

The Geography of Exclusion: Race, Segregation, and Concentrated Poverty

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Extended Abstract

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Introduction

Debates about poverty and racial inequality in the United States during much of the 1980s and 1990s centered on the growing “underclass”—the causes and consequences of concentrated inner city poverty—and on the appropriateness of alternative remedial public policies that address the problem (e.g., building public housing versus providing housing vouchers that incentivize “moving to opportunity”). This literature is perhaps epitomized best in William Julius Wilson’s *The Truly Disadvantaged* (1987) and Douglas Massey and Nancy Denton’s *American Apartheid* (1993). The good news of the 1990s was that the U.S. economic boom brought unexpectedly large reductions in poverty, including geographically-concentrated urban poverty. Between 1990 and 2000, the number of high-poverty neighborhoods (i.e., those with poverty rates exceeding 40 percent) in the largest U.S. metropolitan (metro) cities declined by 27 percent, and the number of poor living in them declined by 2.5 million or roughly one-quarter (Jargowsky 2003).¹ Much less research and policy attention have focused on the rural poor, who are often left behind in economically-distressed small towns in Appalachia, the Mississippi Delta region, and in *colonias* along the borderland in Texas and New Mexico.

This paper uses newly-released place and county poverty estimates from the 2005-2009 *American Community Survey*, along with estimates from the 1990 and 2000 decennial census

¹ Urban and metro are used interchangeably throughout our discussion, as are rural and nonmetro. Technically, metro and nonmetro areas are defined by the U.S. Census Bureau at the county level and distinguished by population size, morphology, and density. Counties are political units used in most U.S. states and are larger in physical size and population than municipalities. Each county has a county seat—a municipality—that is the administrative home of county political or governmental activities and the provision of county-wide services (e.g., transportation planning, water and sanitation, etc.)

summary files, to update post-2000 changes in concentrated poverty, while providing comparative analyses of poverty in both metro and nonmetro counties. Specially, we (1) provide new estimates of changing patterns of concentrated poverty and racial inequality over the 1990-to-2009 period; (2) show that poverty has become increasingly concentrated both *within* and *between* nonmetropolitan counties; and (3) fit various multivariate models (that include controls for county fixed effects) of pooled county data that identify sources of within- and between county changes in concentrated poverty. The post-2000 period reveals that increasing shares of poor people – especially racial and ethnic minorities – are concentrated in poor rural counties and places. Our results highlight the need for additional research on spatially-concentrated poverty of minorities in rural and small town America.

Current Study

Our fundamental goal is to provide an up-to-date and comprehensive portrait of spatial inequality and the changing geographic distribution of America's poor people over the past decade. Unlike previous research (Beale and Gibbs 2006; Lichter and Johnson 2007), we emphasize spatial variation of poverty *within* rather than *between* counties. Our specific analysis addresses four questions.

First, have the poor become more (or less) spatially concentrated and segregated over the 2000s *within* nonmetro and metro counties? Are more people or poor people living in high-poverty sub-county areas today than in the past? Living in poor rural areas is associated with employment dislocations, low education and earnings, and poorer health (Albrecht et al. 2005). It therefore is important to evaluate whether a greater share of the U.S. population is actually exposed to the putative risks associated with living in poor areas.

Second, how have trends in concentrated rural poverty been shaped by the changing settlement patterns of minorities, especially African Americans and Hispanics? That is, have poor rural minorities become increasingly segregated within counties, both from the nonpoor and from whites? And how do these rural minority patterns compare with their metro counterparts?

Third, how are counties with highly concentrated poverty populations *within* their boundaries distinguished from counties in which the poor are less spatially segregated from the nonpoor populations? Unlike previous research (e.g., Beale 2004; Crandall and Weber 2004; Lichter and Johnson 2007), we link county social and economic characteristics (e.g., population growth, region, and metro proximity) to patterns of within-county segregation of the rural poor.

This study builds on previous studies of concentrated poverty (mostly during the 1990s) that have centered largely on changing neighborhood segregation of the poor within metro cities (Jargowsky 2003) or on changing patterns across U.S. nonmetro counties (Lichter and Johnson 2007). We address a particular major limitation of previous research on concentrated poverty in nonmetro areas—the inability to measure changing patterns of sub-county or micro-scale spatial inequality and the emergence (or not) of rural “pockets of poverty” or rural ghettos.

