

Assumptions and Limitations of the Census Bureau Methodology Ranking Racial and Ethnic Residential Segregation in Cities and Metro Areas

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Few issues in American society are more politically sensitive than defining norms for racial mixing. One has only to look at the debates over Congressional redistricting to identify many diverse interests related to residential housing patterns and clusterings of populations with common and competing values. Considerable research has documented the role of discriminatory actions by governments and individuals in promoting separation of racial and ethnic groups in public schools and limiting employment and housing opportunities for individuals based on race. Yet, there appears to be little public consensus as to what constitutes racial segregation or appropriate definitions of racial integration or even of “diversity.”

This paper responds to a request from the U.S. Census Bureau to serve on a five-member peer review panel to examine an historic and first-time study by the Census Bureau that ranked major metropolitan areas by their level of racial and ethnic housing segregation and offered segregation rankings of 1,092 cities and 331 metropolitan areas based on a series of indexes discussed in the sociological literature. The paper identifies assumptions and limitations of the indexes and the five-index rankings used by the Census Bureau in its report on **Racial and Ethnic Residential Segregation in the United States: 1980-2000 (CENSR-3)** and its “Segregation / Housing Pattern Index Tables” posted on the Census Bureau website, and questions the appropriateness of the Census Bureau promoting schemes for ranking cities and metropolitan areas on their population distributions.² The analysis draws in large part from research conducted for the University of Wisconsin-Milwaukee Employment and Training Institute report on **Racial Integration in Urban America: A Block Level Analysis of African American and White Housing Patterns**, published in December 2002 and co-authored with John Pawasarat, and that study is attached as Appendix A.³ The statements and opinions expressed in this paper are those of the author and are not intended to reflect official positions of the University of Wisconsin-Milwaukee or of the U.S. Census Bureau.

I. Summary Points

- The CENSR-3 publication analyzes segregation for non-white racial/ethnic groups but not for the white population. The publication lacks a chapter analyzing white segregation or showing a five-ranking scale for metro areas with greatest segregation for whites.
- The ranking studies of racial/ethnic segregation in metro areas and cities duplicate the work of academics and others outside the Census Bureau.
- The definitions of race used in CENSR-3 are controversial. Use of white-only and any-part-other definitions of race (the “one drop rule”) for the Census Bureau indexes are not comparable to data from prior years and ignore complex (and changing) Census Bureau data on racial and ethnic identity.
- The Census Bureau describes its segregation study as a study of “housing patterns” but uses population units rather than housing units. Analysis of racial patterns of households may be a more appropriate unit of analysis for studies of residential segregation.

- The indexes used by the Census Bureau assume that populations are evenly distributed within census tracts, even when SF1 data show they are not. Use of block data, while better capturing racial mix, may be problematic for the types of measurement tools used by the Census Bureau.
- The dissimilarity index used by the Census Bureau to rank metro areas considers racial/ethnic populations “segregated” if they are not distributed evenly throughout the entire metro area. Racial/ethnic populations living in racially integrated neighborhoods are considered “segregated” if their percentage of the census tract population exceeds the metrowide average.
- A simple adjustment of the dissimilarity index formula to expect that both non-white and white residents would be expected to move to achieve the “even” distributions of population creates dramatically different rankings of cities and metro areas. Use of a two-way dissimilarity formula for ranking the 100 largest metro areas on segregation of African Americans shows 47 of the 100 largest metro areas shifting by 20 or more places if white residents were also expected to move for racial “evenness.”
- The delta index used by the Census Bureau expects the same number of African Americans, Latinos, Asians, and Native Americans per square mile throughout the metro area, regardless of where housing is located and regardless of whether the racial/ethnic population studied is urban or rural. In the metropolitan statistical areas (MSAs) that include large masses of farmland, the delta index may be a better measure of “urban sprawl” than of racial/ethnic segregation.
- Another land-based measure used by the Census Bureau to rank metro areas on their “segregation” is the absolute centralization index. This index expects each racial/ethnic population to be located in equal distances from the population centroid of the MSA. Rather than identifying a point where some racial/ethnic populations have been historically clustered (i.e., the central business districts, CBD, of older communities), the population centroid can be located in a rural or exurban census tract or an affluent area, depending on the number of central cities in the MSAs, the location of the central city compared to the remainder of the county (or counties) in the metropolitan statistical area, and other geographic factors. Again, in some cases the absolute centralization index may be a better measure of “urban sprawl” than of segregation.
- In its treatment of the isolation index used, the Census Bureau gives its lowest “segregation” rankings to geographic areas where very few “minority” members reside compared to whites, again reinforcing the Census Bureau ranking system as providing a “white perspective” on segregation.
- Warnings on rankings do not appear adequate to justify the present Census Bureau website postings of segregation measures for the 331 metro areas and 1,092 cities.

II. Defining Racial/Ethnic Groups: The Census Bureau Approach

The 2000 U.S. Census allowed for the most complex reporting to date of racial and ethnic self-identification of individuals and household members. In the 2000 census, respondents were allowed to check up to fifteen racial categories that each household member considered himself/herself to be, including: white; black, African American, or Negro; American Indian or Alaska Native; any of eleven groups of Asian and Pacific Islander; or “some other race” that could be specified by the respondent. Respondents also had the option of listing a race if they identified themselves as “Other Asian,” “Other Pacific Islander,” or “Some other race.” Additionally, respondents were asked whether they were

Spanish/Hispanic/Latino. The results yield population descriptions that differ substantially from those solicited in prior decennial censuses.

By embracing a segregation ranking methodology that compares racial/ethnic populations one by one to the reference population (of whites), the Census Bureau was required to determine which individuals to include in each racial/ethnic category analyzed in 2000, in contrast to previous censuses when individuals could select only one racial group. The decisions made by the Census Bureau reflect a Euro-centric approach to racial mixing that is increasingly challenged by the self-definitions of race and ethnicity individuals ascribe to themselves and to their children and by the shifting positions of whites who have become the minority population in many geographic areas ranked. The Census Bureau selected a “white-only” reference population. Yet of the 216.9 million persons who reported to the 2000 Census as white, 194.5 million (90 percent) reported as white alone and not Hispanic or Latino, while 16.9 million (7.8 percent) reported as white alone race and Hispanic or Latino ethnicity; 1.8 million (0.8 percent) reported as white in combination with one or more other races and also Hispanic/Latino; and 3.6 million (1.7 percent) reported as white in combination with one or more other races and not Hispanic/Latino.⁴ The identification of the “race” of persons identified as Hispanic/Latino is particularly challenging. Of 35.3 million persons reported to the 2000 Census as Hispanic or Latino, 14.9 million (42.2 percent) identified themselves as “some other race” while another 16.9 million (47.9 percent) identified as white, 2.2 million (6.3 percent) identified as 2 or more races, and 1.3 million 3.6 percent identified as one race that was not white.⁵ The evolving views of race continue to challenge the use of a white-only reference population for measures of racial segregation by the Census Bureau and academics. Several issues require serious reexamination:

- **The interplay among racial groups is ignored in the Census Bureau methodology.** The dissimilarity, isolation, relative concentration, relative centralization, and spatial proximity indexes are used to rank only two groups at a time (whites and the “other”), so that diverse urban populations of Latinos, Asians, and Native Americans are not factored into the black-white segregation rankings, the Hispanic-white segregation rankings, etc. While described as the “one of the most exhaustive study of racial segregation ever undertaken,”⁶ the Census Bureau study provides little new analysis relating to the interaction among racial groups or of households. Nor does it offer new models for analyzing racial/ethnic settlement patterns. Rather, the report plugs 2000 Census data into indexes and definitions developed mainly in the 1940s, 1950s and 1960s.
- **The racial classifications used by the Census Bureau reflect a “pure white” race model – which ignores the self-identification provided by Census 2000 respondents.** Ignoring the complex overlay of racial identities reported to the Census Bureau in the 2000 Census, in its segregation ranking study the Census Bureau uses definitions reminiscent of the 19th century “one drop rule.” Whites are defined, not as anyone who told the U.S. Census they were white, but only those persons who identify themselves as white and white only. Persons who reported that they were white and Native American, Asian, Pacific Islander/Hawaiian, or African American are counted in each of those other racial groupings. Persons who reported they were Hispanic/Latino are classified both as Hispanic/Latino and in every other racial group they listed (except white). At the same time Hispanics who reported they were Hispanic and white are counted only as Hispanic. The Census Bureau states, “The reference group – non-Hispanic Whites – is always defined as those who report being White alone, and who are not of Hispanic origin.”⁷ By contrast, “blacks” are persons with any part black (including persons who are white and African American, white and black and Native American, Asian and black, Latino and black, etc.) -- that is, any mixture that includes black. Similar “any part” definitions are used for Native Americans, Asians and other Pacific Islanders.

- **The Census Bureau report and rankings reflect a perspective that racial/ethnic segregation is a “minority group” problem and not a white problem.** In the Census Bureau CENSR-3 report and accompanying website each non-white racial/ethnic group is compared to a white-only population, which serves as the reference population (and expected behavioral model). Absent from the Census Bureau report and website are sections ranking communities where white populations are segregated. Absent, for example, is a ranking of metro areas where whites are considered “isolated,” that is, surrounded by “too many” other whites.
- **Even in communities where a population other than whites is the majority racial group, the white-only population is used as the model of residential settlement patterns for the dissimilarity, isolation, and spatial proximity indexes.** For example, less than 20 percent of the population in Honolulu is white-only, but this population is used as the reference group for determining whether Native Hawaiian and other Pacific Islanders, African Americans, Hispanics, or Native Americans are racially segregated. White-only persons made up only 10 percent of the population of the City of Detroit, yet this group is used as the reference population for assessing city segregation of African Americans and all other racial/ethnic groups. Even in Laredo, Texas, where white-only persons made up 5 percent of the city population, they (and not the Latino majority) are used as the standard against which segregation of so-called “minority” groups was assessed in the city.
- **Rather than models of racial mixing (as is implied by the “lowest segregation” rankings), many of the metro areas and cities with low segregation scores on the Census Bureau indexes might be considered “hyper-segregated” white communities. Others are racially mixed but show low percentages of the racial/ethnic group being studied.** Among metro areas with over one million population in 2000, the five-index rankings approach shows the Orange County and Salt Lake City-Ogden metro areas as least segregated for African Americans among the largest metro areas, yet both areas have 2 percent or less African American populations. The five-index rankings approach shows the Pittsburgh, Baltimore, and Cincinnati metro areas as least segregated for Hispanics; again, in all three metro areas Hispanics comprise 2 percent or less of the population. The three least segregated metro areas (on the five-index rankings) for Asian and Pacific Islanders were the Tampa-St. Petersburg-Clearwater, Hartford, CT, and Fort Lauderdale metro areas, all of which had 3 percent or less Asian and Pacific Islander populations. These “least segregated” rankings call into question the Census Bureau approach and reinforce the perception that the Census Bureau considers “segregation” to be solely a non-white minority problem.
- **Major metro areas with fewer racial/ethnic group members are arbitrarily excluded from the high-to-low segregation rankings in the published Census Bureau report.** The Census Bureau CENSR-3 publication notes that its indexes were selected using criteria that stressed their usefulness regardless of the size of the geographic areas, but eliminates rankings for large metro areas where the racial/ethnic group analyzed comprised less than 20,000 (or 3 percent of the total population) in 1980. At the same time the Census Bureau website suggests that segregation indexes are useful for places that have at least 100 persons in the racial/ethnic group studied.

III. Selection of the Measurement Tools

With one modification (substitution of Duncan's delta index for the relative concentration index), the Census Bureau utilized the measures of segregation advanced by Douglas Massey and Nancy Denton in their 1988 article on "The Dimensions of Residential Segregation."⁸ Four of the five measures are discussed below and their limitations identified.

- **The Duncan's delta index used by the Census Bureau expects racial/ethnic populations to be dispersed in flat settlement patterns throughout each metro area regardless of where housing units are located – hardly an uncontroversial perspective on "racial segregation."** Here, a community's urban density, as well as its levels of racial/ethnic segregation, affects the index scores. The delta index measures the distribution of each non-white racial/ethnic group against the land area in the area tested, and effectively expects the same approximate number of African Americans (Latinos, Asians, or Native Americans) per square mile on all land in the metro area (or city) regardless of where the urban population lives. For the Milwaukee-Waukesha PMSA, the Census Bureau rates the metro area against an ideal of having approximately 170 African Americans residents per square mile, 65 Latinos per square mile, 25 Asians and Pacific Islanders per square mile, and 10 Native Americans per square mile. (Under the Duncan's delta index ideal population spread, nearly a half million of all City of Milwaukee residents, 84 percent of the total, should be residing outside the city in the suburbs, exurbs, farmlands, and other land areas of the four-county area.) In the Las Vegas metropolitan area, which has 39,370 square miles, the delta index uses an urban ideal of about 8 Latinos, 3 Asians and Pacific Islanders, 3 African Americans, and 1 Native American per square mile. Not surprisingly, the Las Vegas MSA scores "most segregated" on the delta index for all racial/ethnic populations analyzed by the Census Bureau. Fully 97 percent of African Americans, 96 percent of Asians and Pacific Islanders, and 95 percent of Latinos would be required to move to achieve the perfect "urban sprawl" anticipated by the index.

Milwaukee Mayor John Norquist responded to the delta index with the observation that if the implicit goal were to equally distribute population in metro areas, "you'd have to demolish all the great cities of the world. Paris, London – any healthy city would have to be torn apart."⁹

- **A second land area measure used by the Census Bureau, the absolute centralization index, tests whether each racial/ethnic group is distributed in equal distances from a designated geographic center, again regardless of where the urban housing stock or populations are located in the region.** The Census Bureau ranks metro areas where the racial/ethnic population is located closer to the center of the city (compared to land distances in the metro area) as most "segregated" and metro areas where the racial/ethnic group has more settlements in the suburban, exurban and rural portions of the metro area as least "segregated." The Census Bureau's absolute centralization index expects each minority population to be settled equal distances away from the population center of the metro area, ignoring the location of existing housing or any advantages of residing in denser city neighborhoods with existing infrastructure, mass transit, and urban amenities.

When Massey and Denton used this measure, they selected the central business district as the central point identified as the least desirable place for minorities to reside. They argued that, "Residence near this district has long been associated with a relatively high level of crime, social disorder, and economic marginality."¹⁰ They also have observed, "In most industrialized countries, racial and ethnic minorities concentrate in center city areas, inhabiting the oldest and most substandard housing, even though urban renewal and recent 'gentrification' have mitigated this tendency somewhat." [quotation with reference notes excluded]¹¹ While this was a common

and often problematic settlement pattern for African Americans migrating to northern cities, it is not the only settlement pattern, and patterns often differed for Native Americans and Latinos, compared to African Americans, and by region of the country.¹²

The Census Bureau apparently last used the concept of the central business district in its 1982 Census of Retail Trade. At that time, the Bureau defined the CBD as “an area of very high land valuation characterized by a high concentration of retail businesses, service businesses, offices, theaters, and hotels, and by a very high traffic flow” and not necessarily where the oldest housing was located.¹³ Judgment calls would have been required for the use of the 20-year-old CBD site locations, along with decisions as to which CBD to use in metro areas with several large cities. Instead, for its calculation of the absolute centralization index the Census Bureau substituted the metropolitan area’s population centroid for the CBD, with a different location identified for each decennial census analyzed. The Census Bureau explanation for utilizing the population centroid was as follows:

Most analysts using a centralization measure define it in terms of access to the traditional Central Business District (CBD). We feel that this concept is increasingly outmoded as jobs, retail sales, and other CBD functions continue to decentralize.¹⁴

This change is not insignificant, as it alters the meaning of the central point used for the measurement. For Denton and Massey, the CBD marked a city area where historic settlement patterns showed minorities (and particularly African Americans) concentrated because of the poorer quality of the housing and less desirable living conditions. There is no reason to believe, however, that a metropolitan area’s population centroid will fall in a lower-income neighborhood or in a neighborhood where segregation of minorities has occurred. In the Milwaukee-Waukesha PMSA, for example, in 2000 the population centroid is located near the Bluemound Country Club in suburban Wauwatosa.

- **The isolation index used by the Census Bureau ranks geographic areas as *least segregated* where the racial/ethnic group typically lives with the highest percentages of whites and ranks areas as *most segregated* where the racial/ethnic group lives with the highest percentages of its own racial/ethnic group – again, a highly controversial perspective.** As used by the Census Bureau, this index, more than any of the other four in the five-index approach, places maximum value on each racial/ethnic group’s contact with whites. One might imagine a different value system that would hold that African Americans, for example, are **least** isolated when they constitute about half of the population along with a variety of other racial/ethnic groups and are **most** isolated at either end of the continuum, when they make up only 1 percent of the total population or when they make up 99 percent of the population. Such an approach would require new definitions by the Census Bureau regarding which racial mixes are considered most integrated (or less segregated) and would modify the concept of “segregation” tested. A recent survey in Milwaukee, for example, found that 51 percent of African Americans reported a preference for living in neighborhoods that are more than half African American.¹⁵
- **The dissimilarity index used by the Census Bureau to measure segregation places a high value on the widest possible dispersal of non-white populations.** The dissimilarity index used to rank cities and metropolitan areas as to their degree of segregation was popularized by Karl and Alma Taeuber of the University of Wisconsin, who prepared historic segregation rankings for U.S. cities and discussed the discriminatory practices contributing to segregation of Midwestern cities in their book **Negroes in Cities**, published in 1965. The dissimilarity index centered on concerns related to the observed unwillingness of numbers of urban white residents to remain in

or move into racially mixed neighborhoods. Taeuber and Taeuber spoke of a theoretical “tipping point,” which they described as “the percentage Negro in an area which ‘exceeds the limits of the neighborhood’s [that is, the white residents’] tolerance for inter-racial living.’”¹⁶ Along with measuring movement of African Americans into previously all-white neighborhoods, in large part the dissimilarity index addressed the concerns of a white population (and mainly white academic researchers) with “tipping,” by identifying the lowest possible black neighborhood population that could be achieved if blacks were spread evenly throughout the city or the entire metro area.¹⁷ Taeuber and Taeuber explained the approach:

Our segregation index is an index of dissimilarity, and its underlying rationale as a measure of residential segregation is simple: Suppose that whether a person was Negro or white made no difference in his choice of residence, and that his race was not related to any other factors affecting residential location (for instance, income level). Then no neighborhood would be all-Negro or all-white, but rather each race would be represented in each neighborhood in approximately the same proportion as in the city as a whole....

The value of the index may be interpreted as showing the minimum percentage of non-whites who would have to change the block on which they live in order to produce an unsegregated distribution – one in which the percentage of non-whites living on each block is the same throughout the city (0 on the index). For instance, if some governing council had the power and the inclination to redistribute the population of Birmingham so as to obtain an unsegregated distribution of white and non-white residences, they would have to move 92.8 per cent of the non-whites from blocks now containing an above-average proportion of non-whites to blocks now disproportionately occupied by whites.¹⁸

Karl Taeuber recently elaborated on this approach to *Milwaukee Journal Sentinel* reporter Bruce Murphy, and was quoted as stating, “The whole notion was that when a minority population moves into a neighborhood, they’re going to take over the area. We used these war-like terms, like invasion.” With wide dispersal, Taeuber noted, “There’s no ability of a tiny population to take over an area. And it doesn’t develop the infrastructure of an ethnic specific neighborhood, like the old Chinese laundries and Chinese restaurants.”¹⁹ When most U.S. cities were majority white, the dissimilarity index was typically applied to measure “evenness” of the black population within city boundaries. Once suburbanization of white residents expanded urban centers and some major cities became majority black, scholars and open housing advocates began using the index primarily for metropolitan statistical areas, as defined by the federal Office of Management and Budget.

