Segregation Patterns in the District of Columbia

1980 to 2000

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KEY FINDINGS

■ Over the last two decades, blacks in the District have been and remain highly segregated.

■ Hispanics are becoming more segregated and Asians less segregated.

■ Neighborhoods east of the Anacostia River are becoming less diverse; the rest of the city, more diverse.

This discussion brief examines changes in racial and ethnic diversity and patterns of racial and ethnic segregation in the District of Columbia from 1980 to 2000. Using historical and recently released census data, we seek to answer the following questions: What do different measures of segregation tell us about recent population changes in the District of Columbia? What is the level of segregation in the city and how has it changed? Does segregation disproportionately affect particular racial groups or neighborhoods in the city and, if so, how?

Segregation can be defined generally as the extent to which different groups are separated geographically from each other. The phenomenon of segregation is hardly recent or unique to Washington, D.C., and can be caused by several factors.[1] Discrimination, both past and current, is certainly a part of the explanation for the patterns of racial and ethnic segregation that are observed today. Private prejudice and public policies both contributed to the creation of modern segregation (Civil Rights Project 2001; Seitles 1998), and research continues to document the persistence of discrimination in residential housing markets (Turner et al. 2002). Nevertheless, segregation should not be equated with discrimination. Reasons other than discrimination can explain or contribute to segregation's existence, such as personal preference, language differences, immigrant status, education level, and income (Bayer, McMillan, and Rueben 2002; Ihlanfeldt and Scafidi 2002).

Why is segregation a subject that concerns so many people? Segregation can directly impact the quality of life in cities and neighborhoods. As was clearly stated

by the U.S. Supreme Court in the landmark case of *Brown vs. Board of Education,* separate facilities in education are inherently unequal. This same principle can be extended to other aspects of life. In their book *American Apartheid,* Massey and Denton (1993) argue strongly that the persistence of racial segregation in the United States has led directly to the development of an economic underclass—people cut off and excluded from the opportunities needed to lift themselves out of poverty and take advantage of the benefits of society.[2]

Like many cities, Washington has gone through major population changes in its history. We now see the city starting to emerge from a half-century of population decline to the point where we can begin thinking about our city growing again. This is certainly apparent in Mayor Anthony A. Williams's vision of attracting 100,000 new residents to the District over the next decade. As new people come into the District, we need to understand what effect that change will have on the dynamics of the city and its neighborhoods. What does past experience tell us about which areas are likely to attract new residents? What effect will that have on economic and social conditions throughout the city?

While the intuitive idea of segregation is fairly easy to grasp, turning a definition of segregation into a quantifiable index has proven to be more of a challenge. The benefit of such an indicator is that it can be used to measure changes in the extent of segregation in a city over time or to compare the levels of segregation across cities. Over the years, many different measures have been developed and used to measure segrega-

tion. In a seminal paper on the subject, Massey and Denton (1988) identified and examined 20 separate measures of residential segregation.

We look at three different segregation measures in this brief to describe the extent of segregation within the context of Washington's multiracial and multiethnic population. The three measures are the dissimilarity index, the exposure index, and the diversity index. Each of these measures paints its own picture of segregation, and comparing the three measures demonstrates how different indicator definitions can describe the nature and extent of the phenomenon in different ways.[3]

We begin by describing the District's racial and geographical population changes over the past 20 years. The remainder of the brief compares the three measures of racial/ethnic segregation to examine how the diversity of the city has changed and how patterns of segregation have evolved over the past two decades.

Data and Definitions

This brief uses data from the Urban Institute's Neighborhood Change Database (NCDB), which links decennial census data from 1970, 1980, 1990, and 2000 at the census tract level.[4] All three segregation indices were constructed by aggregating the racial and ethnic composition of individual census tracts in the District. Census tracts are small, locally determined geographic areas used by the United States Census Bureau for the collection and tabulation of decennial census data. Tracts generally consist of between 2,500 and 8,000 persons and are defined to group residents with similar population characteristics, economic status, and living conditions. We use census tracts to represent neighborhoods in our analysis, and all three of our segregation measures compare the racial and ethnic composition of tracts to larger areas.

Throughout this brief, we describe segregation for the four major racial/ethnic groups in the city: blacks, whites, Asians, and Hispanics. These categories are based on the U.S. Census Bureau's classifications of race and ethnicity. The Census Bureau's race categories are white, black/African American, Asian, Native Hawaiian or other Pacific islander, American Indian or Alaska Native, and "other race." The Census Bureau's ethnicity categories are "Hispanic/Latino" and "not Hispanic/Latino." Race and ethnicity are two separate distinctions;

therefore, persons of Hispanic/Latino ethnicity may be of any race. We have defined the four major racial/ethnic groups in the District as follows:

Black: Black/African-American persons, not Hispanic/Latino.
White: White persons, not Hispanic/Latino.
Asian: Asian and Native Hawaiian or other Pacific islander persons, not Hispanic/Latino.
Hispanic: Persons of any race who are Hispanic/Latino.

Persons in the other racial groups (i.e., non-Hispanic persons who are Native American, Alaska Native, or "other race") have not been included in this analysis because they represent less than 1 percent of the total population in the District.[5]

Demographic Trends

Current and past segregation patterns in the city need to be put in the context of the overall demographic changes that have occurred over the past decades.[6] From 1980 to 2000, the District's total population decreased by almost 70,000 residents, continuing a trend of population loss that began 50 years ago. The largest change among the four major racial/ethnic groups was in the black population, which decreased by almost 100,000 persons over the past 20 years (figure 1). This is also a continuation of a trend that began in the 1970s, when large numbers of blacks began leaving the city.

