA	12.4	12.2	13.1	0.6
Springfield-Chicopee-Holyoke, MA-CT	14.8	22.0	25.3	10.5
Stockton, CA	20.7	18.9	22.5	1.8
Syracuse, NY	15.8	19.0	23.2	7.5
Tacoma, WA	14.2	16.0	18.9	4.7
Tampa–St. Petersburg, FL	21.4	19.6	19.1	–2.3
Toledo, OH-MI	15.8	20.1	24.3	8.5
Tucson, AZ	23.4	21.0	25.9	2.5
Tulsa, OK	21.1	15.4	19.4	–1.8
Vallejo-Fairfield-Napa, CA	13.3	12.2	10.1	–3.2
Washington, DC-MD-VA	16.1	16.7	14.0	–2.1

Table 8. **Isolation of the Poor and Change in Isolation of the Poor, 100 Largest U.S. Metropolitan Areas, 1970–1990** *(continued)*

Metropolitan Area	Isolation of Poor 1970	1980	1990	Change, 1970–90
West Palm Beach–Boca Raton, FL	22.0	19.0	16.6	–5.4
Wichita, KS	17.1	15.3	18.4	1.3
Wilmington, DE-NJ-MD	18.0	19.6	15.5	–2.5
Youngstown-Warren, OH	14.5	18.3	24.8	10.3
Mean*	19.5	19.7	21.3	1.8

Source: Based on data in The Urban Institute's Under Class Data Base.
Note: N/A refers to data unavailable for 1970.
* All means exclude five metropolitan areas missing data for 1970.

Exploratory regression analysis

As with the cross-sectional analysis, we used multiple regression to explore possible reasons for the differences among metropolitan areas in the 1970–90 change in income segregation. In particular, we examined the relationship between the change in the dissimilarity or isolation of the poor and the following variables: 1970 population, 1970–90 percentage change in population, 1970 poverty rate, 1970–90 change in poverty rate, 1970 percentage black population, and region.[15]

Metropolitan areas in the Northeast experienced significantly greater increases in the segregation of the poor than those in the South and, for isolation, the West also (tables 12 and 13). Segregation changes in Midwest areas were not significantly different from changes in Northeast areas. Metropolitan areas in the Northeast and Midwest appear to be particularly susceptible to some of the negative consequences of recent changes in urban economies described by Peterson and Vroman (1992). As suggested earlier, in the past several decades, the disappearance or flight to the suburbs of manufacturing and other jobs that were once held by inner-city workers has likely contributed to the impoverishment and further isolation of low-skilled central-city residents.

Larger increases in the dissimilarity of the poor from 1970 to 1990 occurred in metropolitan areas with lower 1970 poverty

[15] We excluded 10 metropolitan areas from the regression analysis because complete data were unavailable: Charlotte, Chicago, Greensboro, Johnson City, Long Branch, Milwaukee, New Brunswick, Raleigh, Riverside, and St. Louis.

Table 9. **Effect of Expansion of Metropolitan Area Boundaries on Change in Dissimilarity of the Poor, 40 Largest U.S. Metropolitan Areas, 1970–1990**

Metropolitan Area	Change in Dissimilarity of Poor		
	Boundaries Allowed to Expand	Boundaries Held Constant	Difference
Anaheim–Santa Ana–Garden Grove, CA	12.6	12.6	0.0
Atlanta, GA	–0.2	0.3	0.5
Baltimore, MD	6.0	6.2	0.2
Boston, MA	6.2	6.6	0.4
Buffalo, NY	11.7	11.7	0.0
Chicago, IL	8.3	8.3	0.0
Cincinnati, OH-KY-IN	6.5	6.5	0.0
Cleveland, OH	8.9	8.9	0.0
Columbus, OH	5.0	7.1	2.1
Dallas–Fort Worth, TX	–1.0	–1.0	0.0
Denver-Boulder, CO	3.3	3.3	0.0
Detroit, MI	10.8	11.3	0.5
Fort Lauderdale–Hollywood, FL	2.2	2.2	0.0
Houston, TX	–1.4	–1.4	0.0
Indianapolis, IN	5.5	5.5	0.0
Kansas City, MO-KS	3.2	4.4	1.2
Los Angeles–Long Beach, CA	3.8	3.8	0.0
Miami, FL	–1.9	–1.9	0.0
Milwaukee, WI	16.3	16.3	0.0
Minneapolis–St. Paul, MN-WI	5.4	5.7	0.3
Nassau-Suffolk, NY	3.1	N/A	N/A
New Orleans, LA	–2.3	–2.1	0.2
New York, NY-NJ	5.0	N/A	N/A
Newark, NJ	6.4	6.5	0.1
Orlando, FL	–5.8	–5.8	0.0
Philadelphia, PA-NJ	9.5	9.5	0.0
Phoenix, AZ	0.4	0.4	0.0
Pittsburgh, PA	4.6	4.7	0.1
Portland, OR-WA	1.9	2.4	0.5
Riverside–San Bernardino–Ontario, CA	N/A	N/A	N/A
Sacramento, CA	3.9	4.3	0.4
St. Louis, MO-IL	4.1	4.3	0.2
Salt Lake City–Ogden, UT	2.8	2.8	0.0
San Antonio, TX	–1.2	–1.2	0.0
San Diego, CA	8.2	8.2	0.0
San Francisco–Oakland, CA	3.0	3.0	0.0
San Jose, CA	2.1	2.1	0.0
Seattle-Everett, WA	2.9	2.9	0.0
Tampa–St. Petersburg, FL	2.7	3.4	0.7
Washington, DC-MD-VA	0.1	1.6	1.5
Mean*	4.2	4.4	0.2

