

APRIL 18, 2022



THE
CENTER
FOR
STATE
AND
LOCAL
FINANCE

An Exploration of Racial Residential Segregation Trends in Atlanta: 1970–2020

Lakshmi Pandey
David L. Sjoquist

Working Paper 22-01

ACKNOWLEDGMENTS

We gratefully acknowledge the very helpful comments from Glen Ross and Sally Wallace.

Table of Contents

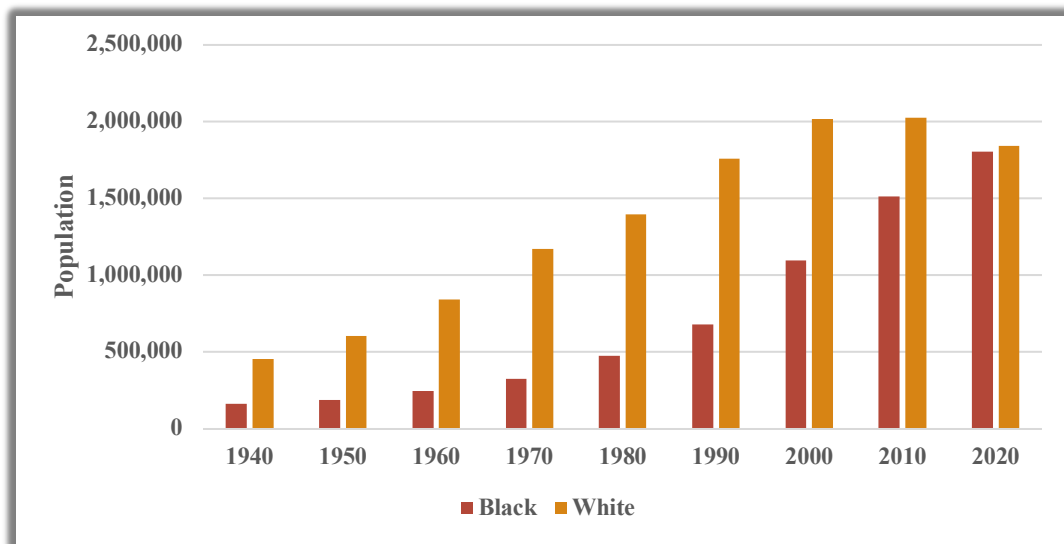
Executive Summary	2
Introduction	8
Population Growth by Race and Ethnicity	10
Population Growth in the ARC Region, 1940 – 2020	10
Population Growth by ARC County and Race	15
Residential Location for Blacks and Whites	20
Residential Patterns for Whites and Black	20
Decentralization of Blacks and Whites, 1970-2020	38
Geographic Concentration of Blacks	39
Changes in Census Tract Population by Race	47
Black Population as a Share of Total Population	60
Dissimilarity Index	61
Changes in the City of Atlanta	62
Explaining Racial Residential Patterns	63
Role of Black Population Density	64
Black Preference to Live with Other Blacks	68
White Avoidance of Black Neighborhoods	68
Income Differences	71
References	72
Appendix A: Data Sources and Adjustments	74
Appendix B: Two or More Races Category	75
About the Authors	77
About the Center for State and Local Finance	77

Executive Summary

In this report we explore two major demographic changes in the 10-county Atlanta Regional Commission region. First, between 1940 and 2020, the population of the ARC region changed dramatically, both in number and racial composition. Second, between 1970 and 2020 the region experienced a significant change in racial residential segregation.

Between 1940 and 2020, the population of the 10-county ARC region increased 7.61-fold, and by 2020 equaled 4,716,231. Over this 80-year period the Black population increased 10.96-fold and the white population increased 4.05-fold. Figure ES-1 shows the population for Blacks and whites for each decennial census year 1940 through 2020. As can be seen, the Black population increased significantly in each decade, although the growth in the 2010-2020 period was smaller than the prior two decades. The growth in the white population was substantial until 2000 but slowed in the next decade and was negative in the 2010-2020 period. Between 2010 and 2020, white population fell in 8 of the 10 ARC counties and increased in two counties, Cherokee and Fulton. As a result of the differential growth of the Black and white population the Black share of the total ARC population increased from 26.60 percent in 1940 to 38.32 percent in 2020.

Figure ES-1. ARC Population



It should not be surprising given the increase in the region's population over time that we observe population growth occurring further and further from the center of the region, which we take to be the Central Business District (CBD). Figure ES-2 and ES-3 show the change in census tract population between 1970 and 2020 by distance (in kilometers) from the CBD for Blacks and white, respectively. The figures look very different. The relationship between Black population growth and distance from the CBD roughly resembles a hill, reaching a peak at about 25 kilometers (Figure ES-2). The relationship between white population growth and distance from the CBD is J-shaped (Figure ES-3). White population fell in many close-in census tracts, i.e., at a distance from the CBD of less than 20 kilometers and increased in census tracts further from the CBD.

Figure ES-2. Change in Black Population by Distance to CBD, 1970-2020

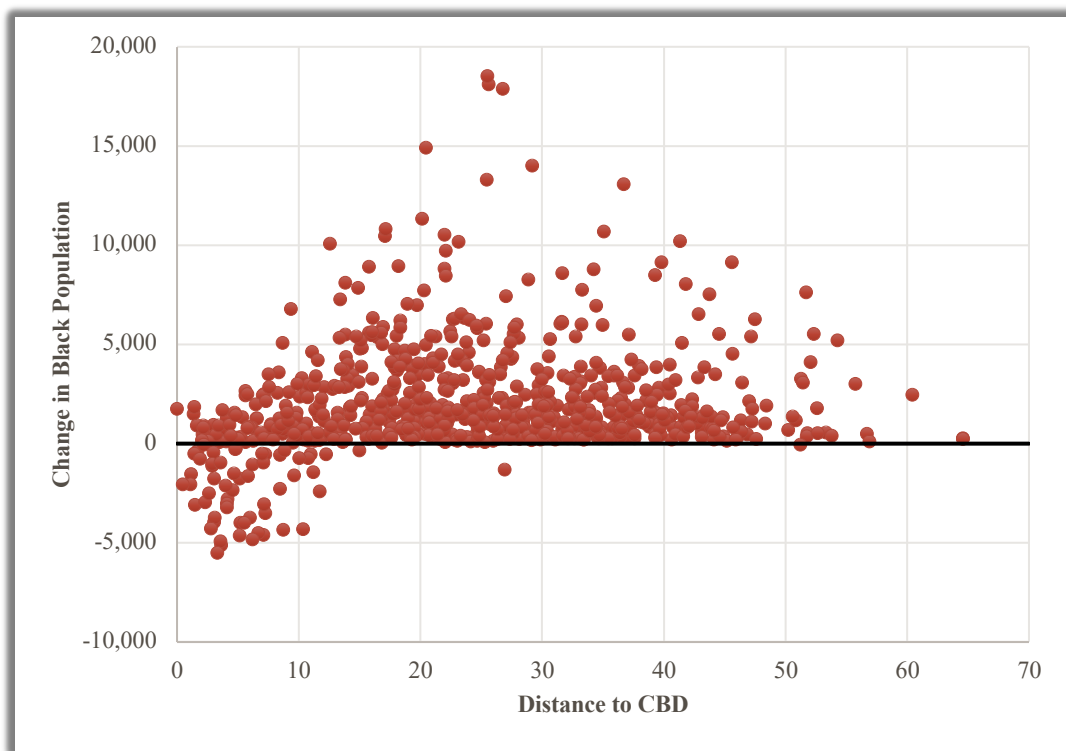
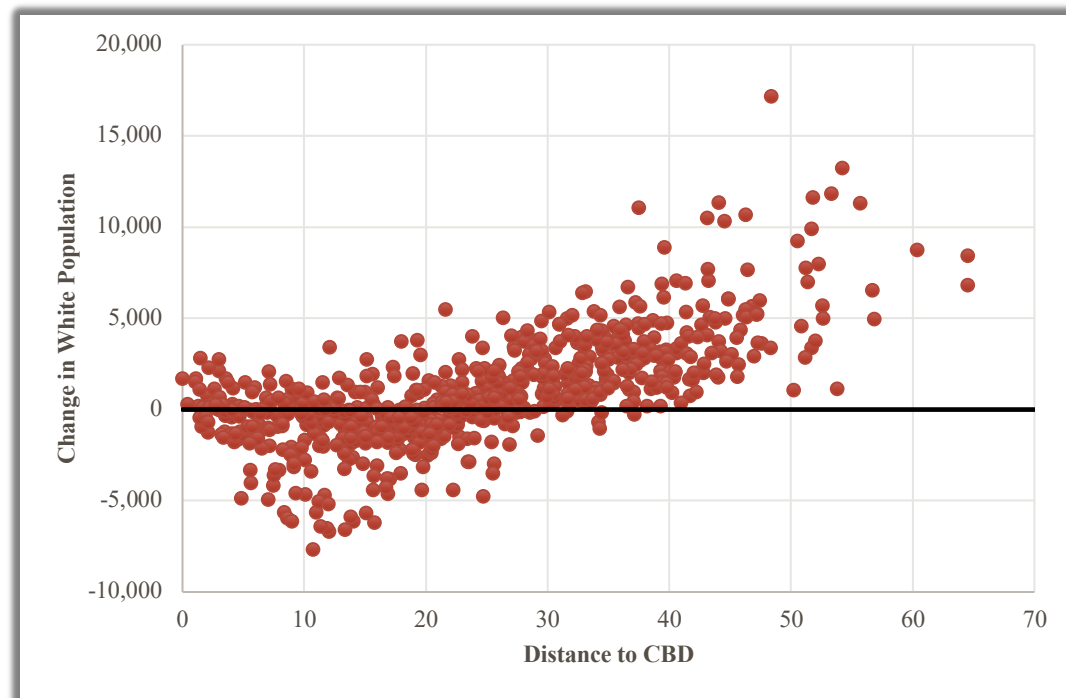


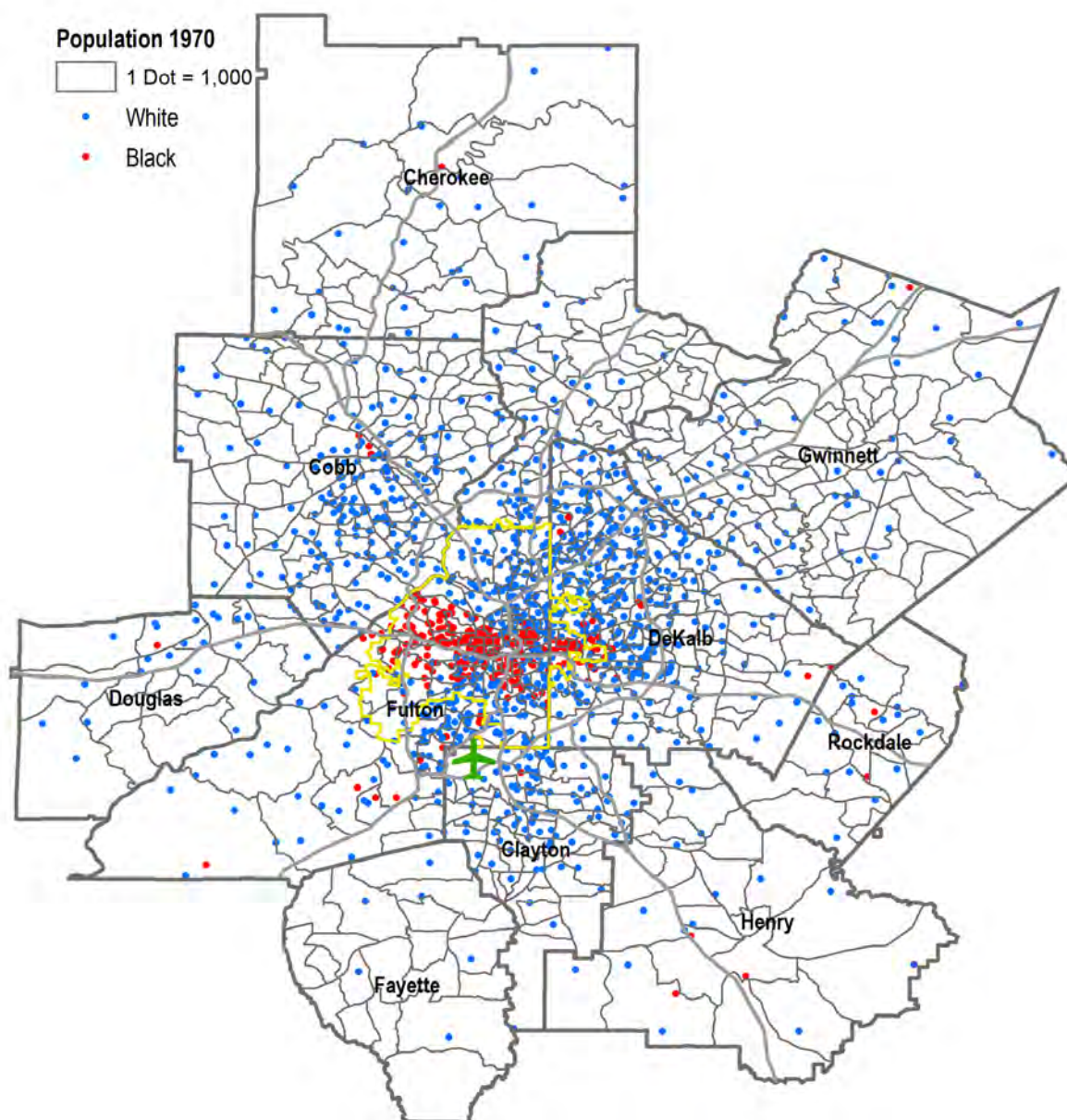
Figure ES-3. Change in White Population By Distance from CBD, 1970-2020



In 1970, Blacks residences were highly segregated from white residents, and were largely concentrated in a small number of census tracts in the city of Atlanta. This can be seen in Map ES-1, which is a dot map

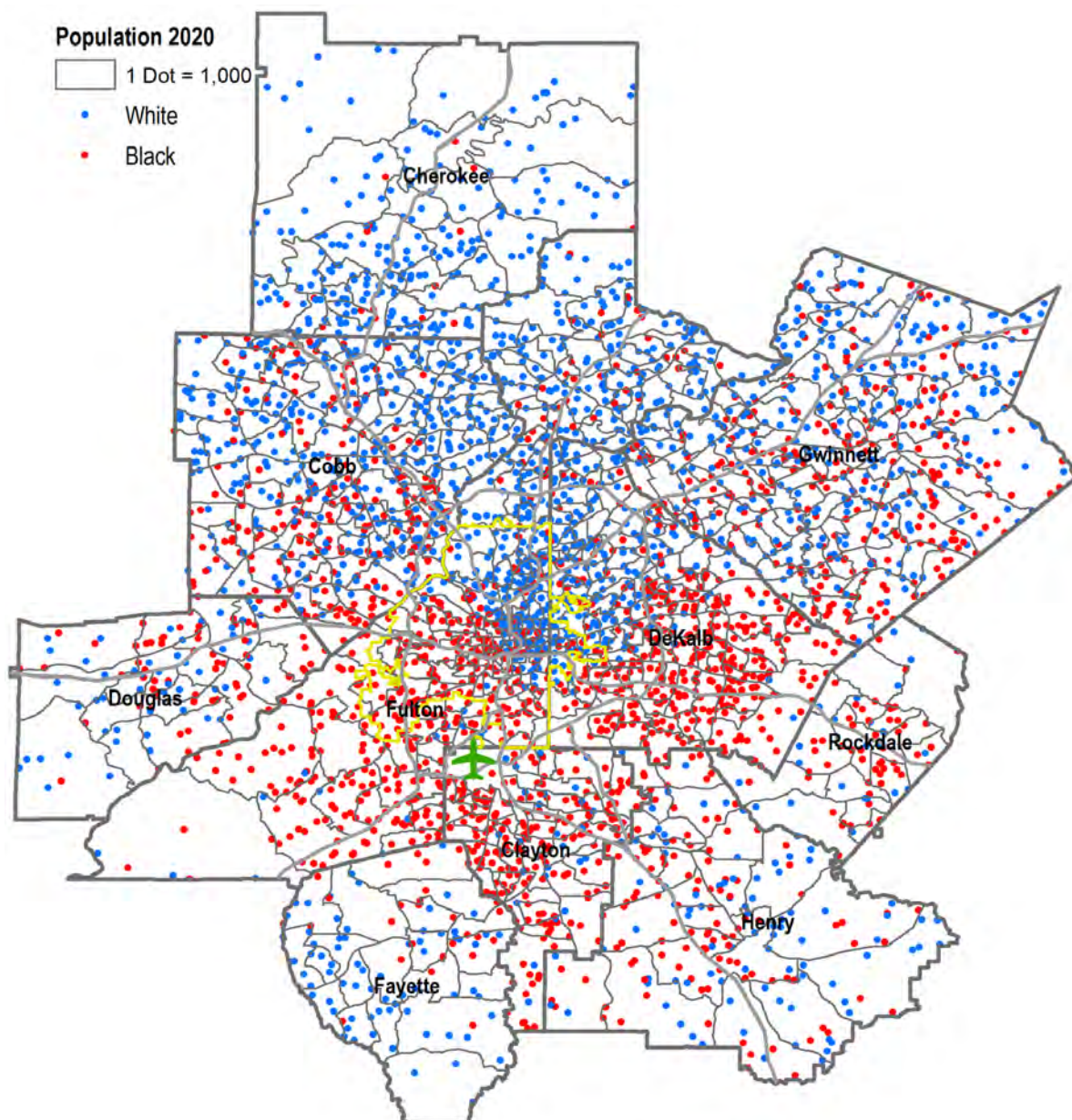
showing the location of Blacks (red dots) and whites (blue dots) by census tract in 1970, where each dot represents 1,000 individuals. As can be seen in Map ES-1, Blacks were concentrated in a swath of land lying largely east and west of the Atlanta Central Business District (CBD). In 1970, there were 41 contiguous census tracts (out of the 735 census tracts in the region) with a Black population share greater than 66.7 percent. These census tracts contained 58.77 percent of the region's Black population. In 1970, 59.14 percent of Blacks lived in the 40 census tracts that had a Black population share of 90 percent or more, and while there were 531 census tracts with a Black population share of 10 percent or less, these census tracts housed only 4.22 percent of the Black population. On the other hand, whites could be found throughout the region, other than in the census tracts with a high concentration of Blacks.

Map ES-1. Black and White Populations, 1970



Map ES-2 is a map equivalent to Map ES-1 but for 2020. Over the 1970-2020 period the area of concentrated Blacks expanded, particularly to the south of I-20, to encompass 172 census tracts. However, this concentrated area's share of Black population fell to 45.23 percent in 2020. Over the period, particularly during the last decade, the Black population expanded throughout the region, so that by 2020 substantial numbers of Blacks could be found throughout the entire ARC region. While there were 65 census tracts with a Black population share of 90 percent or more in 2020, these tracts contained only 18.42 percent of the Black population. Given that the white population decreased between 2010 and 2020, it is not surprising that white population declined in 282 census tracts between 1970 and 2020, with closer-in census tracts more likely to experience a decrease.

Map ES-2. Black and White Populations, 2020



What is obvious from comparing Maps ES-2 and ES-3 is that racial residential segregation fell over the period 1970 to 2020. This decrease in racial residential segregation is reflected in the decrease in the dissimilarity index, which is a measure of racial segregation.¹ In 1970, the dissimilarity index was 0.807, which is very high, suggesting very substantial geographic racial segregation. However, by 2020 the dissimilarity index had fallen to 0.574, which is a significant decrease in measured racial segregation, but suggests that racial residential segregation is still high.

We consider four explanations for the observed change in racial residential segregation. First, due to the pre-1970 restrictive housing policies imposed on Blacks, in 1970 Blacks lived in neighborhoods that had high Black population densities, higher than Black would have likely preferred. The passage of the 1968 Fair Housing Act removed or at least relaxed these constraints. As a result, Blacks begin to move from communities that had high Black population density, a dynamic that lasted several decades. The result was a decrease in the number of high-density census tracts, for example from 36 census tracts with a Black population density of 5,000 or more in 1970 to 20 such tracts in 2020.

It has been argued that racial residential segregation might be due to the possibility that Blacks prefer to live near other Blacks. We explore this hypothesis by relating decade growth in Black population in a census tract to the sum at the beginning of the decade of the number of Blacks in that census tract and within 3 kilometers of the census tract. What we find is that most of the increase in Black population occurred in census tracts that had a small number of Blacks in and within 3 kilometers of the census tract. This is not consistent with the hypothesis that residential segregation is due to preferences of most Blacks to live among other Blacks. However, in 2020 46.98 percent of Blacks lived in census tracts with a Black population share of 66.7 percent or more.

Another explanation for racial housing segregation is that whites prefer to live in white neighborhoods and thus move out when Blacks move in, a process referred to as white flight. We find that between 1970 and 2000 whites did move out of neighborhoods in very large numbers when Blacks moved in. However, we also find that this dynamic becomes much smaller after 2000. In fact, we find a positive but small correlation between the 2000-2010 white population growth and Black population growth.

Finally, if individuals segregate by income and there are large racial differences in income distributions, there will be racial residential segregation. However, we find that for 2020 the correlation between Black per capita income and Black population share is essentially zero for census tracts with 2020 Black per capita income of \$25,000 or less. This finding is inconsistent with the argument that racial residential segregation is due to racial income differences. However, for census tracts in which Black per capita income is above \$25,000 in 2020, the share of Black population is negatively related to Black population share. These patterns are also observed in the other years. Our findings are contrary to the argument that racial differences in income is a cause of racial residential segregation.

¹The dissimilarity index is a measure of racial residential segregation across census tracts whose value ranges from zero if there is no segregation to one if there is complete geographic racial separation.

In 1970, Blacks and whites in the ARC region were very highly segregated. However, racial residential segregation has fallen significantly since then, but remains high. As evidence we can point to the decrease over time in the value of the dissimilarity index and the simple comparison of maps showing the 1970 and 2020 racial residential patterns.

After the passage of the 1968 Fair Housing Act, Blacks began to locate in white neighborhoods. This would have led to reduced racial residential segregation had whites not moved out. The result was that racial residential segregation decreased somewhat but remained high. But our analysis suggests that whites now appear to be more open to living in more racially integrated residential communities. In particular, we find whites are much less likely to move out of a neighborhood when Blacks move in. We also find that white population increased in recent decades in many census tracts that were predominately Black in 1970. This includes recent increases between 2010 and 2020 in the white share in census tracts in the city of Atlanta that in 1970 had Black population shares greater than 66.7 percent. We also note that between 2010 and 2020 the white population increased by an average of 106.4 persons per census tract in the 197 census tracts that in 2010 had a Black population share of more than 60 percent, and by an average of 82.0 persons in the 94 census tracts with a Black share in 2010 of 90 percent or more. These are not large increases in white population, but significant compared to trends in the pre-2010 years.

While this is encouraging evidence of a positive change in racial residential segregation and the underlying dynamics, a positive conclusion must be tempered by the fact that racial residential segregation is still high, particularly in Fulton and DeKalb. And in addition, by the fact that in the past decade the white population in the ARC region decreased.

Introduction

Atlanta is a very dynamic metropolitan area. Between 1940 and 2020, the population of the Atlanta region, defined as the 10-county Atlanta Regional Commission (ARC) planning area, increased from 620,034 to 4,716,231, an average annual growth rate of 2.57 percent. The racial composition of the Atlanta region also changed over that period. For example, in 1940, the Black population was 26.60 percent of the total population in the ARC region and there were no Asians, while in 2020, the Black share was 38.32 percent and Asian share was 7.18 percent.²

The residential patterns of Blacks and whites also changed, particularly after 1970. Prior to the passage of the Fair Housing Act in 1968, Blacks in the Atlanta region were largely concentrated in a few Atlanta neighborhoods. Bayor (1996) and Keating (2001) document the history of post-World War II policies that restricted where Blacks could live. As a result of these restrictive policies, in 1970, 78.2 percent of Blacks in the ARC region lived in the city of Atlanta, and within the city, about 82 percent lived in a contiguous area comprising 41 census tracts³ that were at least 66.7 percent Black.⁴ Over the next 50 years, the racial residential patterns in the ARC region changed dramatically.

Racial residential segregation is a significant issue of concern. Studies have found that racial residential segregation has a negative effect on Blacks living in segregated communities. For example, Cutler and Glaeser (1997) found that Blacks living in segregated communities in the U.S. have lower high school graduation rates, lower earnings, and a higher probability of single parenthood. The status of race relations in Atlanta has been of great public importance and interest, as witnessed by the many books, dissertations, and articles that have been penned exploring various aspects of race relations in Atlanta.⁵ One major slice of Atlanta's race relations is the status of racial residential segregation, which is the focus of this report.

In this report we explore the post-1940 growth in population by race and the post-1970 changes in racial residential patterns in the ARC region.⁶ We start with the 1970 racial residential patterns because 1970 is just after passage of the Fair Housing Act of 1968, which precipitated substantial changes in Black residential patterns.

²Unless otherwise denoted, population counts by race include those whose ethnicity is Hispanic.

³Census tracts are small subdivisions of a county that are updated prior to each decennial census. They generally have a population size between 1,200 and 8,000 people and their spatial size depends on population density. Census tracts occasionally are split due to population growth. However, in 2000, significant changes were made to census tract boundaries in the Atlanta region.

⁴Some of the census tracts with at least 66.7 percent Black population share are not contained wholly within the city of Atlanta, so we do not have exact number of such residents.

⁵Among the more recent books on this topic are Stone (1989), Orfield and Ashkinaze (1991), Holmes (1993), Allen (1996), Bayor (1996), Pomerantz (1996) Sjoquist (2000), and Keating (2011).

⁶The ARC region consists of Cherokee, Clayton, Cobb, Douglas, DeKalb, Fayette, Fulton, Gwinnett, Henry, and Rockdale counties. Forsyth county was added to the ARC on July 1, 2011.