The District's white population, however, has only decreased slightly over the past 20 years. A large exodus of whites began in the 1950s, at a time when white persons made up a majority of the city's population. Over the next 30 years, about 346,000 whites left the city, a precipitous drop of 67 percent. Starting in the 1980s, however, the white population began to stabilize to the levels that we see today.

The decreases in black and white populations in the past two decades were only partially offset by increases in the Hispanic and Asian populations. The Hispanic population has grown by 27,000 persons over the past 20 years—an increase from 3 percent of the total population in 1980 to 5 percent in 2000. Similarly, the Asian population has grown by about 11,000 persons. Asians now represent 2 percent of the city's total population, an increase from 1 percent in 1980.

In particular, most of the neighborhoods in wards 5, 6, 7, and 8 showed moderate or large decreases in population over the past

FIGURE 1. Population by Race/Ethnicity, 1980 to 2000, District of Columbia
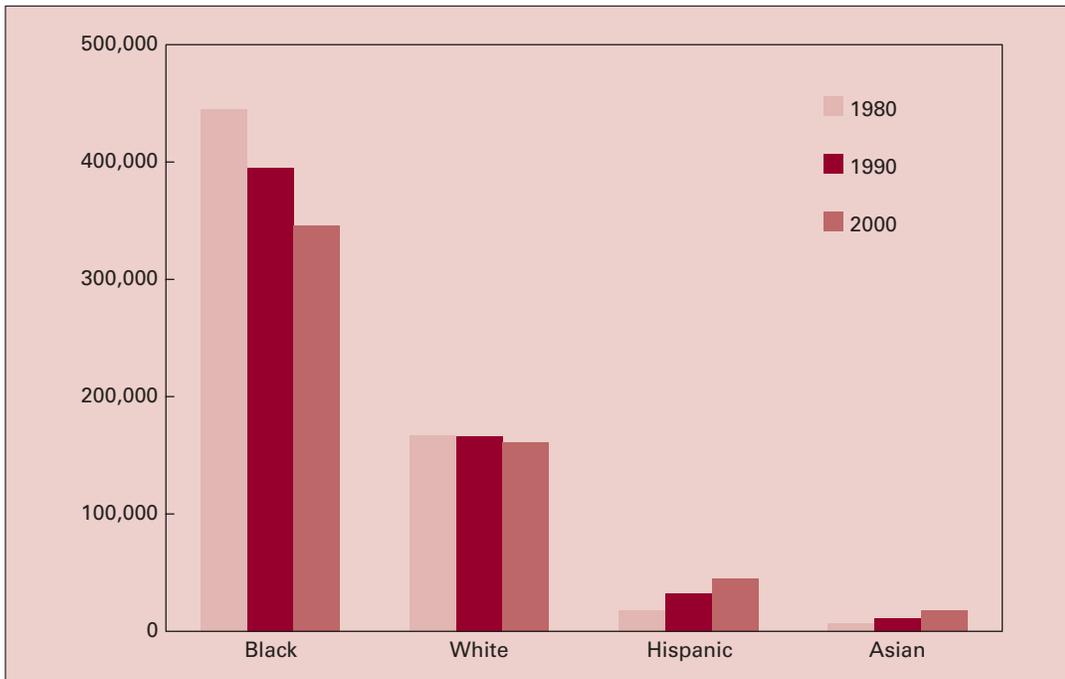
Source: NCDB 2000.

20 years. In contrast, most of ward 3's neighborhoods had either a population increase or only a small change in population. Wards 1, 2, and 4 are mixed pictures, with some neighborhoods growing in population and others remaining stable or declining.

The population changes of the past two decades have not occurred uniformly throughout the city. Northeast and southeast Washington show higher levels of population loss than the northwest quadrant.

Dissimilarity Index

The first of the three measures of segregation that we examined was the *dissimilarity index*. The dissimilarity index is one of the most widely used and familiar of all the segregation measures. It appears throughout the literature not only as an indicator of racial segregation, but also as a measure of segregation of the poor from the nonpoor (Abramson, Tobin, and VanderGoot 1995; Tatian and Wilson forthcoming) and between poor persons and jobs (Raphael and Stoll 2002). Its popularity is such that there are now web sites devoted to presenting dissimilarity index data for cities throughout the United States (Lewis Mumford Center 2002).

The benefits of the dissimilarity index, apart from its familiarity, are its ease of

computation and interpretation. The dissimilarity index is often described as a measure of "evenness" among groups in a population; that is, it indicates how evenly distributed one group is relative to another. The index value ranges from 0, which denotes complete integration, to 1, which denotes complete segregation. The index value represents the proportion of a particular group in a population that would have to move in order for that group to be distributed completely evenly throughout the city. If, for example, the value of the dissimilarity index were 0.25, that means that 25 percent of a group's population would have to move to eliminate all segregation in the city.[7]

One limitation of the dissimilarity index, however, is that it can only measure segregation between two groups. In other words, we can measure segregation between blacks and whites, or whites and Hispanics, but not among all three groups simultaneously. For a multiracial city such as Washington, D.C., this can make interpretation somewhat complicated. We would have to calculate six different values of the dissimilarity index to represent all of the racial pairings for our four major racial/ethnic groups.