DATA

Data and Unit of Measurement

Data for our analysis come from the 1990 and 2000 U.S. Census Summary Files and the 2005-2009 county and block group estimates from the American Community Survey. We consider changing patterns of official poverty within and between all 3,141 counties in the United States over the 1990s. For our purposes, the independent cities of Virginia are treated as counties. County equivalents, based on minor civil divisions, are used in the New England states

(see Johnson and Fuguitt 2000). Counties are classified as metro or nonmetro using the most current (2005) metro definition, as defined by the U.S. Office of Management and Budget. Counties reclassified from nonmetro to metro on the basis of the new population estimates from 2000 Census are treated as metro both in 1990 and 2000 (see Fuguitt, Heaton, and Lichter 1988, for justification of our approach). Our analyses focus on the continental U.S.; like other studies, Alaska and Hawaii are eliminated from our analyses because of the lack of comparable units of enumeration.

Measures

Poverty. Individuals are defined as poor if they live in families with incomes below the official poverty income line for a family of their size and configuration as defined by the U.S. Office of Management and Budget. Family income is measured in the year before census enumeration (i.e., 1989 for the 1990 Census and 1999 for the 2000 Census). For our purposes, we define high-poverty block groups as those with poverty rates at 20 percent or above. This poverty threshold is conventional (Beale 2004; Lichter and Johnson 2007).

Segregation of the poor. We use Census block-group level data to measure sub-county poverty rates and county poverty residential segregation with the index of dissimilarity (D) (See Iceland et al. 2002). The index of dissimilarity, D_t , is defined as:

$$D_t = \frac{1}{2} \sum_{i=1}^k |p_{it} - p'_{it}|$$

where p_{it} and p'_{it} are the respective percentages of poor and nonpoor populations residing in census block groups i at time t . This index varies from 0, no segregation, to 100, complete segregation. D has a straightforward interpretation: it indicates that the percentage of poor (nonpoor) who have to move to other Census block groups in a county in order to achieve parity

between poor and nonpoor in their percentage distribution across all Census block groups. Indices are also calculated to measure the level and patterns of segregation within and between poor and nonpoor racial groups.

County predictors. Several additional measures were included in our multivariate models of poverty concentration. Many of these measures are modeled after those used in recent segregation studies (Farley and Frey 1994; Logan, Stults, and Farley 2004). For example, *population size* is measured as the log of the population of a county (to account for skew in the size distribution of counties). *Minority representation* is defined as the percent of black and Hispanic in a county. *Income inequality* was measured using the Gini coefficient. Although there are other measures of income inequality, we selected this coefficient because it is widely used and easy to interpret (Allison 1978). This coefficient ranges between 0 and 1, where 0 indicates complete equality and 1 complete inequality. We also included measures of the *functional specialization* of counties. Specifically, we used percent employed in manufacturing and in government, percent 18 to 25 in college, and percent greater than 65 (as a proxy for the age-dependent population).² We also included *population change* between 1990 and 2000 and *change in housing stock*, defined as percent of housing built since 1990 (see Logan et al. 2004).

Finally, we included four spatial measures in the analysis. One measure is region, which is operationalized as a set of dummy variables classifying counties as falling within the census-defined West, Midwest, Northeast, and South regions. We also identify counties in nonmetro areas that are physically contiguous or adjacent to metro areas, as well as distinguish between micropolitan and noncore counties. Micropolitan counties are a subset of all nonmetro counties; these counties include municipalities with populations of 10,000 or more people. Micropolitan

² The elderly often share two characteristics: below-average poverty rates and shared physical space (e.g., in aging neighborhoods, retirement or assisted living homes). As a result, we expect lower levels of poor-nonpoor residential segregation in counties with higher percentages of elderly.

counties are highly urban and rapidly growing nonmetro counties that arguably represent nascent metro counties. Nonmetro noncore counties are a residual category (i.e., the reference category in our multivariate analysis). Finally, the average land area of block groups is smaller in metro than nonmetro counties, and the size of block groups differ across regions (i.e., block groups and counties typically become larger from East to West across the continental United States). As a general rule, estimates of population concentration or segregation (on any trait) also become smaller as the spatial scale of aggregation increases (Reardon et al. 2006). To address this methodological issue, our county multivariate analyses include a measure of the mean size of all block groups within the county (defined as the county land area in square miles divided by the number of block groups in the county). An important lesson of our analyses is that metro-nonmetro differences in concentration of the poor people or of poor minorities is not an artifact of metro-nonmetro differences in the average size of block groups.