We use county-level data from the decennial censuses for 1940 through 2020 and census tract data for 1970 through 2020. In order to make consistent comparisons across census tracts over time, we modified the census tract data so that in each year the census tract geographies correspond to the 2010 census tract boundaries; Appendix A contains a discussion of the data set and how the geographic modifications were made.

In Section 2 we consider the growth since 1940 in the ARC-region's population by race. In Section 3 we focus on the changes in Black and white residential patterns. In Section 4 we explore possible explanations for the changes in observed racial residential segregation.

We focus on Black and white residents since they have been and continue to be the dominate racial groups in the ARC region.⁷ In 1970, the Atlanta region's population was comprised almost entirely of Blacks and whites; the "other races" category comprised just 0.20 percent of the total population of the ARC region. In 2020, Blacks and whites comprised 77.42 percent of the total population, while individuals who identify as two or more races comprised 8.05 percent, Asians comprised 7.18 percent, and other races comprised 7.35 percent.

We identified two relatively recent articles that focus on racial segregation in the Atlanta Metropolitan Statistical Area (MSA), both of which consider the 1990-2010 period. Ambinakudige et al. (2017) identify neighborhood concentrations of Blacks in each of the three decennial census years and calculate indices of residential segregation. For 2010, they identify how neighborhood characteristics vary with the percent Black. Strait and Gong (2015) investigate how the increased racial and ethnic diversity affected residential segregation of whites, Blacks, Hispanics, and Asians. They decompose measures of residential segregation in order to investigate the relative impacts of region-wide compositional and intra-urban redistributive changes on racial/ethnic segregation. Our descriptive analysis is similar to that in these two articles, but we provide more details, consider a longer period, and explore possible explanations for the changes in racial residential segregation.⁸

⁷The race categories and terms used by the Bureau of the Census to collect information on race changed over time. Prior to 1960 race was assigned by the Census enumerators. In 2000, the Census allowed individuals to report more than one race. The Census did not ask everyone about one's Hispanic origin until 1980. The Census Bureau considers Hispanic an ethnicity, not a specific race category, and thus, for example, a white can be Hispanic or non-Hispanic. See Ahern (2020) and Parker et al (2015) for discussions of the history of how the Census Bureau measured race over time.

⁸In 1970, the Atlanta MSA was comprised of only 5 counties, Clayton, Cobb, DeKalb, Fulton, and Gwinnett. In 2020, the MSA contained 29 counties. In 2020, the ARC region contained 77.4 percent of the Atlanta MSA population.

Population Growth by Race and Ethnicity

POPULATION GROWTH IN THE ARC REGION, 1940 – 2020

Population levels and growth by decade and race for the ARC region are presented in Table 1. Over the past 80 years the population of the Atlanta region increased from 620,034 to 4,716,231, or by a factor of 7.61. The Black population increased from 164,950 in 1940 to 1,807,074 in 2020, or by a factor of 10.96, while the white population increased from 454,971 to 1,844,049, or by a factor of 4.05. The sum of non-Blacks and non-whites was less than 10 percent of the total population of the ARC region until after 2000.

Table 1. Population in the Atlanta Region by Race, 1940-2020

YEAR	POPULATION	GROWTH	GROWTH RATE	
Panel A. Total				
1940	620,034			
1950	792,211	172,177	27.77%	
1960	1,093,320	301,109	38.01%	
1970	1,503,122	409,802	37.48%	
1980	1,896,277	393,155	26.16%	
1990	2,514,066	617,789	32.58%	
2000	3,429,379	915,313	36.41%	
2010	4,107,750	678,371	19.78%	
2020	4,716,231	608,481	14.81%	
YEAR	POPULATION	GROWTH	GROWTH RATE	SHARE OF TOTAL POPULATION
Panel B. Black				
1940	164,950			26.60%
1950	187,305	22,355	13.55%	23.64%
1960	247,670	60,365	32.23%	22.65%
1970	326,131	78,461	31.68%	21.70%
1980	476,900	150,769	46.23%	25.15%
1990	680,564	203,664	42.71%	27.07%
2000	1,095,222	414,658	60.93%	31.94%
2010	1,515,359	420,137	38.36%	36.89%
2020	1,807,074	291,715	19.25%	38.32%

YEAR	POPULATION	GROWTH	GROWTH RATE	SHARE OF TOTAL POPULATION
Panel C. White				
1940	454,971			73.38%
1950	604,644	149,673	32.90%	76.32%
1960	844,925	240,281	39.74%	77.28%
1970	1,174,023	329,098	38.95%	78.11%
1980	1,399,028	225,005	19.17%	73.78%
1990	1,759,301	360,273	25.75%	69.98%
2000	2,018,321	259,020	14.72%	58.85%
2010	2,027,583	9,262	0.46%	49.36%
2020	1,844,049	-183,534	-9.05%	39.10%
Panel D. Other Races				
1940	113			0.02%
1950	262	149	131.86%	0.03%
1960	725	463	176.72%	0.07%
1970	2,968	2,243	309.38%	0.20%
1980	20,349	17,381	585.61%	1.07%
1990	74,201	53,852	264.64%	2.95%
2000	315,836	241,635	325.65%	9.21%
2010	564,808	248,972	78.83%	13.75%
2020	1,065,108	500,300	88.58%	22.58%

Note: Black and white include those with Hispanic ethnicity. The Other Races category includes all racial group other than Black and white, and beginning in 2000 it also includes individuals who report more than one race.

Black population increased each decade, and between 1940 and 2010 it increased by an increasing amount, with the growth being particularly large between 1990 and 2010. However, the growth of the Black population in the 2010-2020 decade was much smaller than in the previous two decades. The growth rates by decade of the Black population vary over the period, with the growth rate for 2010-2020 being the second smallest over the 80 years. Despite the growth of the Black population between 1940 and 1970, the Black share of total population of the ARC region declined during that period since white population growth was so large. However, the Black share increased continuously since 1970, and in 2020 was 38.32 percent.⁹

White population also increased over the 1940-2010 period, and until the 1990-2000 decade increased by more than the Black population. The white share of total ARC-region population has fallen since 1970 and in 2020 was 39.10 percent. After 2000, white population growth slowed, and according to recent Census Bureau data, it fell during the last decade.¹⁰

The other races category was very small until 2000, but now comprises over one million residents (see Panel D of Table 1). The growth rates for the other races category are much larger than for Blacks and whites, which is to be expected given the small base values. The recent growth in the other races category is largely the result of the growth of the Asian population and of individuals reporting two or more races.¹¹

Table 2 shows by decade the population of non-Hispanic Blacks, non-Hispanic whites, non-Hispanic Asians, Hispanics, and all other individuals. The shares of non-Hispanic Blacks and non-Hispanic whites do not differ much from the Black and white shares reported in Table 1 since they are the dominate groups in the region. The population share of Asian, Hispanics, and “other” are small, particularly in the earlier years.

⁹Blacks as a share of the sum of Black and white population went from 26.61 percent in 1940 to 49.49 percent in 2020. The difference between the Black share of total ARC population and Black share of the Black plus white population increased over time because of the growth of other races, in particular Asians and those reporting more than one race.

¹⁰Between 2010 and 2020 white population fell in the Atlanta Metropolitan Statistical Area by 5.46 percent and in the state by 4.01 percent. White population in the Atlanta MSA outside the ARC region increased by 2.57 percent.

¹¹The Census Bureau began allowing respondents to list more than one race in 2000. About 55 percent of the increase in the other races category between 2010 and 2020 is due to the increase in the number of individuals reporting two or more races.

Table 2. ARC Region Population and Share by Race and Ethnicity

YEAR	-----BLACK ^a -----		-----WHITE ^a -----		-----ASIAN ^a -----		-----HISPANIC-----		-----OTHER-----		TOTAL
	NUMBER	SHARE	NUMBER	SHARE	NUMBER	SHARE	NUMBER	SHARE	NUMBER	SHARE	NUMBER
1970	320,470	21.32%	1,147,819	76.36%	0	0.00%	32,155	2.14%	2,678	0.18%	1,503,122
1980	472,921	24.94%	1,383,862	72.98%	12,328	0.65%	22,151	1.17%	5,015	0.26%	1,896,277
1990	677,559	26.95%	1,729,204	68.78%	48,439	1.93%	52,377	2.08%	6,487	0.26%	2,514,066
2000	1,087,292	31.71%	1,899,606	55.39%	126,721	3.70%	247,294	7.21%	68,466	2.00%	3,429,379
2010	1,489,804	36.27%	1,811,038	44.09%	231,377	5.63%	480,529	11.70%	95,002	2.31%	4,107,750
2020	1,781,209	37.77%	1,753,040	37.17%	336,870	7.14%	627,622	13.31%	217,490	4.61%	4,716,231

^aNon-Hispanic

Population growth in the ARC region is the result of natural increases in population and migration, with migration being the more important force.¹² During the Great Migration, which occurred in the post-World War I and post-World War II periods until about the mid to late 1960s, large numbers of southern Blacks moved to urban centers outside the South and in smaller numbers to southern cities, including the Atlanta region. This migration was driven by the mechanization of southern agriculture that reduced the need for farm workers, by the increase in unskilled manufacturing jobs in urban areas, and the oppressive racial climate in the South (Frey 2004).

The increase in Black population in the Atlanta region between 1940 and 1960 was largely the result of this migration out of the rural South. It was also a period in which whites moved to Atlanta, migrating from the rural South and from the North. Thus, while the growth in the Black population in the ARC region was substantial, the white population growth rate was larger, so that the Black share of the population fell between 1940 and 1970.

For the 1965-1970 period, consistent with the Great Migration, the 10 states with the largest net positive Black migration were non-Southern states and the 10 states with the largest net negative Black migration were southern states, including Georgia, whose loss ranked 6th.¹³ Beginning in the late 1960s or early 1970s, a reversal of the Great Migration began, a result of deindustrialization in the Northeast and improved employment prospects and racial climate in the South. In the 1975-1980 period, 6 of the top 10 states in terms of net positive Black migration were in the South, with Georgia having the 4th largest net positive migration. The magnitude of this reverse migration to Georgia increased, and in the 1985-1990 and 1995-2000 periods Georgia had the largest net positive Black migration of any state. Nearly all Black migrants to Georgia located in the Atlanta region, making the Atlanta region one of the most popular location for Black migration in the country. On the other hand, white migration from the North was directed more to the Southwest and West, and not to the South, with the exception of Florida.

Until the passage of the 1965 Immigration and Naturalization Act, the immigration of Asians to the U.S. was very restricted. Since then, the annual Asian immigration to the United States has increased, from 825 thousand in 1970 to over 14 million in 2020 (Hanna and Batalova 2021). Initially, Asians immigrants mainly located on the west coast and New York City, but gradually Atlanta became a location for Asians.

U.S. migration for the U.S. and for Georgia slowed after the Great Recession of 2008-2009. Net Black migration to Georgia between 2010 and 2020 was about 50 percent of the rate for the 2000-2010 period. However, Georgia still ranked high in net positive Black migration.

¹²For Georgia the annual birth rate less the annual death rate in 2000 was 0.067 percent. This compares to the 2.95 percent annual growth rate in the region's population between 1990 and 2000. Nationally, the birth rate less the death rate is larger for Blacks than for whites.

¹³These migration numbers are based on the decennial census question that asks about residential location 5 years earlier and are taken from Frey (2004).

POPULATION GROWTH BY ARC COUNTY AND RACE

To provide an initial perspective on where the expanded Black and white populations located in the ARC region, we report population growth in each of the 10 ARC counties.¹⁴ Table 3 shows the population (total and share) by decade and ARC county for Blacks (Panel A) and whites (Panel B), while Panel C presents the growth rates for the two racial groups. Table 3 illustrates how the growth in population varied across the ARC region. From 1940 to 1970 approximately 75 percent of the region's Black population was located in Fulton, particularly in the city of Atlanta. In each of the 9 decennial census years, Fulton contained the largest share of the region's Black population, although its share declined each decade after 1950. DeKalb had the second largest share in every year, with its share peaking in 1990. As the region's Black population grew, Black population in the outlying counties increased. As a result, the share of Black population for counties other than Fulton and DeKalb increased over the 80-year period. Not unexpectedly, the counties with the smallest shares of Black population in 2020 are outlying counties, including Cherokee on the northside, Douglas on the westside, and an outer quarter circle from south to east formed by Fayette, Henry, and Rockdale.

¹⁴See Map 1 for the location of the 10 ARC counties.

Table 3. County Population and Share by Decade

PANEL A. BLACK POPULATION BY COUNTY AND PERCENT OF TOTAL BLACK POPULATION										
COUNTY	-----1940-----		-----1950-----		-----1960-----		-----1970-----		-----1980-----	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Cherokee	897	0.54%	823	0.44%	902	0.36%	1,181	0.36%	1,041	0.22%
Clayton	2,984	1.81%	3,768	2.01%	4,745	1.92%	4,447	1.36%	10,377	2.18%
Cobb	6,280	3.81%	6,214	3.32%	8,032	3.24%	8,216	2.52%	13,313	2.79%
DeKalb	13,963	8.46%	14,361	7.67%	22,171	8.95%	56,877	17.44%	130,757	27.42%
Douglas	2,173	1.32%	1,984	1.06%	2,479	1.00%	2,609	0.80%	2,966	0.62%
Fayette	2,667	1.62%	2,544	1.36%	2,431	0.98%	1,954	0.60%	1,117	0.23%
Fulton	123,063	74.61%	145,016	77.42%	193,024	77.94%	236,497	72.52%	303,626	63.67%
Gwinnett	3,335	2.02%	3,044	1.63%	3,502	1.41%	3,641	1.12%	4,154	0.87%
Henry	7,164	4.34%	7,074	3.78%	7,495	3.03%	7,580	2.32%	6,363	1.33%
Rockdale	2,424	1.47%	2,477	1.32%	2,889	1.17%	3,129	0.96%	3,186	0.67%
TOTAL	164,950	100.00%	187,305	100.00%	247,670	100.00%	326,131	100.00%	476,900	100.00%
COUNTY	-----1990-----		-----2000-----		-----2010-----		-----2020-----			
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT		
Cherokee	1,599	0.23%	3,194	0.29%	12,117	0.80%	17,785	0.98%		
Clayton	43,373	6.37%	120,825	11.03%	171,480	11.32%	207,981	11.51%		
Cobb	44,042	6.47%	113,176	10.33%	171,774	11.34%	203,840	11.28%		
DeKalb	230,532	33.87%	360,024	32.87%	375,725	24.79%	388,963	21.52%		
Douglas	5,423	0.80%	16,825	1.54%	52,290	3.45%	69,870	3.87%		
Fayette	3,201	0.47%	10,940	1.00%	21,395	1.41%	29,559	1.64%		
Fulton	323,984	47.61%	361,951	33.05%	405,575	26.76%	453,834	25.11%		
Gwinnett	18,049	2.65%	77,954	7.12%	190,167	12.55%	262,709	14.54%		
Henry	6,017	0.88%	17,448	1.59%	75,277	4.97%	118,124	6.54%		
Rockdale	4,344	0.64%	12,885	1.18%	39,559	2.61%	54,409	3.01%		
TOTAL	680,564	100.00%	1,095,222	100.00%	1,515,359	100.00%	1,807,074	100.00%		

PANEL B. WHITE POPULATION BY COUNTY AND PERCENT OF TOTAL WHITE POPULATION										
COUNTY	-----1940-----		-----1950-----		-----1960-----		-----1970-----		-----1980-----	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Cherokee	19,229	4.23%	19,927	3.30%	22,090	2.61%	29,875	2.54%	50,406	3.60%
Clayton	8,671	1.91%	19,079	3.16%	41,595	4.92%	93,381	7.95%	138,147	9.87%
Cobb	31,990	7.03%	55,606	9.20%	106,096	12.56%	188,234	16.03%	281,344	20.11%
DeKalb	72,973	16.04%	121,985	20.17%	234,370	27.74%	357,536	30.45%	345,082	24.67%
Douglas	7,880	1.73%	10,188	1.68%	14,252	1.69%	26,030	2.22%	51,348	3.67%
Fayette	5,503	1.21%	5,434	0.90%	5,768	0.68%	9,410	0.80%	27,746	1.98%
Fulton	269,743	59.29%	328,390	54.31%	362,923	42.95%	369,815	31.50%	281,178	20.10%
Gwinnett	25,751	5.66%	29,268	4.84%	40,035	4.74%	68,611	5.84%	161,144	11.52%
Henry	7,955	1.75%	8,783	1.45%	10,113	1.20%	16,132	1.37%	29,673	2.12%
Rockdale	5,276	1.16%	5,984	0.99%	7,683	0.91%	14,999	1.28%	32,960	2.36%
TOTAL	454,971	100.00%	604,644	100.00%	844,925	100.00%	1,174,023	100.00%	1,399,028	100.00%
COUNTY	-----1990-----		-----2000-----		-----2010-----		-----2020-----			
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT		
Cherokee	87,464	4.97%	131,027	6.49%	185,536	9.15%	204,670	11.10%		
Clayton	132,036	7.51%	89,814	4.45%	48,960	2.41%	30,505	1.65%		
Cobb	392,411	22.30%	439,705	21.79%	428,023	21.11%	387,625	21.02%		
DeKalb	292,421	16.62%	238,920	11.84%	230,156	11.35%	225,752	12.24%		
Douglas	64,795	3.68%	70,928	3.51%	69,458	3.43%	52,285	2.84%		
Fayette	57,621	3.28%	76,335	3.78%	75,802	3.74%	69,788	3.78%		
Fulton	310,167	17.63%	393,618	19.50%	409,697	20.21%	418,700	22.71%		
Gwinnett	321,400	18.27%	428,036	21.21%	429,563	21.19%	339,822	18.43%		
Henry	52,073	2.96%	96,819	4.80%	112,201	5.53%	89,241	4.84%		
Rockdale	48,913	2.78%	53,119	2.63%	38,187	1.88%	25,661	1.39%		
TOTAL	1,759,301	100.00%	2,018,321	100.00%	2,027,583	100.00%	1,844,049	100.00%		

PANEL C. POPULATION GROWTH RATES BY COUNTY AND RACE								
COUNTY	-----1940-1950-----		-----1950-1960-----		-----1960-1970-----		-----1980-1990-----	
	WHITE	BLACK	WHITE	BLACK	WHITE	BLACK	WHITE	BLACK
Cherokee	3.63%	-8.25%	10.85%	9.60%	35.24%	30.93%	68.72%	-11.85%
Clayton	120.03%	26.27%	118.01%	25.93%	124.50%	-6.28%	47.94%	133.35%
Cobb	73.82%	-1.05%	90.80%	29.26%	77.42%	2.29%	49.47%	62.04%
DeKalb	67.16%	2.85%	92.13%	54.38%	52.55%	156.54%	-3.48%	129.89%
Douglas	29.29%	-8.70%	39.89%	24.95%	82.64%	5.24%	97.26%	13.68%
Fayette	-1.25%	-4.61%	6.15%	-4.44%	63.14%	-19.62%	194.86%	-42.84%
Fulton	21.74%	17.84%	10.52%	33.11%	1.90%	22.52%	-23.97%	28.38%
Gwinnett	13.66%	-8.73%	36.79%	15.05%	71.38%	3.97%	134.87%	14.09%
Henry	10.41%	-1.26%	15.14%	5.95%	59.52%	1.13%	83.94%	-16.06%
Rockdale	13.42%	2.19%	28.39%	16.63%	95.22%	8.31%	119.75%	1.82%
TOTAL	32.90%	13.55%	39.74%	32.23%	38.95%	31.68%	19.17%	46.23%
COUNTY	-----1980-1990-----		-----1990-2000-----		-----2000-2010-----		-----2010-2020-----	
	WHITE	BLACK	WHITE	BLACK	WHITE	BLACK	WHITE	BLACK
Cherokee	73.52%	53.60%	49.81%	99.75%	41.60%	279.37%	10.31%	46.78%
Clayton	-4.42%	317.97%	-31.98%	178.57%	-45.49%	41.92%	-37.69%	21.29%
Cobb	39.48%	230.82%	12.05%	156.97%	-2.66%	51.78%	-9.44%	18.67%
DeKalb	-15.26%	76.31%	-18.30%	56.17%	-3.67%	4.36%	-1.91%	3.52%
Douglas	26.19%	82.84%	9.47%	210.25%	-2.07%	210.79%	-24.72%	33.62%
Fayette	107.67%	186.57%	32.48%	241.77%	-0.70%	95.57%	-7.93%	38.16%
Fulton	10.31%	6.70%	26.91%	11.72%	4.08%	12.05%	2.20%	11.90%
Gwinnett	99.45%	334.50%	33.18%	331.90%	0.36%	143.95%	-20.89%	38.15%
Henry	75.49%	-5.44%	85.93%	189.98%	15.89%	331.44%	-20.46%	56.92%
Rockdale	48.40%	36.35%	8.60%	196.62%	-28.11%	207.02%	-32.80%	37.54%
TOTAL	25.75%	42.71%	14.72%	60.93%	0.46%	38.36%	-9.05%	19.25%

Panel B of Table 3 are the equivalent data for whites. In 1940, Fulton and DeKalb had the largest and second largest share of the region's white population. By 2020, Fulton still had the largest share, but just barely, while DeKalb's share had fallen to fourth. In 2020, the white share in Cobb was the second largest; its share had increased from 1940 until 1990 but declined marginally since 1990. Gwinnett had the third largest share in 2020, although its share declined slightly since 2000. The counties to the north, i.e., Cobb, Cherokee, and Gwinnett, along with DeKalb and Fulton, have the largest shares of the region's white residents. While the shares of ARC's white residents have increased in the other outlying counties, their shares in 2020 are small, i.e., less than 5 percent.

Panel C of Table 3 presents the growth rates by decade, county, and race. The rates are reflective of the changing geographic patterns reported in Panels A and B. Other than the 1940-1950 decade, there are only 6 instances in which Black population in a county decreased. On the other hand, there are 20 instances in which white population in a county decreased, and 14 of those occurred in last two decades.

It is of interest to explore where residents previously lived. To do so we use the 2000 decennial census question that asks where the residents lived five years prior. The possible responses are same house, different house but same county, different county but same state, different state, another country. (Note that living in another Georgia county includes living in another ARC county, and thus we cannot identify those who moved between ARC counties.) For the 10 ARC counties, 40.28 percent of Black residents and 48.44 percent of white residents lived in the same house in 2000 as they did in 1995. Of those who changed residences between 1995 and 2000, Blacks were more likely to have lived in the same county (42.44 percent) than white residents (35.99 percent).

Of existing Black residents in 2000, 34.13 percent had moved from outside their current county of residence (i.e., from another county within Georgia, another state, or another country), compared to 33.00 percent for white residents. Of those who moved into an ARC county, 44.08 percent of Blacks and 41.72 percent of whites moved from another Georgia county (including ARC counties), while 48.24 percent of Blacks and 49.40 percent of whites came from another state, and 7.68 percent of Blacks and 9.88 percent of whites came from another country. The differences in percentages between Blacks and white are relatively small. However, there are substantial differences in these percentages across counties and within a county by race.

Residential Location for Blacks and Whites

In this section we explore in more detail the changes between 1970 and 2020 in the geographic distribution of Black and white residential patterns.

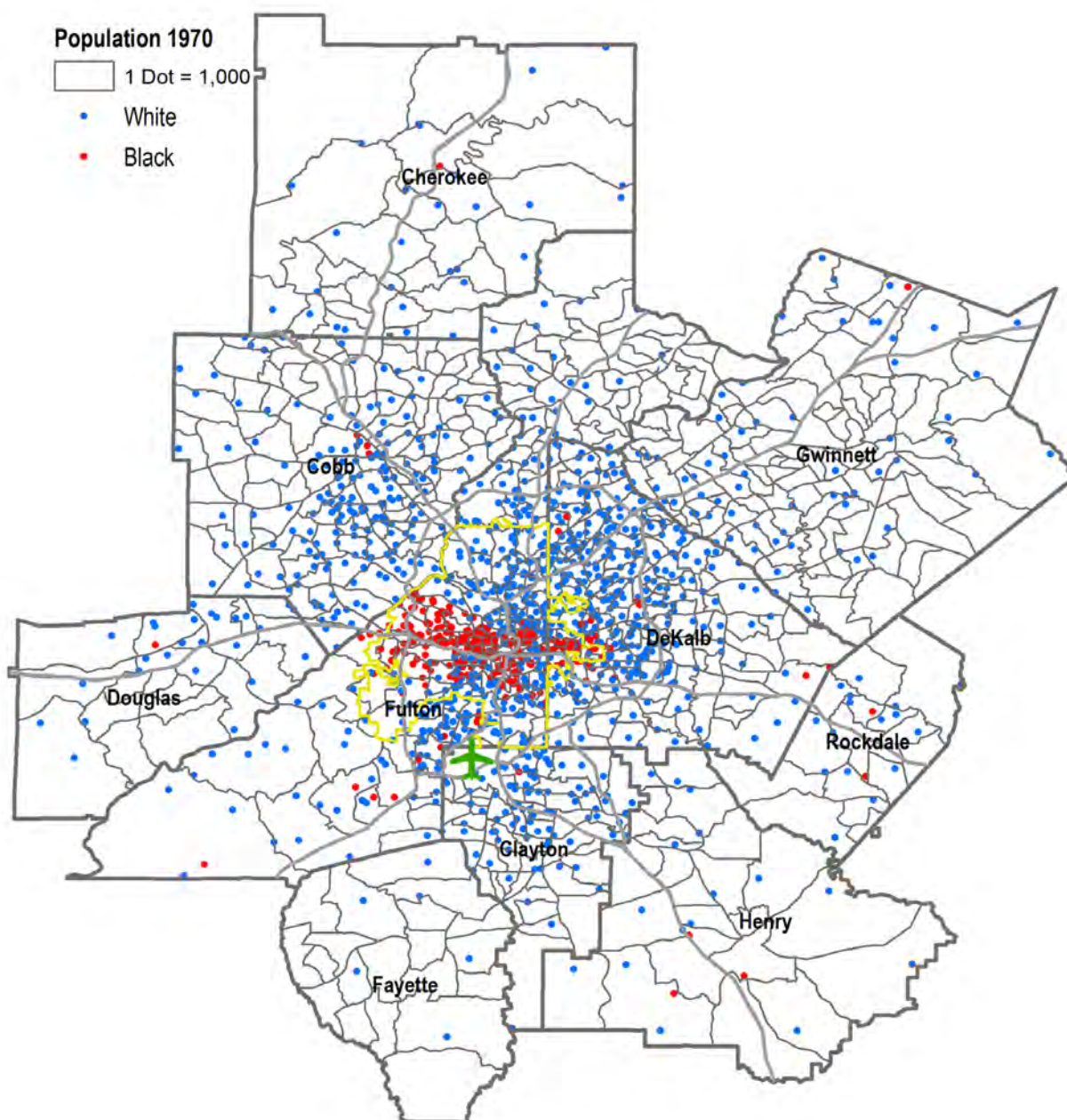
RESIDENTIAL PATTERNS FOR WHITES AND BLACK

Population growth by county provides a perspective on the geographic patterns of Black and white population growth over the 80-year period. In this section we use census tract data to provide more geographic details regarding the changing racial residential patterns over the 1970-2020 period.