Figure 2 shows the trends in the dissimilarity index for four pairs of racial/ethnic

FIGURE 2. *Dissimilarity Index, 1980 to 2000, District of Columbia*
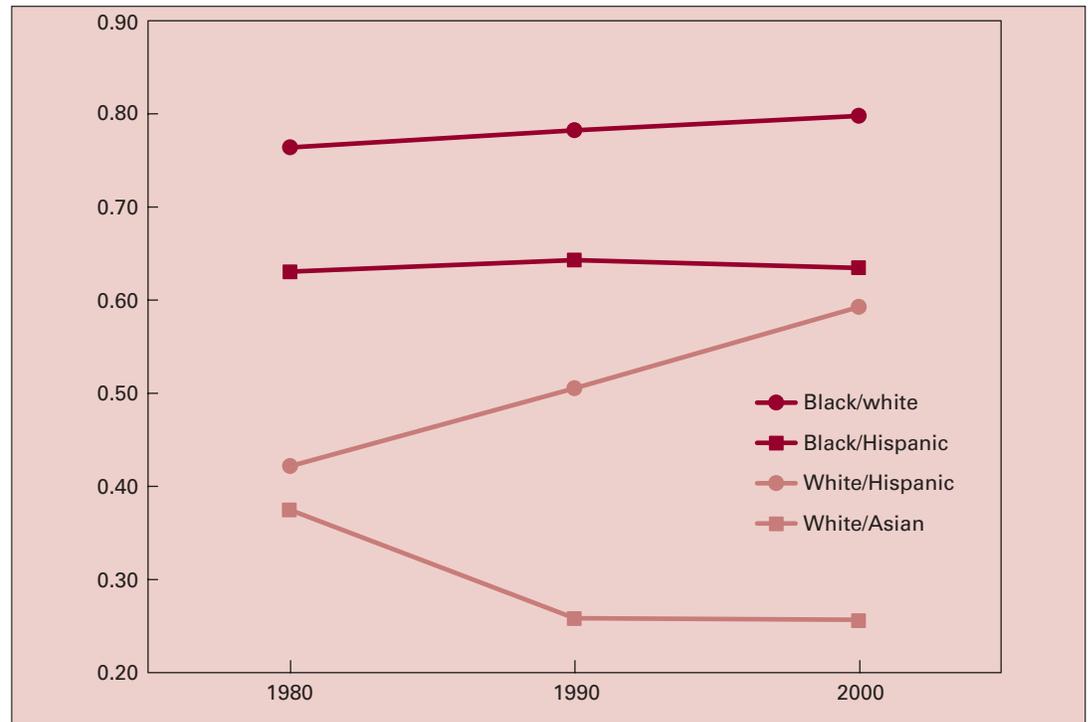
Source: D.C. Data Warehouse analysis of NCDB 2000 data.

groups from 1980 to 2000. From this graph we can observe several things about segregation in the city. First, the relative position of the four lines indicates where the largest segregation occurs among the pairs we examined. The highest level of segregation is between blacks and whites, where the index value went from 0.76 to 0.80. The next highest level of segregation is between blacks and Hispanics, while the third highest is between whites and Hispanics. Finally, of the four pairings we examined, the least segregation is between whites and Asians.

Second, the slope of the line indicates the general trend in segregation among these groups over the past two decades. The level of black and white segregation increased slightly, as noted earlier. Black and Hispanic segregation has been somewhat stable, starting at 0.63 in 1980, rising slightly to 0.64 in 1990, and then dropping back to 0.63 in 2000. The most dramatic changes, however, are in the values for white segregation with Hispanics and Asians. The dissimilarity index indicates a sharp increase in segregation between whites and Hispanics, from a value of 0.42 in 1980 to 0.59 in 2000, a level almost equal to that of black and Hispanic segregation. Between whites and Asians, however, we observe a drop in the index from 0.37 in 1980 to 0.26 in 1990 and no change between 1990 and 2000. So, segregation levels relative to whites for the two growing populations in the city are headed in opposite directions.

As noted previously, the dissimilarity index is limited by the fact that it can only measure segregation between two racial and ethnic groups. Other indices, however, are able to express segregation among multiple populations more completely. Two of these indices, the exposure index and the diversity index, are described in the remainder of this brief.

Exposure Index

The emergence of sizeable Hispanic and Asian populations within the District requires us to consider segregation among four groups, rather than two. While whites and blacks are still the largest components of the District's population, it is important to consider the impact of the growth of smaller groups on the city's geographic segregation patterns.

The *exposure index* indicates the racial composition of a neighborhood for an "average" member of a particular racial group. The statistic is a weighted average of neighborhood racial composition, where each census tract is weighted by the share of a particular race that lives in that tract.[8] This method is useful in showing changes in one racial group's exposure to another. This method is also affected by group size. The larger a particular racial group's share of the population, the more likely its neighborhood is to show higher concentrations of that group's population. We analyzed the differences between the exposure index in 1980 and 2000 for whites, blacks, Hispanics, and Asians. These results are shown in figures 3a through 3d.

The neighborhood of a "typical" black person (figure 3a) was overwhelmingly black in both 1980 and 2000. The proportion of blacks in the average black person's neighborhood decreased from 88 percent to 84 percent. This decrease is small considering that the black population in the District decreased 20 percent over the same time period. The white and Asian populations did not change, but the Hispanic population grew from 2 percent to 6 percent of the population in the average black person's neighborhood.

The neighborhood for an average white in 1980 and 2000 (figure 3b) was overwhelmingly white, though it decreased from 69 percent to 67 percent. The black population in the average white person's neighborhood decreased from 24 percent to 19 percent, while both the Hispanic and Asian populations increased.

The neighborhood of an average Hispanic (figure 3c) has changed significantly over the past 20 years. The percent of blacks remains unchanged, but the percent of whites has decreased from 45 percent to 29 percent. The Hispanic population increased from 7 percent to 21 percent, and the Asian population increased from 2 percent to 4 percent. Over the period 1980 to 2000, the Hispanic population increased 150 percent, but their exposure to other Hispanics increased by 200 percent.

The neighborhood for a typical Asian (figure 3d) has also changed significantly over the past 20 years. The black population decreased from 38 percent to 26 percent. The white, Asian, and Hispanic populations have all increased.