- **The dissimilarity index is based on a one-way concept of desegregation.** While purporting to be race-neutral, the index has historically been used to measure progress toward the dispersal of African Americans into geographic units where they would remain in the minority. Milwaukee’s metro ranking on the index (.818) is based on the ideal of edging toward the goal of moving 200,000 African Americans of the total 245,151 African American population (or 81.8 percent) out of their “too black” census tracts and into the remaining “whiter” tracts. (The converse would be to move toward the goal of “evenness” by relocating 900,000 whites out of 1.1 million from their “too white” census tracts in the four-county area.)²⁰

In discussing the dissimilarity index in **Negroes in Cities**, Taeuber and Taeuber acknowledged receiving correspondence from Otis Dudley Duncan suggesting that “a more effective redistribution of the population to achieve desegregation could be made by having white and non-

white households exchange residences.”²¹ This simple adjustment of the dissimilarity index formula to expect that both black and white residents could move to achieve the index goal of “even” white-black populations in each census tract creates a dramatically different ranking of the metro areas on the dissimilarity index. Use of this formula for ranking the 100 largest metro areas on segregation of African Americans showed 47 of the 100 largest metro areas shifting by 20 or more places if white residents were also expected to move for racial “evenness.” Milwaukee’s ranking as a segregated metropolitan area improved by 22 places. **If the Census Bureau were to adopt a two-way formula, its rankings would change dramatically – both for the dissimilarity index and for the Duncan’s delta index.** Under a one-way dissimilarity index, the ten most segregated metro areas (among the 100 largest) for African Americans were identified as Detroit, Gary, Milwaukee-Waukesha, New York, Chicago, Newark, Cleveland-Lorain-Elyria, Buffalo-Niagara Falls, Cincinnati, and Nassau-Suffolk. Only Detroit and New York remained in the top ten most segregated metro areas when a two-way index was applied. The others were replaced by Miami, Memphis, New Orleans, Birmingham, Baton Rouge, Newark, Atlanta, and Washington D.C. The Gary metro area dropped to 13th and the rest were out of the top 20.

- **Rather than acknowledging a range of population mixes as integrated (or non-segregated), the dissimilarity index seeks as the only ideal condition of an even distribution of each racial/ethnic group compared to the white-only population.** As Howard Fuller, Distinguished Professor of Education at Marquette University and former Superintendent of Milwaukee Public Schools, observed, “The question is what percent of black people to white people is OK? When are there too many of us?”²² The Census Bureau is well aware of the controversies over redistricting of legislative districts, where the value of political majorities may take precedence over emphasis on dispersal of racial/ethnic populations in urban areas as a primary housing goal, particularly since African Americans and Latinos have gained political power in major U.S. cities and electoral districts. Yet the dissimilarity index, based on the dispersal approach, was embraced by the Census Bureau as a primary measure of racial segregation trends.

Massey and Denton suggest this dispersal perspective in **American Apartheid**, when they present the hypothetical example of a city where 32,000 blacks make up 25 percent of the population and 96,000 whites make up 75 percent. They offer as an example of “high racial segregation,” a scenario where all of the black population live in census tracts that are 50 percent black and 50 percent white and where the remaining (non-integrated) white population lives on tracts that are 100 percent white.

Table 1:

Hypothetical City Showing “High Racial Segregation”
(Denton and Massey, **American Apartheid**, p. 121)

B=0 W=8,000 <i>Tract 1</i>	B=0 W=8,000 <i>Tract 2</i>	B=0 W=8,000 <i>Tract 3</i>	B=0 W=8,000 <i>Tract 4</i>
B=0 W=8,000 <i>Tract 5</i>	B=0 W=8,000 <i>Tract 6</i>	B=0 W=8,000 <i>Tract 7</i>	B=0 W=8,000 <i>Tract 8</i>
B=4,000 W=4,000 <i>Tract 9</i>	B=4,000 W=4,000 <i>Tract 10</i>	B=4,000 W=4,000 <i>Tract 11</i>	B=4,000 W=4,000 <i>Tract 12</i>
B=4,000 W=4,000 <i>Tract 13</i>	B=4,000 W=4,000 <i>Tract 14</i>	B=4,000 W=4,000 <i>Tract 15</i>	B=4,000 W=4,000 <i>Tract 16</i>

While Denton and Massey describe the African Americans in this hypothetical city as highly segregated, I (and likely many others) would conclude that the African Americans in such a community are not segregated at all but live in racially integrated areas. Table 2 (below) shows the population mix described by Massey and Denton as their most desirable configuration. This mix would require each census tract to have a 25 percent African American population and a 75 percent white population.²³

Table 2:

Hypothetical City Showing “No Racial Segregation”
(Denton and Massey, **American Apartheid**, p. 120)

B=2,000 W=6,000 <i>Tract 1</i>	B=2,000 W=6,000 <i>Tract 2</i>	B=2,000 W=6,000 <i>Tract 3</i>	B=2,000 W=6,000 <i>Tract 4</i>
B=2,000 W=6,000 <i>Tract 5</i>	B=2,000 W=6,000 <i>Tract 6</i>	B=2,000 W=6,000 <i>Tract 7</i>	B=2,000 W=6,000 <i>Tract 8</i>
B=2,000 W=6,000 <i>Tract 9</i>	B=2,000 W=6,000 <i>Tract 10</i>	B=2,000 W=6,000 <i>Tract 11</i>	B=2,000 W=6,000 <i>Tract 12</i>
B=2,000 W=6,000 <i>Tract 13</i>	B=2,000 W=6,000 <i>Tract 14</i>	B=2,000 W=6,000 <i>Tract 15</i>	B=2,000 W=6,000 <i>Tract 16</i>

The Census Bureau describes this condition, where the dissimilarity score conceptually reaches 0, as “complete integration” (the only time the word “integration” is used in the CENSR-3 report). Entering the realm of social engineering, one could argue that African Americans had already reached “complete integration” in Table 1 above (when all lived on 50-50 racially mixed tracts). It is the white population, and not the African Americans, who reach “complete integration” in Table 2. Again, the perspective and bias of the formula is toward the white (reference group) population and not the racial/ethnic group.²⁴

IV. Issues of Geography

The determination of what geographical unit to use to approximate an “urban area” is critically important for the indexes selected for the Census Bureau analysis. As noted, the Census Bureau ranks communities on the distribution of racial/ethnic groups throughout the geographical unit (whether it be a city or collections of counties). The extent of rural land in the MSA and the racial/ethnic background of the farm population becomes critically important, for example, for the delta index, which expects racial/ethnic groups to be distributed equally per square mile (or per acre) throughout the unit analyzed. The dissimilarity index differs substantially when geographic areas outside the central city are included. In Milwaukee, for example, the dissimilarity index for the City of Milwaukee expects African Americans to make up 69 percent of the combined black and white population in each census tract. Tracts with less than a 69 percent black population (of their black-white population) are considered “too white” and tracts with more than 69 percent black are considered “too black.” When the dissimilarity index is calculated for the four-county Milwaukee-Waukesha MSA, however, African Americans are expected to make up only 18 percent of each census tract’s combined black and white population. For this analysis any tracts more than 18 percent black (of their black-white population) are considered “too black” and tracts with less than 18 percent black are considered “too white.”

- **A serious concern with the Census Bureau study is the use of OMB metropolitan area boundaries to define comparable geographic units.** The Census Bureau posits, “While residential segregation can occur at any geographic level, we have chosen to focus on metropolitan areas as reasonable approximations of housing markets.”²⁵ Outside of New England, under the Office of Management and Budget definitions the metro area boundaries are expanded to include entire counties, encompassing areas that are rural, small towns, and cities only loosely associated with the central city. Although described as comparable urban geographic units for purposes of the segregation index rankings, metropolitan areas vary widely in size and character and their outlying census tracts vary even more. Among the 100 largest metro areas, the land areas range from 47 square miles in the Jersey City metro area to 39,369 square miles in the Las Vegas metro area. The Tucson metro area includes one county, which is 9,186 square miles in size. The Gary metro area covers 915 square miles and two counties. The Milwaukee-Waukesha metro area comprises 1,460 square miles and four counties. (In one of these counties, over half of the land is in farms; in another county, 47 percent of the land is farmland.) The St. Louis metro area spans 6,392 square miles and includes the City of St. Louis plus 12 counties in Missouri and Illinois. The metro area of Atlanta covers 6,124 square miles and includes 20 counties.²⁶ The application of the Census Bureau segregation indexes to such diverse areas (particularly given the index assumptions regarding the value of low density and even dispersal away from urban cores) raises questions that need further exploration from Census Bureau geographers and housing specialists.

- **The indexes used by the Census Bureau assume that racial/ethnic populations are equally distributed within census tracts (and within block groups), even when SF1 block level data show that this is not the case.** The Census Bureau could have studied racial/ethnic segregation at the block level, and to the extent that residential closeness signals racial interaction, the block suggests a better measure than census tracts or block groups.²⁷ Adults may interact at the block level when going to and from work, taking out the garbage, mowing the lawn, taking walks, jogging, and (at least in Wisconsin) shoveling snow. Their children have a higher likelihood of attending the same schools and playing together. In explaining its rationale for choosing census tracts rather than blocks, the Census Bureau report stated,

Arguments can be made that residential segregation indexes ought to be built up from the smallest geographic unit available – the block. Yet we believe it makes less sense to include the residents you may never see (on the opposite edge of a census block as blocks tend not to cross streets) and exclude the residents living across the street (in a different block). Going to larger aggregations of blocks, this problem is mitigated, although it never disappears as all geographies have boundaries. Census tracts, which typically have between 2,500 and 8,000 people, are defined with local input, are intended to represent neighborhoods, and typically do not change much from census to census, except to subdivide.²⁸

It appears spurious for the Census Bureau to argue that residents have as much in common with 2,500 – 8,000 other individuals who live in their census tract (or 600 – 3,000 other individuals living in their block group) as they do with residents who live on the opposite side of their block (and who typically share the same alley).

- **It also appears inappropriate for the Census Bureau to claim that census tracts defined a half-century ago “represent neighborhoods.”** As the Census Bureau itself notes, “*Census tracts...when first delineated*, are designed to be homogeneous with respect to population characteristics, economic status, and living conditions.” [emphasis added]²⁹ Once defined, the

Census Bureau does not allow adjustments of census tract boundaries (except for subdivisions), regardless of whether the neighborhood characteristics change.

The primary reason for using census tracts as the unit of analysis appears to be for historical continuity with the segregation studies of the past four decades. There also appear to be methodological reasons why the Census Bureau could not use blocks as the measurement unit for the segregation indexes it had selected. If so, these reasons should simply be stated. At minimum, one might expect the Census Bureau to use block level data in its maps showing concentrations of white and racial/ethnic groups (rather using dots randomly distributed throughout each census tract).

V. Using Individuals Rather Than Households as the Unit of Analysis for a Study of “Housing Patterns”

While billed as a study of housing patterns, the Census Bureau used population data rather than households (or housing units) as the unit of analysis for all of its indexes. The Census Bureau description of its research as a study of “housing patterns” and identification of spreadsheets as tables of “housing patterns” should be revised. Likewise, the treatment in the formulas of institutional populations, and particularly of prisoners (given the high percentages of non-white males who are incarcerated) requires thoughtful consideration and careful analysis.

- The number of cases for **many of the areas ranked may be too small for statistical analysis** when the household or family decision-making unit is identified as the decision-making unit.
- **In addition to individuals residing in households, the populations used for the Census Bureau segregation indexes included populations in group quarters**, leading to a number of misleading findings (discussed below). One questions why the Census Bureau included state and federal prisoners, nursing home residents, college dorm students, and mental health patients and then assumed an even distribution of population within each census tract (or block group) when applying the segregation indexes. Analysis of changes in household locations by race/ethnicity (and by mixtures of races/ethnic populations within households) might have yielded more useful information for policy deliberations, particularly if integrated or diverse neighborhoods had been mapped or described.³⁰

VI. The “Least Segregated” Cities and Metro Areas in Wisconsin, According to the Census Bureau

In light of the concerns cited above, it may be instructive for policy makers and academics to examine the segregation rankings produced by the Census Bureau for their states in order to determine the perspectives embedded in the Census Bureau approach and to judge the usefulness of the Census Bureau data.

City Rankings for Wisconsin

In Wisconsin, the Census Bureau methodology (using the five-index rankings) identifies the City of Milwaukee as the “most segregated” for African Americans and the City of Brookfield as “least segregated” for African Americans of 22 cities ranked. The urban population mix of Milwaukee is the most diverse in the state – 45 percent white, 38 percent African American, 12 percent Hispanic/Latino, 3 percent Asian, and 1 percent Native American. By contrast, even though it is located less than five miles from Milwaukee, Brookfield is 93 percent white and only 1 percent African American. Rather than

acknowledged for its growing diversity and mixed race neighborhoods, the City of Milwaukee is classified by the Census Bureau as a “highly segregated” city, while white suburbs surrounding it are classified as having low segregation.³¹

Table 3:

**Wisconsin Cities Ranked from “Least Segregated” to “Most Segregated”
for African Americans, According to the Census Bureau Methodology and Indexes**

<u>Rank</u>	<u>Wisconsin City</u>	<u>African Americans</u>	<u>% African American</u>
1	Brookfield	402	1.0%
2	Greenfield	450	1.3%
3	Sheboygan	575	1.1%
4	Janesville	1,037	1.7%
5	Eau Claire	628	1.0%
6	Appleton	906	1.3%
7	New Berlin	246	0.6%
8	Wauwatosa	1,187	2.5%
9	Waukesha	1,096	1.7%
10	West Allis	1,074	1.8%
11	La Crosse	1,040	2.0%
12	Wausau	311	0.8%
13	Fond du Lac	937	2.2%
14	Green Bay	1,978	1.9%
15	Oshkosh	1,516	2.4%
16	Superior	289	1.1%
17	Madison	14,234	6.8%
18	Beloit	6,002	16.8%
19	Racine	17,692	21.6%
20	Fitchburg	1,985	9.7%
21	Kenosha	7,804	8.6%
22	Milwaukee	230,503	38.6%

Note: The Census Bureau indexed all places that had at least 10,000 total population, at least 10 census tracts, and at least 100 persons in the racial/ethnic population analyzed.

In fact, the Census Bureau methodology ranks the City of Brookfield, Wisconsin as the third “least segregated” place in the U.S. (Only Levittown, New York and Sun City, Arizona had better segregation scores.) It appears that Brookfield does very well on the Census Bureau indexes, not only because it has a very small African American population that is spread throughout the city, but also because of the city’s geography. In comparison with other U.S. cities, Brookfield does best on the Duncan’s delta index (which measures whether the racial/ethnic population is spread evenly on the land area within the city boundaries), likely because the housing stock in Brookfield is spread throughout the former countryside and lacks a denser urban core. Brookfield also does well on the so-called isolation index, since those African Americans living in Brookfield typically comprise only 1.2 percent of their census tract’s combined black-white population. (Sun City, Arizona and Coeur d’Alene, North Dakota are even less “African American” – and thus score “best” on the Census Bureau’s isolation index.)

Notably, in Wisconsin the cities ranked as “least segregated” all have very low percentages of African Americans. Indeed, the Milwaukee area suburbs ranked least segregated by the Census Bureau (Brookfield, Greenfield, New Berlin, Wauwatosa, and West Allis) are usually viewed locally as

contributing to racial segregation in the Milwaukee metro area. Interestingly, West Allis shows up as a “less segregated” community even though 94 percent of the African Americans residing in one census tract are located on two blocks where subsidized housing is available. These residents make up nearly a third of all African Americans living in the community. In spite of this high concentration, the Census Bureau formulas report West Allis as ranking 10th in “least segregated” for African Americans.

Metro Area Rankings for Wisconsin

Metro area rankings by the Census Bureau similarly favor areas with very low percentages of non-white populations. For African Americans, the Wausau metro area (i.e., Marathon County) is ranked the “least segregated” metro area in Wisconsin, according to the five-index scale used by the Bureau.³²

Table 4:

Wisconsin “Metro Area” Ranked from “Least Segregated” to “Most Segregated” for African Americans, According to the Census Bureau Methodology and Indexes

<u>Rank</u>	<u>MSA</u>	<u>Counties</u>	<u># of African Americans</u>	<u>% African American</u>
1	Wausau	Marathon	542	0.4%
2	Eau Claire	Eau Claire, Chippewa	906	0.6%
3	La Crosse	La Crosse, Houston (MN)	1,455	1.1%
4	Sheboygan	Sheboygan	1,447	1.3%
5	Green Bay	Brown	3,514	1.5%
6	Appleton-Oshkosh-Neenah	Calumet, Outagamie, Winnebago	3,470	1.0%
7	Kenosha	Kenosha	8,629	5.8%
8	Janesville-Beloit	Rock	7,993	5.2%
9	Madison	Dane	20,241	4.7%
10	Racine	Racine	21,100	11.2%
11	Milwaukee-Waukesha	Milwaukee, Waukesha, Ozaukee, Washington	245,151	16.3%

Note: The Minneapolis-St. Paul and Duluth metro areas were not included as they are located mainly out of Wisconsin.

For Hispanics, Wausau/Marathon County (with an 0.8 percent Hispanic population) is again ranked as “least segregated.” Wausau/Marathon County is ranked “most segregated” for Asians, however, based on the distribution patterns of the largely Hmong population locating in Wausau. Racine County, with an Asian population making up less than 1 percent of its total population, is ranked “least segregated” for this racial group.

Given that two of the main indexes used by the Census Bureau (Duncan’s delta index and the absolute centralization index) expect each ethnic/racial group’s settlement patterns to conform with the distribution of the land mass and distance from a centroid point, the issue of the geography included in the area of analysis becomes crucial. In many of the “metro areas” of Wisconsin analyzed by the Census Bureau, over half of the land is in farm acreage. Other land is zoned industrial or commercial, state and county parkland, wetlands, etc.

Table 5:

**Percent of “Metro Area” Land in Farms
(from the 2002 Census of Agriculture)³³**

Counties in Wisconsin MSAs	% of Land in Farms by County
Milwaukee-Waukesha MSA:	
Milwaukee	4%
Waukesha	28%
Washington	47%
Ozaukee	51%
Madison	
Dane	87%
Appleton-Oshkosh-Neenah	
Winnebago	61%
Outagamie	64%
Calumet	73%
Green Bay	
Brown	58%
Racine	
Racine	58%
Janesville-Beloit	
Rock	75%
Kenosha	
Kenosha	51%
Eau Claire	
Eau Claire	50%
Chippewa	58%
La Crosse	
La Crosse	60%
Houston (MN)	71%
Wausau	
Marathon	54%
Sheboygan	
Sheboygan	59%
Other non-residential land uses include industrial and commercial parcels, state and county parkland, and wetlands.	

It becomes fairly meaningless for indexes of urban segregation to expect that racial/ethnic groups will be distributed equally on farmland or to indirectly suggest that the absence of such settlement patterns reflects persistent racial discrimination. In the Milwaukee-Waukesha MSA, the presence of large tracts of farmland in three of the four counties (only Milwaukee County is a solidly urban county) mitigates against even distributions of urban populations.

VII. A Case Study of the Sheboygan MSA

The limitations of the methodology and definitions used by the Census Bureau are shown for the primary metropolitan statistical area (MSA) of Sheboygan, Wisconsin. The Sheboygan MSA was ranked 4th least segregated – better than average -- of the 11 metro areas in Wisconsin for African Americans, and far less segregated than the urban areas with notable African American populations (i.e., Milwaukee, Racine, and Kenosha). On its website, the Census Bureau reported the following “housing patterns” for the Sheboygan MSA.