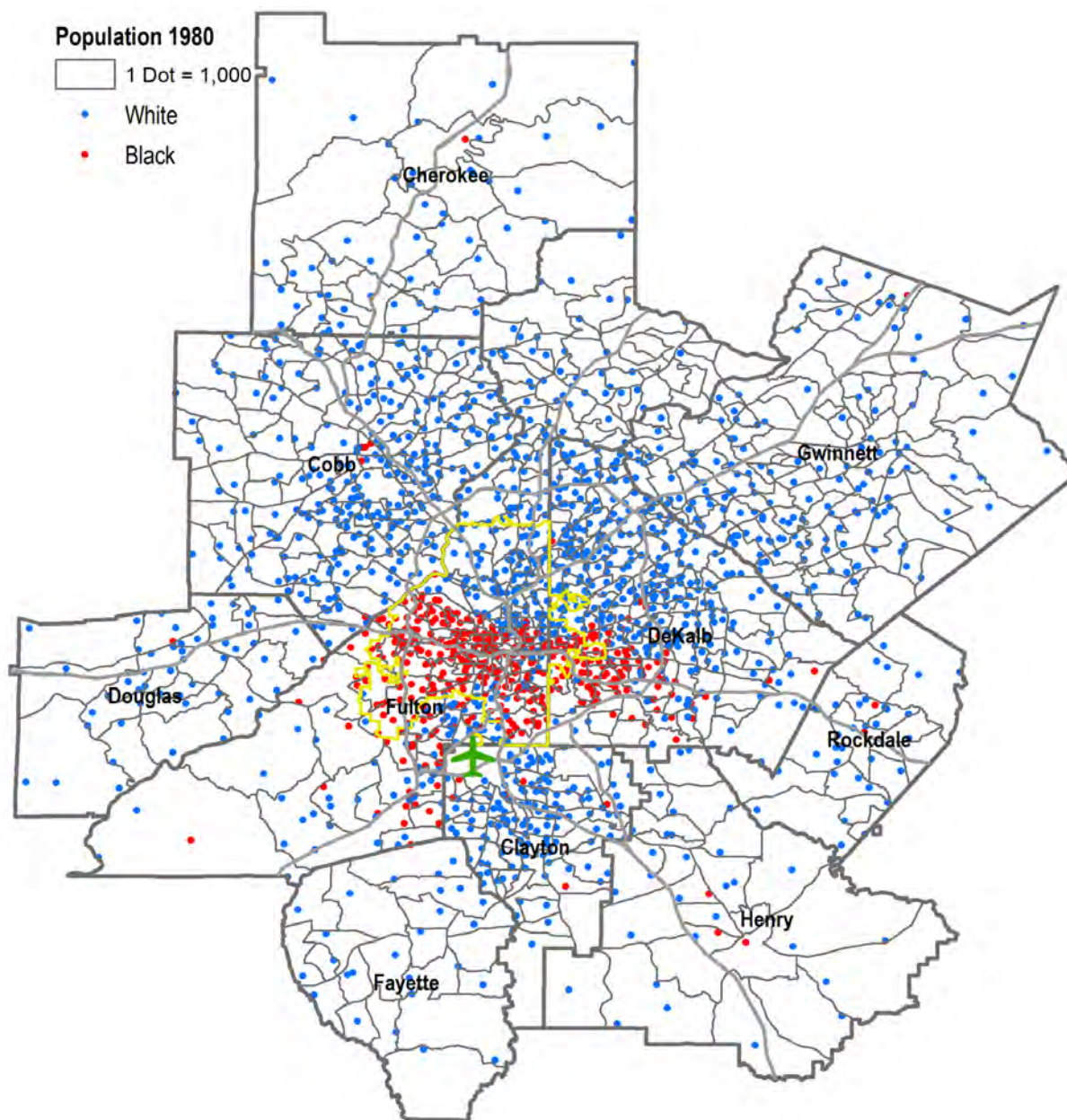
Maps 1 – 6 are dot maps that show for each decennial census year 1970 through 2020 the location of Blacks (red dots) and whites (blue dots) by census tract, where each dot represents 1,000 individuals.¹⁵ The maps provide a very good picture of the geography of population growth (and decline) in the ARC region by race over the past 50 years. Changes in the density of dots captures the change (either growth or decline) in population in a given area, while changes in the mix of red and blue dots captures the changes in racial composition in a given area.

¹⁵There are 735 census tracts in the ARC region. There are three other census tracts with no population. These tracts contain the Hartsfield-Jackson International Airport in Fulton and Clayton (identified by the green airplane in the maps) and the East Lake Golf course in DeKalb.

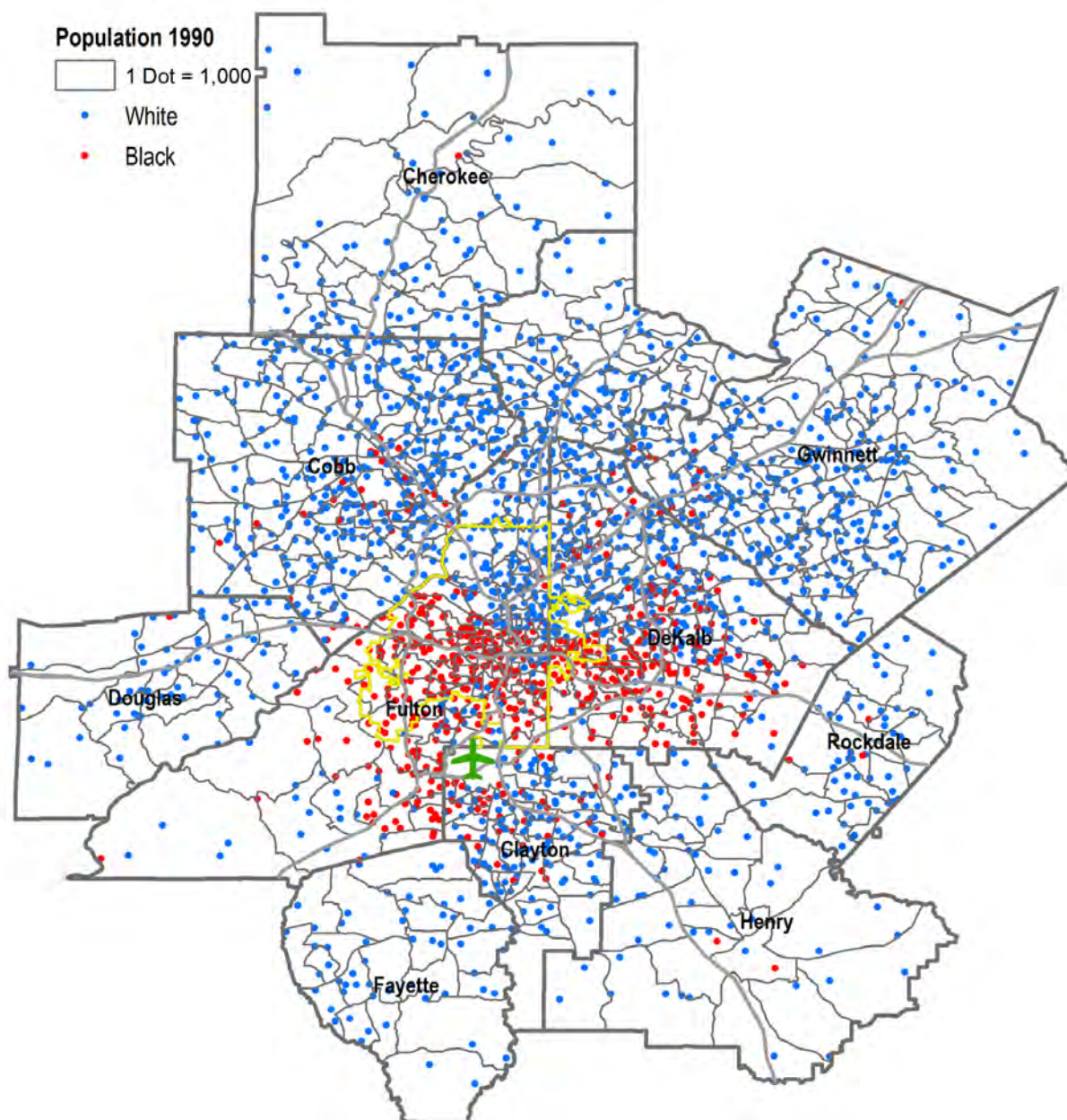
Map 1. Black and White Populations, 1970



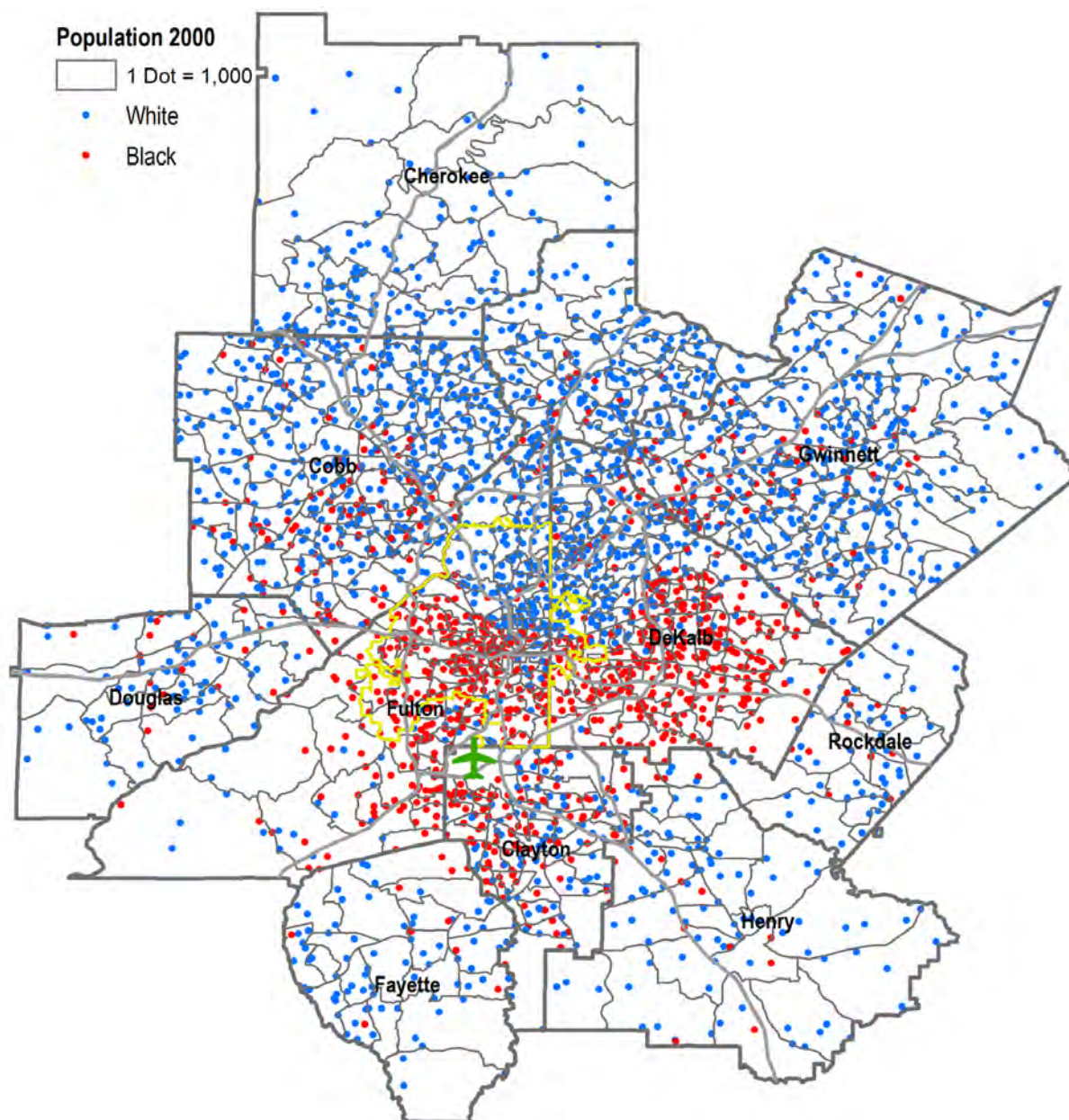
Map 2. Black and White Populations, 1980



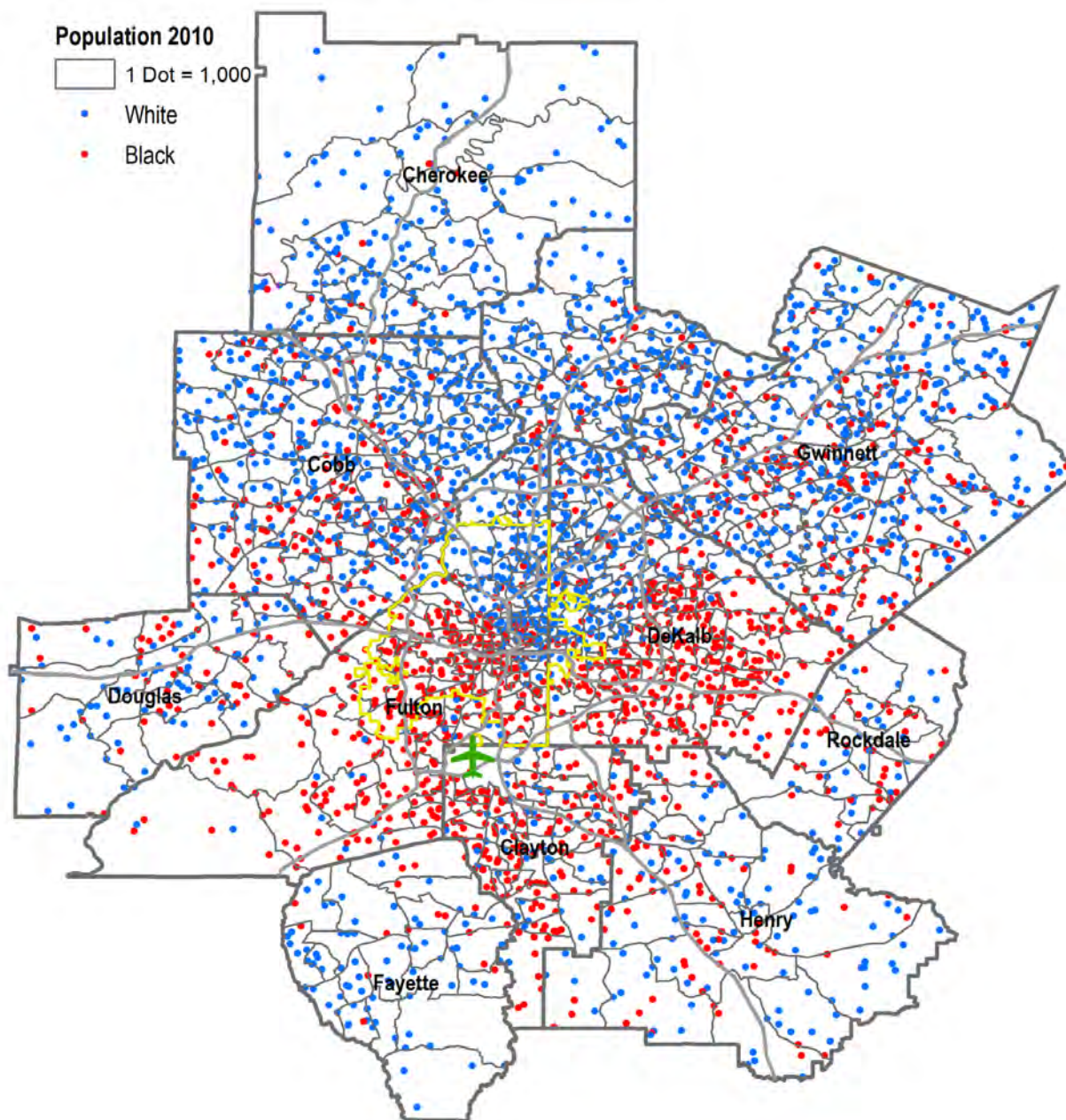
Map 3. Black and White Populations, 1990



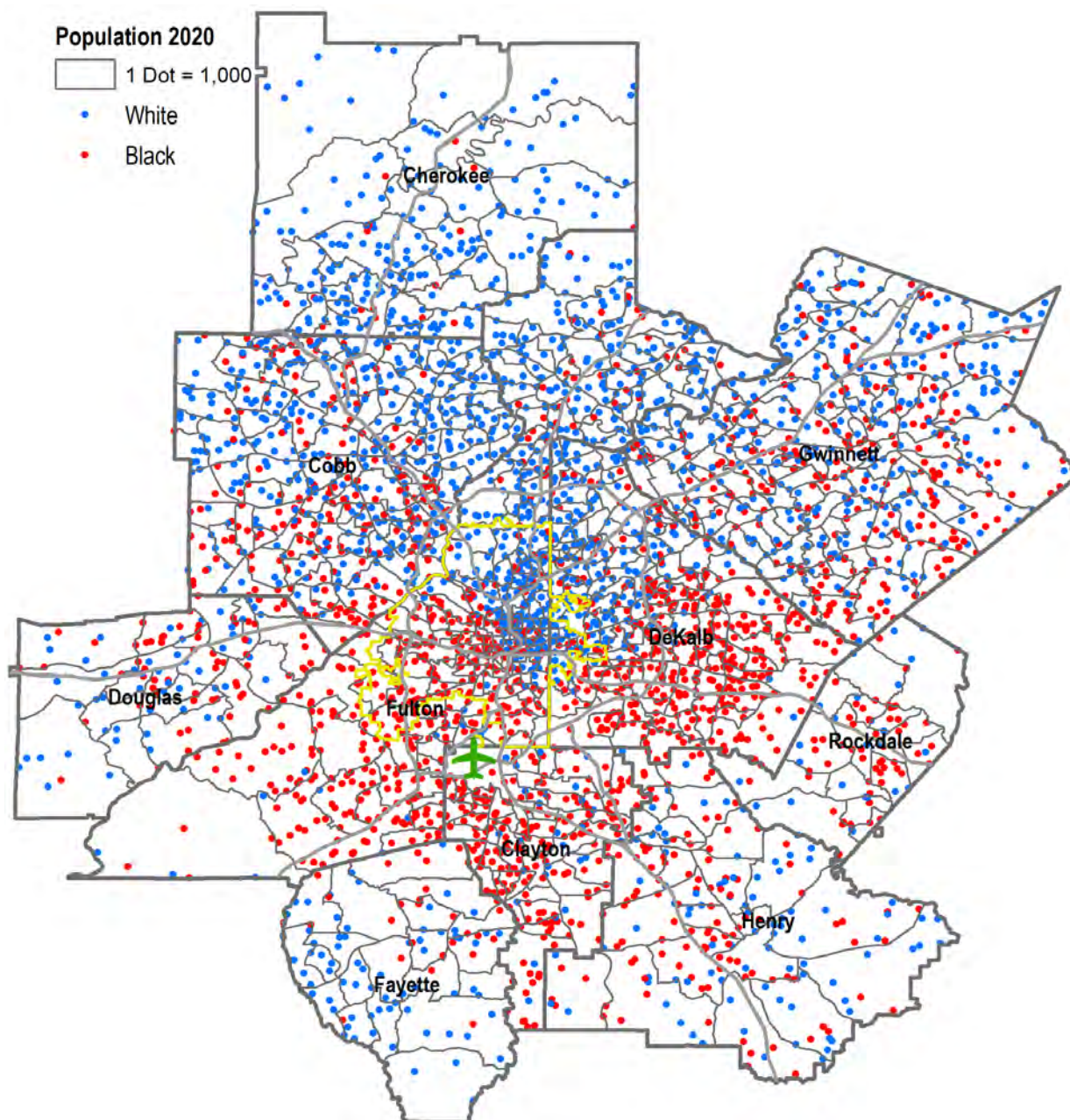
Map 4. Black and White Populations, 2000



Map 5. Black and White Populations, 2010



Map 6. Black and White Populations, 2020

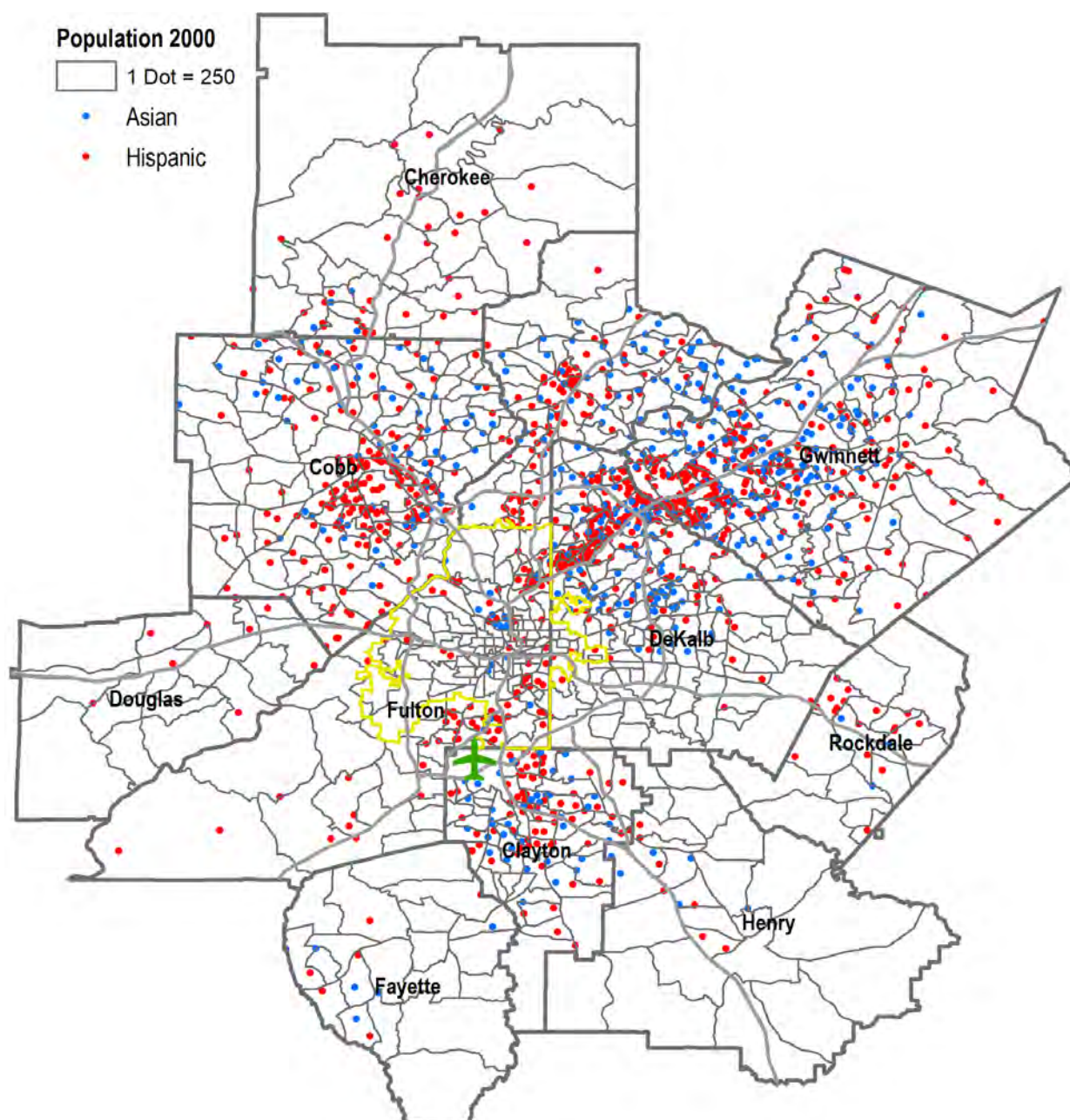


As can be seen in Map 1, in 1970, Blacks were largely concentrated in a swath of land largely east and west of the Atlanta Central Business District (CBD), which is in Fulton. Over the next two decades (see Maps 2 and 3) the growth in Black population occurred principally in south Fulton, southeast DeKalb and northern Clayton, while Black population decreased in the area that comprised the concentrated area of Blacks in 1970. While these patterns continued through 2000, by 2000 the growth in Black population in other areas in the Atlanta region becomes evident (Map 4), particularly the growth in the north. This expansion of Black population to other areas of the region continued through 2020. The maps also illustrate that over time whites left the core of the ARC region and that white population growth occurred increasingly further from the CBD, particularly north.