Diversity Index

The third measure of segregation we used was the *diversity index*.[9] This measure produces a statistic based on the relative proportions of each racial group. Like the dissimilarity index, the values of the diversity index range from 0 (complete integration) to 1 (complete segregation). To calculate the diversity index, we first determine the proportion of each racial/ethnic group in the entire city. Using these figures, we then evaluate the extent that each neighborhood (i.e., census tract) mirrors the diversity of the overall population. According to this measure, from 1980 to 2000 there was a small decrease in the level of segregation among the four major racial/ethnic groups in the city—the index value went from 0.48 to 0.43 over this period.
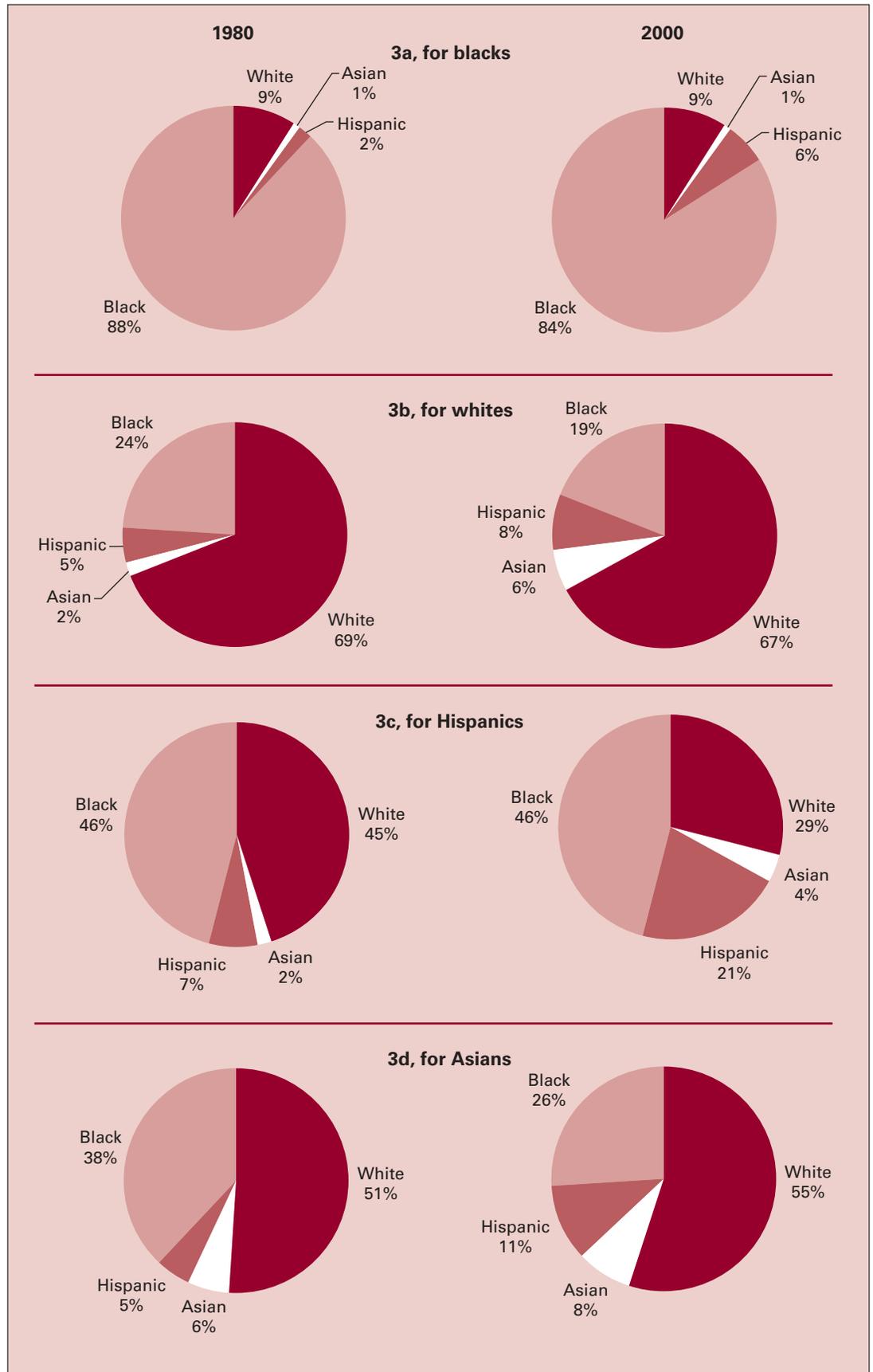
One of the advantages of the diversity index over most other segregation measures is that the overall statistic can be decomposed to analyze how segregation between groups contributes to the overall level of segregation. For instance, for this report we analyzed how much the overall level of segregation in the city consists of whites segregated from the nonwhite population versus segregation among the nonwhite groups.