Table 6:

Census Bureau Segregation Index Rankings for Sheboygan MSA

	<u>1980</u>	<u>1990</u>	<u>2000</u>
Segregation Index			
Dissimilarity	0.687	0.573	0.500
Isolation	0.051	0.055	0.088
Duncan's Delta	0.693	0.639	0.679
Absolute Centralization	-0.125	-0.074	0.115
Spatial Proximity	1.046	1.048	1.090
Population			
African Americans	309	430	1,447
Total Population	100,935	103,877	112,646

The Sheboygan MSA is actually Sheboygan County, which includes the City of Sheboygan (located on Lake Michigan, 50 miles north of Milwaukee) as its “central city” and the remainder of the county in which that city is sited. Sheboygan County has always had a very small African American population (of 1 percent or less) and would generally be considered a “white” and largely rural county. The county includes 13 places, with a total population of 89,193, or 79 percent of the MSA’s 112,646 population. These places are located on 5 percent of the land area of the county.

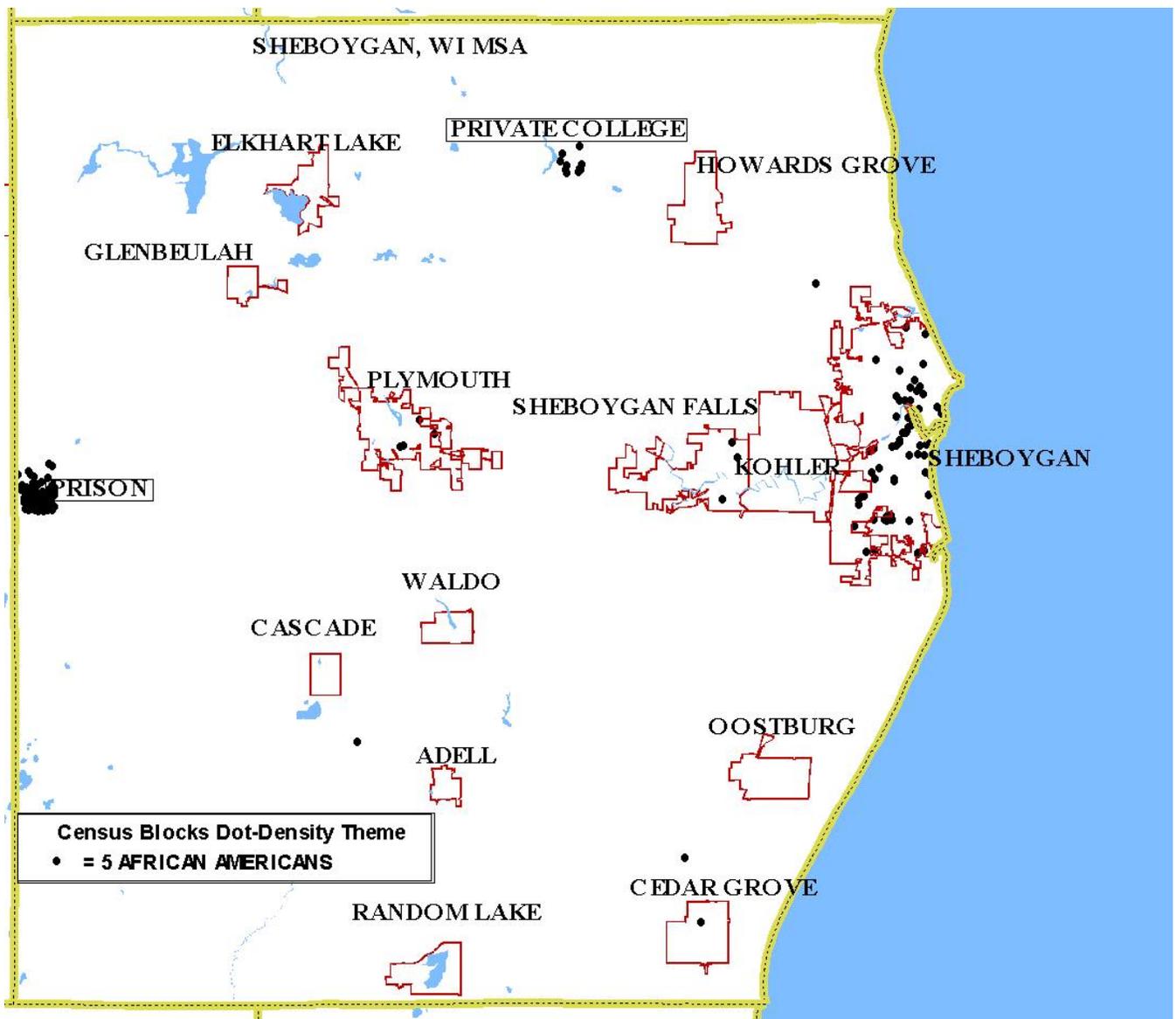
Examination of the geography of Sheboygan County raises several immediate concerns about the application of the delta and absolute centralization indexes to this MSA. There is little reason to expect the population of each racial/ethnic group (African American, Latino, Native American, Asian, or white) to be evenly distributed on a per square mile basis throughout the county (as the delta index expects) nor is there any reason to expect the racial/ethnic groups to live near or far from the population centroid of the county (as the absolute centralization index measures). In 2000 the population centroid of Sheboygan County was located in Sheboygan Falls, a small city to the west of Sheboygan. This location has no particular historic significance for settlement patterns – or less or more desirable housing.

There has been some migration of African American households to Sheboygan County (from 33 in 1990 to 146 in 2000) and those households have settled mainly in the City of Sheboygan. African Americans are also attending Lakeland College, a private school located in rural Sheboygan County. What appears to be of most significance for the very small African American population in Sheboygan County is that over half counted in the 2000 Census are in group quarters and not part of households. The use of population rather than housing units to measure “housing segregation” results in the institutionalized and group quarters population skewing the rankings due primarily to the location of a state prison (Kettle Moraine Correctional Institution, KMCI) occupying three census blocks of land in the most rural census tract of the MSA (Tract # 104). The three blocks of the correctional institution make up 1 percent of the land area of Tract #104, but account for 637 of the 642 African Americans living in the

tract and 637 of the 1,447 African Americans living in the county. The segregation indexes used by the Census Bureau assume that these prisoners are evenly distributed within Tract #104 (and have access to the same land area for their housing), but this is obviously not the case.

Had the prison population been excluded, Sheboygan County (given its very small African American population) would have likely scored even better as a “less segregated” MSA for African Americans. However, residential block level analysis shows only 3 blocks in the Sheboygan MSA with a 20-20 black-white population, i.e., a population that is at least 20 percent African American and also at least 20 percent white (a standard we used in our integration analysis to signal blocks with some level of meaningful black-white integration). There are another 86 blocks with at least one African American living on a block that is 80 percent or more white.

Distribution of the African American Population by Census Blocks in the Sheboygan MSA: 2000 U.S. Census



Had the Census Bureau used households or family units to study housing segregation, the data suggests that far different results would have emerged. An analysis of Sheboygan County by households shows 3,562 blocks of which 2,697 have at least one household. Of these, 2,527 have no African American households, and yet these 2,527 blocks account for 87 percent of all households in the MSA. Note also the very small number of African American households in this MSA – only 17 of 35,433 households in 1980 and only 146 of 43,545 households in 2000. The number of families, typically the unit of concern with discussions of racial segregation, is even smaller. These numbers raise serious questions about the statistic validity of the Census Bureau indexes.³⁴

Table 7:

U.S. Census Data on Population in the Sheboygan MSA: 1980-2000

	All Races			African Americans			
	Total Population	Number of Households	Number of Families	Total Population	Population Not in Group Qtrs.	Number of Households	Number of Families
1980	100,935	35,433	26,952	309	80	17	15
1990	103,877	38,592	28,006	430	146	33	25
2000	112,646	43,545	29,936	1,447	667	146	100

Time constraints precluded a full analysis of the Census Bureau indexes and five-index rankings for other racial/ethnic groups in Wisconsin, but preliminary review suggests that the Census Bureau indexes do not offer useful representations of racial changes since 1980 or 1990 nor do they appear to provide fair comparisons of communities, counties, or MSAs in the state.

VIII. Should the Census Bureau Expand Its Rankings Reports for Metro Areas and Cities?

The American public looks to the Census Bureau for the most accurate possible count of its citizenry and for descriptions of current social and economic conditions, and Congress awards considerable public funds to support these efforts. In the case of the Census Bureau housing segregation ranking studies, the Census Bureau has embraced a research methodology which is popular with a relatively small group of academics, but which suggests controversial approaches to racial segregation based on inconsistent definitions of race, simplistic assumptions about the geography of urban areas, and methodologies with statistical limitations. The Census Bureau segregation rankings reflect one set of competing values regarding racial mixing, and it is questionable whether the Census Bureau is the appropriate body to develop consensus around these politically charged and emotional issues.

Further, while the CENSR-3 Publication and other Census Bureau ranking studies generate headlines, they offer few insights into actions needed to address involuntary segregation, housing discrimination, and economic disparities within or among communities. The Census Bureau provides databases that policymakers, academics, and others can use to conduct their own research in areas such as racial/ethnic segregation and integration. It does not appear productive for the U.S. Census Bureau to divert its resources to ranking studies based on 5 (or 19) of hundreds of potential perspectives on racial mixing or to lend its name (and its reputation) to ranking schemes based on perspectives that many Americans may not share.

Endnotes

¹ Lois Quinn is a senior research scientist at the University of Wisconsin-Milwaukee. In the 1970s she assisted the U.S. District Court Special Master John Gronouski in analyzing the pupil movement by race required under various desegregation plans presented by the Milwaukee Public Schools in response to a federal court order to desegregate its schools. She subsequently served for three years as executive director of the Metropolitan Integration Research Center where she collected evidence on government actions contributing to housing and school segregation in the Milwaukee area for a metropolitan school lawsuit; co-authored a research study for the National Institute of Education on interrelationships between school desegregation and government housing programs; and testified for community organizations in legal challenges to the closing of North Division High School and other predominantly African American schools to the neighborhood African American students.

² Iceland, John, Daniel H. Weinberg, and Erika Steinmetz, **Racial and Ethnic Residential Segregation in the United States: 1980-2000** (Washington, D.C.: U.S. Government Printing Office, 2002); “Housing Patterns” website at <http://www.census.gov/hhes/www/resseg.html>.

³ Lois M. Quinn and John Pawasarat, **Racial Integration in Urban America: A Block Level Analysis of African American and White Housing Patterns** (University of Wisconsin-Milwaukee Employment and Training Institute, December 2002, revised January 2003). The study is available online at <http://www.uwm.edu/Dept/ETI/integration/integration.pdf> and included as Appendix A.

⁴ Elizabeth M. Grieco, “The White Population: 2000” Census 2000 Brief, Issued August 2001 (C2KBR/01-4).

⁵ U.S. Census Bureau, “Overview of Race and Hispanic Origin: 2000” Census 2000 Brief, Issued March 2001 (C2KBR/01-1).

⁶ Daniel H. Weinberg quoted in “Residential Segregation of African Americans Declines; Signals Mixed for Other Groups, Analysis Shows,” Press Release of the U.S. Census Bureau, November 27, 2002. Online at <http://www.census.gov/Press-Release/www/2002/cb02cn174.html>.

⁷ *Ibid.*, 117.

⁸ Douglas S. Massey and Nancy A. Denton, “The Dimensions of Residential Segregation,” **Social Forces** 67: 281-315.

⁹ Bruce Murphy, “UWM Research Sheds New Light on Census Findings,” **Milwaukee Journal Sentinel**, January 18, 2003, available online at <http://www.jsonline.com/news/metro/jan03/111860.asp>.

¹⁰ Douglas S. Massey and Nancy A. Denton, **American Apartheid: Segregation and the Making of the Underclass** (Cambridge, Mass.: Harvard University Press, 1993), 75.

¹¹ Massey and Denton, “Dimensions of Residential Segregation,” 291.

¹² In Milwaukee, for example, Mexicans immigrants settled near factory districts on the city’s south side. See Joseph A. Rodriguez, “Home Ownership and Ethnic Culture: Mexicans in Milwaukee after World War II,” paper presented at the Social Science History Association meeting, November 5-8, 1992.

¹³ “Census Business Districts: 1982 Census of Retail Trade” website posted at <http://www.census.gov/geo/www/cbd.html>.

¹⁴ Iceland, Weinberg, and Steinmetz, **Racial and Ethnic Residential Segregation**, 121.

¹⁵ “Housing, Diversity and Choices: A Metro Milwaukee Opinion Survey,” Public Policy Forum, September 2004.

¹⁶ Karl E. Taeuber and Alma Taeuber, **Negroes in Cities: Residential Segregation and Neighborhood Change** (Chicago: Aldine Publishing Company, 1965), quoting from Morton Grodzins, **The Metropolitan Area as a Racial Problem** (Pittsburgh: University of Pittsburgh Press, 1958), 100.

¹⁷ In his 1971 study on **The Black Ghetto**, Harold Rose of the University of Wisconsin-Milwaukee observed that the terminology used by white scholars to describe racial changes in neighborhoods, while derived from descriptions of plant ecology, “has come to represent the white residents’ perception of events in the struggle for residential space, and in all likelihood the white writer’s perception as well.” Harold M. Rose, “The Development of an Urban Subsystem: The Case of the Negro Ghetto,” **Annals of the Association of American Geographers** (March 1970), 4, cited in Harold M. Rose, **The Black Ghetto: A Spatial Behavioral Perspective** (New York: McGraw-Hill Book Company, 1971), 8.

¹⁸ Taeuber and Taeuber, **Negroes in Cities**, 29-30.

¹⁹ Bruce Murphy, “Segregation Data Based on Racist Premise, Critics Say,” **Milwaukee Journal Sentinel**, January 12, 2003, available online at <http://www.jsonline.com/news/metro/jan03/110290.asp>.

²⁰ The dissimilarity index approach toward desegregation is not a mere abstraction, but represents an ideological approach that has been used in school desegregation cases. The initial Milwaukee Public Schools desegregation plan, for one, was based on such an approach. Concerned (as were the early proponents of the dissimilarity index) with “tipping” and “white flight,” the federal court ordered that schools be considered desegregated if they were no more than 25-50 percent black (an “evenness” range, given the racial mix at that time). The first year desegregation plan prepared by the all-white school board was designed to require mandatory reassignment of up to 5,800 black children from their predominantly black schools while no more than 350 white children would be given mandatory reassignments. Nearly all of first year desegregation resulted from movement of black children out of their neighborhood schools and into predominantly white schools throughout the city. A two-way concept of desegregation, using pairing and clustering of schools, would have produced far different bussing patterns, and burdens, by race. Analysis of the author for the federal court, 1976-1978.

²¹ Under the Duncan approach, the formula used is $2pqD$, where D equals the dissimilarity index, p represents the metro area’s black population expressed as a percentage of the metro area’s combined black and white populations, and $q=1-p$, or the percentage white of the metro area’s combined black and white population. Taeuber and Taeuber, 30.

²² Sarah Carr, “State’s Schools Called Segregated,” **Milwaukee Journal Sentinel**, January 22, 2003, online at <http://www.jsonline.com/news/metro/jan03/112671.asp>.

²³ Massey and Denton, **American Apartheid**, 120-121.

²⁴ Scholars and the press often ignore racial integration occurring in the large urban centers and focus on dispersal of small African American populations into suburban and exurban areas of metropolitan counties, based on the dissimilarity index approach to measuring “segregation.” Edward L. Glaeser and Jacob L. Vigdor in a paper for The Brookings Institution, for example, concluded, “The decline in segregation comes about primarily from the integration of formerly entirely white census tracts.” Glaeser and Vigdor, **Racial Segregation in the 2000 Census: Promising News** (Washington, D.C.: The Brookings Institution Center on Urban and Metropolitan Policy, April 2001), 1.

²⁵ *Ibid.*, 7.

²⁶ U.S. Census Bureau, “GCT-PH1 Population, Housing Units, Area, and Density: 2000.”

²⁷ See, Quinn and Pawasarat, **Racial Integration in Urban America**. The report presented five examples of racial combinations by residential block: blocks with at least 20 percent African American and at least 20 percent white populations, majority white blocks with at least 50 percent white population and less than 20 percent African American population, blocks with at least 50 percent African American population and less than 20 percent white

population, blocks with more than 80 percent black population, blocks with more than 80 percent white population. We also examined blocks with various mixes of African American, Latino, and Asian populations, blocks with 3 or more racial/ethnic groups each comprising at least 10 percent of the population, and many other combinations. We selected residential blocks rather than census tracts as the unit of analysis because we believe that blocks are more sensitive to interaction between races.

²⁸ Iceland, Weinberg, and Steinmetz, **Racial and Ethnic Segregation**, 8.

²⁹ “Census Tracts and Block Numbering Areas,” U.S. Census Bureau website at http://www.census.gov/geo/www/cen_tract.html.

³⁰ The race of the head of household could have been used. Absent that, the population in group quarters could have been excluded (by race/ethnicity) from the analysis, or blocks with more than a third of the population in group quarters could have been excluded as we did in our study.

³¹ Over a fifth (21.7 percent) of Milwaukee’s population live on blocks where at least 20 percent of the population are African American and at least 20 percent are white – one definition of black-white integration offered. See Quinn and Pawasarat, **Racial Integration in Urban America**.

³² The siting of state prisons outside of major metropolitan areas contributes to problems with many of the Census Bureau rankings and assumptions. Nearly a third of the African Americans counted in the 2000 Census in the Appleton-Oshkosh-Neenah metro area (i.e., Calumet, Outagamie, and Winnebago counties) were incarcerated in correctional facilities; the Census Bureau indexes and five-index ranking system showed that area in the middle (6th) of the Wisconsin rankings for segregation of African Americans.

³³ United States Department of Agriculture National Agricultural Statistics Service, “2002 Census of Agriculture” (U.S. Department of Agriculture, Wisconsin Counties), posted at www.nass.usda.gov.

³⁴ The Census Bureau disclaimer, automatically printed on each of the “Housing Patterns Place Table,” states: “Because of their complexity, segregation indexes are particularly subject to programming error. Indexes for places with small minority populations are also less reliable than those with larger ones.” This hardly appears adequate notice for reporting indexes for places where the Census Bureau data shows very small numbers of households and families compared to the number of census tracts and/or where the Census Bureau data shows most of the non-white populations in group quarters or limited to a very small number of blocks.

Racial Integration in Urban America: A Block Level Analysis of African American and White Housing Patterns

by Lois M. Quinn and John Pawasarat, Employment and Training Institute, School of Continuing Education, University of Wisconsin-Milwaukee, December 2002, revised January 2003

Rankings – whether of cities, states, universities, or high school students -- are very popular with the media and the public. These rankings often purport to measure highly complex conditions based on a single statistic and sometimes can be very damaging for the entities ranked. A recent report on **Exposing Urban Legends: The Real Purchasing Power of Central City Neighborhoods**, conducted by the University of Wisconsin-Milwaukee Employment and Training Institute for The Brookings Institution, examined the damage that marketing firms do to cities by ranking neighborhoods based on average household income from richest to poorest and then using racial and other stereotypes that steer retail businesses away from central city neighborhoods. This study examines the basis for the segregation index, which has been used historically to compare urban areas, in order to determine why Milwaukee was ranked as the 3rd most segregated metro area in the U.S. and to assess the strengths and limitations of the formula used to calculate the rankings.