Source: Based on data in The Urban Institute's Under Class Data Base.
Note: N/A refers to data unavailable for 1970.
* All means exclude three metropolitan areas missing data for 1970.

Table 10. **Hundred Largest U.S. Metropolitan Areas Ranked by Change in Dissimilarity of the Poor, Top and Bottom 10 Areas, 1970–1990**

Rank	Metropolitan Area	Change in Dissimilarity of Poor
1	Milwaukee, WI	16.3
2	Hartford, CT	13.9
3	Syracuse, NY	12.8
4	Anaheim–Santa Ana–Garden Grove, CA	12.6
5	Buffalo, NY	11.7
6	Allentown-Bethlehem-Easton, PA	10.9
7	Springfield-Chicopee-Holyoke, MA-CT	10.9
8	Detroit, MI	10.8
9	Gary–Hammond–East Chicago, IN	9.8
10	New Haven–West Haven, CT	9.8
86	Knoxville, TN	–2.9
87	Tacoma, WA	–2.9
88	Baton Rouge, LA	–3.4
89	Nashville-Davidson, TN	–3.7
90	Jacksonville, FL	–4.2
91	Charleston–North Charleston, SC	–4.9
92	Chattanooga, TN-GA	–5.1
93	Orlando, FL	–5.8
94	Charlotte-Gastonia, NC	–5.9
95	Tulsa, OK	–6.0

Source: Based on data in The Urban Institute's Under Class Data Base.
Note: Table excludes five metropolitan areas missing data for 1970.

rates (table 12). That is, there was more mixing of the poor and nonpoor populations over time when the poor started out as a larger share of the population (i.e., smaller 1970–90 changes in dissimilarity were associated with higher 1970 poverty rates).

Larger increases in the isolation of the poor from 1970 to 1990 occurred in metropolitan areas that experienced larger 1970–90 increases in poverty rate (table 13). This relationship is not surprising, since by definition the isolation index is sensitive to the size of the poverty population.

Summary and conclusions

As suggested at the start, the spatial separation of the poor from the nonpoor, which is perhaps inevitable to some degree, appears to have a number of unfortunate consequences. The segregation of the poor isolates them in distressed areas where the neighborhood effects of living among negative role models may subvert positive individual or family efforts. Moreover, isolated, poor

Table 11. **Hundred Largest U.S. Metropolitan Areas Ranked by Change in Isolation of the Poor, Top and Bottom 10 Areas, 1970–1990**

Rank	Metropolitan Area	Change in Isolation of Poor
1	Milwaukee, WI	15.3
2	Flint, MI	13.3
3	Detroit, MI	12.4
4	Springfield-Chicopee-Holyoke, MA-CT	10.5
5	Youngstown-Warren, OH	10.3
6	Buffalo, NY	9.5
7	Gary–Hammond–East Chicago, IN	9.4
8	Cleveland, OH	9.2
9	Hartford, CT	8.8
10	Lansing–East Lansing, MI	8.6
86	Norfolk–Virginia Beach–Portsmouth, VA	–4.4
87	Greensboro–Winston-Salem–High Point, NC	–4.5
88	Knoxville, TN	–4.5
89	Chattanooga, TN-GA	–5.3
90	West Palm Beach–Boca Raton, FL	–5.4
91	Charlotte-Gastonia, NC	–6.1
92	Orlando, FL	–6.4
93	Columbia, SC	–8.0
94	Jacksonville, FL	–8.1
95	Charleston–North Charleston, SC	–12.2

Source: Based on data in The Urban Institute's Under Class Data Base.
Note: Table excludes five metropolitan areas missing data for 1970.

communities may be inadequately served by underfunded public institutions that do little to help residents break out of distressed neighborhoods. The separation of the poor may also leave them more susceptible to the harmful effects of economic downturns; when the poor are isolated, they have few neighborhood resources to call on to relieve dislocations. Finally, the segregation of the poor may reinforce negative stereotypes of the poor and weaken the bonds between the poor and nonpoor that allow the two groups to live in relative peace.[16]

In light of these negative consequences of segregation, it is difficult to know whether to characterize current levels of the segregation of the poor from the nonpoor as acceptable or too high. As reported above, the mean dissimilarity for the poor in the 100 largest U.S. metropolitan areas in 1990 was 36.1, and the mean isolation of the poor was 21.0. This level of segregation is far from the maximum possible, which is 100 for each index.