By decomposing the diversity index, we found that segregation between whites and nonwhites was a larger component of segregation in 2000 than segregation among the nonwhite groups (figure 4). This statistic tells us that most of Washington's residential segregation is due to the fact that whites do not live in the same neighborhoods as nonwhites. The level of white versus nonwhite segregation has decreased, however, as a proportion of overall segregation over the past two decades. In 1980, out of the total index value of 0.48, white versus nonwhite segregation was 0.40, or 83 percent of overall segregation. In 2000, white versus nonwhite segregation represented 0.30 out of the total index value of 0.43, or 70 percent of overall segregation. Segregation among nonwhite groups, on the other hand, has increased from 0.08 in 1980 to 0.13 in 2000, becoming a larger share of the total segregation.
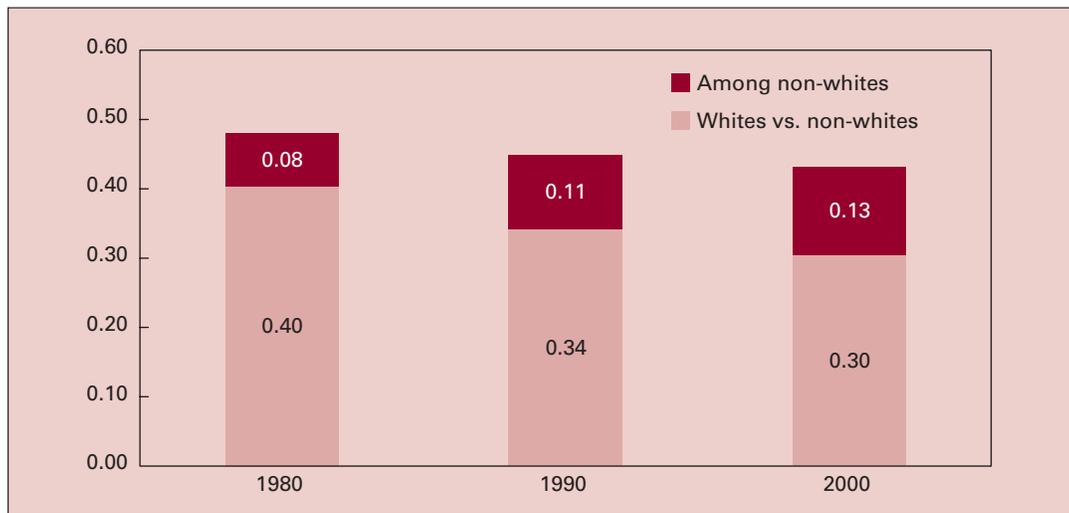
Segregation by Ward

In a similar manner, we can use the diversity index to determine the level of segregation within smaller geographic areas and

FIGURE 3. *Exposure Index, Typical Neighborhoods by Race/Ethnicity, 1980 and 2000, District of Columbia*

1980   **2000**

3a, for blacks

1980: White 9%, Asian 1%, Hispanic 2%, Black 88%
2000: White 9%, Asian 1%, Hispanic 6%, Black 84%

3b, for whites

1980: Black 24%, Hispanic 5%, Asian 2%, White 69%
2000: Black 19%, Hispanic 8%, Asian 6%, White 67%

3c, for Hispanics

1980: Black 46%, Hispanic 7%, Asian 2%, White 45%
2000: Black 46%, White 29%, Asian 4%, Hispanic 21%

3d, for Asians

1980: Black 38%, Hispanic 5%, Asian 6%, White 51%
2000: Black 26%, Hispanic 11%, Asian 8%, White 55%

Source: D.C. Data Warehouse analysis of NCDB 2000 data.

FIGURE 4. *Diversity Index by Race/Ethnicity, 1980 to 2000, District of Columbia*

Source: D.C. Data Warehouse analysis of NCDB 2000 data.

compare them with the overall level of segregation for the District as a whole. This can tell us whether segregation is due to differences among census tracts within wards or because wards overall are racially different from each other.[10]

Figure 5 shows the same diversity index bars for 1980, 1990, and 2000, but decomposed into between-ward and within-ward segregation. We see that segregation within wards has become a smaller percentage of total segregation in the District. In other words, neighborhoods within wards are becoming more similar to each other in racial and ethnic makeup. Segregation within wards accounted for 59 percent of all segregation in 1980, but only 48 percent of all segregation in 2000. At the same time, segregation between wards has increased overall and as a proportion of overall segregation. This indicates that differences between wards are becoming a more important component of overall segregation in the city.

### Segregation by Neighborhood Cluster

Neighborhood clusters are small areas within the city that are being used by the D.C. government for budgeting, planning, service delivery, and analysis purposes. There are 39 neighborhood clusters throughout the city, each made up of three to five neighborhoods.[11] We have used neighborhood clusters as a second level of geographic organization, like wards, to look at the geographic patterns in segregation.

The diversity index allows us to look at the individual diversity levels within each neighborhood cluster and compare those to the diversity of the city as a whole. The District's overall increase in diversity from 1980 to 2000 has not been distributed equally across the city. Maps 1a and 1b show the level of diversity in each of the city's 39 neighborhood clusters in 1980 and 2000.[12]

In 1980, most areas of the city showed low levels of diversity, with the least diverse neighborhood clusters being east of the Anacostia River. Only 2 clusters out of 39 in the city had index values indicating a high level of diversity: Kalorama Heights/Adams Morgan (#1) and Dupont Circle (#6). Nine neighborhood clusters had values indicating a moderate level of diversity: Columbia Heights/Mt. Pleasant (#2), Shaw/Logan Circle (#7), Downtown (#8), Southwest Employment Area (#9), North Cleveland Park/Van Ness (#12), Colonial Village (#16), Union Station (#25), Capitol Hill (#26), and Fairfax Village (#35).

According to the most recent census data for 2000, however, the index values for neighborhood clusters now show a much more diverse population, especially in wards 1, 2, and 6, than they did two decades ago. Eight neighborhood clusters had high diversity index values in 2000. In addition to the two clusters with high diversity in 1980, the Columbia Heights/ Mt. Pleasant (#2), Howard University/ LeDroit Park (#3), Shaw/Logan Circle (#7),