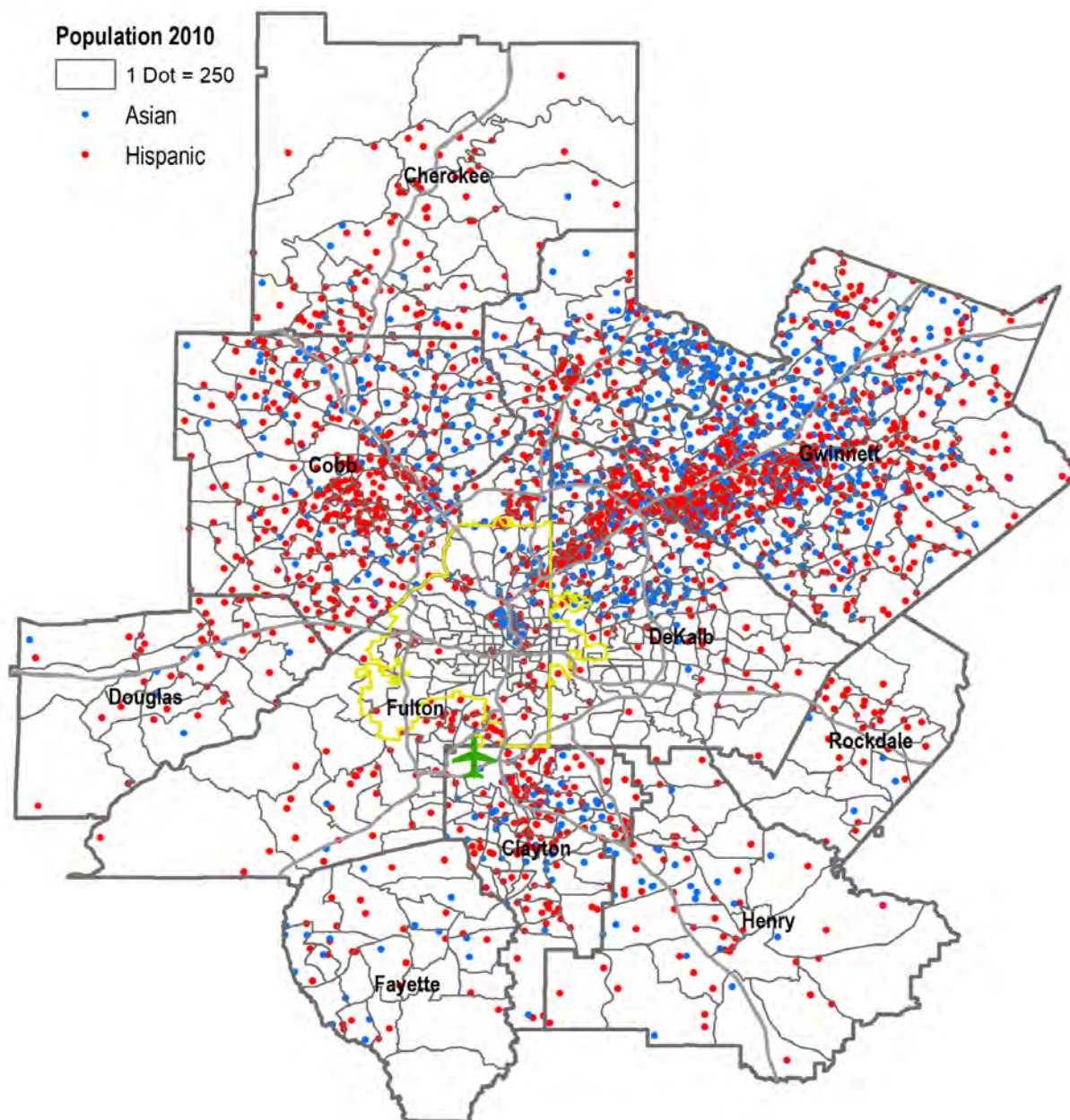
The changes over time in the geographic patterns of the dots across the maps are very substantial and imply a quite remarkable change in racial residential pattern over the 1970-2020 period. In fact, it was a comparison of Maps 1 and 6 that caused us to investigate the changing racial residential patterns more deeply.

Maps 7 – 9 are dot maps showing the location of Asian (blue dots) and Hispanics (red dots) for 2000, 2010, and 2020. Each dot in these maps represents 250 individuals, which means that there are 4 times the number of dots per 1,000 individuals in Maps 7 – 9 than for Maps 1 – 6. Since there were so few Asians and Hispanics until 2000, we did not create maps for earlier years, and because the maps of Blacks and non-Hispanic Blacks and whites and non-Hispanic white are so similar, we did not include them in Maps 7 – 9. The maps show the location of the growth in the Asian population over the period, which has increasingly located in north Fulton and northeast DeKalb. In 2000, while there were Hispanics located throughout the region, the largest concentration was along the I-85 corridor through DeKalb and Gwinnett. In the next twenty years that area continued to attract Hispanics, but at the same time Hispanics were increasingly locating throughout the region.

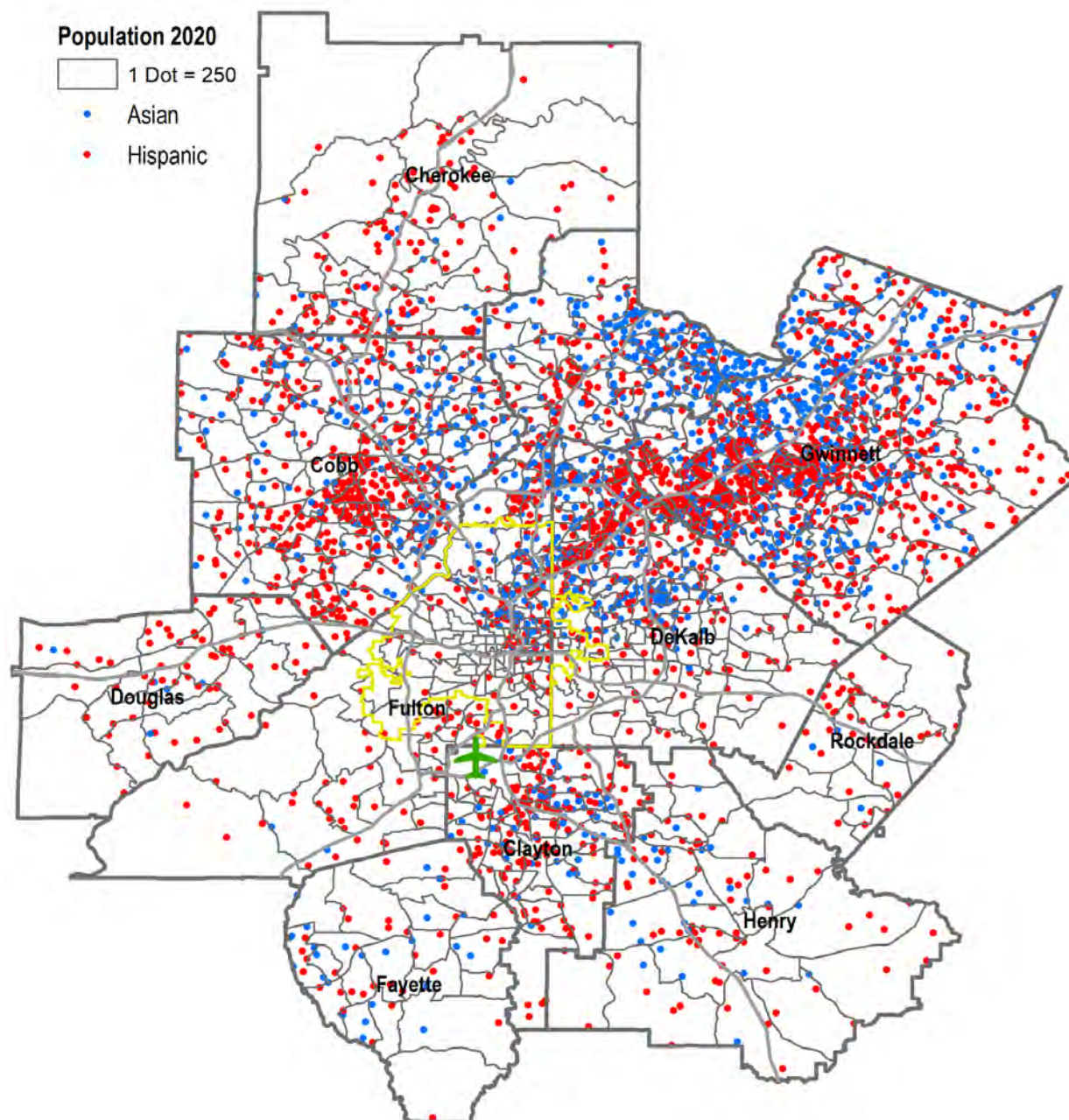
Map 7. Asian and Hispanic Populations, 2000



Map 8. Asian and Hispanic Populations, 2010



Map 9. Asian and Hispanic Populations, 2020

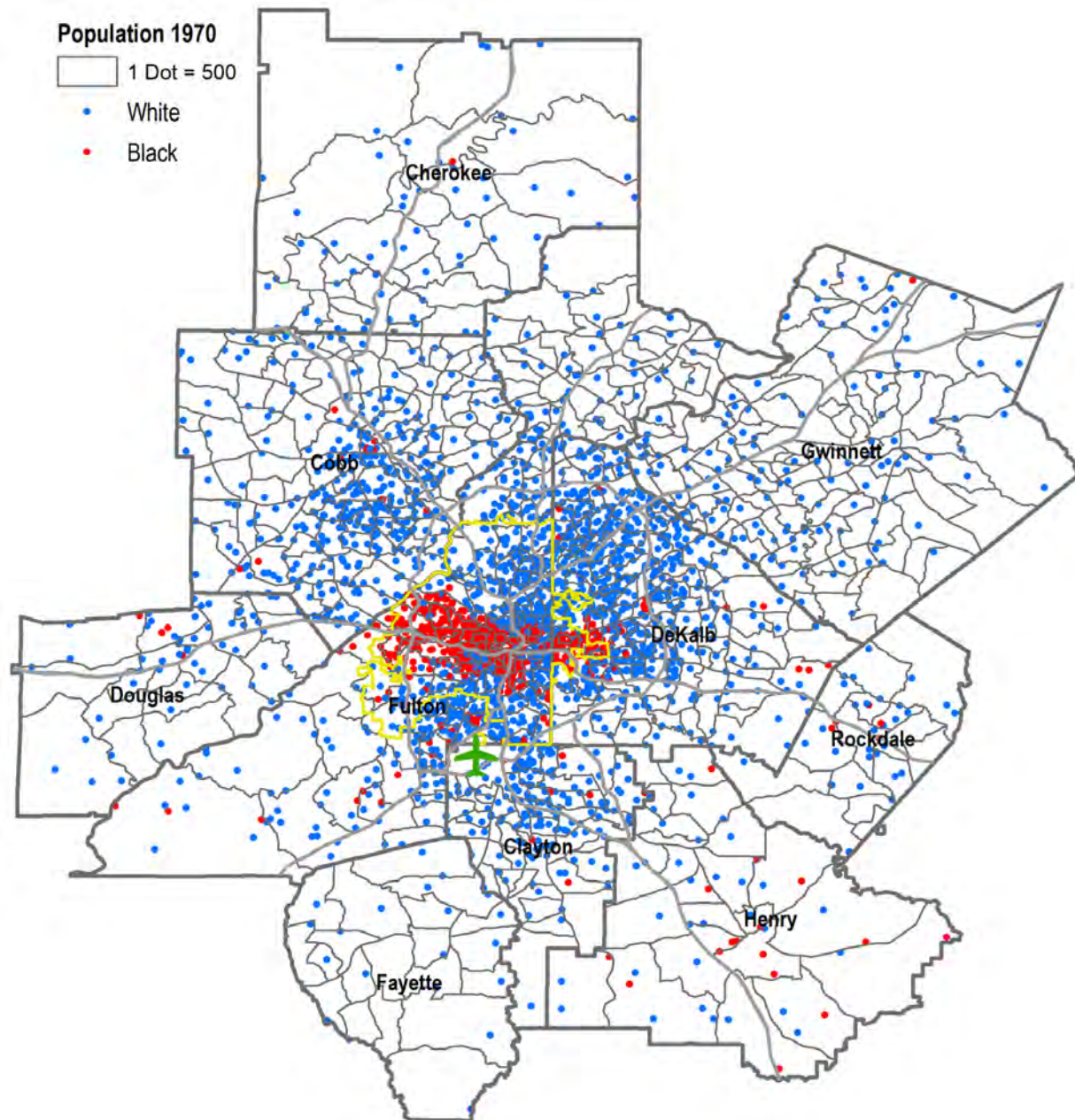


In comparing Maps 1 – 6 it is hard to distinguish between the increase in population, i.e., the change in the number of dots, and changes in racial segregation, i.e., the mix of dots. Maps 10 – 15 are also dot maps of Blacks and whites, but unlike Maps 1 – 6 the total number of dots is the same for each map, i.e., 3,000.¹⁶ Thus, in 1970, each dot represents 500 individuals, while in 2020 each dot represents 1,220 individuals. Each dot represents an equal percentage of the total (Black plus white) population, or 0.033 percent per dot. In effect, the maps control for changes in the size of the total (Black plus white) population and instead captures just the changes in the geography of racial residential segregation. Since the total number of dots is the same in each year, the change in the number of blue dots relative to the number of red dots reflect the change in the ratio of Blacks to whites, and thus the changes in the racial composition of each census tract. Maps 10 – 15 give a clearer picture of the changes in racial residential segregation than do Maps 1 – 6.

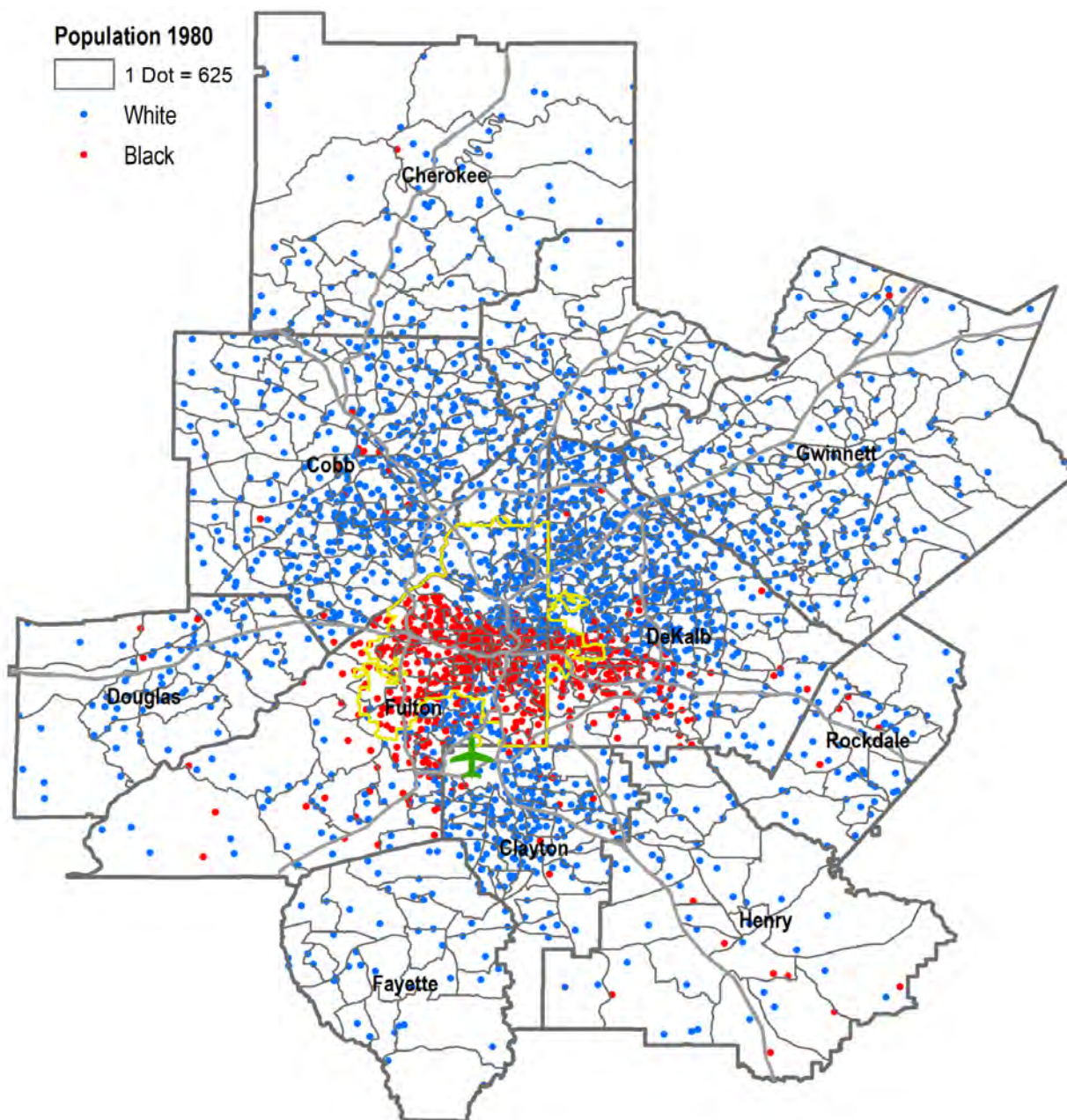
Over the 50 years we observe an increase in the number of red dots relative to blue dots, reflecting the increase in the Black population share. The reduction in the concentration of Blacks near the CBD and increasing dispersal of Blacks across the region is also evident. The maps also highlight the reduction in racial residential segregation as an increasing number of census tracts have similar numbers of red and blue dots. Thus, by 2020 the picture is one of a much more integrated residential pattern than in 1970. The residential patterns of Blacks and whites in Map 15 stand in stark contrast to those in Map 10.

¹⁶Given that the number of dots is the same in each year, if a census tract has an additional red dot in some year, then either another census tract must have one fewer red dot or there must be one fewer blue dot in the region.

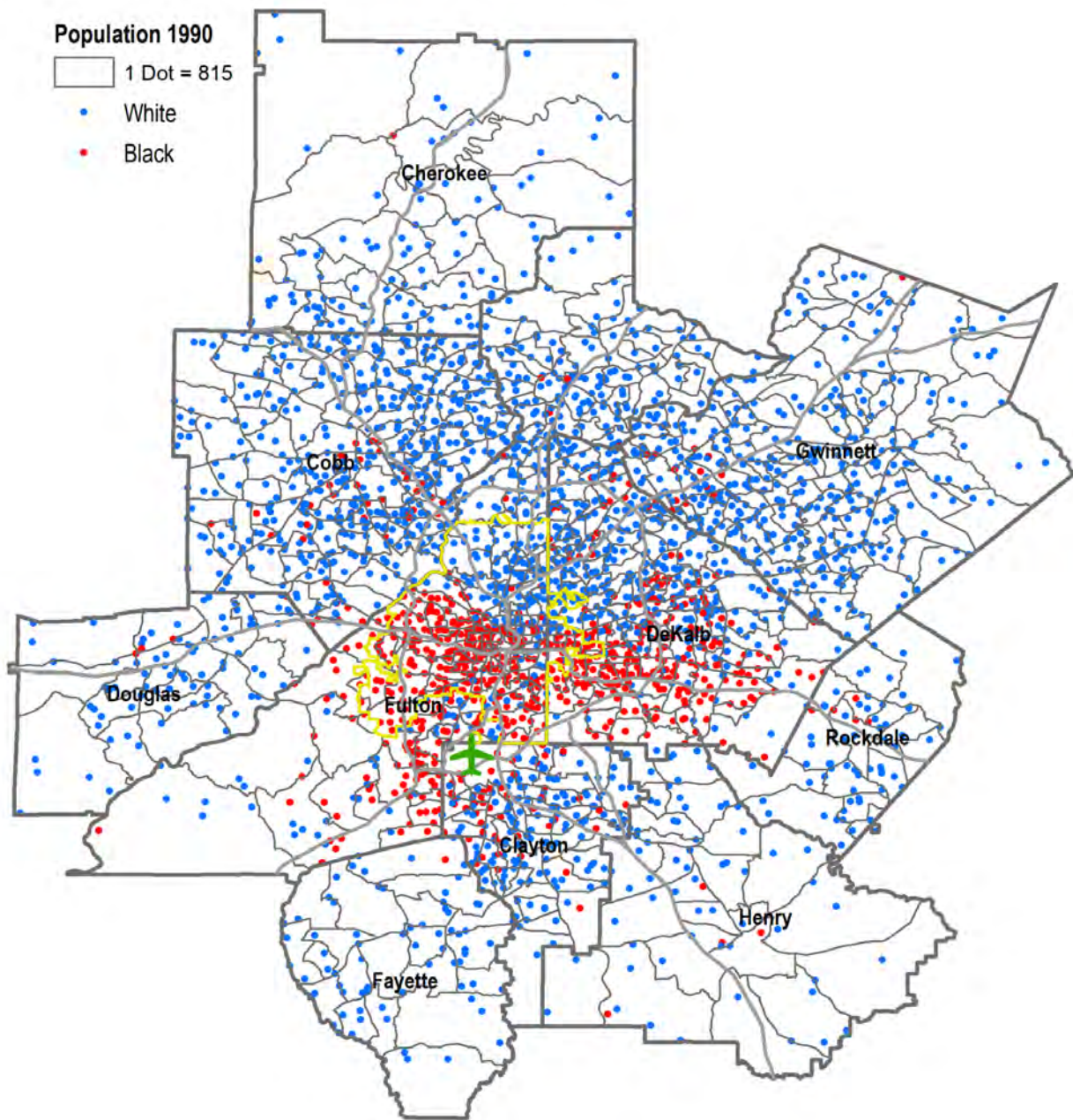
Map 10. Black and White Populations (1 Dot = 500 Individuals), 1970



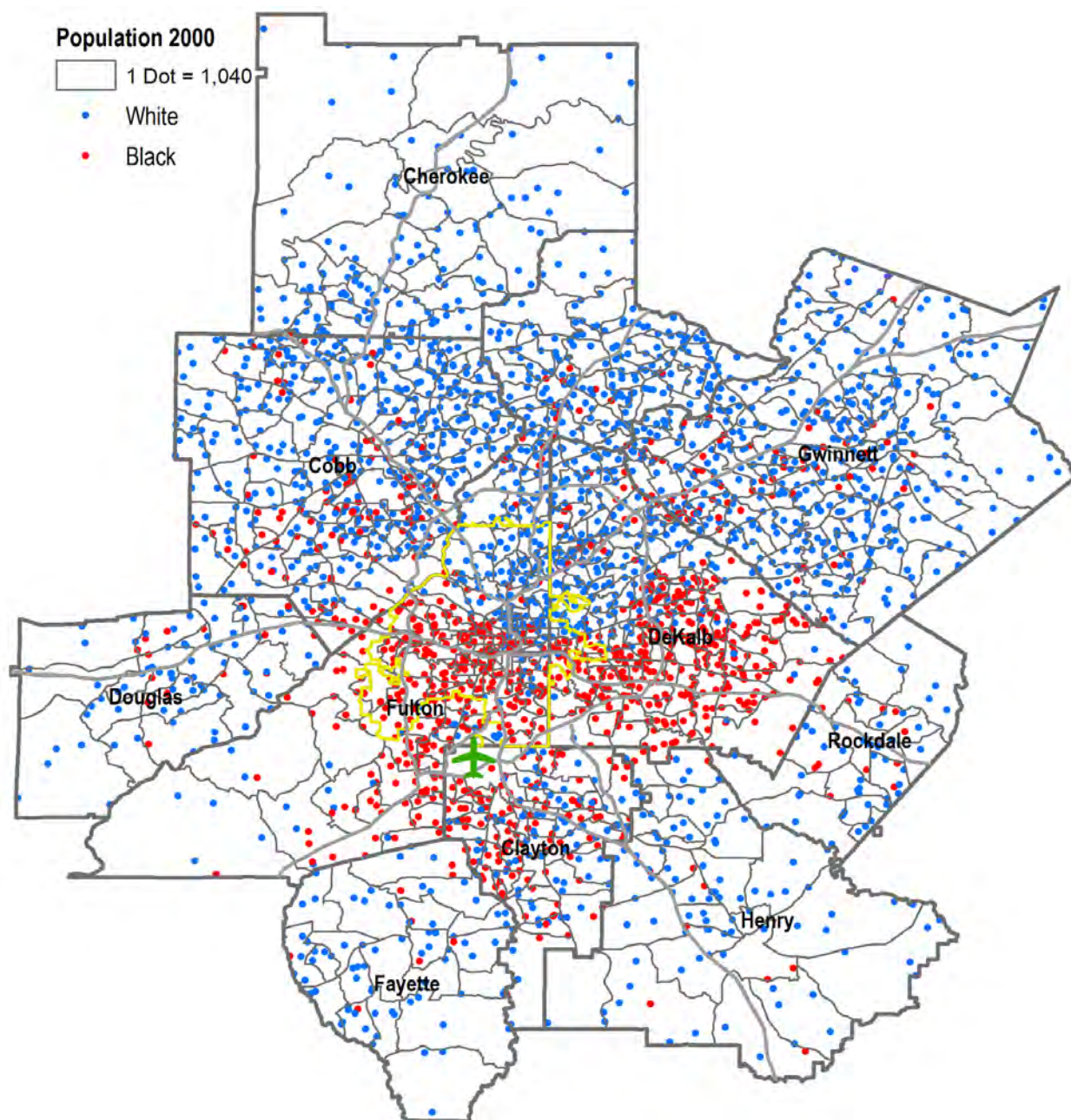
Map 11. Black and White Populations (1 Dot = 625 Individuals), 1980