Findings

- The segregation index appears to represent an obsolete and racially-biased approach based on a white majority view of segregation. Historically concerned with “white flight” and “racial tipping,” the index ranks metropolitan areas on the degree to which the African American population is evenly dispersed, with the goal of the same white-black ratio in every census tract.¹ For the four-county Milwaukee area, census tracts that are more than 16-18 percent black are considered segregated by the index. For the Salt Lake City-Ogden metro area, which is ranked as one of the best on the segregation index and close to the “ideal,” the desired goal is to have a less than 2 percent black population in each census tract.²
- The index is based on a one-way concept of desegregation where blacks are expected to move into white areas, but whites are not expected to move into majority black areas. Milwaukee’s metro ranking on the index (82.16) is based on the “ideal” of moving 197,890 blacks of the total 240,859 black population (or 82.16%) out of their “too black” census tracts and into the remaining “whiter” tracts.³
- In urban areas with substantial black populations, the “ideal” of the segregation index would require most of the black population to move into neighborhoods with fewer black residents. While claiming to be race-neutral, the index has historically been used to measure progress toward the dispersal of blacks into geographic units where they would remain in the minority. Each decade, after the black population fails to move in the high percentages needed to become “evenly” dispersed (i.e., “non-segregated” under the index), cities are declared continually resistant to integration.
- The segregation index can only rank two races at a time, so that diverse urban populations of Latinos, Asians, and Native Americans are not factored into the black-white segregation rankings. First, all Hispanics, regardless of stated race, are excluded. The remaining black-white racial categories reflect 19th century definitions. Any persons identified in whole or in any part as black or African American are considered “black.” Only those white persons with no other racial identity are considered “white.”

An alternative definition of black-white integration is presented in this paper, not as a competitive model for ranking cities and metro areas, but to expose the biases and limitations of the segregation indexes. It represents a radical departure from the white domination approach to desegregation that was introduced in the 1950s and that has persisted in the segregation index rankings. Unlike the historic segregation index, the integration measure reflects a democratic perspective that both majority white and majority black

neighborhoods may be considered integrated, that is, if an 80 percent white and 20 percent black population is acceptable for a residential block, then an 80 percent black and 20 percent white population should be acceptable as well. Using this new definition of black-white integration, this study analyzed the racial composition of 8.2 million blocks in the U.S. We find that:

- The five metro areas that the historic index ranks as “least segregated” for African Americans and whites are Albuquerque, Honolulu, El Paso, Orange County (California), and Salt Lake City-Ogden. These five metro areas have a combined population of 6.5 million, but only 48,803 residents (less than 1 percent) living on black-white integrated blocks. The bias of the historic segregation index against “too black” communities and in favor of non-black areas can be seen in the metro areas ranked as “least segregated.” These metro areas fall to the bottom using the new black-white integration measure, that is, are the least black-white integrated.
- Many of the Midwestern cities that are ranked as among the “most segregated” on the historic segregation index show average or above average rates of integration when actual counts are made of residents living on black-white integrated blocks. The Milwaukee-Waukesha metro area is ranked 98th worst out of 100 on the historic segregation index, but its percentage of population living on black-white integrated blocks ranks near the middle – 43rd highest out of the 100 largest metro areas. (See Table 2) The Cleveland-Lorain-Elyria metro area is ranked 94th worst on the historic segregation index, but its percentage of population living on black-white integrated blocks ranks at 36th highest out of 100. The Buffalo metro area is ranked 93rd worst on the historic segregation index, but has a 55th ranking of residents living on black-white integrated blocks. Cincinnati and St. Louis are also labeled among the most segregated metro areas by the segregation index, but are in the top third of metro areas with integrated populations.
- The 20 metro areas with the highest percentages of residents living on black-white integrated blocks (16 to 39 percent) are all located in the South. These were not, however, the top metro areas identified by the historic segregation index.
- When major city (rather than metro) populations are compared, the City of Milwaukee’s proportion of residents living on black-white integrated blocks ranks it in the top ten out of the fifty largest cities in the U.S. (Table 1) In the City of Milwaukee one out of every five residents (21.7 percent) lives on a black-white integrated block. Integrated blocks are located on the northwest side, the west side, and the east of the river areas of the City. (Maps 1 and 2) The absence of integrated blocks in the Milwaukee area suburbs and exurban communities contributed to a much lower percentage of residents (9.1 percent) living in black-white integrated blocks for the four-county Milwaukee-Waukesha metropolitan area. (Map 3)
- For maps of integrated, predominantly black, and predominantly white neighborhoods in each metropolitan area, see **Density Maps of the African American and White Populations in the 100 Largest Metro Areas** at www.uwm.edu/Dept/ETI/integration/maps.htm.

Conclusion

This block level analysis raises serious questions about the white-black dissimilarity segregation index historically used to rank metropolitan areas and its assumptions about the lack of integration occurring in many cities with large African American populations. No single statistic or set of statistics can capture the complex population mix and levels of integration and segregation in urban America, and the current segregation rankings of cities and metropolitan areas – while popular in the media – appear to offer little insight into the configuration of neighborhoods in cities with large African American populations. Given housing preferences and electoral successes of African Americans in majority black neighborhoods and cities, emphasis on even dispersal of

African Americans throughout each metropolitan area can hardly be considered a national goal with broad-based consensus. Further, in-migration of Latino and Asian populations has brought increasing diversity to urban neighborhoods. In this context, integration may appropriately be defined as successful mixing of diverse populations, rather than the continued dominance of neighborhoods by an urban white majority.

Much of the United States remains racially segregated, with almost a third of the African American population living on blocks that are more than 90 percent black and over half of the white population living on blocks that are more than 90 percent white. The data for Milwaukee and other metro areas clearly suggest the need for remedial efforts to combat racial discrimination and racial steering in housing; to support affirmative housing opportunities, particularly for low and moderate income African American families interested in moving into suburban areas; and to provide public and private support for integrated and diversified neighborhoods.

The implicit goal of the segregation indexes, that is, integrating urban America by diluting the population of black residents in individual neighborhoods, is one, however, which requires serious reexamination. This preliminary development of an alternative measure of integration – which views black and white populations as equal partners in the integrating process – is a first step toward articulating goals that may assist cities in identifying the strengths and weaknesses of their population mixes. Public policy makers are encouraged to use block level 2000 census data to offer other tests of racial integration and to develop new measures of diversity in order to identify and address the racial challenges of the 2000s.

I. Methodology

One of the most repeated claims and damaging urban legends is that Milwaukee is the second or third most segregated city in the country. This study examines the basis for the historic statistical tool used to define “segregation” in Milwaukee and compares the national “segregation” rankings to actual counts of residents living on racially integrated blocks in each city and metropolitan area in the United States. The research identifies serious problems with the traditional segregation and “hyper-segregation” indexes and challenges statistical approaches that consider modestly integrated neighborhoods as “too black” while ranking cities with very low African American populations as “least segregated.” The historic context for the segregation indexes is also explored, given the concern of many academic researchers in the 1960s and 1970s with neighborhood “tipping points” and racial biases of white homeowners.

In the 2000 census, respondents were asked to check up to **fifteen racial categories** that each household member considered himself/herself to be, including: white; black, African American, or Negro; American Indian or Alaska Native; any of eleven groups of Asian and Pacific Islander; or “some other race” that could be specified by the respondent. Additionally, respondents were asked whether they were Spanish/Hispanic/Latino.

While a growing number of sociologists are pouring over the 2000 census data analyzing the complex overlay of racial identity in 21st century urban America, the researchers calculating segregation indexes for the Lewis Mumford Center for Comparative Urban and Regional Research at the State University of New York at Albany and the U.S. Census Bureau used definitions that are reminiscent of the 19th century “one drop rule.” Whites are defined, not as any one who told the U.S. census they were white, but only those persons who told the census they were **white and white only**. Persons who reported that they were white and Native American, Asian, black or other race are considered of another race. The census bureau report states, “The reference group – non-Hispanic Whites – is always defined as those who report being White alone, and who are not of Hispanic origin.”⁴ By contrast, “blacks” are persons with **any part black** (except, as noted, Hispanic): persons who are white and black, white and black and Native American, Asian and black, that is, any mixture that includes black. **Because these definitions are those used for the segregation index rankings, and for that reason alone, these racially biased definitions are also used in this analysis.**

For our integration research measure the racial composition of all 8.2 million blocks in the United States was examined for the 2000 U.S. Census. Population data files were examined for individual blocks, block groups, census tracts, cities, and metropolitan areas. **Blocks**, rather than census tracts, were chosen as the unit of analysis since they are more sensitive to whether interaction is occurring between races. To the extent that residential closeness signals racial interaction, the block suggests a better measure than block groups or census tracts.⁵ In a number of cases, the census tract (a much larger geographic unit, typically containing 2,500 to 8,000 residents) may include sizeable mixtures of black and white populations even though most blocks in the tract are not racially mixed. Blocks are considered “**black-white integrated**” if at least a fifth (20 percent) of their population is black and at least a fifth is white. The historic segregation index appears to have a built-in bias suggesting that integration (or non-segregation) is defined by what the majority will tolerate. Its goal of “evenness” of the white majority and black minority reflects this perspective. The integration measure used here (at least 20 percent black and at least 20 percent white on a residential block) describes a more democratic ideal that suggests that each racial group finds the other group acceptable as neighbors.

In order to eliminate blocks that appear integrated due to the presence of **institutionalized populations**, all U.S. blocks were identified with institutionalized residents (i.e., prison inmates; patients in nursing homes, mental hospitals or wards, hospitals or wards for chronically ill patients, and hospices).⁶ Blocks where over a third of the residents are institutionalized are excluded from the count of residentially integrated populations. The **percentages** of city (or metropolitan) residents living on black-white integrated blocks are calculated by dividing the total population living on black-white integrated blocks by the total city (or metropolitan) population minus the excluded population living in blocks with one-third or more institutionalized persons. The findings for these analyses are then compared to the rankings historically used by academics to compare segregation in urban areas.

II. History of the Segregation Index

Much of the research work on residential segregation developed out of the University of Chicago and focused on racial changes in Chicago neighborhoods. In 1955 Otis Dudley Duncan and Beverly Duncan of the University of Chicago published an analysis of segregation indexes in the **American Sociological Review**, identifying strengths of various conceptual models.⁷ The historic dissimilarity segregation index most commonly used today to rank metropolitan areas and cities as to their degree of segregation was popularized by Karl and Alma Taeuber of the University of Wisconsin, who prepared historic segregation rankings for U.S. cities and discussed the discriminatory practices contributing to segregation of Midwestern cities in their book **Negroes in Cities**, published in 1965. Segregation was defined as the lack of “even” distribution of the black population. Taeuber and Taeuber explained, “Our segregation index is an index of dissimilarity, and its underlying rationale as a measure of residential segregation is simple: Suppose that whether a person was Negro or white made no difference in his choice of residence, and that his race was not related to any other factors affecting residential location (for instance, income level). Then no neighborhood would be all-Negro or all-white, but rather each race would be represented in each neighborhood in approximately the same proportion as in the city as a whole.”⁸

In the 1960s the dissimilarity index addressed two major concerns of academic researchers. First, settlement patterns of African Americans to urban areas, particularly in Chicago and other industrial cities of the Midwest, were shaped not only by the time periods in which African Americans arrived in the northern cities, but also by public and private discriminatory actions. White real estate agents, homeowners and landlords often discriminated against African Americans seeking access to housing as they migrated to the North. The federal government itself redlined in the granting of home mortgages under the Federal Housing Administration and Veterans Administration, enforced racially restrictive covenants placed on deeds in new subdivisions, funded racially segregated housing projects, and supported “urban renewal” projects that displaced low-income residents. Many municipalities prohibited public housing for returning World War II veterans and lower-income families to prevent non-white families from entering their communities. Others enacted restrictive zoning laws that limited new construction housing options for low and moderate-income families.⁹ When the federal Fair Housing Act

was finally passed in 1968, researchers saw the dissimilarity segregation index as a tool to measure progress toward open housing.

Much of the concern about neighborhoods in racial transition centered on the observed unwillingness of urban white residents to remain in or move into racially mixed neighborhoods. Researchers spoke of a theoretical “tipping point,” which Taeuber and Taeuber described as “the percentage Negro in an area which ‘exceeds the limits of the neighborhood’s tolerance for inter-racial living.’”¹⁰ (In this quotation, the term “neighborhood’s tolerance” actually refers to the white residents’ tolerance.¹¹) Along with measuring movement of African Americans into previously all-white neighborhoods, in large part the dissimilarity segregation index addressed the concerns of a white population (and mainly white academic researchers) with “tipping,” by identifying the lowest possible black neighborhood population that could be achieved if blacks were spread evenly throughout the city or the entire metro area.¹² Taeuber and Taeuber explained the approach: “The value of the index may be interpreted as showing the minimum percentage of non-whites who would have to change the block on which they live in order to produce an unsegregated distribution – one in which the percentage of non-whites living on each block is the same throughout the city (0 on the index). For instance, if some governing council had the power and the inclination to redistribute the population of Birmingham so as to obtain an unsegregated distribution of white and non-white residences, they would have to move 92.8 per cent of the non-whites from blocks now containing an above-average proportion of non-whites to blocks now disproportionately occupied by whites.”¹³ Taeuber and Taeuber calculated segregation indexes based on block data as well as on census tract data.

The segregation index has been used to rank cities and metropolitan areas regardless of their population size or the size of the black population. Rather than recognizing a range of population mixes as integrated (or non-segregated), the index seeks an even distribution of the black population in the metro area as the ideal condition. The index number itself represents the percentage of black residents who would have to move out of their present census tracts and into “whiter” tracts so that all census tracts would have an identical percentage mix of white and black populations.¹⁴ While purporting to be race-neutral, the index has historically been used to measure progress toward the dispersal of blacks into geographic units where they would remain in the minority – and often as a very small minority.¹⁵ In **Negroes in Cities**, Taeuber and Taeuber reported receiving correspondence from Otis Dudley Duncan suggesting that “a more effective redistribution of the population to achieve desegregation could be made by having white and non-white households exchange residences.”¹⁶ This simple adjustment of the segregation index formula to expect that both black and white residents could be expected to move to achieve the index goal of even white-black populations in each census tract – which was not pursued – would create a dramatically different ranking of the metro areas on the segregation index. (In 2000, the rankings for 47 of the 100 largest metro areas would shift by 20 or more places if white residents were also expected to move for racial “evenness.” Milwaukee’s ranking would improve by 19 places.)¹⁷

When most U.S. cities were majority white, the segregation index was typically applied to measure “evenness” of the black population within city boundaries. Once suburbanization of white residents expanded urban centers and some major cities became majority black, scholars and open housing advocates began using the index primarily for metropolitan statistical areas, as defined by the federal Office of Management and Budget.¹⁸ Even though emphasis on dispersal of their population throughout the metropolitan area was increasingly challenged as a primary housing goal after African Americans gained political power in major U.S. cities and electoral districts, the dissimilarity segregation index continued to be used by academics as the primary measure of black-white racial trends. A number of other segregation indexes have been introduced, but none reached the popularity of the dissimilarity segregation index. It was easy to calculate, especially with the availability of computers; produced an impressively precise number; and typically generated newspaper headlines, at least for the cities ranked as most segregated.

When the dissimilarity segregation index is applied to the Milwaukee metro area in 2000, its score is 82.16% based on the “ideal” of moving 197,890 blacks of the total 240,859 African American populations out of

their “too black” census tracts and into the remaining “whiter” tracts. When the dissimilarity index is applied to the Hispanic population as a Latino-white index, it expects 59.5 percent of the Latino population, or 56,200 residents, to move from “too Latino” neighborhoods.

Other Segregation Indexes

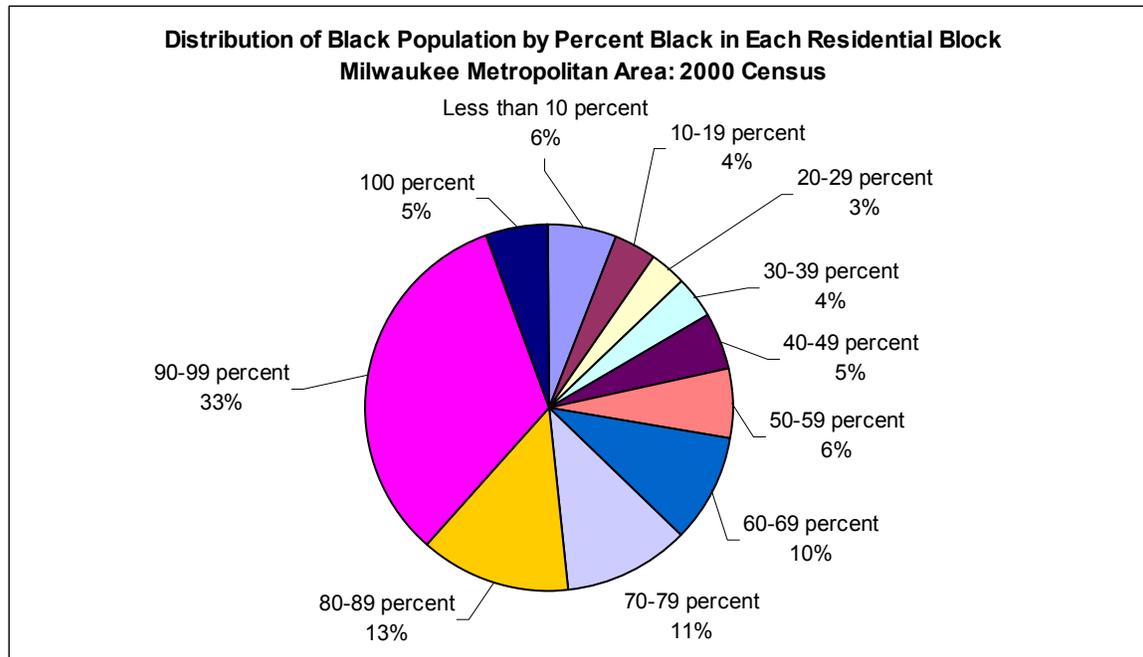
In the late 1980s, Douglas Massey and Nancy Denton brought renewed publicity to the segregation index by coining the term “hypersegregation,” which they used to describe many metropolitan areas with the largest black populations.¹⁹ In addition to the historic segregation index, Massey and Denton used an “isolation index” to calculate the average percentage of other blacks living in census tracts with blacks. Massey and Denton rank the percentages on a scale from 0 to 100 percent.²⁰ For example, in 1990 the “isolation index” ratings in Anaheim, California, and the Salt Lake City-Ogden, Utah metro areas were each 0.4 percent, indicating that on average blacks lived in census tracts that were had only a 0.4 percent black population. Massey and Denton considered these the **best** rankings among major metropolitan areas.²¹ Metro areas where blacks typically live with more than 60 percent other blacks are considered candidates for the Massey-Denton “hypersegregation” category. Under this approach, blacks are considered “isolated” when they live with a substantial majority of other blacks. They are not considered “isolated” when they live in nearly all-white census tracts.

A third measure (“absolute centralization”) used by Massey and Denton reflects a racial dispersal goal that the black population should be distributed in equal distances from the central business district to the borders of the metro area, in this case regardless of where the urban housing stock or populations are located in the region. (In the case of Milwaukee, this means that the black population should be spread equally from the heart of downtown to the Sheboygan, Fond du Lac, Dodge, Jefferson, Walworth, and Racine county lines.) Massey and Denton have chosen to rank metro areas where the black population is located closer to the center of the city as most “segregated” and the metro areas where the black population has more settlements in the suburban, exurban and rural portions of the metro area as least “segregated.”

None of the indexes used by Massey and Denton actually calculate the percentage of blacks living in all-black neighborhoods or the percentage of whites living in all-white neighborhoods.²² Yet, in spite of the limitations of their methodology, in 2001 Massey went so far as to describe the metro areas that they had labeled “hypersegregated,” including Milwaukee, as follows:

Blacks in these areas live within large, contiguous settlements of densely inhabited neighborhoods packed tightly around the urban core. Inhabitants typically would be unlikely to come into contact with non-Blacks in the neighborhood where they live. If they were to travel to an adjacent neighborhood, they would still be unlikely to see a White face. If they went to the next neighborhood beyond that, no Whites would be there either. People growing up in such an environment would have little direct experience with the culture, norms, and behaviors of the rest of American society, and have few social contacts with members of other racial groups.²³

The graph below shows the actual distribution of the black population in metro Milwaukee by residential block. Black residents live in a variety of settings – from predominantly white neighborhoods, to majority white integrated neighborhoods, to majority black integrated neighborhoods, to predominantly black neighborhoods. In all, 5 percent of the black population (13,156 blacks) live on residential blocks that are 100 percent black and 33 percent live on blocks that are 90-99 percent black, while 62 percent live in largely mixed race situations. The Massey description of absolute lack of contact with non-black populations is not actually tested by his indexes and does not hold for the black population in metro Milwaukee.