FIGURE 5. *Diversity Index by Ward, 1980 to 2000, District of Columbia*
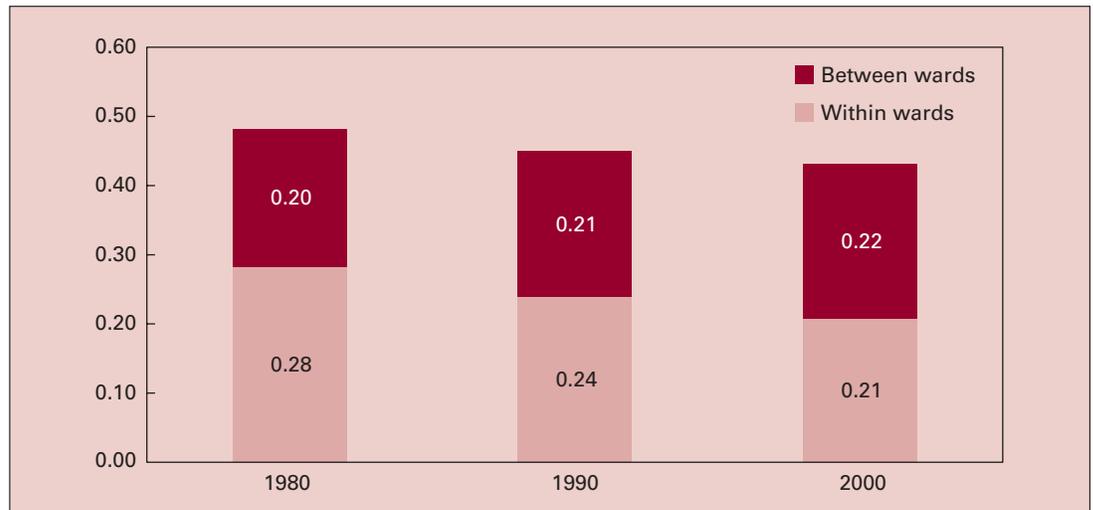
Source: D.C. Data Warehouse analysis of NCDB 2000 data.

Downtown (#8), Southwest Employment Area (#9), and Capitol Hill (#26) clusters are now highly diverse. Similarly, 13 neighborhood clusters now have moderate levels of diversity, an increase over the nine clusters in 1980. The additional clusters that have become moderately diverse are Georgetown (#4), West End/Foggy Bottom (#5), Hawthorne (#10), Spring Valley/Foxhall (#13), Cathedral Heights/Glover Park (#14), Cleveland Park/Woodley Park (#15), Takoma (#17),

MAP 1. *Diversity Index Values for Neighborhood Clusters, District of Columbia*
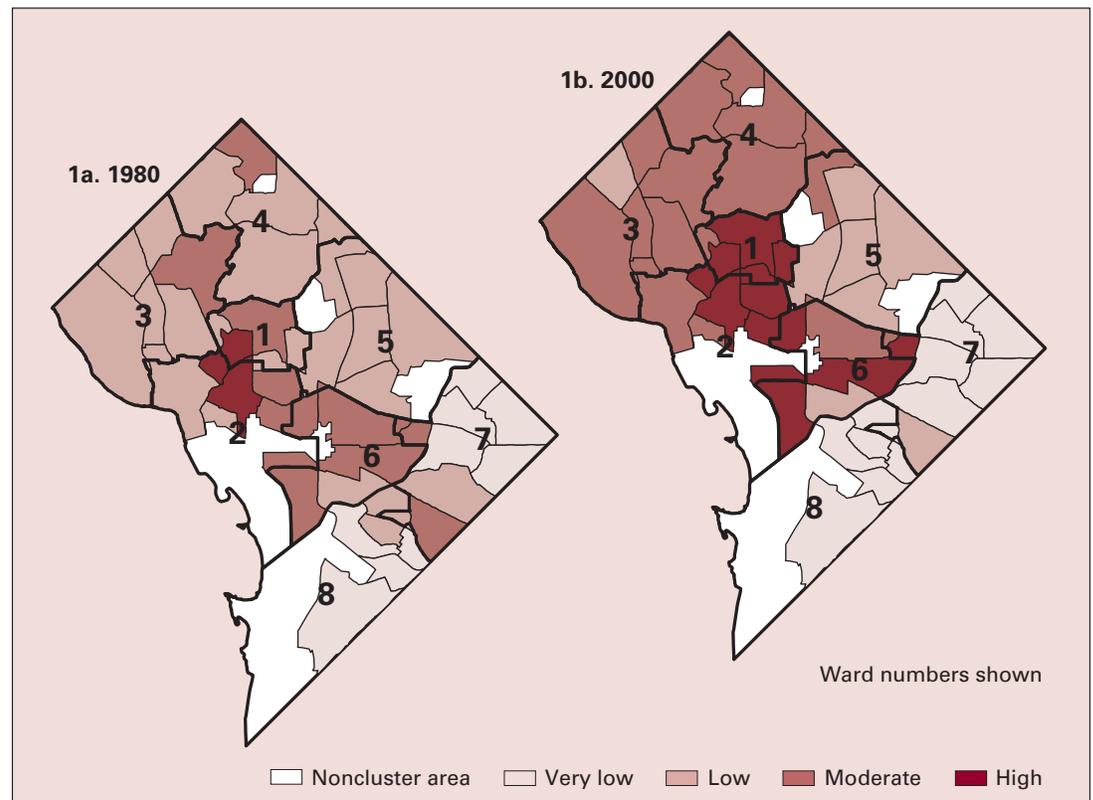
Source: D.C. Data Warehouse analysis of NCDB 2000 data.