Preliminary Results

This section describes preliminary results on changing poverty and segregation during the 1990s. The 5-year county and subcounty estimates of poverty will be released in Fall 2010, and will provide the basis of updating our analyses for the post-2000 period. Our analyses below provides data for the 1990s and template for the proposed analyses during the 2000 to 2005-9 period.

The Changing Spatial Distribution of Poverty

Comparing county and block-group poverty. We begin by juxtaposing U.S. maps which clearly show that observed patterns of poverty concentration are affected by the unit of

measurement, i.e., whether block groups or counties define high-poverty areas. To be sure, analyses based on either counties or block groups reveal familiar patterns in the geographic distribution of high-poverty areas (i.e., those with poverty rates over 20 percent). Poverty is concentrated in Appalachia, the black belt crescent that extends from Arkansas to North Carolina, the Delta region, the Lower Rio Grande River Valley along the Mexico-U.S. border, and on Indian reservations in the Southwest and in the upper Great Plains states (mostly South Dakota).

(Figure 1 about here)

However, the map of high-poverty block groups clearly indicates a broader geographic spread of “pockets of poverty” at the sub-county level. It also shows that some high-poverty regions (e.g., the “Black Belt”) are not—as implied with data—uniformly poor. More importantly, there are many areas of poverty, even within affluent counties. In fact, Table 1 reveals that over 75 percent of the nation’s high poverty block groups were located in low poverty counties in 2000. This percentage is lower (53 percent) in nonmetro areas. The methodological implication is clear: Analyses based on county poverty rates masks the high shares of population living in smaller “pockets of poverty”, while potentially providing misleading interpretations of changing concentrated poverty and differences between metro and nonmetro areas.

(Table 1 about here)

Poor people living in poor areas. Table 2 provides descriptive information about the changing distribution of poor people across all block groups in the United States. These results show large reductions in the percentage of high-poverty block groups over the 1990s, especially in nonmetro areas. The percentage of high-poverty nonmetro block groups (e.g., those with

poverty rates exceeding 20 percent) declined by roughly one-quarter, from 32 to 24 percent over the 1990s. The declines were even larger for extremely high-poverty counties (i.e., over 40 percent). To put these figures in perspective, Lichter and Johnson (2007) showed, using county data, that the number of high-poverty counties declined from 705 to 422, or approximately 40 percent.

(Table 2 about here)

Data in Table 2 also addresses the question of whether the poverty rates in the poorest and richest block groups had widened over the 1990s (bottom panel, Table 2). Indeed, it may be that the poorest block groups became poorer over time, while poverty rates declined to even lower levels in the most affluent block groups (while leaving the overall median unchanged). First, these data show that the median poverty rate for nonmetro block groups declined during the 1990s, from 14.4 to 12.6 percent. This decline is consistent with national declines in nonmetro poverty. On the other hand, the median poverty of metro blocks groups increased from about 8 percent to 8.4 percent. In metro areas, poverty rates increased on average across the distribution of block groups (i.e., in each poverty quintile), except in the poorest quintile of block groups, which declined from 21.7 to 20.8 percent. In nonmetro block groups, median poverty rates declined throughout the poverty distribution, especially in the poorest quintile of block groups.

But declines in high-poverty block groups warrants less optimism if the share of rural people or rural poor people who live in them has increased (Lichter and Johnson 2007). Table 3 addresses this question. It reveals that the share of rural people and rural poor people living in high-poverty areas declined dramatically over the 1990s. The share of nonmetro people who lived in high-poverty block groups declined from 32.1 to 23.5 between 1990 and 2000, while the

percentage of rural poor people declined from 58.3 to 46.73. These are large percentages by any measure. At the same time, they also dramatize the extent of poverty concentration among both the rural and urban poor (i.e., about 50 percent). The study by Lichter and Johnson (2007), based on counties, showed that only 13 percent of the metro poor lived in poor metro counties in 2000. Clearly, analyses based on the county as the unit of analysis can affect conclusions about the comparative ghettoization of rural poverty vis-à-vis urban poverty.

(Table 3 about here)

Racial Differences in Concentrated Poverty

Minority population shares in high-poverty areas. Our analyses also reveal—as in other studies—high levels of poverty concentration among racial and ethnic minority populations. As shown in Table 3, only 18 percent of nonmetro whites and 37 percent of the nonmetro poor white population lived in high-poverty block groups in 2000. The corresponding percentages are much higher among their black counterparts—58 and 75 percent. Moreover, rural blacks are considerably more “ghettoized” than blacks living in metro areas. These results mirror those reported by Lichter and Johnson (2007) at the county level.