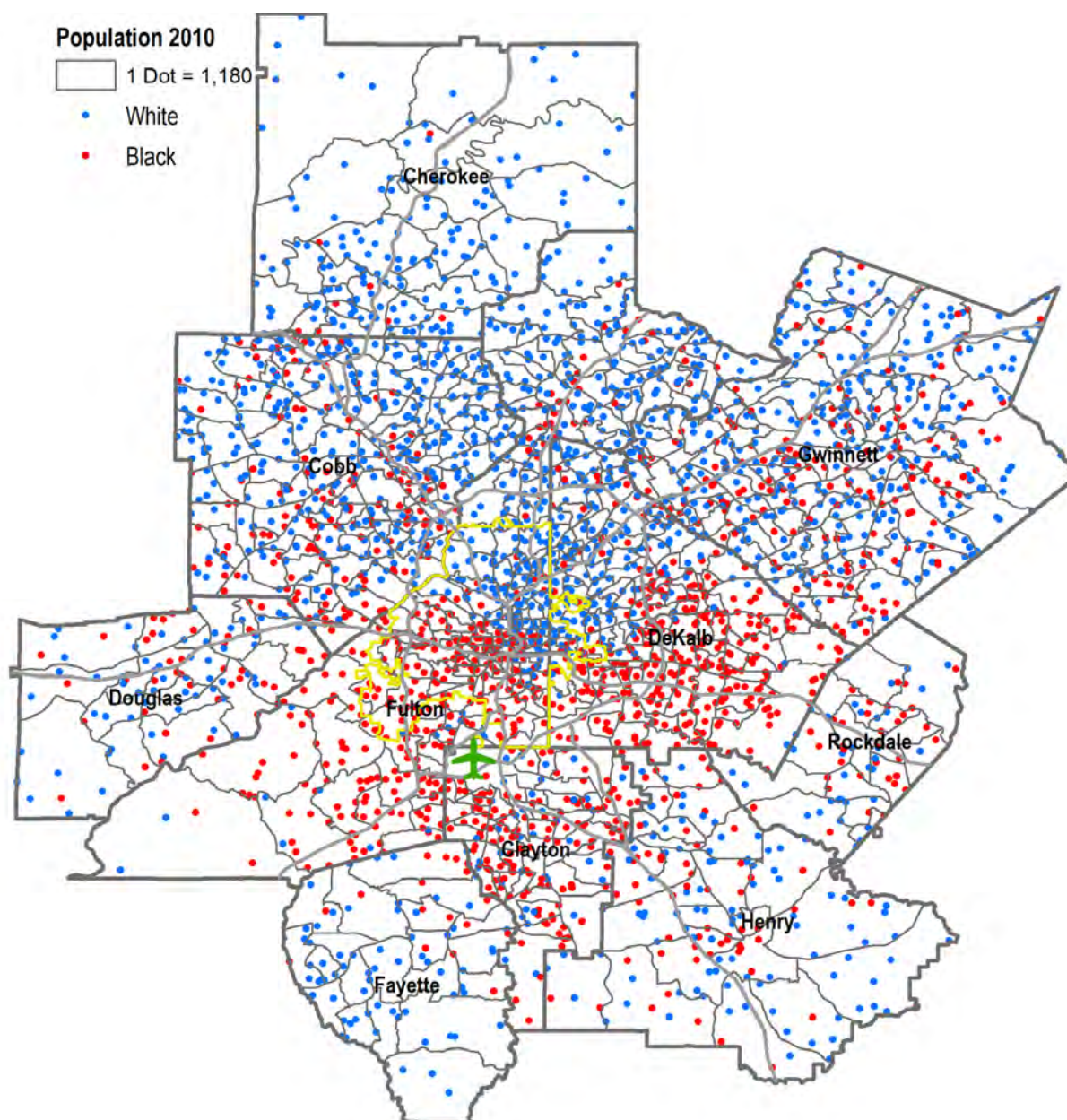
Map 12. Black and White Populations (1 Dot = 815 Individuals), 1990



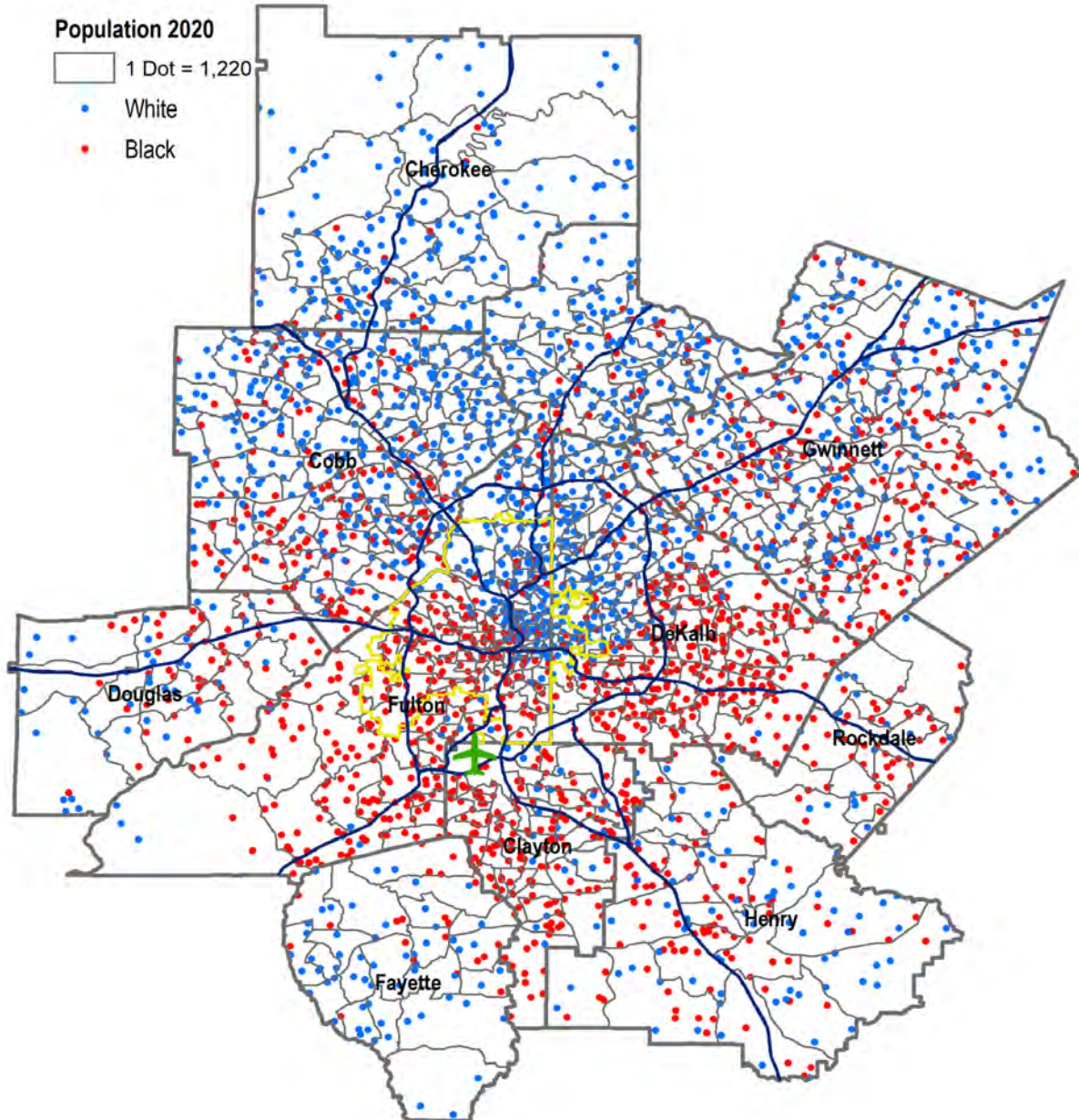
Map 13. Black and White Populations (1 Dot = 1,040 Individuals), 2000



Map 14. Black and White Populations (1 Dot = 1,180 individuals), 2010



Map 15. Black and White Populations (1 Dot = 1,220 Individuals), 2020



In the remainder of Section 3 we explore in more detail some of the aspects of the change in racial residential segregation in the ARC region.

DECENTRALIZATION OF BLACKS AND WHITES, 1970-2020

In comparing Maps 1 and 6, it is clear that the population, both Black and white, decentralized over the 50-year period. To illustrate more clearly the decentralization of the region's population we plotted the change between 1970 and 2020 in census tract population, separately by race, against distance (measured in kilometers) from the CBD. Figure 1A shows the relationship for Blacks, while Figure 1B is the equivalent figure for whites. The figures summarize the racial differences in the changes seen in comparing Maps 1 and 6. The Black population declined in many of the census tracts within 10 kilometers (about 6.2 miles) of the CBD (see the lower right corner of Figure 1A). In 1970, census tracts beyond 10 kilometers had relatively few Black residents, which explains why there are no observations with large decreases in Black population in these census tracts. Many census tracts had small increases in Black population (see the band of observations just above zero population change); for example, there were 124 census tracts with a Black population increase of less than 500 between 1970 and 2020. The relationship between the magnitude of Black population growth and distance from the CBD roughly resembles a hill, reaching a peak at about 25 kilometers.

Figure 1A. Change in Black Population by Distance to CBD, 1970-2020

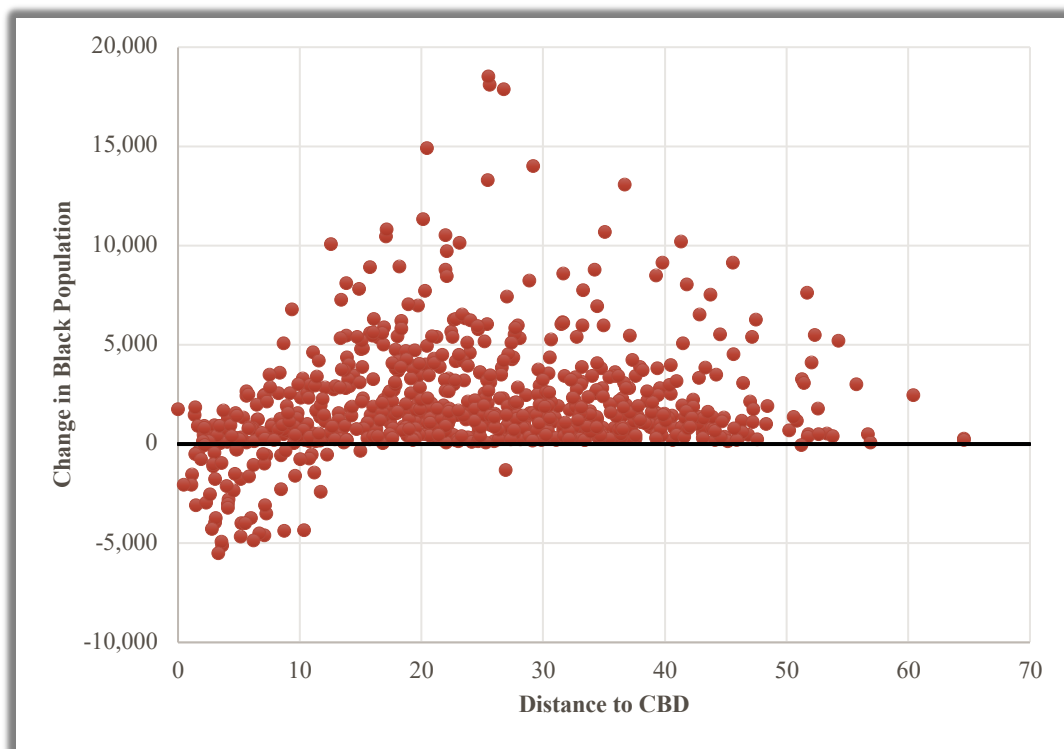
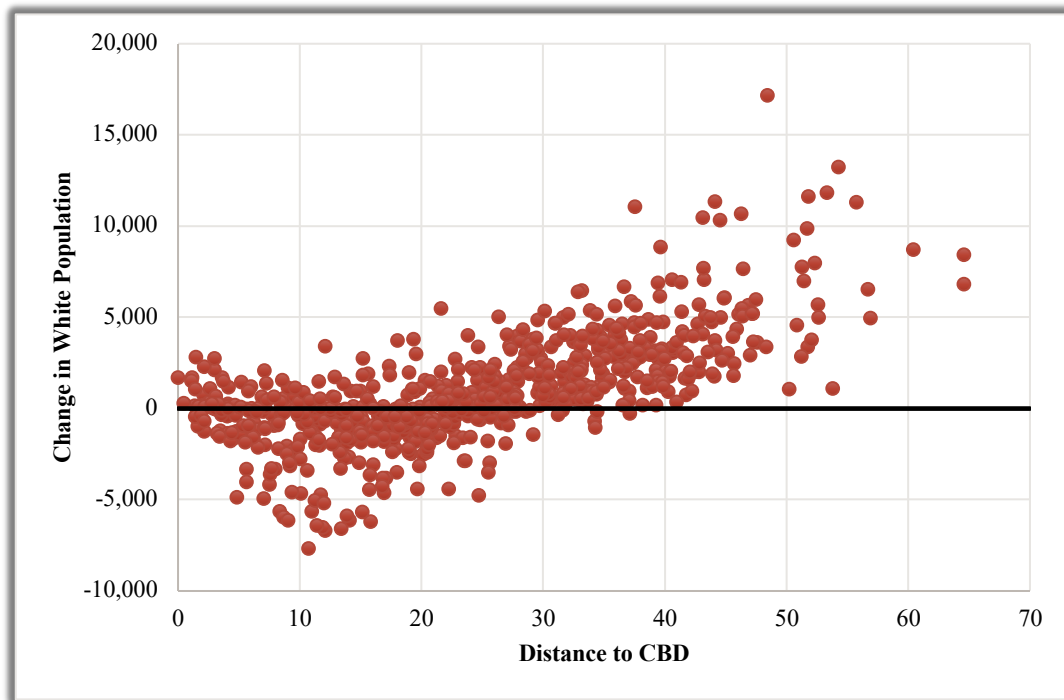


Figure 1B. Change in White Population By Distance from CBD, 1970-2020



The relationship between white population growth and distance from the CBD is J-shaped (Figure 1B) and looks much different than Figure 1A. White population fell in many closer-in census tracts, i.e., at a distance from the CBD of less than 20 kilometers, and increased in census tracts further from the CBD.

The magnitude of the growth in Black and white populations are both positively correlated with distance from the CBD. However, large Black population growth, i.e., greater than 5,000, occurs in census tracts that are between about 10 and 50 kilometers from the CBD. On the other hand, large white population growth is observed at distances beyond about 30 kilometers, with increasing population growth the further the census tract is from the CBD. Note also that at any distance the growth across census tracts in Black population is more varied than the growth in white population. This difference in variability is reflected in the difference in the correlation coefficients between the change in population and distance, 0.672 for the white population but only 0.200 for the Black population.

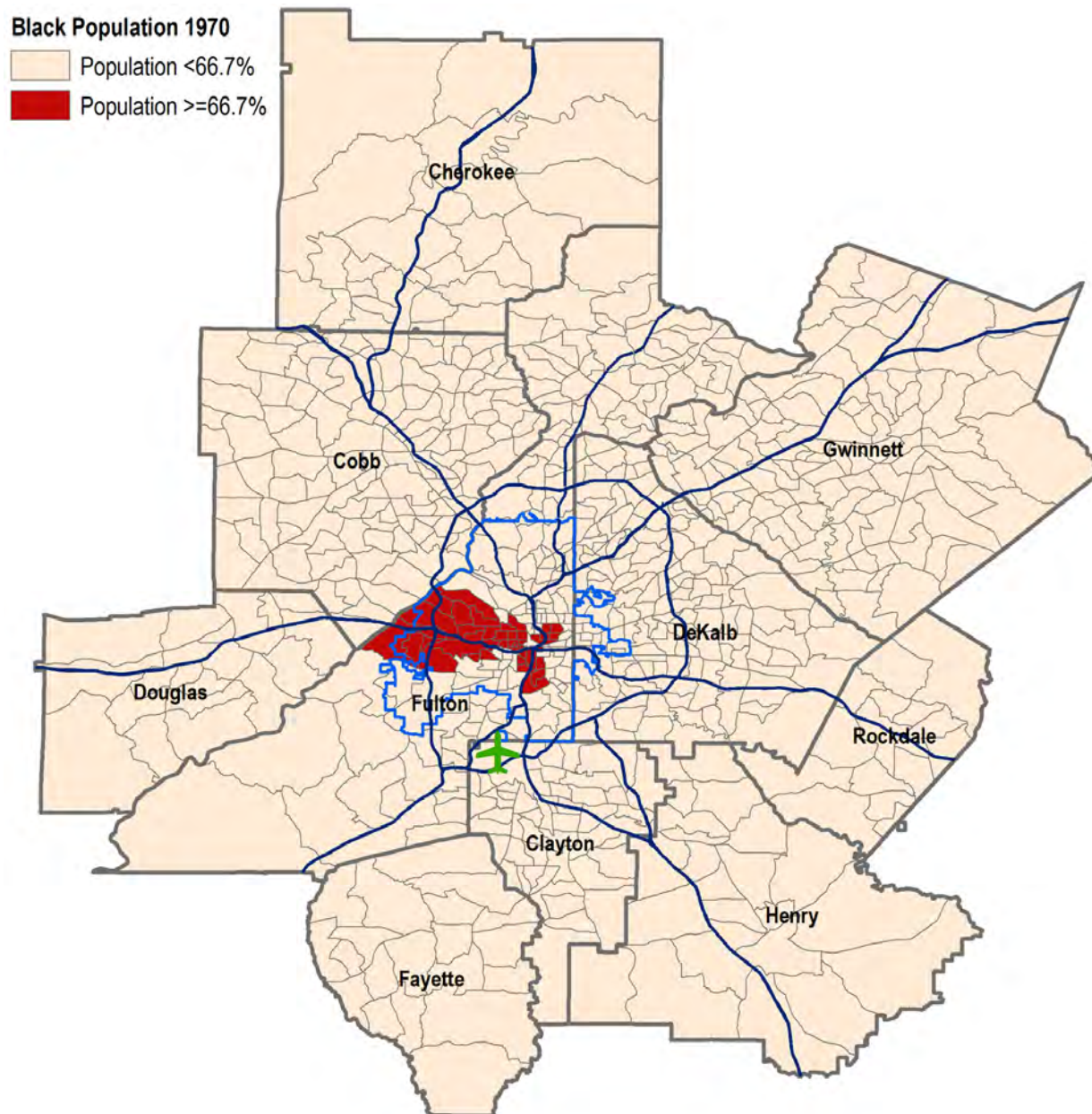
GEOGRAPHIC CONCENTRATION OF BLACKS

As implied by Map 1, in 1970 Blacks were concentrated in a relatively small area, mainly in the city of Atlanta. To explore the concentration of Blacks and how that changed over time, we identified contiguous census tracts in which Blacks comprise at least 66.7 percent of the tract's population (see Maps 16 – 21).¹⁷ (We refer to these areas as "Black concentration areas.") In 1970, the area of concentrated Black population was located mostly in the city of Atlanta, essentially west and a little east of the Atlanta CBD. Neighborhoods in the Black concentration area in 1970 included, among many others, Vine City, Old

¹⁷66.7 percent is essentially three times the Black population share in 1970.

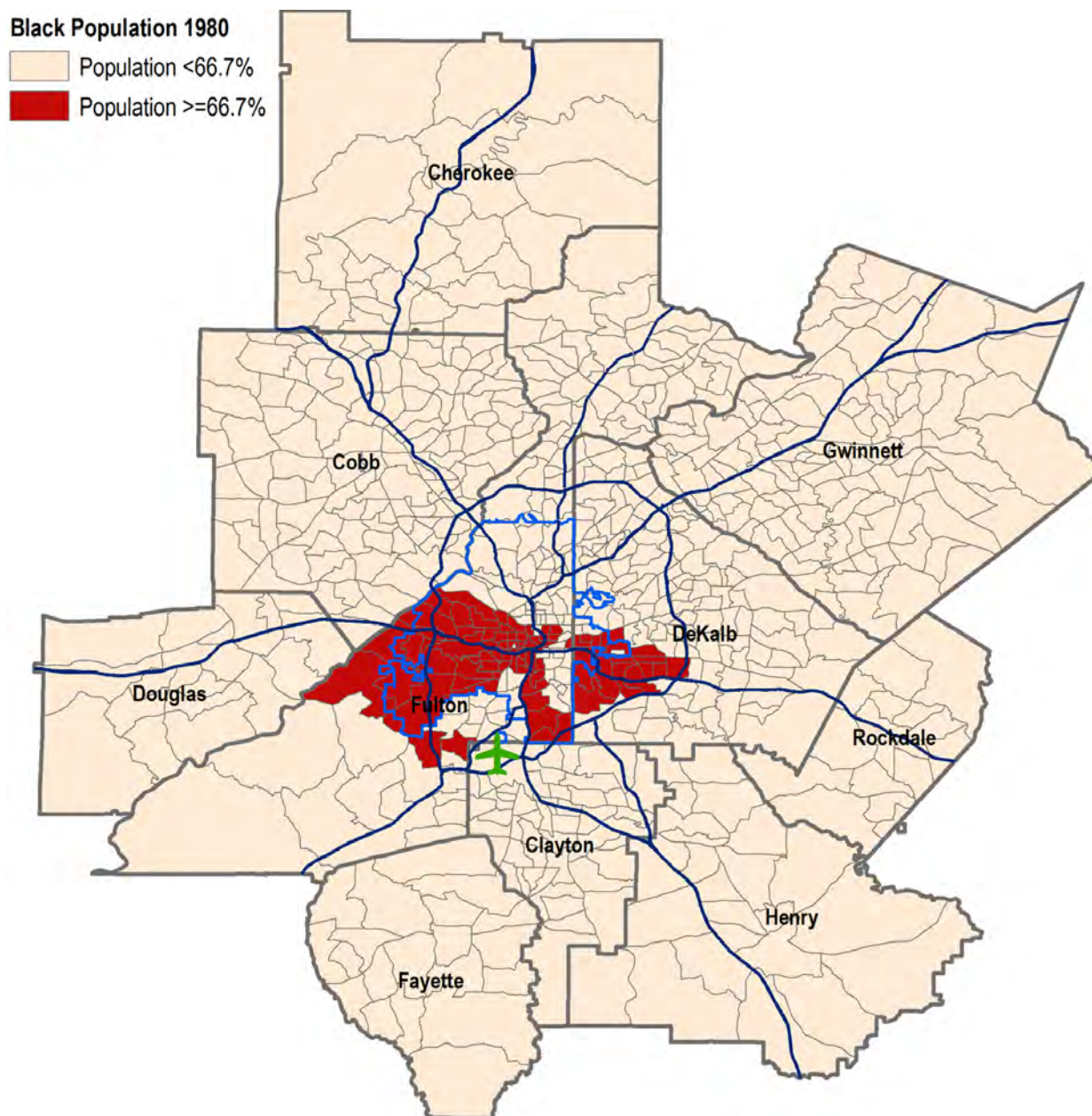
Fourth Ward, Grove Park, Cascade Heights, and Collier Heights.¹⁸ The Black concentration area comprised 41 census tracts and contained 58.77 percent of the region's Black population.

Map 16. Black Concentrated Census Tracts (Black Share $\geq 66.7\%$), 1970

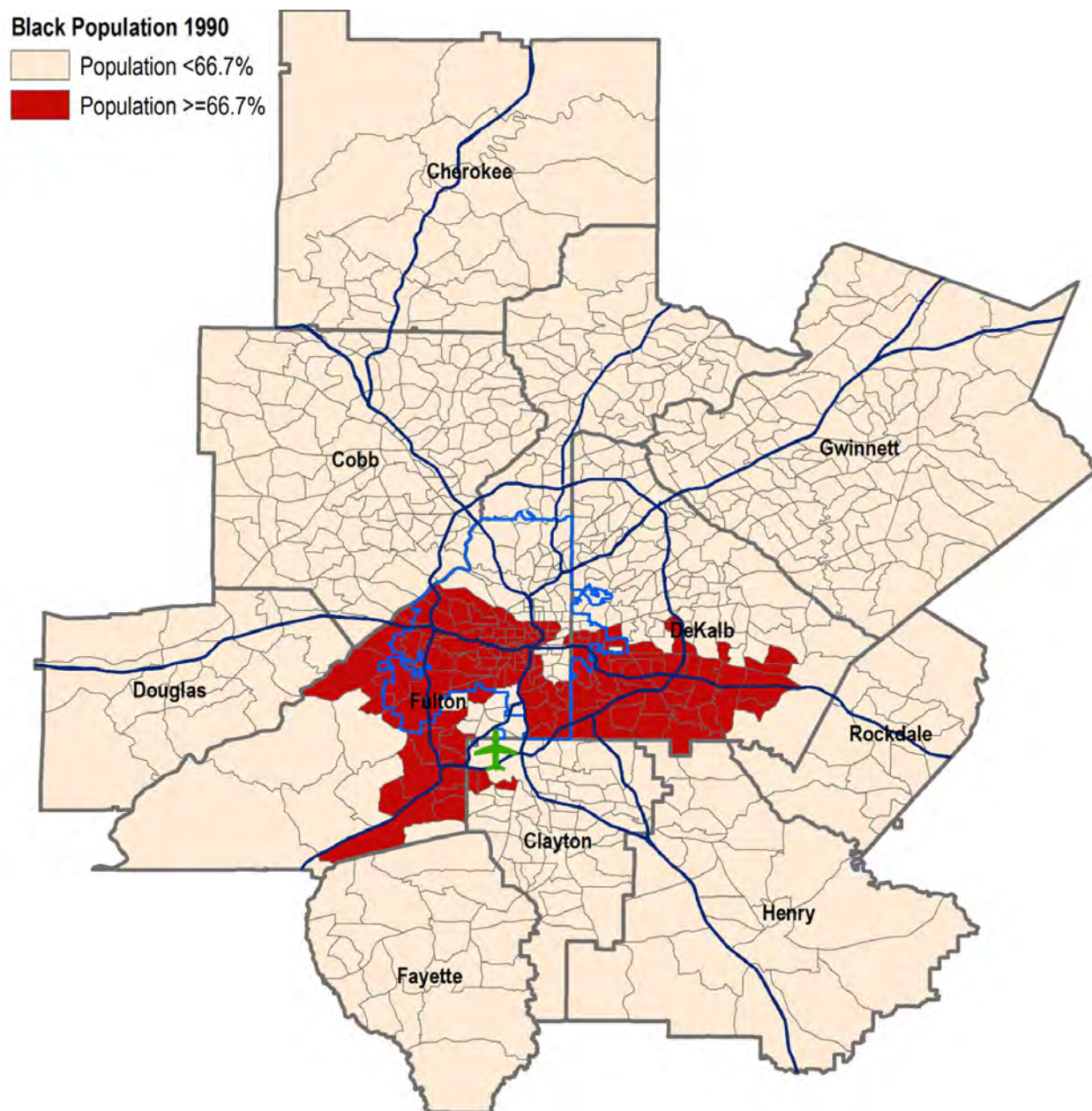


¹⁸Neighborhood boundaries do not match census tract boundaries, and thus a neighborhood may not be entirely within a Black concentration area.