TABLE 1. *Diversity Index Values and Demographic Statistics for Neighborhoods and Wards, 1980 to 2000, District of Columbia*

	Diversity index		Percent black		Percent white		Percent Hispanic		Percent Asian	
	1980	2000	1980	2000	1980	2000	1980	2000	1980	2000
District of Columbia	0.54	0.70	70	61	26	28	2.8	7.9	1.0	3.0
Wards										
Ward 1	0.59	0.85	70	46	20	25	8.1	24	1.2	4.1
Ward 2	0.70	0.79	35	23	56	58	5.5	10	3.4	8.4
Ward 3	0.33	0.51	3.8	5.8	89	80	4.8	6.8	2.0	6.7
Ward 4	0.42	0.62	80	70	17	16	1.7	12	0.7	1.4
Ward 5	0.33	0.32	87	88	12	7.7	1.2	2.6	0.5	1.0
Ward 6	0.50	0.60	71	64	26	31	1.3	2.9	0.8	2.0
Ward 7	0.16	0.10	95	97	3.7	1.3	0.8	0.9	0.3	0.2
Ward 8	0.13	0.08	96	98	2.4	0.8	0.8	0.8	0.2	0.2
Neighborhood clusters										
1 Kalorama Heights, Adams Morgan, Lanier Heights	0.75	0.77	35	17	50	60	12	16	1.8	5.9
2 Columbia Heights, Mt. Pleasant, Pleasant Plains, Park View	0.48	0.79	80	52	11	13	7.5	30	1.2	3.9
3 Howard University, LeDroit Park, Cardozo/Shaw	0.29	0.65	90	67	7.1	19	2.8	12	0.3	1.9
4 Georgetown, Burleith/Hillandale	0.26	0.40	2.1	3.8	92	86	4.2	4.2	1.6	6.1
5 West End, Foggy Bottom, GWU	0.38	0.60	4.4	6.4	86	74	4.6	5.5	3.8	13
6 Dupont Circle, Connecticut Avenue/K Street	0.70	0.64	25	9.5	62	72	9.1	8.8	3.4	9.2
7 Shaw, Logan Circle	0.50	0.85	76	50	19	25	2.8	18	2.0	6.6
8 Downtown, Chinatown, Penn Quarters, Mount Vernon Square, North Capitol Street	0.60	0.62	73	71	15	17	2.8	3.2	8.6	8.6
9 Southwest Employment Area, Southwest/Waterfront, Fort McNair, Buzzard Point	0.55	0.63	60	66	38	25	1.2	4.4	0.7	3.2
10 Hawthorne, Barnaby Woods, Chevy Chase	0.36	0.51	6.4	10.0	88	80	3.1	4.7	2.7	5.0
11 Friendship Heights, American University Park, Tenleytown	0.25	0.39	2.3	3.7	93	86	3.1	5.3	1.8	4.6
12 North Cleveland Park, Forest Hills, Van Ness	0.40	0.54	6.0	6.8	85	79	6.8	6.6	1.7	7.5
13 Spring Valley, Palisades, Wesley Heights, Foxhall Crescent, Foxhall Village, Georgetown Reservoir	0.28	0.48	3.4	5.0	91	81	3.8	6.2	1.4	6.2
14 Cathedral Heights, McLean Gardens, Glover Park	0.32	0.59	3.8	5.8	89	75	4.3	9.6	2.1	8.8
15 Cleveland Park, Woodley Park, Massachusetts Avenue Heights, Woodland-Normanstone Terrace	0.38	0.52	3.6	7.7	86	80	7.2	6.8	2.5	5.2
16 Colonial Village, Shepherd Park, North Portal Estates	0.54	0.51	66	74	31	21	2.6	3.2	0.2	1.0
17 Takoma, Brightwood, Manor Park	0.33	0.48	87	79	9.7	6.1	1.3	13	1.2	1.2
18 Brightwood Park, Crestwood, Petworth	0.24	0.50	92	77	6.0	5.3	1.6	16	0.2	1.0
19 Lamond Riggs, Queens Chapel, Fort Totten, Pleasant Hill	0.31	0.44	87	81	11	15	0.9	2.5	0.6	1.3
20 North Michigan Park, Michigan Park, University Heights	0.37	0.34	81	87	17	9.8	0.5	1.6	0.3	1.2
21 Edgewood, Bloomingdale, Truxton Circle, Eckington	0.30	0.27	89	91	8.7	3.9	2.0	3.5	0.4	0.9
22 Brookland, Brentwood, Langdon	0.24	0.33	92	88	6.7	7.5	1.0	3.2	0.6	0.9
23 Ivy City, Arboretum, Trinidad, Carver Langston	0.21	0.24	93	92	5.4	5.2	0.9	1.6	0.5	0.8
24 Woodridge, Fort Lincoln, Gateway	0.22	0.18	92	94	7.8	2.4	0.3	2.1	0.2	0.6
25 Union Station, Stanton Park, Kingman Park	0.44	0.56	79	67	19	29	1.4	2.5	0.9	1.4
26 Capitol Hill, Lincoln Park	0.58	0.65	56	46	41	48	1.5	3.3	0.9	2.2
27 Near Southeast, Navy Yard	0.27	0.31	89	90	9.5	6.2	0.6	2.2	0.5	1.6
28 Historic Anacostia	0.16	0.10	95	97	4.5	1.0	0.3	1.0	0.3	0.4
29 Eastland Gardens, Kenilworth	0.01	0.05	100	99	0.1	0.5	0.0	0.3	0.0	0.3
30 Mayfair, Hillbrook, Mahaning Heights	0.10	0.08	97	98	1.2	0.7	1.6	1.0	0.0	0.2
31 Deanwood, Burrville, Grant Park, Lincoln Heights, Fairmont Heights	0.06	0.07	98	98	0.7	0.6	0.5	0.8	0.2	0.1
32 River Terrace, Benning, Greenway, Ft. Dupont	0.08	0.08	98	98	0.8	0.5	0.9	1.3	0.1	0.2
33 Capitol View, Marshall Heights, Benning Heights	0.05	0.06	99	98	0.5	0.5	0.2	0.6	0.3	0.2
34 Twining, Fairlawn, Randle Highlands, Penn Branch, Fort Davis Park, Dupont Park	0.28	0.14	90	96	8.1	2.1	1.7	1.2	0.2	0.3
35 Fairfax Village, Naylor Gardens, Hillcrest, Summit Park	0.45	0.21	77	93	21	5.1	1.1	0.9	1.0	0.5
36 Woodland/Fort Stanton, Garfield Heights, Knox Hill	0.14	0.07	96	98	3.3	0.7	0.5	0.7	0.3	0.1
37 Sheridan, Barry Farm, Buena Vista	0.03	0.07	98	98	0.2	0.5	0.2	0.9	0.1	0.1
38 Douglass, Shipley Terrace	0.03	0.06	99	99	0.1	0.3	0.5	0.8	0.0	0.0
39 Congress Heights, Bellevue, Washington Highlands	0.14	0.08	96	98	2.5	0.9	1.0	0.7	0.3	0.3

Source: D.C. Data Warehouse analysis of NCDB 2000 data.
Notes: Diversity index values range from 0 (no diversity) to 1 (maximum diversity).