Data in Table 3 also show that Hispanics occupy an intermediate position regarding their concentration in high-poverty areas. About 44 percent of nonmetro Hispanics lived in high-poverty areas in 2000, while 61.4 percent of poor Hispanics lived in high-poverty block groups. These figures compare similarly with 41.7 and 66.4 in metro areas. Clearly, racial and ethnic minorities in rural areas are highly concentrated in poor rural areas, often to an extent equal or greater than in metro areas, where minorities are commonly assumed to be especially disadvantaged.

On a more optimistic note, the data in Table 3 also highlight rapid declines during the 1990s in the percentage of nonmetro minorities living in high-poverty block groups. Absolute declines in concentrated rural poverty were especially large among Hispanics, where the share of the poor population residing in high-poverty block groups declined from 76.5 to 61.4 percent over the 1990s. This decline is undoubtedly associated, at least in part, with the rapid geographic dispersion of Hispanics to new rural immigrant destinations in the Midwest and South (Kandel and Cromartie 2004). Unlike rural areas, declines in concentrated poverty among metro blacks and Hispanics were modest during the 1990s.

For purposes of completeness, we also provide the corresponding estimates of changing patterns of concentrated poverty based on counties (bottom panel, Table 3). The results point to a singularly important conclusion: Levels of both metro and minority poverty are seriously underestimated when using counties rather than sub-county units of measurement. As an example, only 12.7 percent of the metro poor people lived in high-poverty counties, but 50.9 percent lived in high-poverty block groups. The differences between counties and block groups in estimates of concentrated poverty are also evident in nonmetro areas, but the magnitude of the difference is much less extreme (46.7 vs. 31.1 percent in 2000). Our estimates make a compelling case for additional analyses of concentrated poverty at the sub-county level. At the same time, estimates of poverty concentration—even of minority population—indicate large scale declines at both the county and sub-county levels during the 1990s.

Segregation of the poor. Concerns about concentrated poverty often center on questions about the putative lack of exposure of the poor population, including poor minorities, to middle-class role models (i.e., Furstenberg and Hughes 1997; Wilson 1987). Indeed, the concentration of poverty implies that the poor—heavily concentrated in a “pocket of poverty”—

are spatially segregated from the nonpoor. The data in Table 4 addresses this question directly. It provides estimates of within-county segregation (based on the index of dissimilarity) for 1990 and 2000. Here, we provide both unweighted and weighted (by county poor population size) estimates of within-county segregation. Unweighted estimates treat each county the same (i.e., a weight of 1), while weighted estimates give greater weight to more heavily poor counties (and therefore better reflect the average exposure of individuals to a segregated environment).

(Table 4 about here)

These data reveal several key findings. First, rates of segregation between the poor and nonpoor (based on block groups) are higher in metro than nonmetro areas (Table 4, line 1). The weighted segregation for metro areas was 37.5 in 2000, compared with 24.1 in nonmetro areas. This means that nearly 40 percent of the poor areas within metro counties, on average, would have to move to nonpoor areas to equalize the distribution of the poor and nonpoor populations across all block groups within the county. Compared with nonmetro counties, the metro poor are much less likely to be spatially blended with the nonpoor.

Second, poor whites are considerably less segregated from nonpoor whites than are their minority counterparts. This is especially true in nonmetro counties. In nonmetro areas, for example, the weighted poor-nonpoor segregation index in 2000 was only 23.8 among whites. It was 52.4 among blacks and 60.2 among Hispanics. Poor minorities are heavily concentrated in high-poverty areas and, as shown here, are considerably more segregated from their nonpoor counterparts than are poor whites. One implication, although unproven here, is that segregation places poor minorities “at risk” of experiencing additional disadvantages (e.g., living in unsafe neighborhoods, lacking of middle-class role models, and few good jobs).

Third, the residential segregation of the poor from the nonpoor is not simply a reflection of racial segregation (where blacks who are mostly poor are segregated from whites who are mostly nonpoor). Indeed, poor minorities and whites are highly segregated from each other, at least as measured by D .³ This pattern is also evident among the nonpoor (bottom panel, Table 4), both in metro and nonmetro counties. The extent of segregation is often extreme. For example, the weighted nonmetro segregation of poor whites from poor blacks was 68.8 in 2000. The corresponding figure in metro counties was 68.4. There also is little indication here of “melting pot ghettos” of multiracial populations. Instead, the segregation of poor Hispanics from poor blacks—within both metro and nonmetro areas—is extreme.