A new report by U.S. Census Bureau staff uses a similar approach to rank large metro areas on their level of residential segregation (with separate rankings for African Americans; Hispanics; American Indians and Alaska Natives; and Asians, Native Hawaiians, and other Pacific Islanders).²⁴ Five values are measured by the census bureau indexes:

- No neighborhood should have a higher percentage black (of the black-white population total) than the percentage black for the metro area as a whole.
- African Americans are most “isolated” when they live in neighborhoods that are majority black and least “isolated” when they live in neighborhoods that are majority white.
- Black neighborhoods should not be adjacent to each other.
- The African American population should be distributed in equal distances from the center of the metro area regardless of the location of housing in the area.
- The African American population should have the same concentration per square mile in every census tract in the metro area, regardless of whether that tract is urban, suburban, exurban, or rural. (the “delta index”)

Like the Massey-Denton approach, the census bureau rankings have combined the anti-minority biases of the dissimilarity and isolation indexes with anti-urban indexes valuing population redistribution onto farmland and “urban sprawl” areas surrounding the central cities. The census bureau’s “delta index” expects the black population to be evenly distributed on the landmass in each metropolitan area, regardless of land usage (residential, commercial, industrial, rural) and location of existing housing.²⁵ For the Milwaukee metro area, this means that the black population should be limited to 165 black residents per square mile throughout the four-county region. According to the census bureau, 89 percent of the black population would need to move into less populated tracts to achieve the census bureau’s new desegregation goal of an equal number of blacks per square mile – giving Milwaukee the worst “segregation” ranking in this category. Under this standard, the City of

Milwaukee would be limited to 15,920 black residents (and the total City population would be limited to 99,231 residents). All the rest of the city residents would be expected to relocate onto less populated census tracts, including the many acres of farmland in Ozaukee, Washington, and Waukesha counties. (When applied to the metro Milwaukee Latino population, the census bureau goal would limit the Hispanic population to 58 Hispanics per square mile. The census bureau redistribution goal for Asians in metro Milwaukee would be 22 Asians per square mile.)

Like Denton and Massey, the Census Bureau uses the “absolute centralization index,” expecting the black population to be scattered equal distances away from the population center of the metro area, ignoring the location of existing housing or any advantages of residing in city areas with existing infrastructure, mass transit, and urban amenities. Finally, reflecting the perspective that segregation is a minority problem, and not a majority problem, the Census Bureau report eliminates from its rankings of “most segregated” communities those metro areas with over one million total population but with less than 20,000 blacks.²⁶

The recent releases of segregation indexes based on 2000 census data demonstrate many of the limitations of continuing to use this statistical approach as the primary tool for gauging segregation in urban America. Proponents of the segregation indexes often avoid discussions of the perplexing configuration of metropolitan areas ranked as “least segregated” by omitting them from their ranking lists. For example, the Mumford Center publishes dissimilarity indexes for metropolitan areas on its website and seeks out press coverage on its rankings of cities.²⁷ The center reported the black-white segregation index for what it called the “top 50 metro areas,” after excluding 80 metro areas with the largest total population but with fewer African Americans. Similarly, Hispanic-white segregation index rankings are reported only for the 50 metropolitan areas with the most Hispanic residents. If the 50 largest metro areas were used, the “least segregated” metro areas for Hispanics and whites would be St. Louis, Pittsburgh, and Cincinnati – all areas with less than 2 percent Latino populations.²⁸ The Mumford Center ranks all 331 metro areas on its black-white indexes and then provides a small note indicating that its methodology may not be valid for 226 of the areas.²⁹

The perspective that “segregation” occurs when neighborhoods have “too high” a concentration of **black** residents and not when neighborhoods have “too high” a concentration of **white** residents also permeates the Mumford Center reports. In one report, the Mumford Center staff stated, for example, “Black-white segregation remains very high except in the metropolitan areas with the smallest black populations.”³⁰

Under this segregation index, the City of Milwaukee is reported to have a higher level of segregation (74.6 on the black-white segregation index scale) than the “suburban areas” of Milwaukee, Ozaukee, Washington and Waukesha counties. The suburbs have a 46.4 rating, described by the Mumford Center describes as only “a moderate level of segregation.” Actually, in the so-called “moderately segregated” suburban/exurban areas, blacks make up only 1.5 percent of the population and less than 1 percent of the population lives on black-white integrated blocks.³¹

By ignoring racial integration occurring in the large urban centers and focusing on dispersal of small African American populations in suburban and exurban areas of metropolitan counties, press coverage of the historic segregation index rankings reinforces the latest anti-urban legend that the nation’s predominantly white suburbs and cities with very small black populations are the most successful models for black-white integration growth in the 1990s. A recent study on black-white segregation used the index to conclude that, “The decline in segregation comes about primarily from the integration of formerly entirely white census tracts.”³² Areas that are nearly all non-black are considered “least segregated” when their small black populations are dispersed. Meanwhile, the racial integration occurring in the major cities of the Midwest is ignored – with much of it considered “segregation” under the old indexes.

III. Black-White Integration in the 50 Largest U.S. Cities

The segregation index is typically applied to metropolitan areas, yet media and public discussions regarding the rankings usually focus on the **central city** as the entity analyzed. Accordingly, it may be instructive to review the racial composition of blocks in the 50 largest cities, where much of focus of the index rankings has centered. For this analysis all blocks in the 50 largest U.S. cities were examined to identify black-white integrated blocks where black and white residents each comprised at least 20 percent of the block population.

- In the City of Milwaukee, 21.7 percent of residents were found to live on black-white integrated blocks (using the standard of at least 20 percent black and at least 20 percent white populations). In the city, 28 percent of black residents and 20 percent of white residents live on integrated blocks. The integrated blocks were located on the northwest side, the west side, and west of the river. (The integration with Latino, Asian and Native American populations was not studied in this report.)
- The proportion of the City of Milwaukee population living on integrated blocks ranked it in the top ten among the largest fifty cities in the United States.
- The highest degree of black-white integration was observed in the largest cities of the **South**.³³ In Virginia Beach, 41 percent of residents lived on black-white integrated blocks. More than a fourth of residents lived on integrated blocks in Charlotte (32 percent), Nashville-Davidson (29 percent), Jacksonville (29 percent) and Memphis (27 percent). By contrast, in Miami, where a large portion of the population is Latino, a relatively small number of blocks showed black-white integration.
- In the largest cities of the **Midwest**, the highest level of black-white integration was seen in the City of St. Louis, where 27 percent of residents lived on black-white integrated blocks, and Columbus, where 25 percent of residents lived on integrated blocks. The lowest degree of black-white integration was in Chicago, where only 6 percent of residents lived on black-white integrated blocks.
- In the **Northeast**, New York City had the largest number, but the smallest percentage, of residents living on black-white integrated blocks; only 4 percent of residents lived on black-white integrated blocks. In Philadelphia, 14 percent of residents lived on black-white integrated blocks, as did 13 percent of residents in Boston.
- Among the big cities of the **West**, Oakland and Sacramento had the highest levels of black-white integration, with 18-19 percent of residents living on black-white integrated blocks. By contrast, in four of the largest western cities (Tucson, San Jose, Mesa, and Albuquerque) less than 1 percent of residents lived on black-white integrated blocks.

Table 1. Block Level Black-White Integration in the 50 Largest U.S. Cities

<u>CITY</u>	<u>% of Residents Living on Black-White Integrated Blocks</u>		<u>City Population % Black</u>		<u>Total Population</u>	
		<u>Rank</u>		<u>Rank</u>		<u>Rank</u>
Virginia Beach, VA	41.1%	1	19.5%	26	425,257	38
Charlotte, NC	31.9%	2	33.0%	13	540,828	26
Nashville-Davidson, TN	29.4%	3	27.3%	16	545,524	25
Jacksonville, FL	28.7%	4	29.3%	15	735,617	14
St. Louis, MO	27.2%	5	51.8%	7	348,189	49
Memphis, TN	26.6%	6	61.6%	4	650,100	18
Columbus, OH	25.1%	7	25.8%	19	711,470	15
Indianapolis, IN	24.4%	8	26.1%	17	781,870	12
Minneapolis, MN	23.3%	9	20.0%	25	382,618	45
Milwaukee, WI	21.7%	10	38.0%	10	596,974	19
Kansas City, MO	21.2%	11	32.0%	14	441,545	36
Baltimore, MD	19.8%	12	64.8%	3	651,154	17
Oakland, CA	19.5%	13	36.7%	12	399,484	41
New Orleans, LA	18.5%	14	67.3%	2	484,674	31
Sacramento, CA	18.5%	15	16.4%	27	407,018	40
Fort Worth, TX	17.3%	16	20.5%	24	534,694	27
Oklahoma City, OK	16.2%	17	16.1%	29	506,132	29
Cleveland, OH	15.9%	18	51.4%	8	478,403	33
Philadelphia, PA	14.1%	19	43.4%	9	1,517,550	5
Tulsa, OK	13.4%	20	16.3%	28	393,049	43
Omaha, NE	13.2%	21	14.0%	31	390,007	44
Boston, MA	12.6%	22	25.7%	20	589,141	20
Washington, DC	11.0%	23	60.5%	6	572,059	21
Detroit, MI	10.8%	24	82.3%	1	951,270	10
Portland, OR	10.4%	25	7.6%	41	529,121	28
Dallas, TX	10.4%	26	26.1%	18	1,188,580	8
Wichita, KS	10.2%	27	12.1%	32	344,284	50
Seattle, WA	10.1%	28	9.6%	37	563,374	23
Colorado Springs, CO	9.9%	29	7.3%	42	360,890	48
Atlanta, GA	8.8%	30	61.6%	5	416,474	39
Long Beach, CA	8.4%	31	15.4%	30	461,522	34
Denver, CO	7.2%	32	11.6%	33	554,636	24
Las Vegas, NV	7.1%	33	10.8%	35	478,434	32
Houston, TX	6.7%	34	25.4%	22	1,953,631	4
Austin, TX	6.4%	35	10.2%	36	656,562	16
Chicago, IL	5.7%	36	36.9%	11	2,896,016	3
San Diego, CA	4.8%	37	8.5%	39	1,223,400	7
New York, NY	4.1%	38	25.6%	21	8,008,278	1
San Francisco, CA	3.7%	39	8.2%	40	776,733	13
Fresno, CA	3.2%	40	8.6%	38	427,652	37
San Antonio, NM	3.2%	41	6.9%	43	1,144,646	9
Honolulu, HI	2.0%	42	2.2%	50	371,657	46
El Paso, TX	1.8%	43	3.0%	48	563,662	22
Miami, FL	1.5%	44	21.3%	23	362,470	47
Los Angeles, CA	1.4%	45	11.4%	34	3,694,820	2
Phoenix, AZ	1.3%	46	5.3%	44	1,321,045	6
Tucson, AZ	0.9%	47	4.6%	45	486,699	30
San Jose, CA	0.4%	48	3.8%	46	894,943	11
Mesa, AZ	0.4%	49	2.8%	49	396,375	42
Albuquerque, NM	0.3%	50	3.2%	47	448,607	35
50 Largest U.S. Cities	9.4%		24.8%		44,559,138	

IV. Black-White Integrated Blocks in the 100 Largest Metropolitan Areas

Since the 1990s most academics have used the segregation index to compare metropolitan areas, relying on the definition of metropolitan areas from the Office of Management and Budget. The OMB defines metro areas to include cities with a population of at least 50,000 (or an urbanized area with at least 100,000 people) along with the county in which the city is located and adjacent counties considered to have a “metropolitan character” based on commuting patterns, population density, and economic and social interrelationships. In New England, metropolitan areas are composed of cities and towns rather than whole counties and the urbanized population must total at least 75,000.

The metropolitan areas were used as the unit of analysis to compare the segregation index rankings to the percentages of residents living on black-white integrated blocks for the 100 largest metropolitan areas. Ranking comparisons are limited, however, by differences among metro areas throughout the U.S.

- Although described as comparable geographic units for purposes of the segregation index rankings, metropolitan areas vary widely in size and character. Among the 100 largest metro areas, the areas range from 47 square miles in the Jersey City metro area to 39,369 square miles in the Las Vegas metro area. The Tucson metro area includes one county, which is 9,186 square miles in size. The Gary metro area covers 915 square miles and two counties. The Milwaukee-Waukesha metro area comprises 1,460 square miles and four counties. The St. Louis metro area spans 6,392 square miles and includes the City of St. Louis plus 12 counties in Missouri and Illinois. The metro area of Atlanta covers 6,124 square miles and includes 20 counties.³⁴
- Given their differing mixes of urban, suburban, exurban and rural populations, the density and settlement patterns of the metro areas also differ widely. The densest units are the Jersey City metro area (a portion of the New York, Northern New Jersey and Long Island consolidated metro region), with 13,044 residents per square mile and the metro area including New York City with 8,159 residents per square mile. Given their large expanse of non-urban territory, 3 metro areas in the West average less than 100 residents per square mile: the Las Vegas metro area with 40 residents/square mile, the Bakersfield metro area with 81 residents/square mile, and the Tucson metro area with 92 residents/square mile.

The percentage comparisons of black-white integration in metro areas showed different results from the percentages observed in the largest cities.

- For Milwaukee, the primary metropolitan statistical area (PMSA) is defined as the “central cities” of Milwaukee and Waukesha and the counties of Milwaukee, Waukesha, Ozaukee and Washington. In this geographical area, the population residing on black-white integrated blocks comprised 9.1 percent of the total metropolitan population. While 21.7 percent of City of Milwaukee residents lived on black-white integrated blocks, less than 1 percent of residents in the metro area outside the City of Milwaukee lived on integrated blocks.
- For a number of the major cities, their suburban metropolitan areas were far less integrated than the major city. In Indianapolis, 24 percent of the city population lived on black-white integrated blocks, but in the metro area as a whole only 11 percent of residents lived on integrated blocks. In Minneapolis, 23 percent of the city population lived on black-white integrated blocks, but in the entire Minneapolis-St. Paul metropolitan statistical area only 6 percent of residents lived on integrated blocks. Likewise, in Boston 12 percent of the city population lived on integrated blocks, but in the total metro area only 4 percent of residents lived on integrated blocks.
- Other major cities had suburban areas that were more integrated than the central city. In Washington, D.C., only 11 percent of the city population lived on integrated blocks; when the surrounding suburbs were included, that percentage rose to 20 percent. In Atlanta, 9 percent of the city population lived on integrated blocks, while 18 percent of the entire metro area population lived on integrated blocks.

Table 2 below compares the rankings on the black-white integration measure with the rankings on the historic segregation index. Many of the metropolitan areas with low percentages of residents living on black-white integrated blocks are ranked “high” on the segregation index. Likewise, many metro areas, particularly in the Midwest, with relatively higher percentages of residents living on black-white integrated blocks are ranked as highly segregated on the old index system.

- While the Milwaukee metropolitan area is highly segregated, with 38 percent of the black population living on blocks that are more than 90 percent black and 69 percent of the white population living on blocks that are more than 90 percent white, the 2000 census data do not support ranking Milwaukee as the 3rd most segregated metro areas in the U.S. When the percentage of residents in the Milwaukee-Waukesha metropolitan area living in black-white integrated blocks (9.1 percent) is compared to other large metropolitan areas, the Milwaukee-Waukesha PMSA ranks near the middle -- 43rd out of the 100 largest metropolitan areas for residents living on black-white integrated blocks.
- Other metropolitan areas in the Midwest show different rankings when they are compared on the basis of integrated neighborhoods rather than the segregation index. Many of the Midwestern cities, including Milwaukee, Cleveland, Cincinnati, St. Louis, and Indianapolis that are ranked as among the “most segregated” on the historic segregation index show average or above average rates of integration when actual counts are made of residents living on black-white integrated blocks.
- The 20 metro areas with the highest percentages of residents living on black-white integrated blocks (16 to 39 percent) are all located in the South. These were not, however, the top metro areas identified by the historic segregation index.
- The bias of the historic segregation index against “too black” communities and in favor of non-black areas can be seen in the metro areas ranked as “least segregated.” With the exception of Las Vegas, the metropolitan areas ranked as “least segregated” (Albuquerque, Honolulu, El Paso, Orange County, Salt Lake City-Ogden, Tucson, San Jose, Phoenix-Mesa, and Ventura) have very low rankings on black-white residential integration and among the lowest percentages of black residents in their metro areas.

Table 2. Comparison of Black-White "Segregation Index" Rankings to Percentage of Metro Population Living on Black-White Integrated Blocks

100 Largest Metropolitan Areas, 2000 Census	Black-White Segregation Dissimilarity Index	Old Rank	Black Population in Metro Area	Rank	% of Metro Population Living on Black-White Integrated Blocks	New Rank
Albuquerque, NM MSA	31.81	1	2.6%	95	0.3%	95
Honolulu, HI MSA	35.83	2	3.1%	91	2.9%	86
El Paso, TX MSA	36.45	3	3.0%	94	2.5%	88
Orange County, CA PMSA	36.80	4	1.8%	97	0.1%	97
Salt Lake City--Ogden, UT MSA	36.91	5	1.3%	99	0.1%	98
Tucson, AZ MSA	38.82	6	3.3%	89	0.6%	94
San Jose, CA PMSA	40.51	7	3.1%	92	0.3%	96
Las Vegas, NV--AZ MSA	43.32	8	8.5%	59	5.7%	66
Phoenix--Mesa, AZ MSA	43.72	9	3.9%	88	1.0%	93
Ventura, CA PMSA	45.52	10	2.1%	96	0.1%	99
Tacoma, WA PMSA	45.95	11	8.2%	64	13.7%	23
Raleigh--Durham--Chapel Hill, NC MSA	46.17	12	23.0%	15	23.1%	6
Norfolk--Virginia Beach--Newport News, VA--NC MSA	46.20	13	31.5%	5	38.6%	1
Riverside--San Bernardino, CA PMSA	46.28	14	8.1%	66	6.3%	62
Greenville--Spartanburg--Anderson, SC MSA	46.44	15	17.7%	29	17.8%	17
Charleston--North Charleston, SC MSA	47.42	16	31.1%	6	32.2%	3
Portland--Vancouver, OR--WA PMSA	48.07	17	3.2%	90	3.0%	85
McAllen--Edinburg--Mission, TX MSA	49.47	18	0.4%	100	0.0%	100
Seattle--Bellevue--Everett, WA PMSA	49.62	19	5.2%	86	4.1%	77
San Antonio, TX MSA	50.40	20	6.7%	75	4.4%	74
Vallejo--Fairfield--Napa, CA PMSA	50.90	21	12.5%	46	15.6%	21
Middlesex--Somerset--Hunterdon, NJ PMSA	51.97	22	8.0%	68	7.2%	56
Columbia, SC MSA	52.15	23	32.3%	3	33.5%	2
Austin--San Marcos, TX MSA	52.28	24	8.1%	65	5.4%	68
Bakersfield, CA MSA	52.28	25	6.1%	78	3.1%	84
Allentown--Bethlehem--Easton, PA MSA	53.27	26	3.1%	93	2.8%	87
Wilmington--Newark, DE--MD PMSA	53.55	27	18.2%	28	20.3%	9
Jacksonville, FL MSA	53.94	28	21.9%	18	20.9%	8
San Diego, CA MSA	54.15	29	6.2%	77	3.2%	83
Fresno, CA MSA	54.30	30	5.3%	85	1.7%	91
Oklahoma City, OK MSA	54.45	31	11.2%	50	11.2%	31
Stockton--Lodi, CA MSA	54.45	32	7.0%	72	3.4%	81
Charlotte--Gastonia--Rock Hill, NC--SC MSA	55.16	33	20.7%	20	21.5%	7
Scranton--Wilkes-Barre--Hazleton, PA MSA	55.60	34	1.6%	98	1.1%	92
Sacramento, CA PMSA	55.97	35	8.4%	62	8.4%	46