Brightwood Park (#18), and Lamond Riggs (#19).

Nevertheless, while overall the city's neighborhoods are becoming more diverse, in certain areas diversity is declining. Areas east of the Anacostia River that were moderately diverse in 1980 now have index values indicating low or very low levels of diversity. The Fairfax Village cluster (#35) went from moderate to low diversity, while the Historic Anacostia (#28) and Twining (#34) clusters declined from low diversity to very low diversity.

Conclusions

This brief demonstrates that different measures of racial and ethnic segregation can paint different pictures of the composition of a multiracial, multiethnic city such as Washington, D.C. In summary, we found the following:

- The dissimilarity index shows persistent high levels of segregation between blacks and whites and between blacks and Hispanics. Segregation between whites and Hispanics has increased over the past two decades, while segregation between whites and Asians has decreased.
- The exposure index shows that the level of segregation for blacks has changed little over the past 20 years, despite a large decrease in population. Black persons still live in neighborhoods that are overwhelmingly black.
- By decomposing the diversity index, we can see that the dynamic of segregation has shifted over the past 20 years. The growth of the Hispanic and Asian populations has affected the pattern of racial segregation. Segregation among non-whites has increased significantly over the past 20 years. Similarly, the average Hispanic or Asian lives in a dramatically different neighborhood than 20 years ago.
- Breaking segregation patterns down geographically, we find that most segregation today is due to racial differences between wards, rather than differences within wards. Furthermore, while neighborhoods in the northwest and southwest quadrants have become more diverse over the past two decades, neighborhoods east of the Anacostia River have become less diverse.

Notes

1. For more on the extent of racial segregation in other cities and metro areas, see Civil Rights Project (2002); Glaeser and Vigdor (2001); Iceland and Weinberg (2002); Lewis Mumford Center (2002); and Stuart (2000).
2. For example, Freeman, Scafidi and Sjoquist (2002) note that higher segregation levels are correlated with higher teacher turnover rates in public schools in Georgia.
3. For further comparisons of segregation indices, see Iceland and Weinberg (2002); Reardon (n.d.); and Taylor, Gorard and Fitz (2000).
4. The NCDB data and sources are documented in Tatian (2002).
5. In Census 2000, individuals could specify more than one race for the first time. Persons specifying multiple races constituted about 2.4 percent of the District's population in 2000. To make more consistent comparisons to earlier census data, the NCDB reallocates these multiracial persons to single-race categories according to a decision rule. For more on this, see Tatian (2002, 4-10–4-12).
6. Historical information on population by race for the District prior to 1980 is from Gibson and Jung (2002).
7. The formula for calculating the dissimilarity index can be found in Massey and Denton (1988, p. 284).
8. The formula for calculating the exposure index can be found in Massey and Denton (1988, p. 288).
9. What we are calling the "diversity index" here is referred to in the literature as the "information index" or the "entropy index." The formula for calculating this measure can be found in Massey and Denton (1988, p. 285).
10. For our analyses, census tract data have been assigned to 2001 ward boundaries.
11. We have combined census tracts into neighborhood clusters using specifications provided by the D.C. Office of Planning. These tract-based boundaries used for data reporting do not correspond exactly to the boundaries shown on official cluster maps.
12. In maps 1a and 1b, clusters identified as having very low levels of diversity have index values from 0 to 0.15; those with low diversity have values from 0.15 to 0.40; moderate, 0.40 to 0.60; and high, 0.60 or higher. These ranges were chosen by analyzing the standard deviations from the mean for diversity levels in 2000 and rounding those numbers. Below are examples of each of the four categories:

   - Twining cluster (#34)—very low diversity (index value 0.14): 96 percent black, 2.1 percent white, 1.2 percent Hispanic, and 0.6 percent Asian.
   - Ivy City cluster (#23)—low diversity (index value 0.24): 92 percent black, 5.2 percent white, 1.6 percent Hispanic, and 0.8 percent Asian.
   - Brightwood Park cluster (#18)—moderate diversity (index value 0.5): 77 percent black, 5.3 percent white, 16 percent Hispanic, and 1.2 percent Asian.
   - Columbia Heights/Mt. Pleasant cluster (#2)—high diversity (index value 0.79): 52 percent black, 13 percent white, 30 percent Hispanic, and 3.9 percent Asian.

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Acknowledgments

To obtain more data on neighborhoods in the District, or to download an electronic version of this report, please visit the DC Agenda Neighborhood Information Service web site at **http://www.dcagenda.org/nis/**

The DC Data Warehouse, a cooperative effort of the Urban Institute's Metropolitan Housing and Communities Center and DC Agenda's Neighborhood Information Service (NIS), is a comprehensive database containing information about the District of Columbia and its neighborhoods. It is funded by the Annie E. Casey Foundation to increase the capacity of funders, policymakers, and community groups to use data to track outcomes for children, youth, and families at the neighborhood level. Additional support is provided by the Meyer Foundation. The Discussion Brief series is intended to illustrate how information from the DC Data Warehouse can be used to shed light on issues of importance to the District and its residents.

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