Models of micro-scale poverty concentration. Our final objective is to account for county-to-county differences in the sub-county spatial concentration of the poor. Our dependent variable is the poor-nonpoor segregation index (D), which indicates the extent to which the poor are concentrated in poor block groups rather than spread more evenly across block groups within the county. A previous analysis by Crandall and Weber (2004) examined the predictors of poverty rates across census tracts in the United States. Our analyses build on these results by focusing on inter-county variation in *within-county* poverty concentration. Unlike Crandall and Weber (2004), we nest within-county patterns with county-level predictors. This is a time-intensive data-analytic task that requires linking each block group to the county in which it is located. Here, we ask a straightforward question: Why are the poor highly concentrated

³ D is aspatial in the sense that the location of the census block groups within counties does not influence our estimate of segregation (D). So-called “concentration effects” may be larger when high-poverty block groups are adjacent to each other than when they are physically separated from each other (i.e., block groups located in different parts of the county). It also may matter whether high-poverty “black” block groups are adjacent to or distant from high-poverty “Hispanic” block groups. Other segregation indexes measure the extent to which different high poverty groups are spatially clustered or not (Iceland et al 2002). Despite clear conceptual distinctions between different spatial dimensions of segregation, segregation estimates based on different indices are often highly inter-correlated. In fact, Johnston, Poulsen, and Forrest (2007) recently showed that one popular measure of spatial clustering (i.e., spatial proximity index) loaded highly (.84) on the first dimension a factor analysis, along with several measures of spatial unevenness, including D .

spatially (i.e., living in “neighborhoods” with mostly other poor people) in some counties but not others? Descriptive statistics for the various county-level predictors (defined earlier) are provided in Table 5.

(Table 5 about here)

The multivariate results are provided in Table 6.⁴ We begin with an ordinary least squares regression model of within-county poor-nonpoor segregation using all U.S. counties in 2000. These data show poor-nonpoor segregation is positively associated with population size ($b = 4.275$) and percent black ($b = .038$). In other words, more heavily populated counties and those with more racial minorities (especially blacks) are most likely to have segregated poor populations. This occurs independently of average county block group size, county poverty rates, and county income inequality, although higher levels of county poverty are associated with less segregation of the poor while greater income inequality, not surprisingly, is associated with more segregation of the poor. Large income disparities presumably are reflected in housing markets that physically separate the poor from the nonpoor.

The results also indicate that population growth (measured by recent population change or new housing construction) are associated with less segregation. The industrial mix of counties also plays a role in patterns of poor-nonpoor segregation. Specifically, counties with a high percentage of elderly are less likely to be segregated by economic status, as are counties with a high percentage of manufacturing employment. On the other hand, the percentage of the 18-24 population in college and the percentage employed in government are positively associated with within-county segregation of the poor.

⁴ The regression models are unweighted. We also estimated the weighted regressions, but they yielded estimates that were not much different from the unweighted estimates. We decided to use unweighted regressions because they have fewer problems with multicollinearity and because we were more interested in county-to-county differences in poor-nonpoor segregation than in differences in the average socioeconomic segregation of individuals in poverty (which would be reflected in the weighted regressions).