Metropolitan Area	Black-White Segregation Dissimilarity Index	Old Rank	Black Population in Metro Area	Rank	% of Metro Population Living on Black-White Integrated Blocks	New Rank
Richmond--Petersburg, VA MSA	57.04	36	30.5%	7	26.4%	4
Orlando, FL MSA	57.04	37	14.1%	39	10.1%	38
Nashville, TN MSA	57.05	38	15.9%	32	17.0%	19
Minneapolis--St. Paul, MN--WI MSA	57.83	39	6.1%	80	6.2%	64
Knoxville, TN MSA	58.05	40	6.1%	81	5.0%	72
Wichita, KS MSA	58.21	41	8.4%	61	6.8%	61
Tulsa, OK MSA	58.52	42	9.4%	56	7.6%	49
Providence--Fall River--Warwick, RI--MA MSA	58.69	43	4.3%	87	3.5%	80
Greensboro--Winston-Salem--High Point, NC MSA	59.01	44	20.4%	22	18.9%	13
Dallas, TX MSA	59.36	45	15.3%	33	10.5%	37
Fort Worth--Arlington, TX PMSA	60.33	46	11.4%	49	11.8%	27
San Francisco, CA PMSA	60.87	47	5.7%	84	1.9%	90
Albany--Schenectady--Troy, NY MSA	60.91	48	6.4%	76	7.4%	54
Little Rock--North Little Rock, AR MSA	61.27	49	22.2%	17	20.2%	10
Denver, CO PMSA	61.76	50	5.9%	83	5.1%	71
Fort Lauderdale, FL PMSA	62.25	51	21.5%	19	16.2%	20
Oakland, CA PMSA	62.81	52	13.4%	40	8.7%	45
Columbus, OH MSA	63.10	53	14.2%	38	13.6%	25
Washington, DC--MD--VA--WV PMSA	63.12	54	26.7%	12	20.2%	11
Ann Arbor, MI PMSA	63.24	55	7.9%	69	10.7%	35
Monmouth--Ocean, NJ PMSA	63.35	56	5.9%	82	5.4%	69
Mobile, AL MSA	63.73	57	27.5%	11	17.7%	18
Springfield, MA MSA	64.13	58	6.8%	74	6.0%	65
Tampa--St. Petersburg--Clearwater, FL MSA	64.47	59	10.4%	53	7.8%	47
Louisville, KY--IN MSA	64.49	60	14.3%	37	11.3%	29
Omaha, NE--IA MSA	64.69	61	8.8%	57	7.8%	48
Hartford, CT MSA	65.05	62	9.7%	55	7.0%	58
Atlanta, GA MSA	65.61	63	29.2%	9	18.4%	14
Boston, MA--NH PMSA	65.68	64	7.3%	71	4.4%	75
Jersey City, NJ PMSA	65.69	65	12.8%	45	3.8%	79
Akron, OH PMSA	65.85	66	11.5%	48	10.8%	34
Rochester, NY MSA	66.32	67	10.6%	52	9.1%	42
West Palm Beach--Boca Raton, FL MSA	66.68	68	14.5%	35	9.7%	40
Baton Rouge, LA MSA	66.93	69	32.1%	4	17.9%	16
Sarasota--Bradenton, FL MSA	67.15	70	6.1%	79	4.3%	76

Metropolitan Area	Black-White Segregation Dissimilarity Index	Old Rank	Black Population in Metro Area	Rank	% of Metro Population Living on Black-White Integrated Blocks	New Rank
Grand Rapids--Muskegon--Holland, MI MSA	67.18	71	7.7%	70	6.9%	59
Pittsburgh, PA MSA	67.27	72	8.5%	60	7.6%	50
Houston, TX PMSA	67.49	73	17.6%	30	7.6%	51
Los Angeles--Long Beach, CA PMSA	67.55	74	10.0%	54	2.5%	89
Baltimore, MD PMSA	67.93	75	27.9%	10	19.0%	12
Memphis, TN--AR--MS MSA	68.72	76	43.6%	1	23.5%	5
New Haven--Meriden, CT PMSA	68.97	77	13.4%	42	11.4%	28
Toledo, OH MSA	69.10	78	13.3%	43	11.3%	30
Kansas City, MO--KS MSA	69.12	79	13.2%	44	10.1%	39
New Orleans, LA MSA	69.25	80	37.7%	2	18.3%	15
Syracuse, NY MSA	69.26	81	7.0%	73	6.9%	60
Dayton--Springfield, OH MSA	70.16	82	14.8%	34	9.4%	41
Harrisburg--Lebanon--Carlisle, PA MSA	70.62	83	8.2%	63	7.5%	52
Indianapolis, IN MSA	70.66	84	14.4%	36	13.7%	24
Philadelphia, PA--NJ PMSA	72.33	85	20.4%	21	11.1%	32
Youngstown--Warren, OH MSA	72.85	86	10.6%	51	8.8%	44
Birmingham, AL MSA	72.92	87	30.2%	8	14.8%	22
Bergen--Passaic, NJ PMSA	73.24	88	8.1%	67	3.4%	82
Miami, FL PMSA	73.57	89	19.9%	23	3.9%	78
St. Louis, MO--IL MSA	74.35	90	18.7%	27	13.2%	26
Nassau--Suffolk, NY PMSA	74.38	91	8.7%	58	5.3%	70
Cincinnati, OH--KY--IN PMSA	74.84	92	13.4%	41	10.9%	33
Buffalo--Niagara Falls, NY MSA	76.74	93	12.0%	47	7.3%	55
Cleveland--Lorain--Elyria, OH PMSA	77.32	94	18.9%	26	10.6%	36
Newark, NJ PMSA	80.42	95	22.5%	16	7.5%	53
Chicago, IL PMSA	80.85	96	19.0%	25	6.3%	63
New York, NY PMSA	81.82	97	23.8%	13	4.7%	73
Milwaukee--Waukesha, WI PMSA	82.16	98	16.0%	31	9.1%	43
Gary, IN PMSA	84.14	99	19.8%	24	5.7%	67
Detroit, MI PMSA	84.72	100	23.4%	14	7.1%	57

V. Distribution of the Black and White Populations in the 100 Largest Metropolitan Areas

No single statistic or set of statistics can capture the complex population mix and levels of integration and segregation in urban America, and communities are encouraged to use block level census data to understand the mixes of their neighborhoods. Current rankings of cities and metropolitan areas appear to offer little insight into the configuration of neighborhoods in cities with large African American populations. In addition to defining and identifying integrated blocks, it is critical to locate areas where less racial mixing is taking place.

Table 3 below shows the breakdown of the black population by those living on black-white integrated blocks as well as those living on blocks that are predominantly black (here defined as more than 80 percent black). Additionally, percentages are shown of the black population living on blocks where blacks make up less than 20 percent of the population and whites comprise over 50 percent of the total population. A remaining “other mixture” category shows the population on blocks where blacks typically reside with Latino or Asian populations as well as whites.

- In the 100 largest metro areas of the U.S., nearly a fourth (23.4 percent) of blacks lived on black-white integrated blocks. Another 13.6 percent lived on majority white (over 50 percent) blocks where they constituted less than a fifth of the block population.
- The black population living on blocks with a predominantly (over 80 percent) black population made up 41.3 percent of the total black population in the largest metro areas. Finally, 21.7 percent of blacks lived on a remaining category of “other mixture” populations where blacks reside with Latino or Asian populations as well as whites in a variety of combinations.

Similarly, Table 4 below shows the breakdown of the white population by those living on black-white integrated blocks as well as those living on blocks that are predominantly white (here defined as more than 80 percent white), majority black and less than a fifth white, and the remaining blocks with other mixtures.

- When the distribution of the white population is analyzed for the 100 largest metro areas in the U.S., 6.5 percent live on black-white integrated blocks. A small proportion (0.6 percent) live on majority black (over 50 percent) blocks where they constituted less than a fifth of the block population.
- The white population living with a predominantly (over 80 percent) white population made up 66.4 percent of the total white population in the largest metro areas. Finally, 26.5 percent of whites lived on a remaining category of “other mixture” populations where whites reside with Latino or Asian populations as well as blacks in a variety of combinations.

The tables showing percentages of black and white residents living together help demonstrate the limitations of a two-race analysis. In many metro areas, Latino and Asian populations make up a sizeable proportion of the total population and individuals may identify themselves as members of more than one racial/ethnic group. The smaller the total black population or larger the “other mixture” populations, the fewer residents who will likely live on predominantly black blocks.

Table 3. Racial Composition of Blocks Occupied by Black Residents

Metropolitan Area	Black Population	Percent of Black Population Living on Blocks That Are:				Other Mixtures
		>=20% Black+		<20% Black+		
		>=20% White	>50% White	>80% Black		
MIDWEST						
Akron, OH PMSA	80,180	38.7%	21.7%	36.1%	3.5%	
Ann Arbor, MI PMSA	45,704	51.7%	31.6%	13.5%	3.3%	
Chicago, IL PMSA	1,575,173	12.6%	7.0%	68.5%	11.9%	
Cincinnati, OH--KY--IN PMSA	220,034	37.1%	14.2%	46.6%	2.1%	
Cleveland--Lorain--Elyria, OH PMSA	425,722	24.0%	10.4%	62.3%	3.3%	
Columbus, OH PMSA	218,565	40.3%	21.5%	48.8%	6.6%	
Dayton--Springfield, OH PMSA	141,038	30.0%	18.5%	31.5%	2.8%	
Detroit, MI PMSA	1,037,674	14.1%	6.6%	75.2%	4.1%	
Gary, IN PMSA	125,093	12.2%	5.2%	68.3%	14.3%	
Grand Rapids--Muskegon--Holland, MI PMSA	84,193	36.0%	26.3%	23.2%	14.5%	
Indianapolis, IN PMSA	230,843	39.5%	13.5%	39.3%	7.7%	
Kansas City, MO--KS PMSA	235,277	31.4%	18.3%	43.7%	6.5%	
Milwaukee--Waukesha, WI PMSA	240,859	27.0%	7.7%	52.3%	13.0%	
Minneapolis--St. Paul, MN--WI PMSA	180,006	37.1%	37.2%	4.1%	21.7%	
Omaha, NE--IA PMSA	63,134	38.7%	26.4%	24.8%	10.1%	
St. Louis, MO--IL PMSA	486,602	31.5%	10.6%	55.2%	2.7%	
Toledo, OH PMSA	82,304	36.0%	17.5%	40.2%	6.3%	
Wichita, KS PMSA	45,776	27.6%	32.4%	30.1%	9.9%	
Youngstown--Warren, OH PMSA	63,221	39.6%	17.6%	33.5%	9.3%	
NORTHEAST						
Albany--Schenectady--Troy, NY PMSA	56,092	43.9%	35.1%	10.2%	10.8%	
Allentown--Bethlehem--Easton, PA PMSA	19,526	26.9%	52.3%	0.8%	20.1%	
Bergen--Passaic, NJ PMSA	110,763	13.4%	16.3%	19.0%	51.3%	
Boston, MA--NH PMSA	247,684	20.2%	27.9%	21.2%	30.7%	
Buffalo--Niagara Falls, NY PMSA	140,496	25.9%	15.3%	50.8%	8.0%	
Harrisburg--Lebanon--Carlisle, PA PMSA	51,579	37.1%	21.4%	20.7%	20.9%	
Hartford, CT PMSA	114,378	25.6%	26.2%	22.1%	26.1%	
Jersey City, NJ PMSA	77,941	8.7%	5.9%	36.8%	48.6%	
Middlesex--Somerset--Hunterdon, NJ PMSA	93,639	28.5%	30.2%	4.2%	37.1%	
Monmouth--Ocean, NJ PMSA	66,698	31.9%	30.0%	17.6%	20.5%	
Nassau--Suffolk, NY PMSA	238,293	21.8%	16.0%	21.9%	40.2%	
New Haven--Meriden, CT PMSA	72,419	31.8%	17.0%	22.8%	28.4%	
New York, NY PMSA	2,217,680	7.3%	4.6%	40.3%	47.9%	
Newark, NJ PMSA	457,825	12.8%	6.4%	58.2%	22.6%	
Philadelphia, PA--NJ PMSA	1,040,144	22.0%	11.7%	53.3%	13.1%	
Pittsburgh, PA PMSA	200,229	37.0%	22.5%	38.5%	2.0%	
Providence--Fall River--Warwick, RI--MA PMSA	51,012	23.9%	40.4%	0.5%	35.2%	
Rochester, NY PMSA	116,235	34.0%	23.6%	19.5%	22.9%	
Scranton--Wilkes-Barre--Hazleton, PA PMSA	9,817	26.5%	70.4%	0.5%	2.7%	
Springfield, MA PMSA	40,349	28.6%	26.9%	6.5%	38.0%	
Syracuse, NY PMSA	50,995	38.7%	27.5%	20.2%	13.7%	

Metropolitan Area	% of Black Population Living on Blocks That Are:					Other Mixtures
	Black Population	>=20% Black+		<20% Black+		
		>=20% White	>80% Black	>50% White	>80% Black	
SOUTH						
Atlanta, GA MSA	1,202,260	25.8%	10.9%	53.0%	10.3%	
Austin--San Marcos, TX MSA	101,518	20.1%	28.8%	4.9%	46.2%	
Baltimore, MD PMSA	712,002	28.1%	10.5%	57.1%	4.3%	
Baton Rouge, LA MSA	193,449	26.3%	7.4%	63.2%	3.1%	
Birmingham, AL MSA	278,254	23.1%	6.1%	68.3%	2.4%	
Charlotte--North Charleston, SC MSA	170,564	44.0%	11.3%	41.7%	3.0%	
Charlotte--Gastonia--Rock Hill, NC--SC MSA	310,821	39.4%	14.1%	34.9%	11.6%	
Columbia, SC MSA	173,380	45.5%	7.6%	43.0%	3.9%	
Dallas, TX PMSA	537,789	24.8%	17.2%	28.6%	29.4%	
El Paso, TX MSA	20,085	23.6%	4.6%	0.1%	71.7%	
Fort Lauderdale, FL PMSA	349,610	26.8%	14.1%	39.7%	19.4%	
Fort Worth--Arlington, TX PMSA	194,002	34.0%	22.7%	19.1%	24.2%	
Greensboro--Winston-Salem--High Point, NC MSA	255,112	36.7%	14.2%	38.0%	11.0%	
Greenville--Spartanburg--Anderson, SC MSA	170,249	41.0%	18.0%	37.6%	3.5%	
Houston, TX PMSA	734,732	14.0%	10.2%	32.1%	43.7%	
Jacksonville, FL MSA	241,161	38.0%	17.1%	41.5%	3.4%	
Knoxville, TN MSA	41,582	32.7%	36.3%	29.4%	1.5%	
Little Rock--North Little Rock, AR MSA	129,554	39.8%	12.4%	41.8%	5.9%	
Louisville, KY--IN MSA	147,162	30.2%	19.9%	47.0%	2.9%	
McAllen--Edinburg--Mission, TX MSA	2,085	1.2%	4.1%	0.5%	94.2%	
Memphis, TN--AR--MS MSA	494,641	26.1%	5.2%	64.1%	4.6%	
Miami, FL PMSA	448,173	7.0%	1.7%	49.3%	42.0%	
Mobile, AL MSA	148,754	26.9%	8.4%	62.4%	2.2%	
Nashville, TN MSA	196,127	38.1%	20.9%	37.8%	3.3%	
New Orleans, LA MSA	503,720	21.9%	5.4%	66.0%	6.6%	
Norfolk--Virginia Beach--Newport News, VA--NC MSA	493,863	47.7%	10.3%	37.3%	4.7%	
Oklahoma City, OK MSA	121,420	36.1%	27.5%	27.5%	8.9%	
Orlando, FL MSA	232,243	27.6%	21.1%	28.9%	22.4%	
Raleigh--Durham--Chapel Hill, NC MSA	273,724	38.7%	17.1%	30.8%	13.5%	
Richmond--Petersburg, VA MSA	303,953	37.3%	11.2%	45.8%	5.7%	
San Antonio, TX MSA	106,747	19.0%	19.4%	4.3%	57.3%	
Sarasota--Bradenton, FL MSA	36,186	25.2%	24.4%	30.2%	20.1%	
Tampa--St. Petersburg--Clearwater, FL MSA	248,058	29.2%	23.0%	32.5%	15.3%	
Tulsa, OK MSA	75,471	28.0%	28.7%	36.0%	7.4%	
Washington, DC--MD--VA--WV PMSA	1,312,419	28.2%	12.3%	43.3%	16.3%	
West Palm Beach--Boca Raton, FL MSA	163,774	24.1%	16.8%	42.1%	17.0%	
Wilmington--Newark, DE--MD PMSA	106,463	41.9%	18.8%	28.0%	11.3%	

Metropolitan Area	Black Population	% of Black Population Living on Blocks That Are:				Other Mixtures
		>=20% Black+ >=20% White	<20% Black+ >50% White	>80% Black		
WEST						
Albuquerque, NM MSA	18,544	3.4%	42.6%	0.2%	53.8%	
Bakersfield, CA MSA	40,606	16.0%	29.3%	1.2%	53.5%	
Denver, CO PMSA	124,352	28.1%	34.8%	5.0%	32.0%	
Fresno, CA MSA	48,597	9.2%	18.5%	2.7%	69.6%	
Honolulu, HI MSA	27,134	23.4%	22.0%	0.0%	54.6%	
Las Vegas, NV--AZ MSA	133,244	19.0%	43.9%	7.7%	29.3%	
Los Angeles--Long Beach, CA PMSA	950,765	7.8%	8.8%	13.7%	69.7%	
Oakland, CA PMSA	319,836	21.7%	12.1%	9.1%	57.1%	
Orange County, CA PMSA	51,080	1.4%	44.7%	0.0%	53.9%	
Phoenix--Mesa, AZ MSA	127,227	6.8%	49.6%	1.4%	42.2%	
Portland--Vancouver, OR--WA PMSA	61,373	34.8%	54.7%	1.7%	8.8%	
Riverside--San Bernardino, CA PMSA	263,591	22.1%	21.3%	0.7%	55.9%	
Sacramento, CA PMSA	136,246	28.8%	30.9%	0.4%	39.9%	
Salt Lake City--Ogden, UT MSA	17,717	2.5%	78.8%	0.2%	18.4%	
San Diego, CA MSA	174,418	13.9%	30.6%	0.7%	54.8%	
San Francisco, CA PMSA	99,199	10.2%	20.9%	5.4%	63.5%	
San Jose, CA PMSA	51,590	2.7%	26.8%	0.1%	70.5%	
Seattle--Bellevue--Everett, WA PMSA	124,410	25.6%	52.6%	0.5%	21.3%	
Stockton--Lodi, CA MSA	39,684	13.5%	21.8%	0.2%	64.6%	
Tacoma, WA PMSA	57,374	47.2%	45.0%	0.2%	7.6%	
Tucson, AZ MSA	27,876	4.6%	60.4%	0.2%	34.7%	
Vallejo--Fairfield--Napa, CA PMSA	64,897	36.5%	22.6%	2.7%	38.2%	
Ventura, CA PMSA	16,055	1.4%	49.8%	0.1%	48.7%	