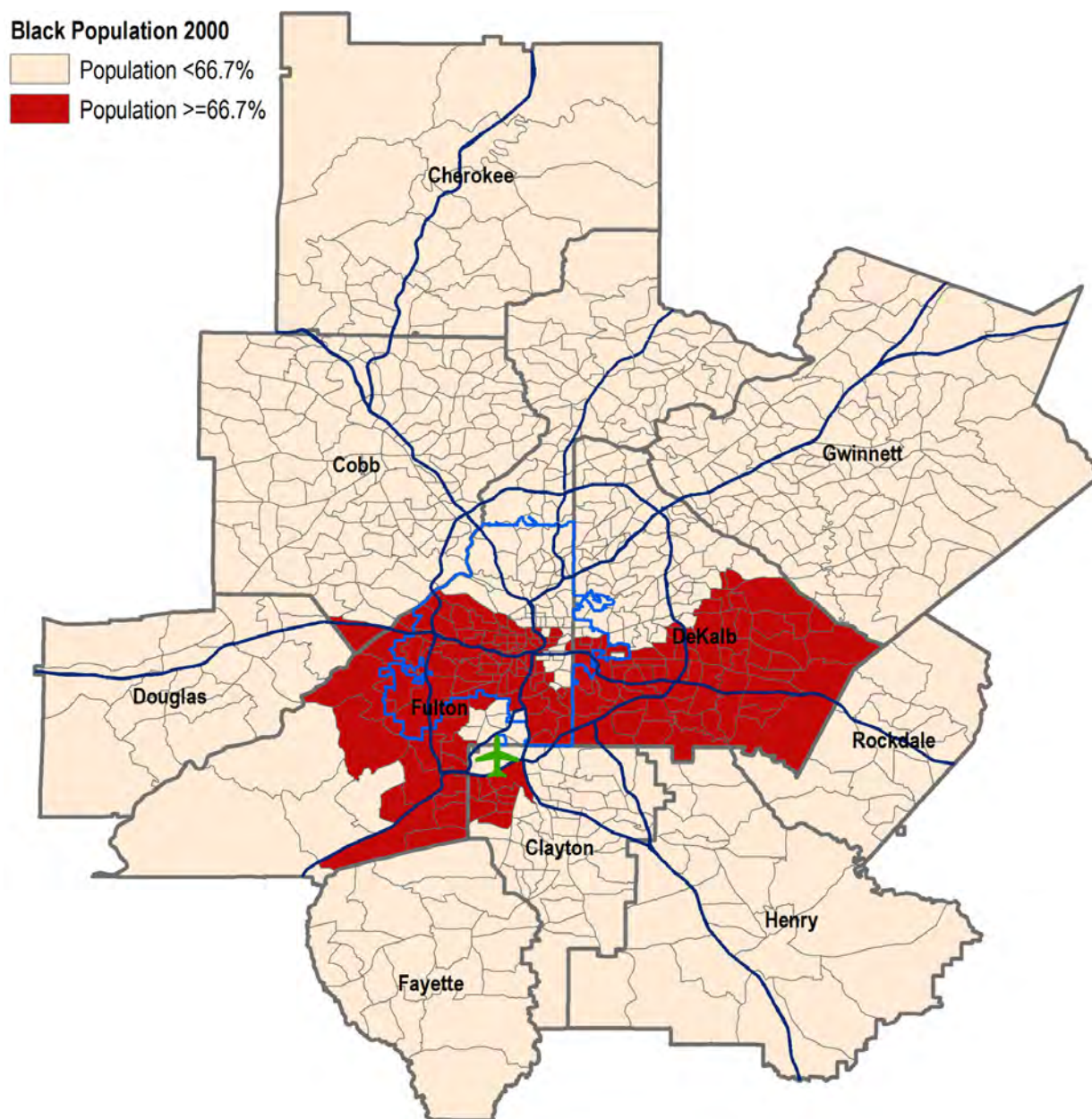
Map 17. Black Concentrated Census Tracts (Black Share $\geq 66.7\%$), 1980



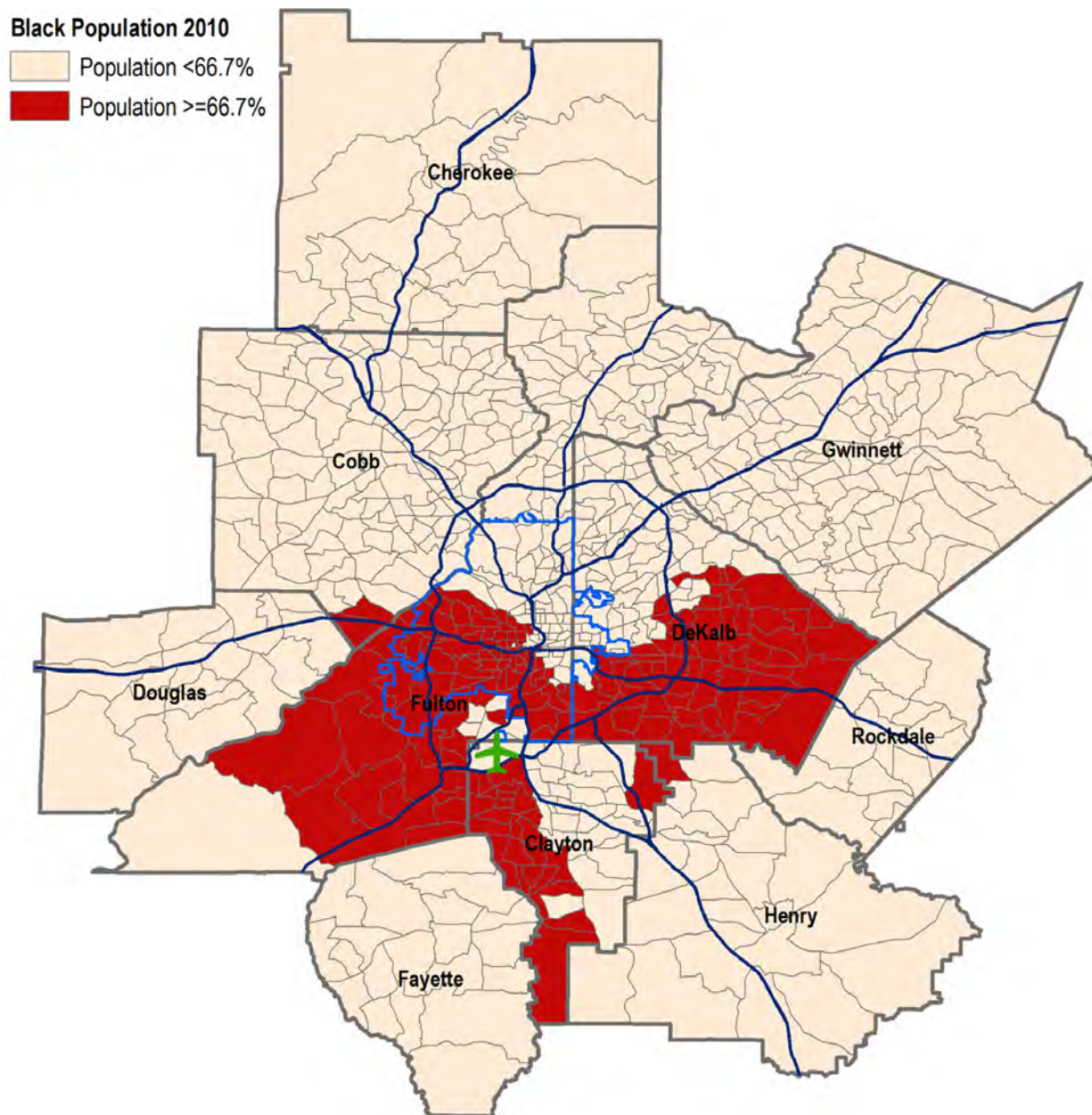
Map 18. Black Concentrated Census Tracts (Black Share $\geq 66.7\%$), 1990



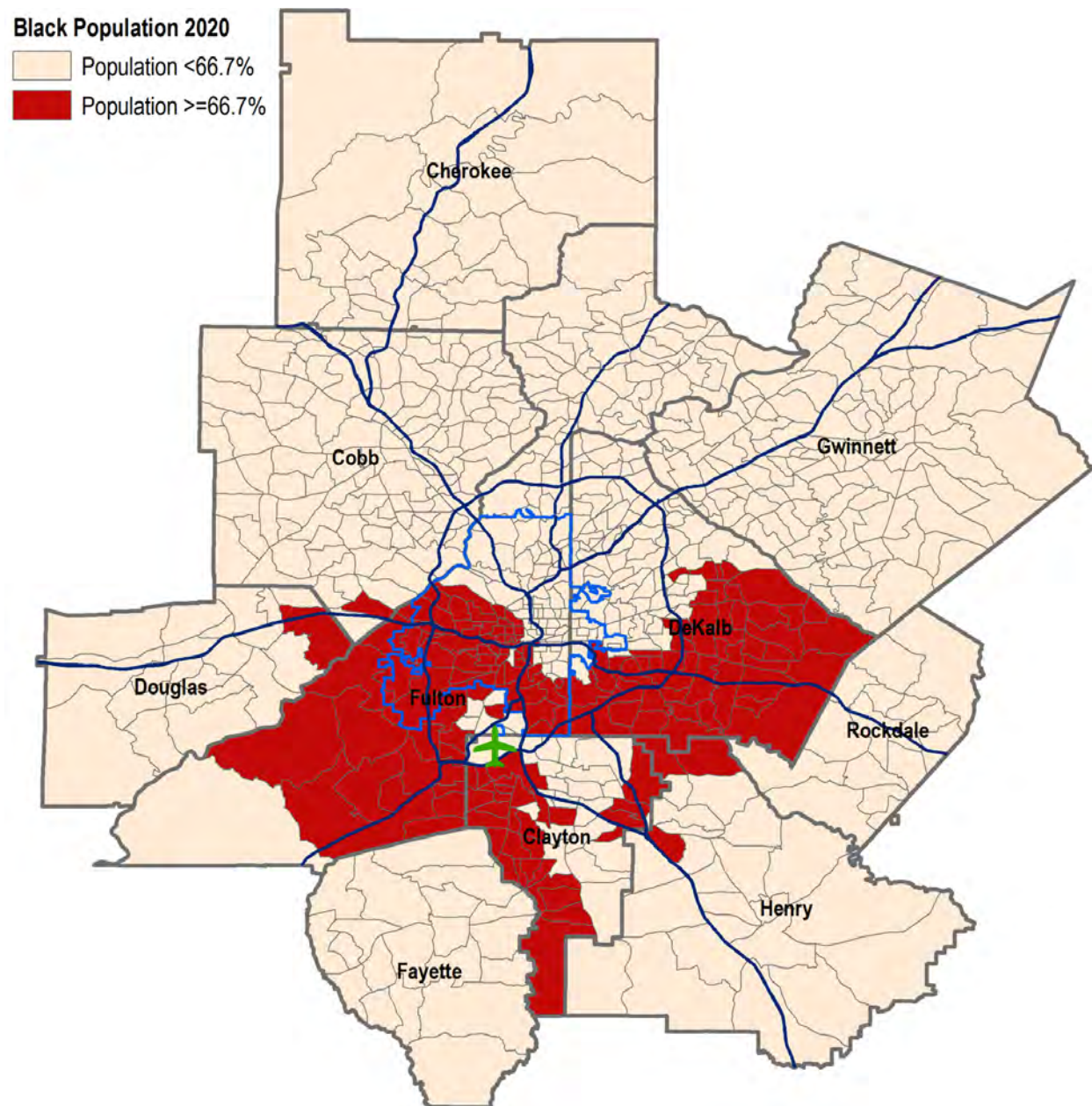
Map 19. Black Concentrated Census Tracts (Black Share $\geq 66.7\%$), 2000



Map 20. Black Concentrated Census Tracts (Black Share $\geq 66.7\%$), 2010



Map 21. Black Concentrated Census Tracts (Black Share $\geq 66.7\%$), 2020



By 1980, this Black concentration area had expanded west toward Douglas and east into south DeKalb. (While the area in DeKalb is not quite linked to the concentrated area in Fulton, we combined them for this analysis.) There were 47 additional census tracts that became part of the Black concentration area during the 1970s.¹⁹ In 1970, these additional census tracts had an aggregate Black population share of 36.02 percent, while in 1980 the Black population share of these 47 census tracts was 87.15 percent; 21 went from a Black population share of less than 10 percent in 1970 to more than 66.7 percent in 1980.

¹⁹There was one census tract that had a Black share greater than 66.7 percent in 1970 but less than 66.7 percent in 1980. Thus, while the number of Black concentrated area census tracts increased by 46, the number of new census tracts was 47.

Over the next three decades (1980-1990, 1990-2000, and 2000-2010) the Black concentration area continued to expand, principally to the south and east. However, in the past decade there was little change in the Black concentration area. In Maps 16 – 19 the Black concentration areas are relatively compact, but in 2010 and 2020 that is less so.²⁰

Panel A of Table 4 provides a summary of the Black concentration areas shown in Maps 16 – 21. The number of census tracts included in the Black concentrated area increased 4.2-fold between 1970 and 2020, from 41 to 172. Since census tracts vary in area and are generally larger the greater the distance from the CBD, we also report the total area (in square miles) of these census tracts.²¹ The concentration area increased from 42.24 square miles in 1970 to 487.79 square miles in 2020, an 11.5-fold increase. The population of the Black concentration area increased each decade, but its share of the region’s Black population decreased after 1980, and by 1990 was less than in 1970.

Table 4. Census Tracts at Least 66.7% Black

	1970	1980	1990	2000	2010	2020
Panel A: Black Concentration Area ^a						
Number of Census Tracts	41	87	129	160	174	172
Land Area (sq. miles)	42.24	121.77	223.35	336.95	457.95	487.79
Black Population	191,667	324,961	425,527	603,854	726,367	817,368
Percent of ARC Black Population	58.77%	68.14%	62.53%	55.14%	47.93%	45.23%
Panel B: Black Census Tracts ^b						
Number of Census Tracts	52	96	132	167	179	177
Land Area (sq. miles)	60.79	150.49	226.43	345.39	477.97	512.55
Black Population	233,000	341,773	434,869	627,349	752,731	848,937
Percent of ARC Black Population	71.44%	71.67%	63.90%	57.28%	49.67%	46.98%

^a These are contiguous census tracts containing at least 66.7% percent Black.

^b These are all census tracts containing at least 66.7% percent Black.

Panel B of Table 4 summarizes information for all census tracts whose population is at least 66.7 percent Black; we refer to these as “Black census tracts.” As can be seen in Table 4, in 1970 the Black concentration area contained nearly all Black census tracts and 82.26 percent of the Black population in Black census tracts. By 2020, the Black concentration area contained 96.28 percent of the Black population of Black census tracts. In 1970, 71.44 percent of the region’s Black population was housed in

²⁰We constructed maps equivalent to Maps 16 – 21 for census tracts with a Black population share of at least 80 percent. The two sets of maps are quite similar in the number of census tracts in 1970 and 1980, but the concentrated areas for the 80 percent maps are much smaller and more compact in 2010 and 2020.

²¹The area of ARC region is 2966.81 square miles.

Black census tracts, which means that almost three quarters of the Black population lived in predominately Black census tracts. The percentage of the region's Black population living in Black census tracts decreased between 1980 and 2020 and is now less than 50 percent. (A similar pattern is observed if we consider census tract in which the Black population is at least 40 percent of the census tract's total population.)

CHANGES IN CENSUS TRACT POPULATION BY RACE

Although the Black and white population increased substantially over the period, not every census tract experienced an increase in Black population or white population. Furthermore, the changes in census tract population by race varied significantly in magnitude across census tracts and by racial composition. In this subsection, we describe the variation across census tracts and over time in the growth of population by race.

Table 5 shows the distributions of changes in census tract Black population and white population by decade. Maps 22 – 26 show the geographic pattern of the changes in Black population by decade while Maps 27 – 31 are equivalent maps for whites.

Table 5. Distribution of Census Tracts by Change in Population

POPULATION CHANGE	-----1970-1980-----		-----1980-1990-----		-----1990-2000-----		-----2000-2010-----		-----2010-2020-----	
	BLACK	WHITE	BLACK	WHITE	BLACK	WHITE	BLACK	WHITE	BLACK	WHITE
< -1,000	23	74	9	53	8	69	35	65	8	85
≥ -1,000 to < -500	12	48	25	65	4	51	49	114	21	146
≥ -500 to < -200	4	46	17	53	29	82	54	153	48	143
≥ -200 to < -100	13	20	7	34	17	39	17	58	32	53
≥ -100 to < -50	23	10	13	22	10	24	18	36	27	26
≥ -50 to < 0	83	10	34	21	19	38	17	33	43	43
≥ 0 to < 50	354	22	176	32	72	38	33	39	65	51
≥ 50 to < 100	53	15	99	15	44	23	34	20	54	31
≥ 100 to < 200	48	40	92	17	92	47	57	33	65	37
≥ 200 to < 500	33	129	117	61	173	85	129	62	163	154
≥ 500 to < 1,000	22	157	77	134	113	88	137	52	105	33
≥ 1,000 to < 2,000	31	119	47	170	103	72	89	33	70	24
≥ 2,000	36	45	22	58	51	79	66	39	34	9
Total	735	735	735	735	735	735	735	735	735	735
< 0	158	208	105	248	441	303	190	459	179	496
= 0	120	11	11	4	4	1	1	4	2	2
> 0	457	516	619	483	644	431	544	272	554	237

In the 1970s, 120 census tracts had no change in Black population. These are mainly census tracts located near the boundaries of the ARC region, suggesting that in that decade Blacks who moved to the ARC area or who were relocating within the area chose to locate in closer-in census tracts. In subsequent decades, there were very few census tracts that had no change in Black population.

In every decade, despite increases in Black and white population, there were census tracts that lost Black population and even more census tracts that lost white population.²² In each decade, the bulk of census tracts experienced an increase in Black or white population, consistent with the growth in Black and white populations in the region. Other than the 1970s, there were more census tracts that had an increase in Black population than an increase in white population, again consistent with the relative growth of Black and white populations.

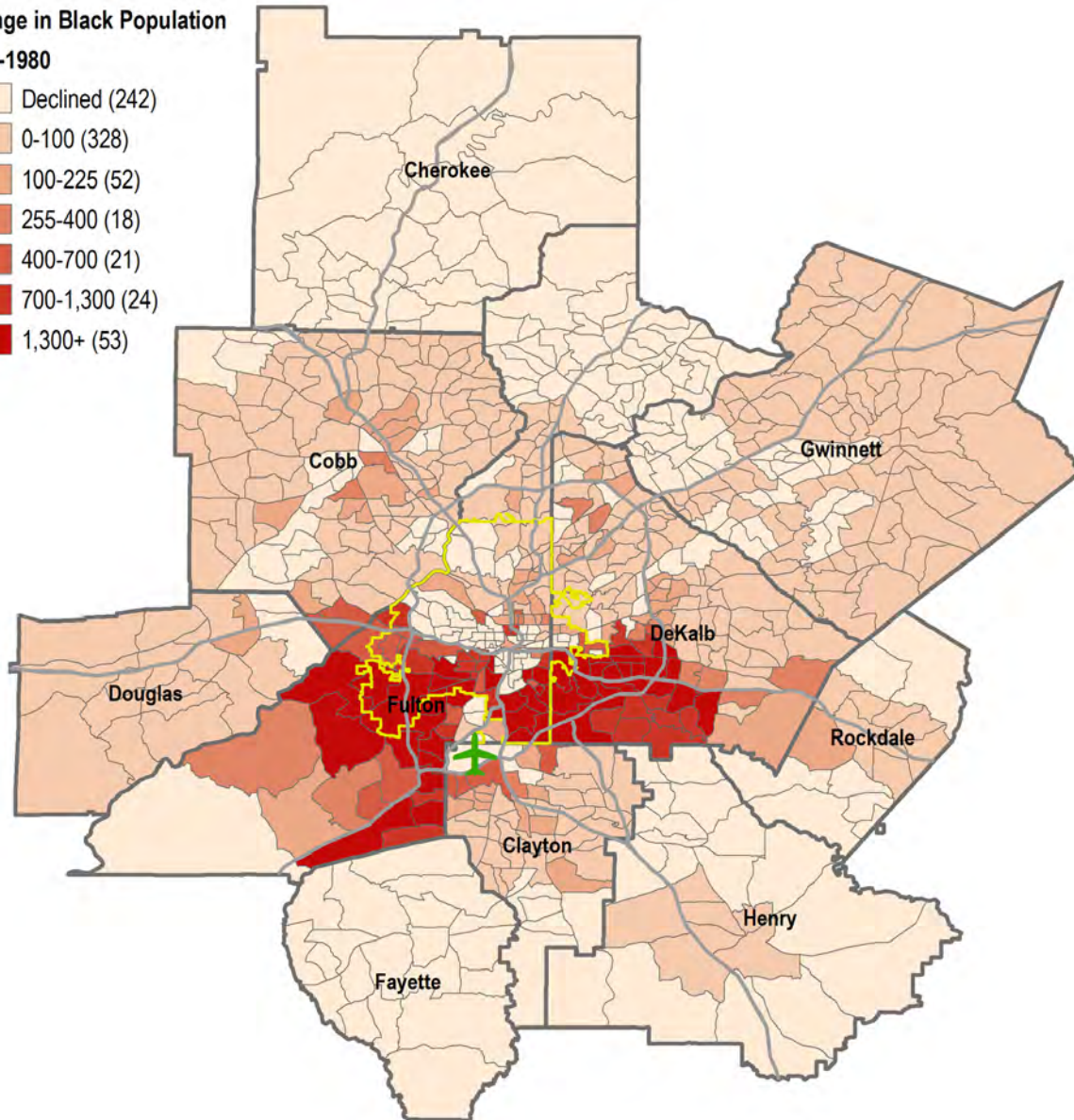
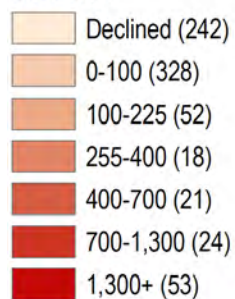
There are substantial variations over time and by race in the magnitude of the change in census tract populations. In the 1970s, there were 23 census tracts that had a decrease in Black population of 1,000 or more, while in the 2010-2020 decade there were only 8 census tracts with that size decrease in Black population. However, there were more census tracts that had decreases of at least 1,000 whites, 74 census tracts in the 1970s and 19 in the 2010-2020 period. On the other hand, 106 census tracts had a decrease of 100 or less Black residents in the 1970s and 70 in the 2010-2020 period. This compares to 20 census tracts with a decrease of 100 or less whites residents in the 1970s and 69 in the 2010-2020 period. Between the 1970s and the 2010-2020 period, the number of census tracts that gained 100 or less Black residents decreased (407 compared to 119) but the number of census tracts that gained 100 or less white residents increased (37 compared to 90). But the reverse is true for the number of census tracts that gained 500 or more residents. The number of census tracts that gained 500 or more whites residents was 321 for the 1970s and 166 for the 2010s. This compares to 89 and 209 census tracts, for those two decades respectively, that had an increase of 500 or more Black residents.

In the 1970s and 1980s, the census tracts that lost Black population (Maps 22 and 23) were located in the outlying census tracts and in the city of Atlanta, particularly in the census tracts that comprised the 1970 Black concentrated area shown in Maps 16 and 17. For the 1990-2000 and 2000-2010 decades, census tracts that lost Black population were located in the center of the region, generally in the city of Atlanta and DeKalb (Maps 24 and 25), while for the 2010-2020 decade, the 179 census tracts that lost Black population (Map 26) are largely scattered across a cone-shaped area that runs north from Hartfield-Jackson International Airport (located at the northwest corner of Clayton).