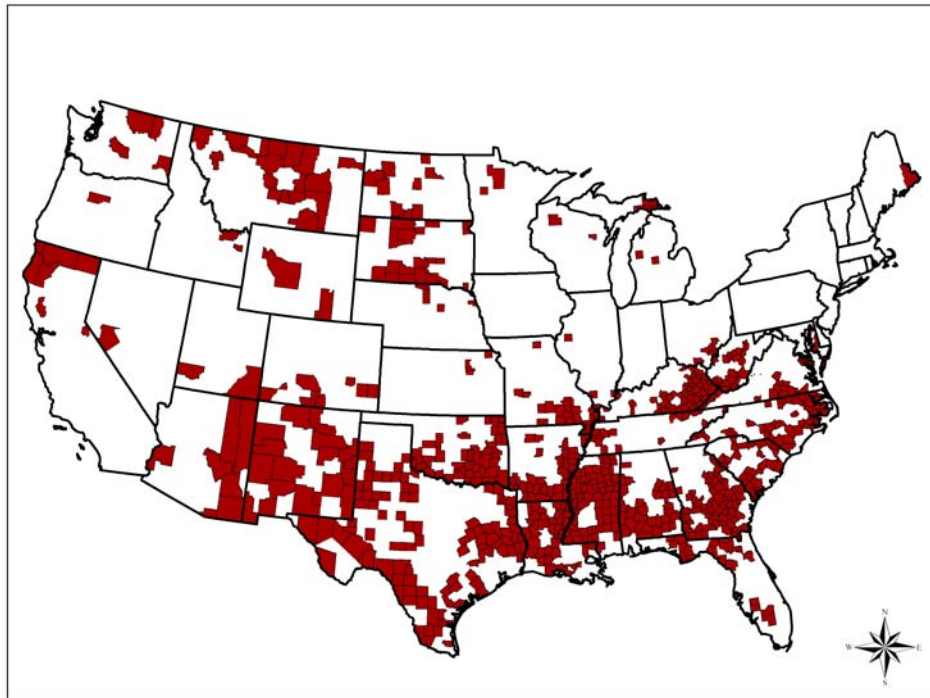
Finally, our models also include dummy variables that identify micropolitan and noncore nonmetro counties. These results show that both micropolitan and noncore counties have significantly lower levels of poor-nonpoor segregation than in metro counties. This is unsurprising. What is surprising is that these differences in segregation— -1.255 and -2.934— are small substantively. They are also much smaller than the bivariate results for metro and nonmetro areas reported earlier in Table 4. The implication is that social and demographic characteristics in nonmetro counties (as compared with metro counties) have the effect of exaggerating metro-nonmetro differences in the segregation of the poor from the nonpoor populations. When these variables are controlled—as in model 1 of Table 6—the metro-nonmetro differences are surprisingly small in an absolute sense.

Our multivariate analyses are also disaggregated by metro status. These analyses do not warrant an extensive discussion here. Suffice it to say that most of the differences from the baseline model (model 1) are a matter of degree (i.e., size of the estimate) rather than kind (i.e., direction of the coefficient). For both metro and nonmetro counties, segregation of the poor from the nonpoor is positively associated with living in the Midwest, a smaller county block group size, having a younger as opposed to older population, more income inequality, a high percentage of nonpoor, greater population size, and more racial diversity (e.g., a high percentage of blacks). In nonmetro counties, segregation by socioeconomic status is significantly higher in micropolitan counties, which are typically more urbanized in function and morphology. On the other hand, counties in close physical proximity (as measured by adjacency to metro counties) are no more likely than geographically remote counties to be highly segregated by socioeconomic status.

**Figure 1: Poverty Rates Greater Than 20 Percent Across Non-Metro Counties
Census Block Groups**

&

County



Census Block Group

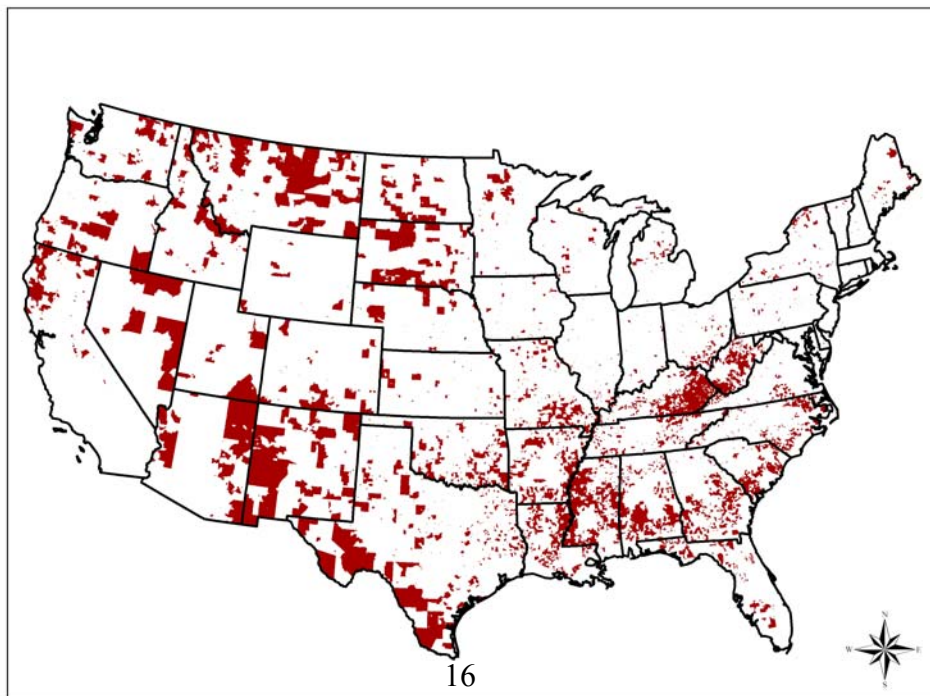


Table 1: Cross-Tabulation of Block-Group Poverty Concentration by County Poverty Concentration