Table 4. Racial Composition of Blocks Occupied by White Residents

Metropolitan Area	White Population	% of White Population Living on Blocks That Are:			Other Mixture
		>=20% White+	<20% White+	>80% White	
MIDWEST					
Akron, OH PMSA	593,445	6.8%	0.4%	89.3%	3.5%
Ann Arbor, MI PMSA	484,391	6.8%	0.1%	79.4%	13.8%
Chicago, IL PMSA	4,798,533	4.8%	0.7%	64.2%	30.3%
Cincinnati, OH--KY--IN PMSA	1,375,267	6.6%	0.5%	90.0%	2.9%
Cleveland--Lorain--Elyria, OH PMSA	1,697,660	6.8%	0.6%	85.6%	7.0%
Columbus, OH PMSA	1,238,296	8.7%	0.6%	82.1%	8.6%
Dayton--Springfield, OH PMSA	776,050	5.8%	0.6%	87.8%	5.9%
Detroit, MI PMSA	3,096,900	4.5%	1.1%	85.0%	9.4%
Gary, IN PMSA	428,791	3.6%	0.9%	81.0%	14.5%
Grand Rapids--Muskegon--Holland, MI PMSA	903,766	4.1%	0.2%	84.0%	11.7%
Indianapolis, IN PMSA	1,299,311	8.6%	0.6%	85.6%	5.2%
Kansas City, MO--KS PMSA	1,391,492	6.3%	0.4%	83.3%	10.0%
Milwaukee--Waukesha, WI PMSA	1,116,150	5.3%	0.8%	85.2%	8.7%
Minneapolis--St. Paul, MN--WI PMSA	2,514,494	3.3%	0.2%	85.9%	10.6%
Omaha, NE--IA PMSA	593,902	4.5%	0.3%	83.2%	12.0%
St. Louis, MO--IL PMSA	2,014,776	8.6%	0.7%	86.1%	4.6%
Toledo, OH PMSA	495,070	6.8%	0.6%	83.6%	9.0%
Wichita, KS PMSA	430,553	4.4%	0.2%	75.2%	20.2%
Youngstown--Warren, OH PMSA	513,967	5.0%	0.5%	91.9%	2.6%
NORTHEAST					
Albany--Schenectady--Troy, NY PMSA	771,049	4.2%	0.2%	89.2%	6.4%
Allentown--Bethlehem--Easton, PA PMSA	552,429	1.7%	0.0%	87.0%	11.3%
Bergen--Passaic, NJ PMSA	890,640	2.1%	0.3%	60.7%	36.9%
Boston, MA--NH PMSA	2,726,018	2.4%	0.2%	80.5%	16.9%
Buffalo--Niagara Falls, NY PMSA	965,233	4.1%	0.5%	90.2%	5.2%
Harrisburg--Lebanon--Carlisle, PA PMSA	544,078	4.4%	0.4%	89.6%	5.6%
Hartford, CT PMSA	915,287	4.0%	0.2%	82.0%	13.8%
Jersey City, NJ PMSA	215,216	3.5%	0.7%	18.5%	77.3%
Middlesex--Somerset--Hunterdon, NJ PMSA	797,594	4.5%	0.1%	61.2%	34.2%
Monmouth--Ocean, NJ PMSA	955,076	3.0%	0.2%	86.1%	10.7%
Nassau--Suffolk, NY PMSA	2,105,352	2.8%	0.4%	80.0%	16.8%
New Haven--Meriden, CT PMSA	395,573	6.8%	0.6%	77.3%	15.3%
New York, NY PMSA	3,684,669	4.4%	1.7%	48.4%	45.5%
Newark, NJ PMSA	1,196,664	5.3%	1.2%	70.0%	23.5%
Philadelphia, PA--NJ PMSA	3,583,090	7.4%	0.7%	80.8%	11.1%
Pittsburgh, PA PMSA	2,100,501	4.8%	0.2%	92.5%	2.5%
Providence--Fall River--Warwick, RI--MA PMSA	990,722	1.9%	0.0%	86.7%	11.5%
Rochester, NY PMSA	902,811	5.1%	0.5%	87.4%	7.1%
Scranton--Wilkes-Barre--Hazleton, PA PMSA	600,830	0.7%	0.0%	97.6%	1.7%
Springfield, MA PMSA	459,511	3.4%	0.2%	81.4%	15.0%
Syracuse, NY PMSA	644,035	3.9%	0.3%	91.1%	4.7%

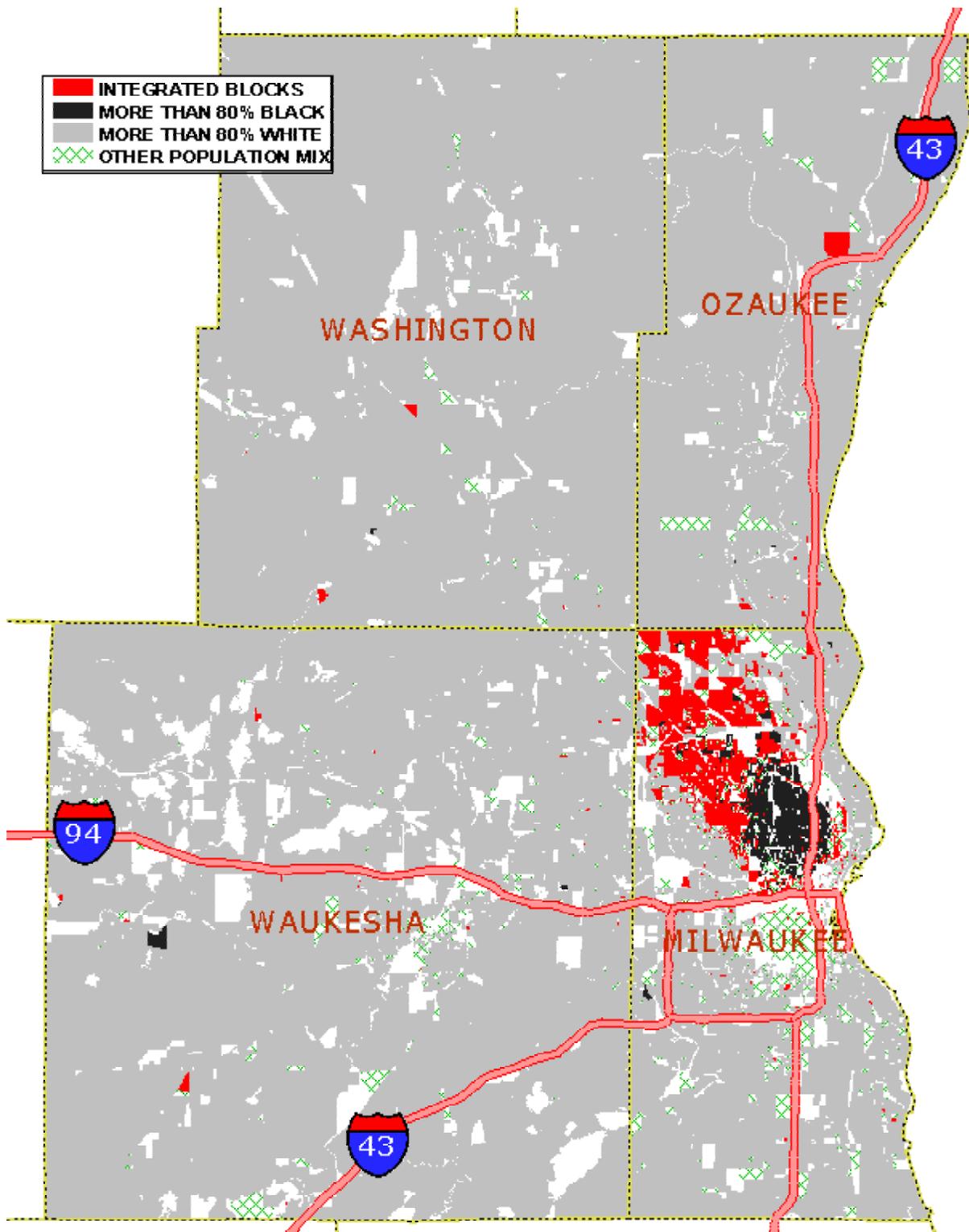
Metropolitan Area	White Population	% of White Population Living on Blocks That Are:				Other Mixture
		>=20% White+ >=20% Black	<20% White+ >50% Black	>80% White		
SOUTH						
Atlanta, GA MSA	2,460,740	14.1%	1.6%	66.8%	17.5%	
Austin--San Marcos, TX MSA	758,302	3.3%	0.1%	46.6%	50.0%	
Baltimore, MD PMSA	1,692,851	14.4%	1.3%	73.8%	10.5%	
Baton Rouge, LA MSA	385,099	13.5%	1.5%	78.3%	6.7%	
Birmingham, AL MSA	611,574	10.9%	1.4%	83.1%	4.6%	
Charleston--North Charleston, SC MSA	351,434	26.0%	1.4%	61.1%	11.5%	
Charlotte--Gastonia--Rock Hill, NC--SC MSA	1,067,594	15.7%	0.7%	74.0%	9.6%	
Columbia, SC MSA	337,574	26.4%	1.3%	65.9%	6.4%	
Dallas, TX PMSA	1,979,218	7.8%	0.6%	50.3%	41.3%	
El Paso, TX MSA	115,535	6.2%	0.0%	1.7%	92.1%	
Fort Lauderdale, FL PMSA	941,674	11.1%	1.3%	43.5%	44.1%	
Fort Worth--Arlington, TX PMSA	1,116,886	7.9%	0.4%	59.5%	32.2%	
Greensboro--Winston-Salem--High Point, NC MSA	905,018	13.1%	0.8%	77.4%	8.7%	
Greenville--Spartanburg--Anderson, SC MSA	747,540	12.3%	0.6%	80.2%	6.9%	
Houston, TX PMSA	1,923,990	6.1%	1.0%	45.3%	47.6%	
Jacksonville, FL MSA	775,279	14.7%	0.6%	66.8%	17.9%	
Knoxville, TN MSA	623,048	3.2%	0.1%	93.5%	3.2%	
Little Rock--North Little Rock, AR MSA	429,131	14.0%	1.1%	78.0%	6.9%	
Louisville, KY--IN MSA	840,677	7.6%	0.4%	86.9%	5.1%	
McAllen--Edinburg--Mission, TX MSA	59,423	0.0%	0.0%	21.8%	78.2%	
Memphis, TN--AR--MS MSA	588,808	20.8%	2.7%	69.2%	7.3%	
Miami, FL PMSA	465,772	6.0%	3.3%	6.4%	84.3%	
Mobile, AL MSA	370,631	13.7%	1.0%	80.0%	5.3%	
Nashville, TN MSA	960,118	11.8%	0.5%	79.5%	8.2%	
New Orleans, LA MSA	731,514	15.1%	2.3%	68.4%	14.2%	
Norfolk--Virginia Beach--Newport News, VA--NC MSA	959,404	32.4%	1.3%	52.1%	14.2%	
Oklahoma City, OK MSA	789,780	7.5%	0.3%	62.3%	29.9%	
Orlando, FL MSA	1,070,460	6.4%	0.5%	53.0%	40.1%	
Raleigh--Durham--Chapel Hill, NC MSA	793,714	17.7%	0.9%	63.1%	18.3%	
Richmond--Petersburg, VA MSA	637,800	20.6%	1.5%	68.7%	9.2%	
San Antonio, TX MSA	627,176	4.0%	0.2%	23.4%	72.4%	
Sarasota--Bradenton, FL MSA	505,267	2.2%	0.2%	90.4%	7.2%	
Tampa--St. Petersburg--Clearwater, FL MSA	1,821,955	4.5%	0.4%	73.6%	21.6%	
Tulsa, OK MSA	593,498	4.7%	0.3%	61.0%	34.0%	
Washington, DC--MD--VA--WV PMSA	2,762,241	16.2%	1.5%	48.6%	33.7%	
West Palm Beach--Boca Raton, FL MSA	798,484	6.1%	0.5%	69.4%	24.0%	
Wilmington--Newark, DE--MD PMSA	433,306	14.4%	0.6%	74.2%	10.9%	

<u>Metropolitan Area</u>	White Population	<u>% of White Population Living on Blocks That Are:</u>				Other Mixture
		>=20% White+	>=20% Black	<20% White+	>50% Black	
WEST						
Albuquerque, NM MSA	340,286	0.3%		0.0%		80.1%
Bakersfield, CA MSA	327,190	2.5%		0.0%		57.9%
Denver, CO PMSA	1,484,343	3.2%		0.2%		34.7%
Fresno, CA MSA	374,913	1.3%		0.0%		73.1%
Honolulu, HI MSA	175,633	6.9%		0.0%		91.7%
Las Vegas, NV--AZ MSA	986,463	3.8%		0.1%		57.8%
Los Angeles--Long Beach, CA PMSA	2,959,614	2.8%		0.4%		73.1%
Oakland, CA PMSA	1,140,504	6.4%		0.8%		65.1%
Orange County, CA PMSA	1,458,978	0.1%		0.0%		66.6%
Phoenix--Mesa, AZ MSA	2,140,171	0.6%		0.0%		41.7%
Portland--Vancouver, OR--WA PMSA	1,564,685	1.7%		0.0%		24.1%
Riverside--San Bernardino, CA PMSA	1,541,053	4.5%		0.1%		69.6%
Sacramento, CA PMSA	1,046,616	4.8%		0.1%		44.5%
Salt Lake City--Ogden, UT MSA	1,104,467	0.1%		0.0%		22.9%
San Diego, CA MSA	1,548,833	2.1%		0.1%		57.6%
San Francisco, CA PMSA	885,518	1.5%		0.1%		61.5%
San Jose, CA PMSA	744,282	0.3%		0.0%		80.6%
Seattle--Bellevue--Everett, WA PMSA	1,841,254	2.3%		0.1%		34.8%
Stockton--Lodi, CA MSA	267,002	2.3%		0.0%		75.5%
Tacoma, WA PMSA	532,934	8.8%		0.0%		28.2%
Tucson, AZ MSA	518,720	0.5%		0.0%		54.9%
Vallejo--Fairfield--Napa, CA PMSA	280,214	10.2%		0.3%		60.6%
Ventura, CA PMSA	427,449	0.1%		0.0%		54.9%

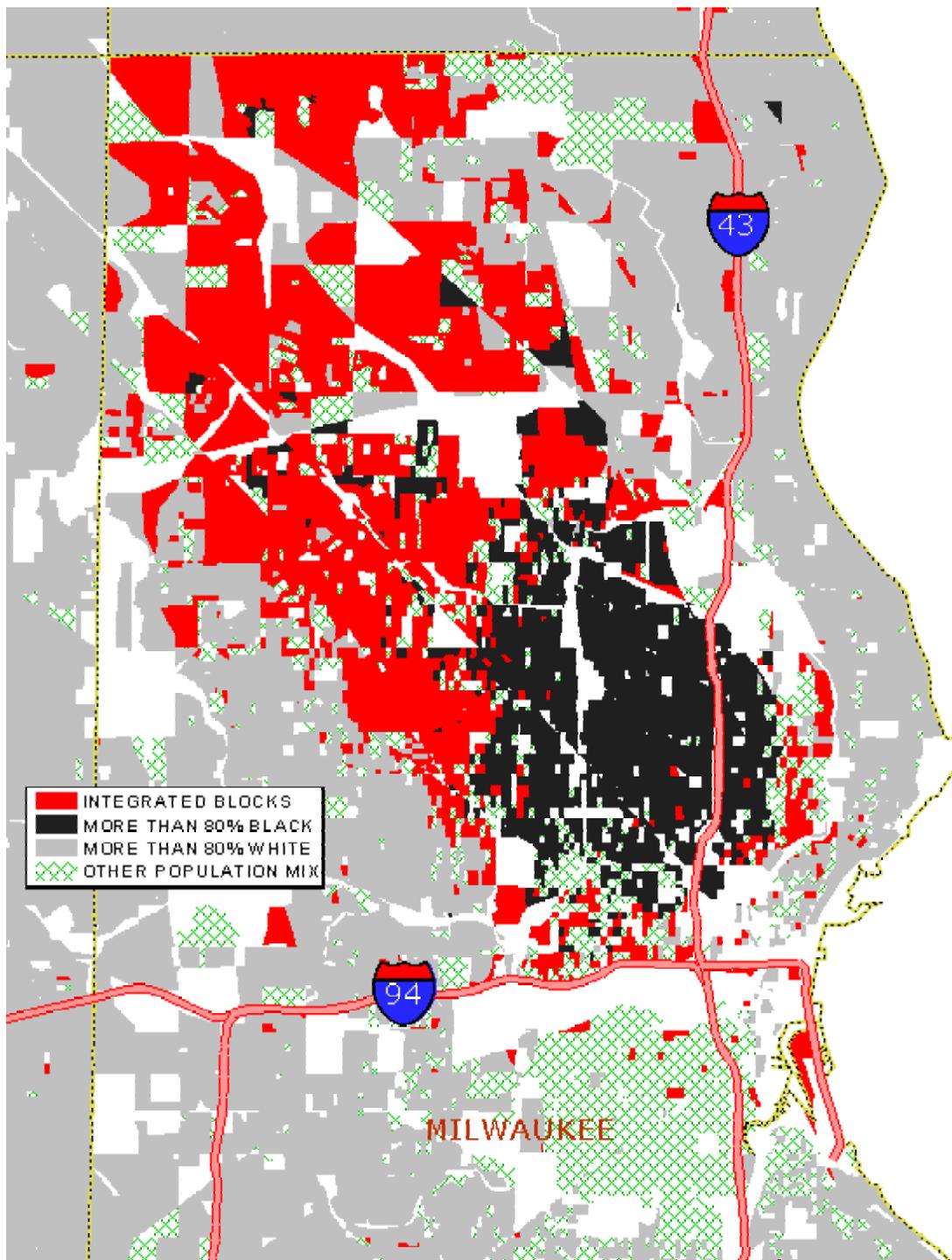
- In the Milwaukee metro area, 27.0 percent of blacks lived on black-white integrated blocks and another 7.7 percent live on blocks where whites constitute over half of the population and they make up less than 20 percent. About half (52.3 percent) of the black population lived on predominantly (over 80 percent) black blocks. Another 13.0 percent lived on blocks in the “other mixture” population category. (See Table 3)
- For the white population in the Milwaukee metro area, 5.3 percent lived on black-white integrated blocks and less than 1 percent (0.8 percent) lived on blocks where blacks constitute over half of the population and they made up less than 20 percent. A large majority (85.2 percent) of whites lived on predominantly (over 80 percent) white blocks. Another 8.7 percent lived on blocks in the “other mixture” population category. (See Table 4)

Maps 1 and 2 below show the location of integrated, predominantly black, and predominantly white blocks in the Milwaukee metropolitan area. Integrated blocks have at least a 20 percent black and a 20 percent white population. Predominantly black blocks show a population that is more than 80 percent black; predominantly white blocks show a population that is more than 80 percent white. Blocks are left blank that have no residents (i.e., industrial land, parks, cemeteries, schools) or where the institutionalized population makes up more than a third of the total population.