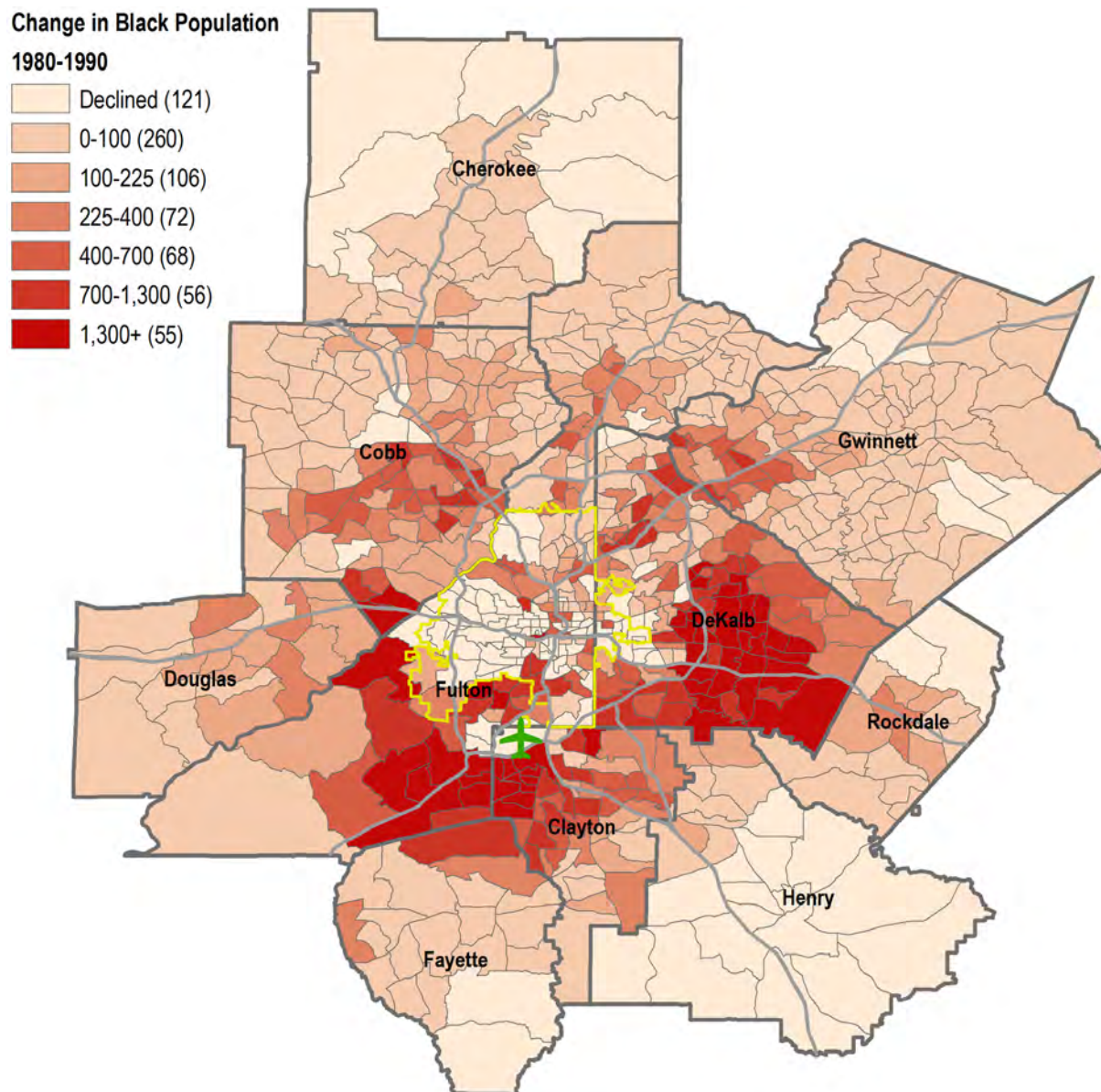
²²Over the entire 1970-2020 period there were 60 census tracts that lost Black population and 282 census tracts that lost white population.

Map 22. Change in Black Population, 1970-1980

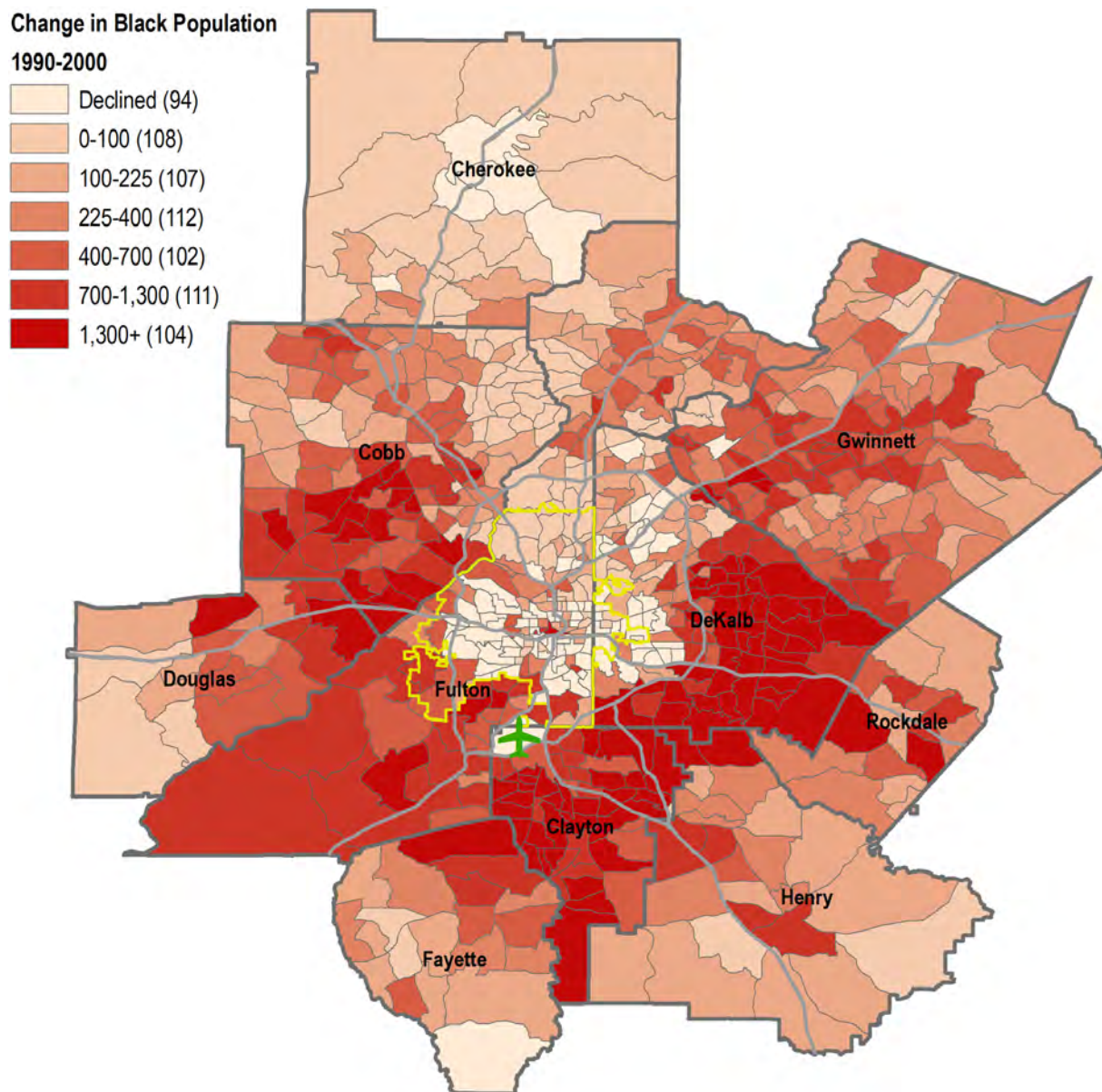
Change in Black Population
1970-1980



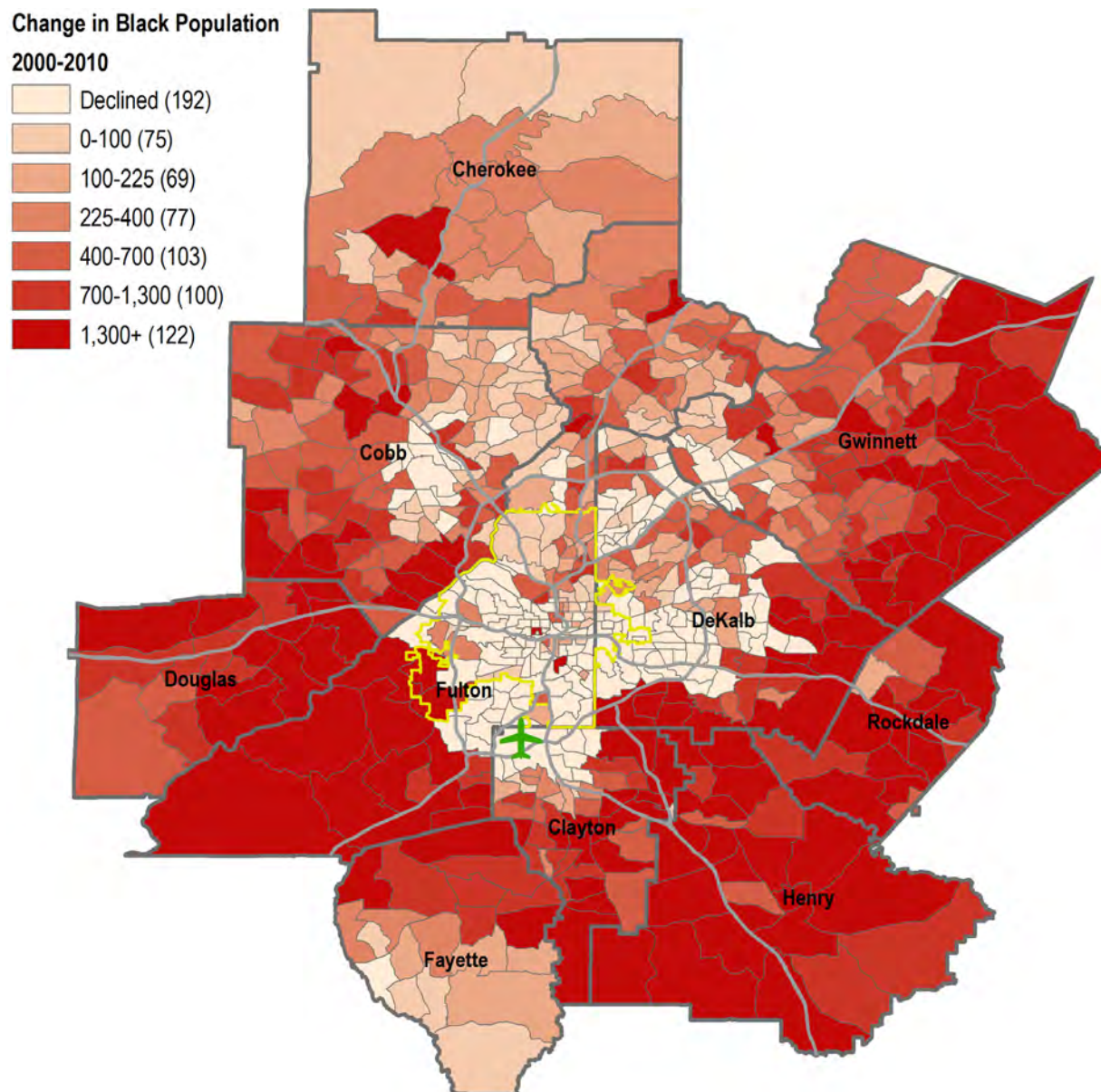
Map 23. Change in Black Population, 1980-1990



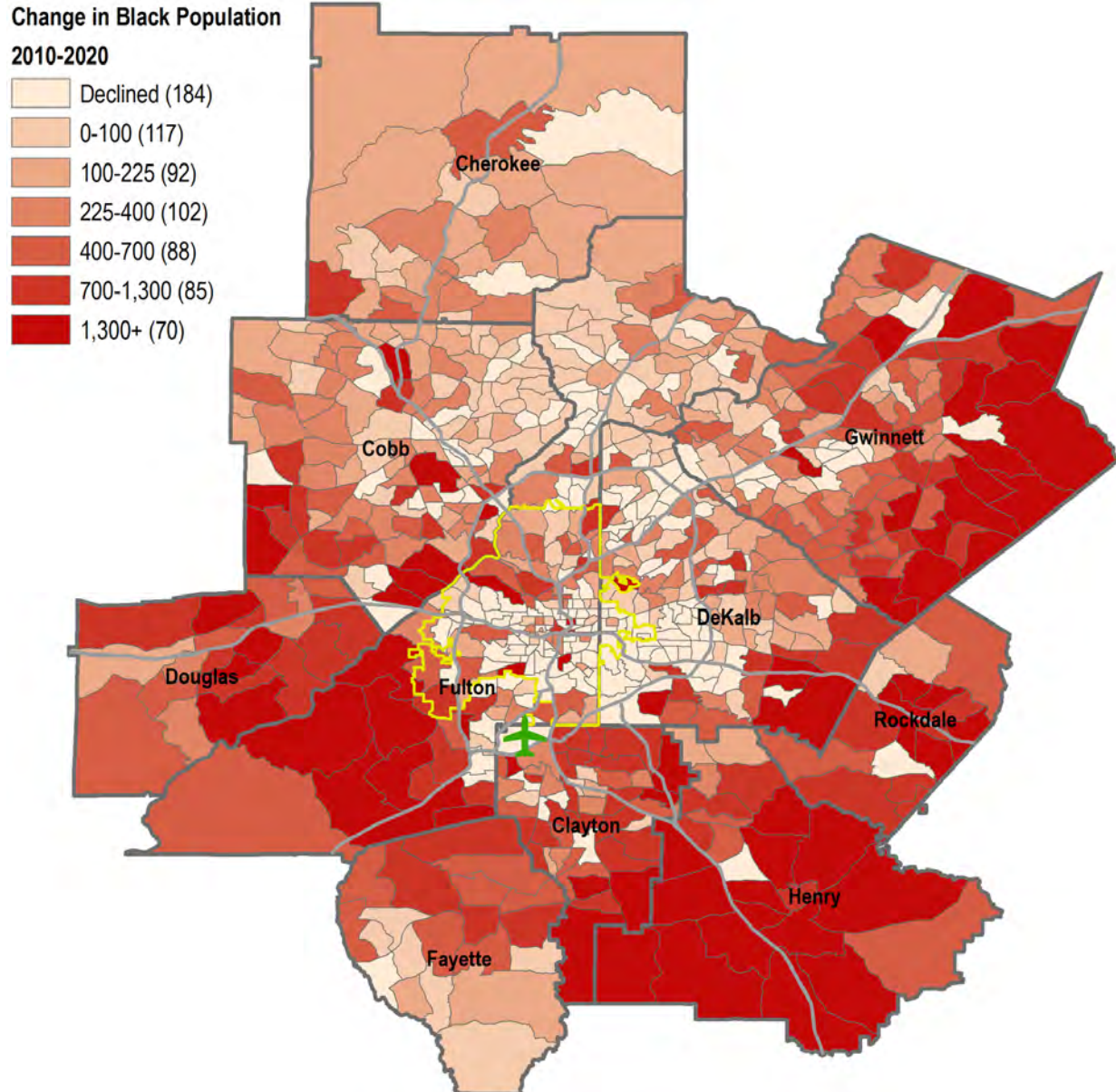
Map 24. Change in Black Population, 1990-2000



Map 25. Change in Black Population, 2000-2010



Map 26. Change in Black Population, 2010-2020

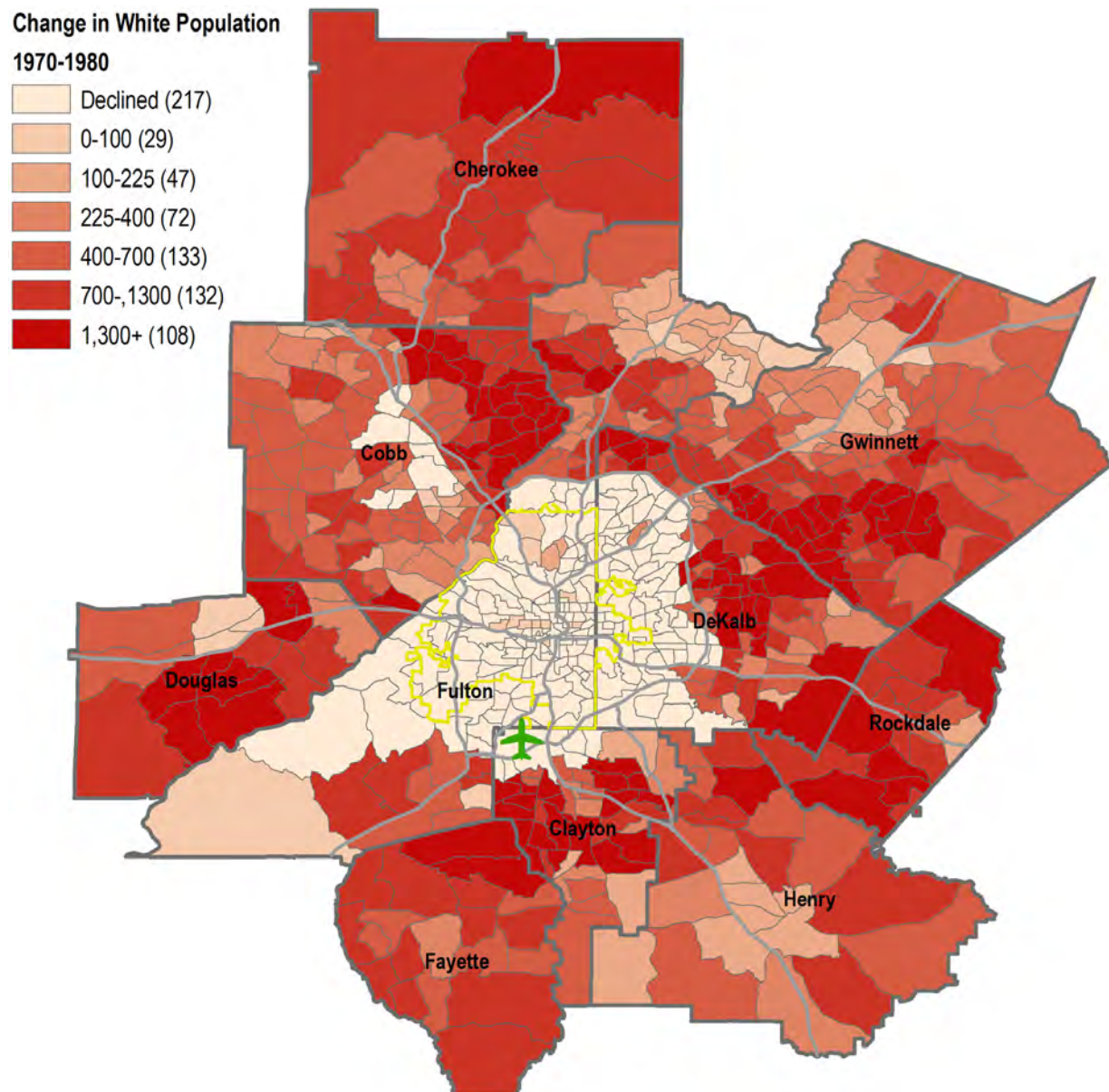


The pattern of Black population changes by census tract reflects the expansion of the residential area due to the growth of Black population and the relocation of Blacks from the closer-in census tracts. New and relocating Black residents located further and further from the historic center of Black residences (i.e., the Black concentration area in Map 16). For most of the post-1970 period, census tracts with large Black population growth formed an expanding semi-circle on the southside. However, since 2000, and particular since 2010, census tracts that experienced large Black population increases can be observed throughout the ARC region, and increasingly on the northside.

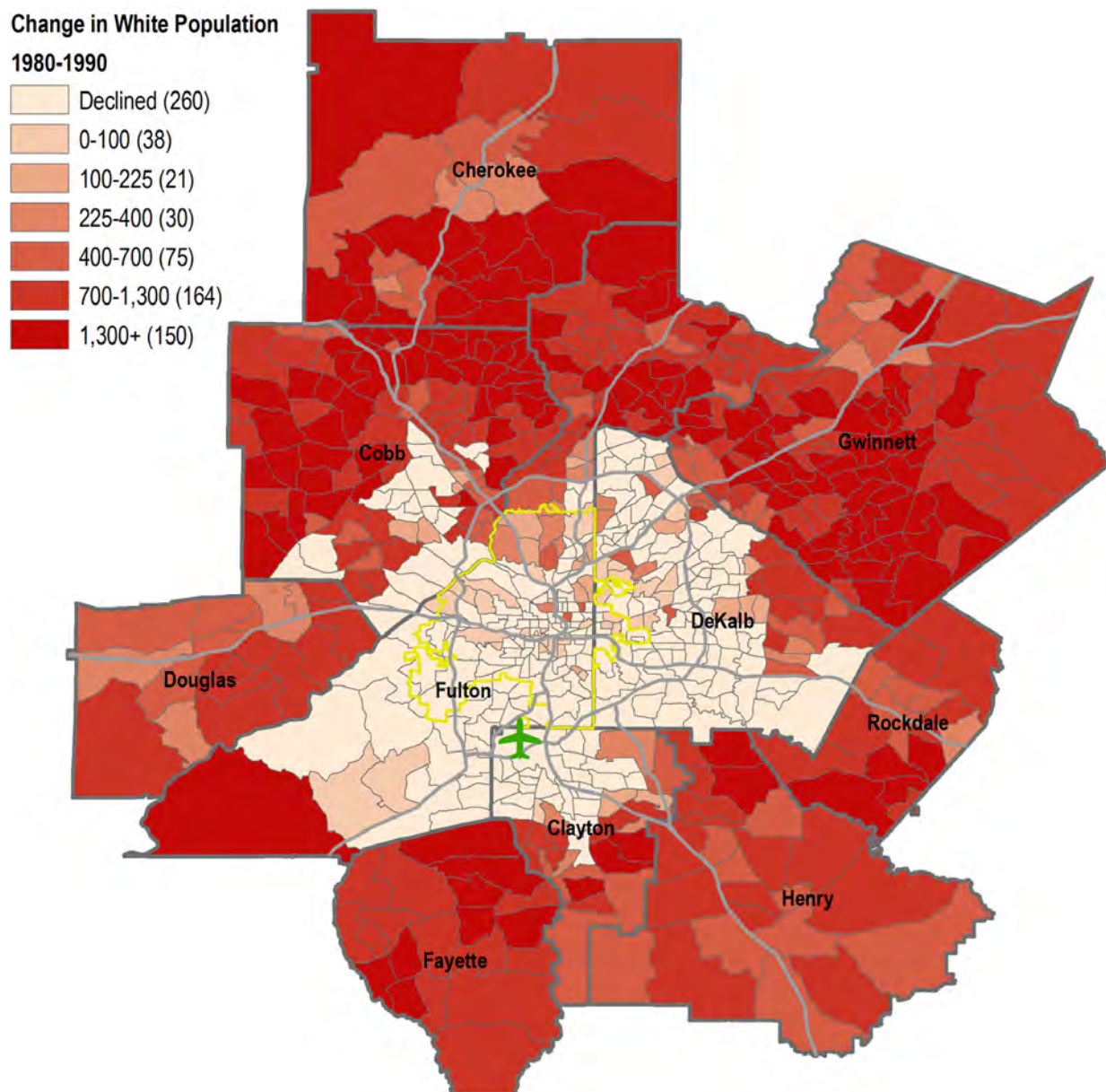
The geographic pattern of the changes in white population stands in strong contrast to that for Blacks (Maps 27 – 31). In the 1970s, census tracts in the core of region lost population or had small increases in

white population, while outlying census tracts, particularly on the northside, experienced large increases (Map 27). Over time the size of the area with declining or small increases in white population expanded, while the number of census tracts with large increases in white population fell (Maps 28 – 31). However, in the past three decades, the core of the region began to experience significant increases in white population, first in northern Fulton but then in the city of Atlanta and central DeKalb (Maps 29 – 31).