<u>County Poverty</u>	<u>Block-Group Poverty</u>					
	<u>U.S. Total</u>		<u>Metro</u>		<u>Nonmetro</u>	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
Low	94.99 ¹ (95.68) ²	75.56 (75.93)	96.08 (96.68)	81.90 (82.19)	90.74 (90.89)	54.82 (52.63)
High	5.01 (4.32)	24.44 (24.07)	3.92 (3.32)	18.10 (17.81)	9.26 (9.11)	45.18 (47.37)
<i>Total</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>
N of Block Groups	163,666	45,124	130,318	34,557	33,348	10,567
N of People (000's)	226,178	55,243	187,206	43,553	38,972,	11,691

¹Percentage of block groups

²Percentage of people

Table 2: Metropolitan and Nonmetropolitan Poverty Concentrations Across Census Block Groups, 1990 and 2000

	1990		2000	
	Metro	Non-Metro	Metro	Non-Metro
Percentage Block Groups with Poverty > 20%	22.10	32.00	21.00	24.40
Percentage Block Groups with Poverty > 40%	6.90	6.00	5.00	3.50
Median Poverty Rates, by Quintile				
Bottom 20%	2.28	7.02	2.93	6.71
20 to 40%	5.72	11.91	6.24	10.61
40 to 60%	7.99	14.44	8.40	12.65
60 to 80%	10.93	17.23	11.19	15.06
Top 80%	21.70	25.72	20.80	22.03

Table 3: Percentage Living in Census Block Groups and Counties with Poverty Greater than 20 Percent, 1990 - 2000

		1990		2000	
		Metro	Non-Metro	Metro	Non-Metro
Block Group:					
Population	Total	19.46	32.11	18.87	23.51
	Poor	54.55	58.28	50.91	46.73
White	Total	12.46	27.36	11.60	18.48
	Poor	39.06	49.29	36.91	36.63
Black	Total	51.02	66.63	44.75	57.88
	Poor	77.89	83.24	70.94	75.19
Hispanic	Total	44.14	57.84	41.68	43.92
	Poor	70.77	76.46	66.42	61.37
County:					
Population	Total	9.75	29.05	6.05	18.54
	Poor	19.05	45.04	12.72	31.14
White	Total	7.42	25.07	4.28	14.01
	Poor	13.81	36.09	9.79	21.65
Black	Total	22.51	57.78	13.22	51.86
	Poor	27.51	70.40	16.94	60.24
Hispanic	Total	18.88	55.69	12.59	33.22
	Poor	25.05	63.60	19.01	39.94

Table 4: Weighted and Unweighted Metropolitan and Non-Metropolitan Poor-Nonpoor Segregation (D), 1990 and 2000

	1990				2000			
	Metro		Non-Metro		Metro		Non-Metro	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Total Population	32.10	40.28	23.04	25.47	30.69	37.52	20.64	24.10
Poor - Nonpoor Within Racial Groups								
Poor White vs. Nonpoor White	30.93	38.22	22.88	24.94	30.05	37.65	20.59	23.81
Poor Black vs. Nonpoor Black	51.91	47.70	53.77	52.08	50.41	46.00	54.90	52.45
Poor Hispanic vs. Nonpoor Hispanic	72.20	57.66	71.29	74.10	60.11	47.32	58.17	60.17
Poor Between Racial Groups								
Poor White – Poor Black	69.95	72.83	71.33	71.28	66.97	68.39	69.27	68.77
Poor White – Poor Hispanic	71.73	59.64	70.75	73.34	62.97	51.05	61.83	63.77
Poor Hispanic – Poor Black	78.21	73.57	80.99	81.91	71.16	67.29	75.19	75.85
Nonpoor Between Racial Groups								
Nonpoor White – Nonpoor Black	64.18	68.42	69.36	68.22	57.94	62.82	63.61	62.39
Nonpoor White – Nonpoor Hispanic	54.42	50.05	60.15	62.20	46.49	46.02	47.77	50.18
Nonpoor Hispanic–Nonpoor Black	69.65	66.87	77.10	77.31	59.31	58.63	67.82	67.35