Map 1. Map of Integrated, Predominantly Black, and Predominantly White Blocks in the 4-County Milwaukee Area



Map 2. Detailed Map of Integrated, Predominantly Black, and Predominantly White Blocks in the Milwaukee Area



VI. Density Maps of Integrated, Predominantly Black, and Predominantly White Block Groups

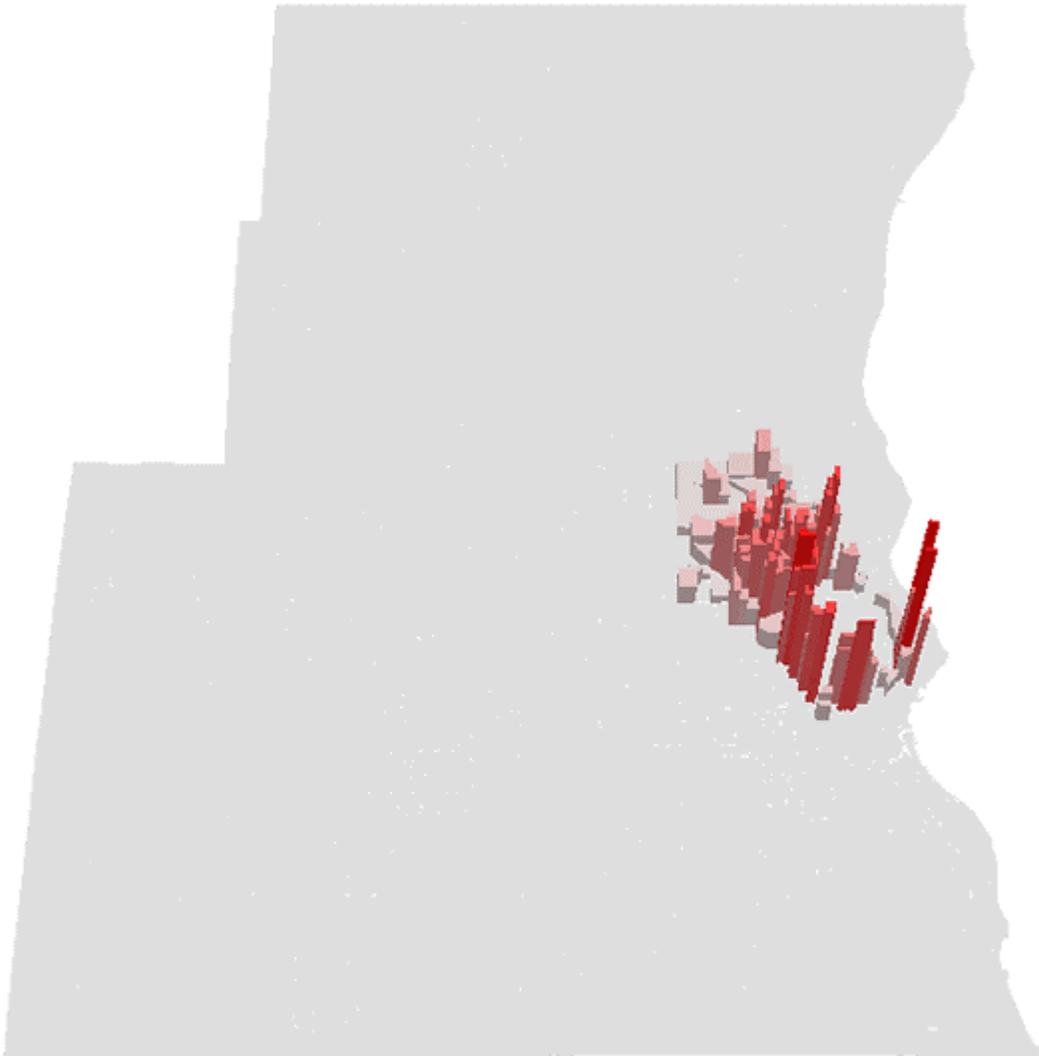
Maps were prepared for the 100 largest metro areas in the U.S. to aid public policy makers in identifying integrated neighborhoods. The analysis of integrated and predominantly one-race neighborhoods was conducted at the block level. For mapping purposes, block groups were used to help show the location of integrated and predominantly one-race areas. Three sets of population density maps were prepared for each of the 100 largest metropolitan areas:

- residents living in integrated block groups with at least 20 percent black population and at least 20 percent white population.
- residents living in block groups that were over 80 percent black.
- residents living in block groups that were over 80 percent white.

The maps show the concentration of population based on density per square mile. As a result, urban neighborhoods with highest concentrations of residents (integrated, predominantly black, or predominantly white) are tallest in the 3-D maps presented, while sparsely populated areas appear flat. Block groups are excluded where the institutionalized population makes up more than a third of the total population or where the block group population totals less than 50 people. Some metropolitan areas have residents living on black-white integrated blocks but have no block groups meeting the black-white integration criteria. Likewise, some metro areas, particularly those with large Latino and Asian populations, may have individual blocks with predominantly black (or predominantly white) populations but no block groups where the population is predominantly black (predominantly white).

Density maps for the Milwaukee metropolitan area are shown below. Maps for other metropolitan areas are included in **Maps of the African American and White Populations in the 100 Largest Metro Areas** (at www.uwm.edu/Dept/ETI/integration/maps.htm).

**Map 3. Density of Integrated Neighborhoods in the Milwaukee Metropolitan Area
(Milwaukee, Ozaukee, Washington, and Waukesha Counties)**



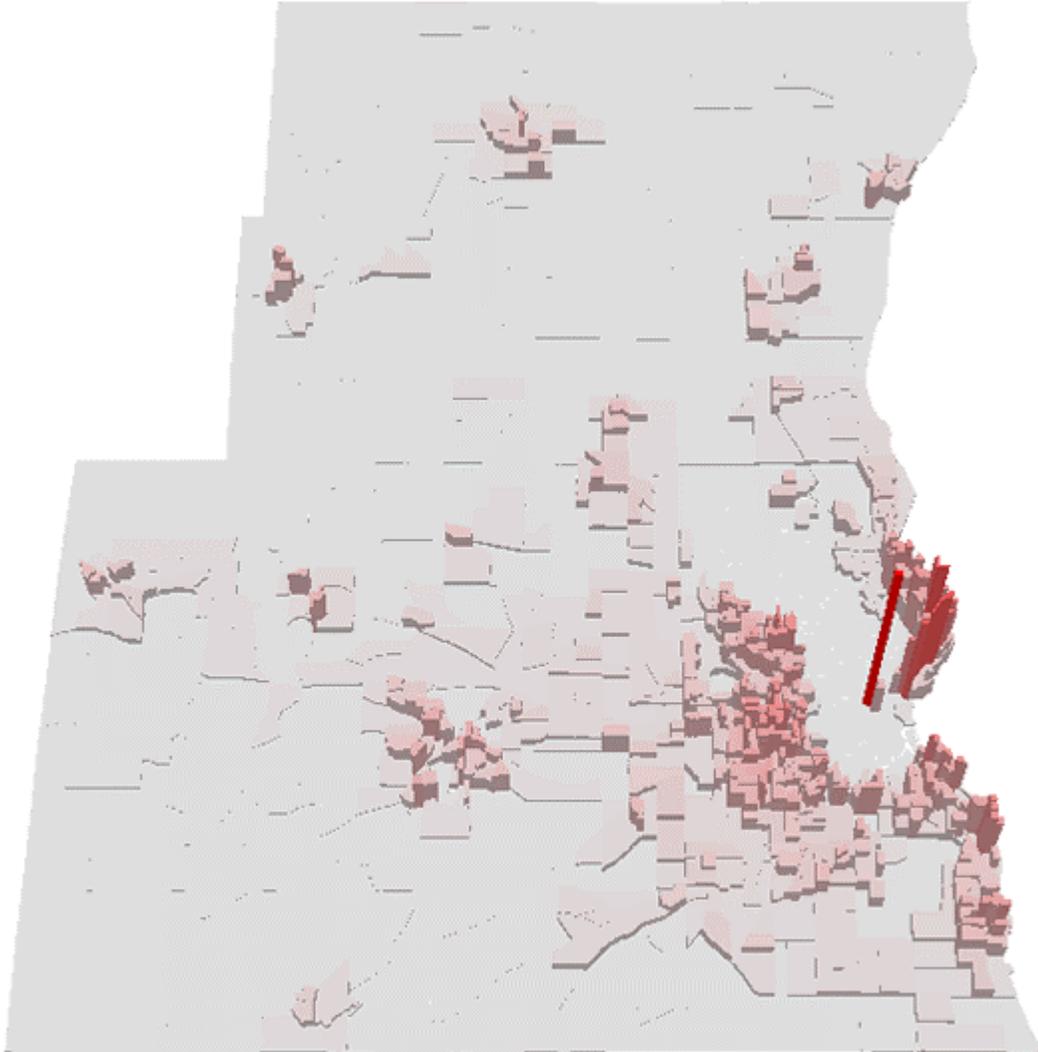
**INTEGRATED BLOCK GROUPS (AT LEAST 20% WHITE & 20% BLACK) IN
THE MILWAUKEE--WAUKESHA, WI PMSA**

**Map 4. Density of Predominantly Black Neighborhoods in the Milwaukee Metropolitan Area
(Milwaukee, Ozaukee, Washington, and Waukesha Counties)**



**BLOCK GROUPS WITH MORE THAN 80% BLACK POPULATION IN THE
MILWAUKEE--WAUKESHA, WI PMSA**

**Map 5. Density of Predominantly White Neighborhoods in the Milwaukee Metropolitan Area
(Milwaukee, Ozaukee, Washington, and Waukesha Counties)**



**BLOCK GROUPS WITH MORE THAN 80% WHITE POPULATION IN
THE MILWAUKEE--WAUKESHA, WI PMSA**

Endnotes

¹ Under the segregation index, the racial “ideal” in 329 of the 331 metropolitan areas in the U.S. would result in blacks being in the minority in every census tract. Only in Albany, Georgia (population 120,822) and Pine Bluff, Arkansas (population 84,278), where the metro population is majority black, does the index allow a goal of majority black tracts.

² In the Milwaukee metro area the population includes 1,116,150 residents (74.4 percent) identified as white only and non-Hispanic, 240,859 residents (16.5 percent) identified as in whole or any part black, 94,511 residents (6.3 percent) identified as Hispanic regardless of other racial choices, and the remaining 49,221 residents reporting their racial/ethnic identity as Native American, Asian or other race (but not Hispanic and not part black). The segregation index formula uses the black population percentage of the combined black and white population total for the metro area in determining the “ideal” racial mix in each tract. In the Salt Lake City-Ogden metro area the population is 82.8 percent white, 1.3 percent black, and 15.9 percent other.

³ The equally absurd converse – that 917,029 whites out of the total 1,169,641 white population in the four-county Milwaukee-Waukesha metro area (or 82.16%), would abandon their “too white” census tracts and move into the remaining tracts – never appears to be discussed as a policy option. See, for example, the discussion by Taeuber and Taeuber on moving 92.8 percent of the black population of the City of Birmingham. Karl E. Taeuber and Alma F. Taeuber, **Negroes in Cities: Residential Segregation and Neighborhood Change** (Chicago: Aldine Publishing Company, 1965), 30.

⁴ John Iceland, Daniel H. Weinberg, and Erika Steinmetz, U.S. Census Bureau, Series CENSR-3, **Racial and Ethnic Segregation in the United States: 1980-2000** (Washington, D.C.: U.S. Government Printing Office, August 2002), 117.

⁵ In cities census blocks usually correspond to individual city blocks bounded by streets, but in rural areas “blocks” may include several square miles and have boundaries that are not streets.

⁶ Institutionalized populations are included among the black populations “expected to move” in the calculations for the segregation index.

⁷ Otis Dudley Duncan and Beverly Duncan, “A Methodological Analysis of Segregation Indexes,” **American Sociological Review** 20 (April 1955): 210-217.

⁸ Taeuber and Taeuber, 29. The dissimilarity index formula is
$$D = \left(\frac{1}{2} \right) \sum_{i=1}^n \left| \frac{b_i}{B} - \frac{w_i}{W} \right|$$

where b_i is the black population in census tract i , B is the total black population in the metropolitan area, w_i is the white population in census tract i , and W is the total white population in the metropolitan area.

⁹ For discussions of racial practices in Milwaukee, see Ruth Zubrensky, “A Report on Past Discrimination Against African-Americans in Milwaukee, 1835-1999” (July 1999); Joe William Trotter, Jr., **Black Milwaukee: The Making of an Industrial Proletariat, 1915-45** (Urbana: University of Illinois Press, 1985); Lois M. Quinn, Michael G. Barndt, and Diane S. Pollard, “Relationships Between School Desegregation and Government Housing Programs: A Milwaukee Case Study,” report prepared for the National Institute of Education (Milwaukee: Metropolitan Integration Research Center, 1980).

¹⁰ Taeuber and Taeuber, quoting from Morton Grodzins, **The Metropolitan Area as a Racial Problem** (Pittsburgh: University of Pittsburgh Press, 1958), 100.

¹¹ In his 1971 study on **The Black Ghetto**, Harold Rose of the University of Wisconsin-Milwaukee observed that the terminology used by scholars to describe racial changes in neighborhoods, while derived from descriptions of plant ecology, “has come to represent the white residents’ perception of events in the struggle for residential space, and in all likelihood the white writer’s perception as well.” Harold M. Rose, “The Development of an Urban Subsystem: The Case of the Negro Ghetto,” **Annals of the Association of American Geographers** (March 1970), 4, cited in Harold M. Rose, **The Black Ghetto: A Spatial Behavioral Perspective** (New York: McGraw-Hill Book Company, 1971), 8.

¹² A more recent use of “tipping point” and “dispersal” policies can be seen in the Gautreaux public housing relocation program, an experiment finding housing for African American families in 115 suburbs around Chicago. According to Northwestern University sociologist James Rosenbaum, the program did not place families in communities considered to be “too near a ‘tipping point,’” which he defined as “a level of black population above which white residents might feel threatened and flee.” James E. Rosenbaum, “Changing the Geography of Opportunity by Expanding Residential Choice: Less from the Gautreaux Program,” **Housing Policy Debate** 6 (1995): 257.

¹³ Taeuber and Taeuber, 30.

¹⁴ For example, if the black population in a metro area makes up 10 percent of the combined black and white populations, the goal of the segregation index would be to have each census tract with a 90 percent white and 10 percent black population out of the combined black-white total. Under the one-way movement approach, if a census tract has 1,000 black residents and 18 white residents, all but 2 of the black residents would be expected to move out of the tract so that the tract would be 90 percent white. If a census tract has no whites, all blacks are expected to move out to achieve the black-white “evenness” goal for the metro area.

¹⁵ Surveys of housing preferences of metro Detroit area residents by University of Michigan researchers in 1976 and 1992 found that a majority of African American respondents preferred racially mixed neighborhoods with at least fifty percent or more black populations. There was some increase in tolerance for mixed neighborhoods by white respondents from 1976 to 1992. Still, in 1992 while 70 percent of white respondents indicated they would feel comfortable with a racial mix equal to the Detroit metro average (20 percent black), 73 percent reported that they would not be willing to move onto a block that was just over 50 percent black. Reynolds Farley, Sheldon Danziger, and Harry J. Holtzer, **Detroit Divided** (New York: Russell Sage Foundation, 2000), 188-216.

¹⁶ Duncan’s formula for calculating the percentage of the total population required to move under this approach was not used by the authors or discussed further in the text. Taeuber and Taeuber, 30.

¹⁷ Under the Duncan approach, the formula used is 2 times the percentage black of the metro area’s combined black and white populations (p) times the percentage white of the metro area’s combined black and white population ($q=1-p$) times the dissimilarity index (D), or $2pqD$.

¹⁸ For a study using the historical segregation index to rank cities based on 2000 census data, see William H. Frey and Dowell Myers, “Working Paper: Neighborhood Segregation in Single-Race and Multirace America: A Census 2000 Study of Cities and Metropolitan Areas” (Fannie Mae Foundation, 2002).

¹⁹ Douglas S. Massey and Nancy A. Denton, “The Dimensions of Residential Segregation,” **Social Forces** 67: 281-315.

²⁰ Douglas S. Massey and Nancy A. Denton, **American Apartheid: Segregation and the Making of the Underclass** (Cambridge, Mass.: Harvard University Press, 1993); Douglas S. Massey and Nancy A. Denton, “Hypersegregation in U.S. Metropolitan Areas: Black and Hispanic Segregation Along Five Dimensions,” **Demography** 26 (August 1989), 373-391.

²¹ Nancy A. Denton, “Are African Americans Still Hypersegregated?” pp. 80-81 in Robert D. Bullard, J. Eugene Grigsby, and Charles Lee (eds.), **Residential Apartheid: The American Legacy** (Los Angeles: CAAS Publications, 1994).

²² The last two measures compare the density of census tracts with black population to the density of blocks with white populations and test whether blacker census tracts are located closer together than whiter census tracts.

²³ Douglas S. Massey, “Residential Segregation and Neighborhood Conditions in U.S. Metropolitan Areas,” in Neil J. Smelser, William Julius Wilson, and Faith Mitchell (eds.), **America Become: Racial Trends and Their Consequences** (Washington, D.C.: National Academy Press, National Research Council Commission on Behavioral and Social Sciences and Education, 2001), 410.

²⁴ Iceland et al, **Racial and Ethnic Segregation in the United States**.

²⁵ The delta index formula is $\left(\frac{1}{2}\right)\sum_{i=1}^n\left|\frac{b_i}{B}-\frac{a_i}{A}\right|$

where b_i is the black population in census tract i , B is the total black population in the metropolitan area, a_i is the land area of census tract i , and A is the total land area in the census tracts of the metropolitan area. Ibid., 122-123.

²⁶ The Census Bureau ranked large metro areas on their segregation of African Americans in the year 2000 only if their total population was at least one million in 1980 and had at least 20,000 blacks (or 3 percent or more of the population) in 1980.

²⁷ The dissimilarity segregation indexes in this report are from the Lewis Mumford Center for Comparative Urban and Regional Research website at mumford1.dyndns.org/cen2000/data.html. The center also maintains a website listing its national newspaper coverage at mumford1.dyndns.org/cen2000/news.html.

²⁸ See John Logan et al, "Ethnic Diversity Grows, Neighborhood Integration Lags Behind," (Albany: University of New York, Lewis Mumford Center, April 2001). Online at mumford1.dyndns.org/cen2000/WholePop/WPreport/page1.html.

²⁹ The Mumford Center states that its ranking results "should be interpreted with caution" when the population of blacks or Hispanics is under 50,000 (a condition affecting 226 of its 331 metro area rankings for blacks and 245 of its 331 metro area rankings for Hispanics). According to the Mumford Center, the formulae work for the Asian population unless it is under 20,000, although the mathematical basis for this difference in the formulae's utility is not explained. The Asian-white rankings would be questionable for 260 metro areas under the Mumford Center's "20,000 minimum rule." If a "50,000 minimum rule" were applied, 293 of the 331 Asian-white rankings posted on the Mumford Center website would be questionable. "Metropolitan Area Rankings: Population of All Ages," Mumford Center web page at mumford1.dyndns.org/cen2000/WholePop/WPsort.html, accessed August 8, 2002.

³⁰ "Ethnic Diversity Grows," p.4.

³¹ When the dissimilarity segregation index is used to rank the four counties in the Milwaukee area on their black-white segregation, Milwaukee County is ranked the "most segregated" with an index of 77.3. The three suburban counties show what is considered only "modest segregation." Ozaukee County has a segregation index of 36.5; Washington County has an index of 35.0; and Waukesha County has an index of 33.0. The City of Waukesha is combined with the City of Milwaukee as the "central cities area" of the Milwaukee MSA in the Mumford calculations. In Waukesha blacks comprise 1 percent of the total population; in the City of Milwaukee, blacks comprise 38 percent of the population.

³² Edward L. Glaeser and Jacob L. Vigdor, **Racial Segregation in the 2000 Census: Promising News** (Washington, D.C.: The Brookings Institution Center on Urban and Metropolitan Policy, April 2001). Online at www.brook.edu/dybdocroot/es/urban/census/glaeser.pdf.

³³ U.S. Census Bureau definitions of regions were used for this report. See, Bureau of the Census, **Geographic Areas Reference Manual** (Washington, D.C.: U.S. Department of Commerce, November 1994).

³⁴ U.S. Census Bureau, "GCT-PH1 Population, Housing Units, Area, and Density: 2000."

This study was supported in part by a grant from the Helen Bader Foundation. Maps were prepared by Spencer Barnett and John Pawasarat. For more information on the research, contact Lois M. Quinn, Employment and Training Institute, School of Continuing Education, University of Wisconsin-Milwaukee, 161 W. Wisconsin Avenue, Suite 6000, Milwaukee, WI 53203. Phone (414) 227-3388. Email: lquinn@uwm.edu.