[16] On the consequences of segregation generally, see Galster and Mincy (1993), Massey and Denton (1993), Wilson (1987), and the references therein.

Table 12. **Regression of Selected Metropolitan Area Characteristics on Change in Dissimilarity of the Poor, 100 Largest U.S. Metropolitan Areas, 1970–1990**

Independent Variable	Coefficient	*t* Statistic
Intercept	0.098	6.43***
1970 population	-1×10^{-9}	–0.44
Percent change in population, 1970–90	–0.020	–1.77
1970 poverty rate	–0.325	–2.52*
Change in poverty rate, 1970–90	0.082	0.49
Black share of population, 1970	0.064	0.94
South region dummy	–0.047	–3.16**
Midwest region dummy	–0.006	–0.50
West region dummy	–0.019	–1.55
Regression statistics		
Adjusted R^2	0.47	
F value for regression	10.70	
Observations	90	
Mean of dependent variable	0.034	

Source: Based on data in The Urban Institute's Under Class Data Base.
Note: Default region is Northeast. Regression excludes 10 metropolitan areas with data missing for 1970. Dependent variable is change in dissimilarity of the poor, 1970–90.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

Table 13. **Regression of Selected Metropolitan Area Characteristics on Change in Isolation of the Poor, 100 Largest U.S. Metropolitan Areas, 1970–1990**

Independent Variable	Coefficient	*t* Statistic
Intercept	0.032	3.50***
1970 population	4×10^{-10}	0.21
Percent change in population, 1970–90	–0.006	–0.84
1970 poverty rate	–0.093	–1.21
Change in poverty rate, 1970–90	1.184	11.89***
Black share of population, 1970	0.064	1.57
South region dummy	–0.022	–2.45*
Midwest region dummy	0.011	1.57
West region dummy	–0.015	–2.04*
Regression statistics		
Adjusted R^2	0.82	
F value for regression	51.91	
Observations	90	
Mean of dependent variable	0.017	

Source: Based on data in The Urban Institute's Under Class Data Base.
Note: Default region is Northeast. Regression excludes 10 metropolitan areas with data missing for 1970. Dependent variable is change in isolation of the poor, 1970–90.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

However, given the possible severe consequences of segregation, citizens and policy makers may judge that current levels of income segregation are unacceptable.[17]

An average dissimilarity of 36.1 for the 100 largest metropolitan areas means that, on average, 36.1 percent of the poor would have to relocate to other neighborhoods in the same area to achieve an even distribution of the poor throughout the area. In total, 5.7 million poor people would have to change neighborhoods in these 100 metropolitan areas to eliminate segregation completely. The average isolation of 21.0 means that 21.0 percent of the neighbors of the average poor person were themselves poor. In 1990, the segregation of the poor in metropolitan areas was highest in the Northeast and Midwest and lowest in the South and West.

Looking back, since 1970 the dissimilarity of the poor has increased by 3.5, or 11 percent, in the 100 largest metropolitan areas, and the isolation of the poor rose by 1.8, or 9 percent. In contrast, the segregation of blacks, which is at a higher level than the segregation of the poor, has been declining in recent decades. In the 1970s and 1980s, the segregation of the poor in metropolitan areas increased more in the Northeast and Midwest and less in the South and West.

Those who want to halt the increasing isolation of the poor or reduce segregation in areas where it is already judged to be too high can choose from a broad range of policy options. One set of programs would attempt to attract the nonpoor into poor neighborhoods through community redevelopment programs (Vidal 1995). Another strategy is to assist the poor in moving out of isolated neighborhoods by providing them with transportation assistance to jobs in the suburbs or by finding them housing in nonpoor areas, as in the Gautreaux program (Hughes 1995; Rosenbaum 1995). Other approaches have a broader scope, focusing on the overall health of metropolitan-area or regional economies that might, in turn, affect the level of segregation.

Further research into the causes of income segregation—particularly its relationship to racial segregation and to regional factors—is clearly called for. Calculating dissimilarity and isolation indices that take into account the race *and* income class of individuals (e.g., poor blacks and nonpoor blacks) would be a logical next step. These analyses would help citizens and policy makers make wiser decisions about how to proceed.

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[17] It is worth restating that how one measures segregation affects how much segregation is found; it is possible to find more—or less—income segregation depending on which index of segregation is used and how it is computed.

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The authors are grateful to George Galster, Patrick Simmons, Douglas Massey, and an anonymous reviewer for their comments on an earlier draft of this article. The authors, and not the institutions with which they are or were associated, bear responsibility for this article.

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