Table 5: Descriptive Statistics

	All		Metro		Nonmetro	
	Mean	SD	Mean	SD	Mean	SD
Segregation Index (<i>D</i>)	24.15	9.69	30.69	9.45	20.64	7.80
2000 County Population Characteristics:						
Block Group Size (square miles) ^a	82.52	186.80	20.83	45.19	115.61	222.25
Total Population (ln)	89,927	293,515	212,485	471,639	24,134	25,712
Percent Black	8.79	14.57	10.49	13.63	7.89	14.97
Percent Hispanic	6.15	12.12	6.49	10.97	5.98	12.69
Percent In Poverty	14.18	6.55	11.57	5.31	15.58	6.72
Income Inequality (Gini coefficient)	0.39	0.02	0.39	0.03	0.39	0.02
Percent Change Between 1990 and 2000:						
Percent Population Change	8.39	11.63	13.61	10.94	5.59	11.00
Percent of Housing Units Built	10.49	10.23	15.13	9.72	7.99	9.61
Functional Specialization:						
Percent Employed in Manufacturing	15.92	9.08	15.74	7.21	16.01	9.95
Percent Employed in Government	5.36	3.02	5.16	2.79	5.46	3.13
Percentage Greater than 65	14.82	4.12	12.49	3.40	16.08	3.91
Percent Aged 18-24 in College	48.45	14.48	50.68	12.22	47.25	15.43
Region:						
South	0.46	0.50	0.51	0.50	0.43	0.50
Northeast	0.07	0.25	0.11	0.32	0.05	0.21
Midwest	0.34	0.47	0.26	0.44	0.38	0.49
West	0.13	0.34	0.12	0.32	0.14	0.35
Spatial Characteristics:						
Metropolitan	0.35	0.48	-	-	-	-
Micropolitan	0.22	0.42	-	-	-	-
Noncore	0.43	0.49	-	-	-	-
Nonmetro Spatial Characteristics:						
Metropolitan Adjacent	-	-	-	-	0.23	0.42

^aThe median average block group size (in square miles) for counties is 27.38, 9.96, and 39.49 all counties, metro counties, and nonmetro counties, respectively. Medians are smaller than means because the distribution of average block group size for counties is highly skewed.

Table 6: Ordinary Least Squares Regression of Poor-Nonpoor Segregation on County Characteristics, 2000

	All		Metro		Nonmetro	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Constant	-30.997***	2.986	-44.071***	4.984	-30.019***	4.242
2000 Population Characteristics:						
Average Block Group Size (square miles)	-0.001	0.001	-0.015**	0.005	-0.002**	0.001
Total Population (ln)	4.275***	0.130	3.902***	0.198	3.890***	0.221
Percent Black	0.038***	0.010	0.042*	0.019	0.036**	0.012
Percent Hispanic	0.003	0.011	-0.003	0.022	0.014	0.012
Percent In Poverty	-0.166***	0.030	-0.495***	0.071	-0.075*	0.033
Income Inequality (Gini coefficient)	46.852***	8.055	103.13.2***	14.516	36.021***	10.318
Percent Change Between 1990 and 2000						
Percent Population Change	-0.063**	0.021	-0.121*	0.047	-0.043	0.023
Percent of Housing Units Built	-0.065**	0.024	0.052	0.050	-0.109***	0.027
Functional Specialization						
Percent Employed in Manufacturing	-0.073***	0.016	-0.126***	0.031	-0.017	0.020
Percent Employed in Government	0.119**	0.045	0.049	0.079	0.169**	0.054
Percentage Greater than 65	-0.328***	0.038	-0.572***	0.066	-0.189***	0.047
Percent 18-24 In College	0.047***	0.009	0.098***	0.017	0.033**	0.010
Region (South as Reference)						
Northeast	-0.524	0.508	0.989	0.700	-1.821*	0.731
Midwest	2.490***	0.333	3.394***	0.536	2.026***	0.428
West	1.782***	0.417	1.495*	0.682	2.839***	0.540
Spatial Characteristics (Metro as Reference)						
Micropolitan	-1.255***	0.331	-	-	-	-
Noncore	-2.934***	0.364	-	-	-	-
Nonmetro Spatial Characteristics(Noncore as Reference):						
Micropolitan	-	-	-	-	1.976***	0.462
Metropolitan Adjacent	-	-	-	-	0.865	0.502
Adjusted <i>R</i> ²	60.8		62.9		40.2	

*** p<.001; ** p<.01; * p<.05