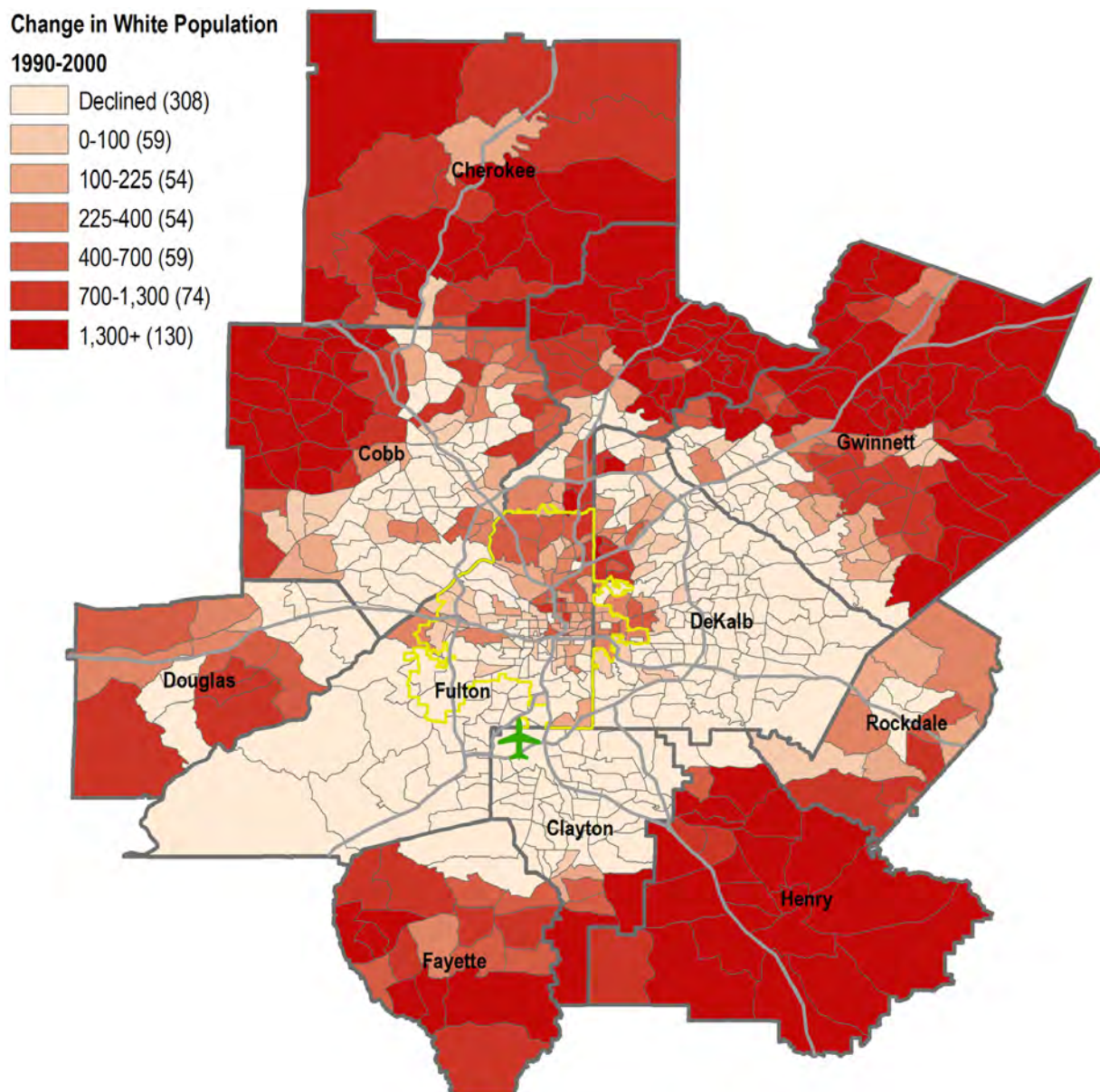
Map 27. Change in White Population, 1970-1980



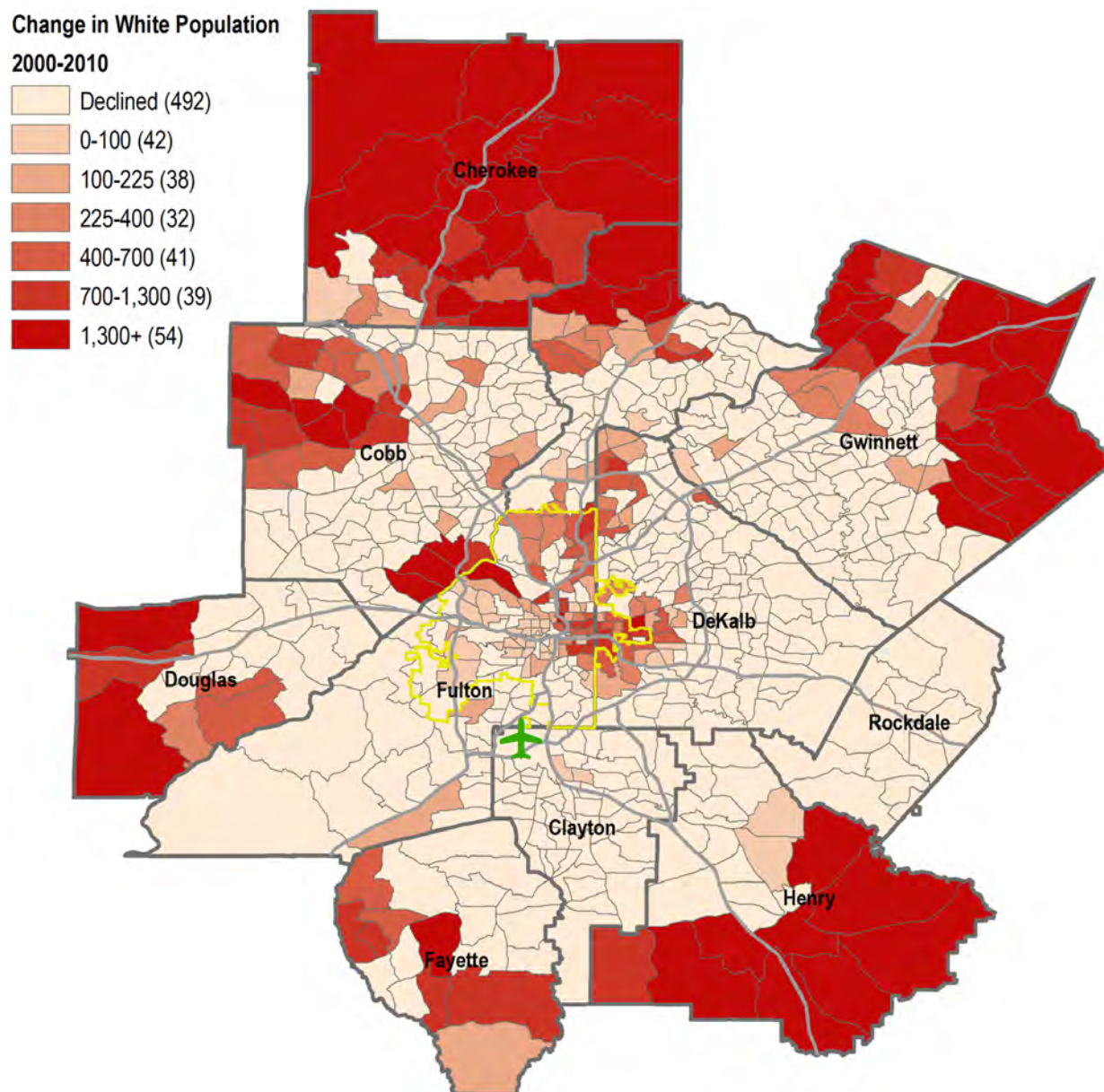
Map 28. Change in White Population, 1980-1990



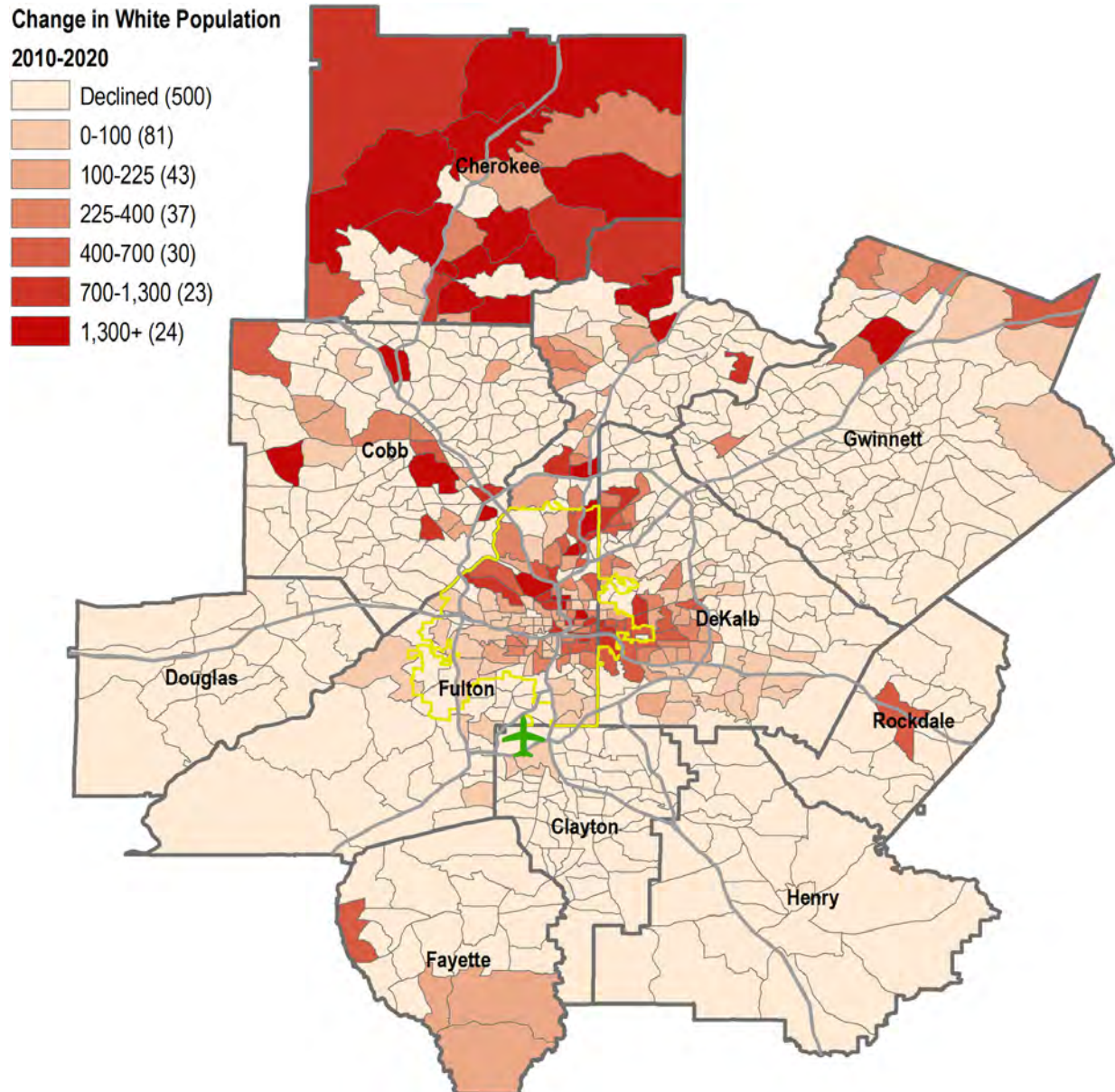
Map 29. Change in White Population, 1990-2000



Map 30. Change in White Population, 2000-2010



Map 31. Change in White Population, 2010-2020

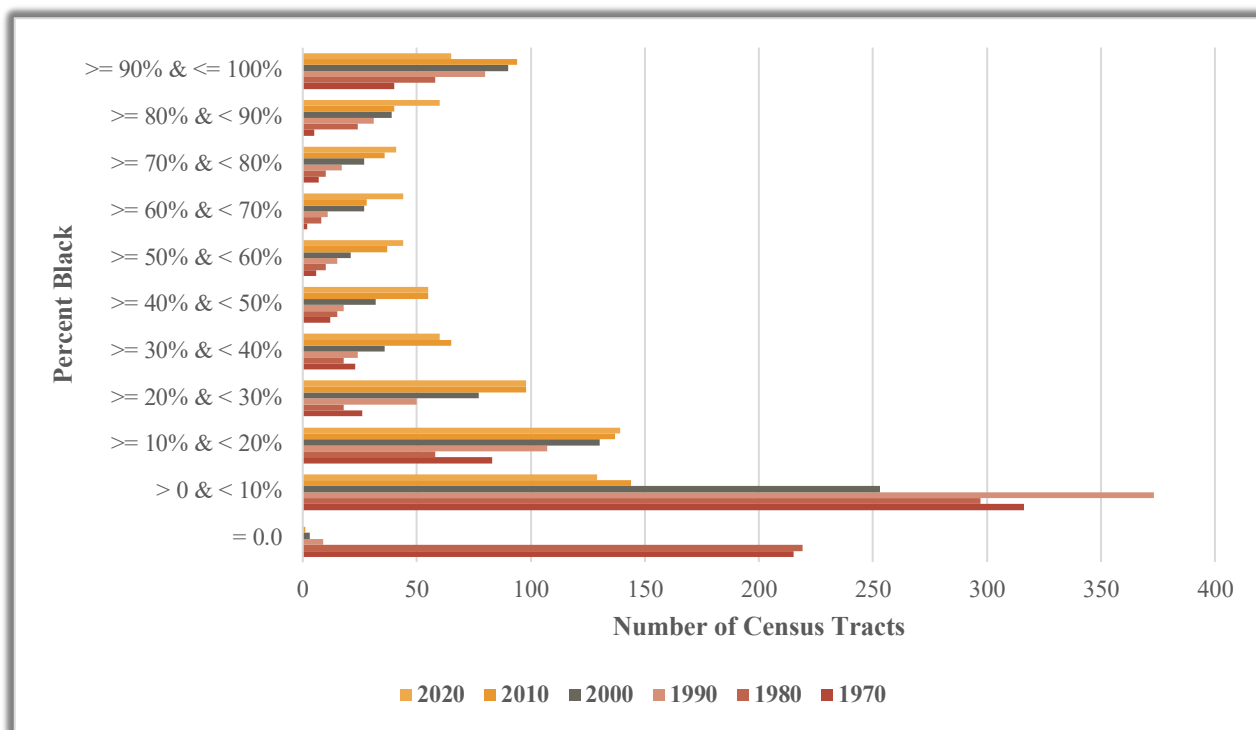


There are several possible factors that might explain the why census tracts lost population, either Black or white. Some census tracts lost population because the existing housing stock was replaced by non-residential uses or by less dense housing, or there were decreases in average household size. Population increased in census tracts in which developers built new and more dense housing, although where developers build is driven by where people want to live. Where individuals choose to live depends on such factors as the availability of their preferred quality and price of housing, the commute, the quality of schools, the level of public services, shopping, and the amenities available. In Section 4 we focus specifically on explanations for racial differences in residential location, i.e., racial segregation, and changes thereof.

BLACK POPULATION AS A SHARE OF TOTAL POPULATION

The share of total population accounted for by Blacks varies widely across census tracts and over time, variations that reflect the decentralization of the Black population. Figure 2 shows the distribution of census tracts by the percent Black for each decennial census year.²³ The distributions are bimodal in all years, i.e., the number of census tracts is larger for those with Black shares of less than 20 percent and those with shares greater than 80 percent. In earlier years the Black share of population in most census tracts was less than 10 percent (in 1970 it was 531 census tracts, 215 of which had zero Black population). The number of census tracts with zero Black population declined significantly after 1980 and the number with less than 10 percent Black population trended downward over the 1970–2020 period. In 2020, only 129 census tracts had a Black share of less than 10 percent. In 1970, 76 census tracts had a Black share between 20 and 80 percent, but over the ensuing decades the number of such census tracts increased, so that in 2020 there were 342 census tracts. The number of census tracts with a Black share of 90 percent or more was 40 in 1970 and 65 in 2020.

Figure 2. Distribution of Census Tracts by Percent Black and Year



Census tract Black population shares for adjacent decennial census years are positively correlated for all decades, with the correlation coefficients increasing over time from 0.606 to 0.972. The value of the correlation increased over time because the changes in Black population across census tracts became more uniform over time.

²³The white share is approximately equal to one minus the Black share, so we do not include a figure for the white share of total population.

DISSIMILARITY INDEX

Maps 1 – 6 provide a visual picture of racial residential segregation. A common numerical measure of the degree of racial segregation is the dissimilarity index.²⁴ This index measures the extent to which two groups are similarly distributed across neighborhoods, which in our case are census tracts. The value of the index can range from zero, which reflects total racial integration, to one, which reflects complete racial segregation. If there was complete racial integration, each census tract would have a Black (white) share equal to the Black (white) share for the region. The value of the index is the percentage of a racial group that would have to change census tracts in order for each racial group to have the same share of its population in each census tract. If there is full integration, the value of the index is zero, which implies the obvious that no one has to move in order to bring about full integration since full integration already exists.

Table 6 reports the dissimilarity indices for each of the six decennial census years for the ARC region and for each county.²⁵ Two things are evident regarding the index for the ARC region. First, the dissimilarity index is large, particularly in 1970 and 1980, suggesting significant racial segregation. Second, the index has declined over time, reflecting the change in racial residential patterns observed in Maps 1 – 6.²⁶

Table 6. Dissimilarity Index

AREA	1970	1980	1990	2000	2010	2020
ARC Region	0.807	0.793	0.706	0.651	0.572	0.574
Cherokee	0.663	0.663	0.579	0.349	0.261	0.267
Clayton	0.635	0.398	0.391	0.330	0.304	0.272
Cobb	0.625	0.477	0.443	0.454	0.411	0.423
DeKalb	0.813	0.778	0.634	0.722	0.732	0.710
Douglas	0.406	0.512	0.325	0.303	0.289	0.288
Fayette	0.476	0.476	0.306	0.376	0.435	0.457
Fulton	0.842	0.771	0.797	0.784	0.730	0.713
Gwinnett	0.513	0.573	0.449	0.366	0.314	0.320
Henry	0.347	0.469	0.410	0.417	0.331	0.321
Rockdale	0.265	0.343	0.394	0.321	0.310	0.298

²⁴The formula for the index of dissimilarity (*ID*) is $ID = 1/2 \left[\sum_i^N \left| \frac{a_i}{A} - \frac{b_i}{B} \right| \right]$, where *i* is a census tract, *a_i* and *b_i* are the population in census tract *i* of the two groups and *A* and *B* are the region's populations of the two groups.

²⁵Caution needs to be exercised in comparing the index across counties since the number of census tracts differ across counties, which can affect the value of the index.

²⁶Boustan (2013) suggests that a dissimilarity index under 0.3 implies the area is well integrated and an index over 0.6 implies a very segregated area.

The value of the index differs across counties and declines over time for most counties, reflecting differences in and changes to racial residential patterns. Fulton and DeKalb have dissimilarity indices that are much larger than the other counties, which reflects the racial residential patterns seen in Maps 1 – 6. We calculated dissimilarity indices for Fulton north and south of I-20. The value of the index for the northern part of Fulton went from 0.928 in 1970 to 0.481 in 2020, while the index went from 0.744 to 0.581 for the southern part. The indices for other counties are smaller in part because they have larger census tracts, which masks some of the racial residential segregation.²⁷

CHANGES IN THE CITY OF ATLANTA

Much has been made of the recent increase in size of the white population in the city of Atlanta, suggesting that it is a sign of increased inter-racial acceptance. The change in the racial composition of the city can be seen in Table 7, which reports the white share of the sum of whites and Blacks in the city of Atlanta (thus the Black share equals one minus the white share). After 1970, the white population in the city of Atlanta fell until sometime in the 1990s. The Black population began to fall sometime after 1980 and began to increase again no later than 2010. But the white share of the sum of the white and Black population increased after 1990, although it is still below its 1970 value.

Table 7. White Share of Population in City of Atlanta and Black Census Tracts

YEAR	CITY OF ATLANTA	-----BLACK CONCENTRATED AREA 1970-----			40% BLACK TRACTS ^b
	WHITE SHARE ^a	WHITE POP	BLACK POP	WHITE SHARE ^a	WHITE SHARE ^a
1970	48.3%	9,953	191,667	4.9%	11.7%
1980	32.8%	3,669	151,872	2.4%	4.5%
1990	31.6%	2,859	129,452	2.2%	4.0%
2000	35.3%	5,106	121,620	4.0%	6.5%
2010	43.0%	8,486	102,393	7.7%	13.9%
2020	45.7%	15,624	103,797	13.1%	21.7%

^a Whites as a share of white plus Black population.

^b Census tracts with at least 40% Black population in 1970.

Perhaps a better indicator of the changing dynamic of residential integration in the city of Atlanta is to consider just changes in the 1970 Black concentration area, that is, contiguous census tracts that were at least 66.7 percent Black in 1970 (see Map 16). Table 7 shows the number of whites and Blacks and the ratio for this set of census tracts. As expected, the white shares are smaller than for the city of Atlanta as a whole but follow a pattern similar to that for the city. However, unlike for the city as a whole, in 2010 and 2020 the white share in these census tracts exceeded the share for 1970. In other words, beginning

²⁷Consider an area in which Black and white shares are equal to those for the region, but with Blacks living on one side and whites on the other. If this was one census tract, the dissimilarity index would not capture the residential segregation, but if it was two census tracts, the index would reflect the segregation.

in the 2000s whites were moving into census tracts that in 1970 had been largely populated by Blacks. We repeated this calculation for the group of census tracts in the city of Atlanta that were at least 40 percent Black in 1970. The white shares for these census tracts are, as expected, larger than for the concentrated census tracts, but have a time trend pattern similar to that for the Black concentrated census tracts.

Consistent with these changes, the dissimilarity index for the city of Atlanta decreased, from 0.865 in 1970 to 0.699 in 2020, with most of this decrease occurring after 2000. While this suggests a positive change racial residential segregation, the dissimilarity index is still very high.

Explaining Racial Residential Patterns

At the end of Section 3.4 we listed some of the factors that affect a household's residential location decision. In this section, we focus more directly on factors that might explain racial differences in residential locations, i.e., residential segregation. Many possible underlying factors associated with Black-white residential segregation have been suggested, and there is a large literature exploring potential causes and persistence of Black-white residential segregation.²⁸ Kim (2020) identified 6 basic hypotheses associated with the various causes of racial residential segregation. For each hypothesis he reviews the post-2000 literature and presents summary conclusions for each hypothesis. The following are the six hypotheses and a summary of Kim's conclusions of the findings of the empirical literature for each hypothesis.

- *Segregation results from racial differences in income.* If individuals segregate by income and there are large racial differences in income distributions, there will be racial segregation. Kim reports that the research finds that higher income Blacks tend to live in less segregated neighborhoods while high income whites tend to live in predominately white neighborhoods. However, Kim notes that income alone is not sufficient to explain the diverse pattern of segregation.
- *Segregation results from racial differences in preferences for residential and neighborhood attributes.* If Blacks and whites prefer different residential and neighborhood attributes, they will sort into different neighborhoods. However, actual preferences cannot be observed. Instead, researchers argue that racial differences in observed residential and neighborhood attributes are caused by racial differences in socio-demographic status. Thus, researchers explore how racial residential segregation varies with social economic status. Generally, residential segregation declines with increases in social economic status.
- *Segregation results from housing and mortgage market discrimination.* There is recent evidence that there is racial discrimination in the housing market and that it contributes to residential segregation. For example, experiments have been conducted in which matched pairs of potential renters that differ only by race are sent to housing rental offices. These studies find that minority couples are less likely to

²⁸For surveys of this literature see Clark (1986), Wong, Reibel, and Dawkins (2001), Dawkins (2004), Boustan (2013), and Kim (2020).

be approved. Similar studies that use couples looking to buy a house find that Black couples are shown fewer homes and are steered to certain neighborhoods.

- *Segregation results from racial differences in preference for the racial composition of neighborhoods.* There is survey data that asks about one's willingness to live in neighborhoods of differing racial composition. Studies find evidence that on average whites are less willing to live in a racially integrated neighborhood than are Blacks, and that the difference is a major factor in determining racial residential segregation. However, racial differences in preferred neighborhood racial composition have gotten smaller.
- *Segregation is the result of racial differences in housing market information regarding cost and affordability.* Recent studies suggest that racial differences in housing market information are modest and thus not a major cause of racial residential segregation.
- *Segregation is the result of governmental institutions and policies.* Recent studies of density zoning find that it is associated with greater segregation, while urban containment policies appear to have the opposite effect. Government programs such as low-income housing tax credits and housing choice voucher have been showed to be associated with greater racial residential segregation.

Unfortunately, we do not have the data necessary to directly test these hypotheses. We have no information on or the ability to measure government institutions and policies, housing market discrimination, housing market information, survey data on neighborhood preferences, or individual household level data on housing choices.

Nonetheless, we explore four possible explanations by considering whether changes in the location of Black and white population over the period are consistent with the hypothesis. Note that our empirical results are based on correlations and are therefore not evidence of causality; at best, we can only claim that our empirical analysis is consistent with a specific hypothesis.

ROLE OF BLACK POPULATION DENSITY

As noted above, prior to 1970 the area in which Blacks could locate was restricted by government policies and other housing market discrimination. The implication of these restrictions is that Blacks were forced to live in neighborhoods that were denser than they would have likely otherwise preferred. The Fair Housing Act of 1968 removed, or at least weaken, that constraint. Thus, we would expect that after 1970 to observe decreases in Black population in census tracts with high 1970 Black density. Given that moving is costly and that reducing the size of the housing stock takes time, we expect that this adjustment to a lower density in these census tracts to take substantial time, probably more than a decade.

To explore the adjustment to lower population density, for each decade we plotted the change in Black population during the decade against Black density in 1970 (Figures 3 – 7). We observe that in the first three decades, census tracts with large 1970 Black density, particularly those with density greater than 5,000 Black individuals per square mile, generally lost Black population. However, the decrease in population for these census tracts got smaller over the three decades as the adjustment to lower density occurred.

Figure 3. Change in Black Population by Census Tract, 1970-1980

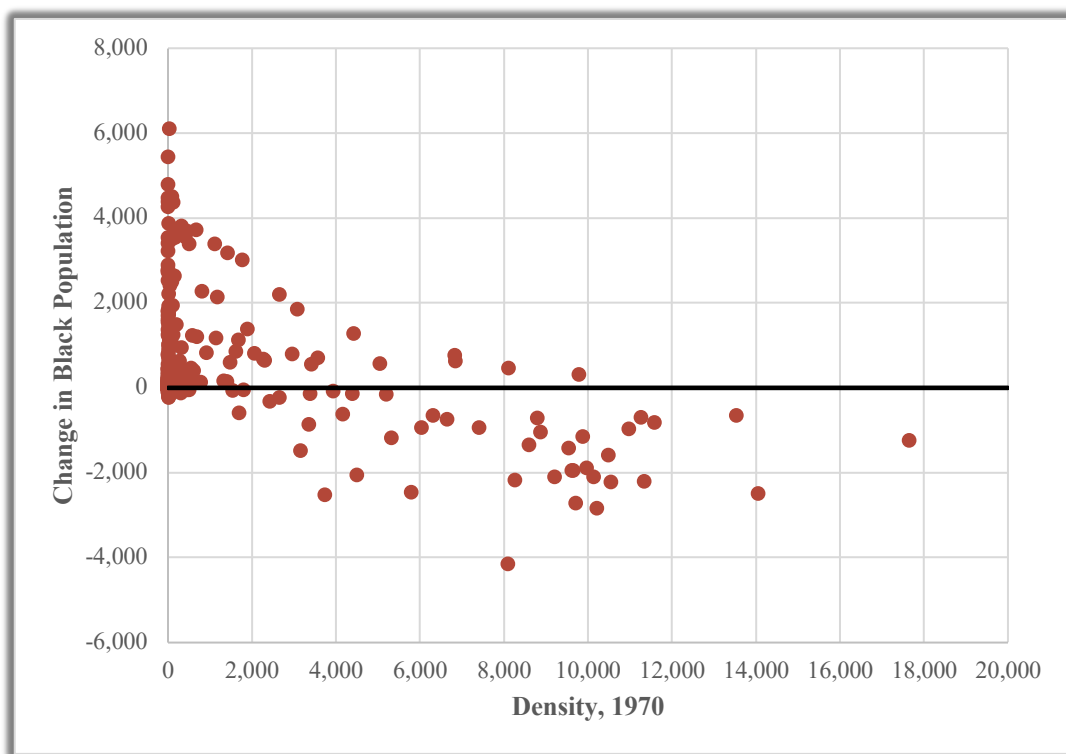


Figure 4. Change in Black Population by Census Tract, 1980-1990

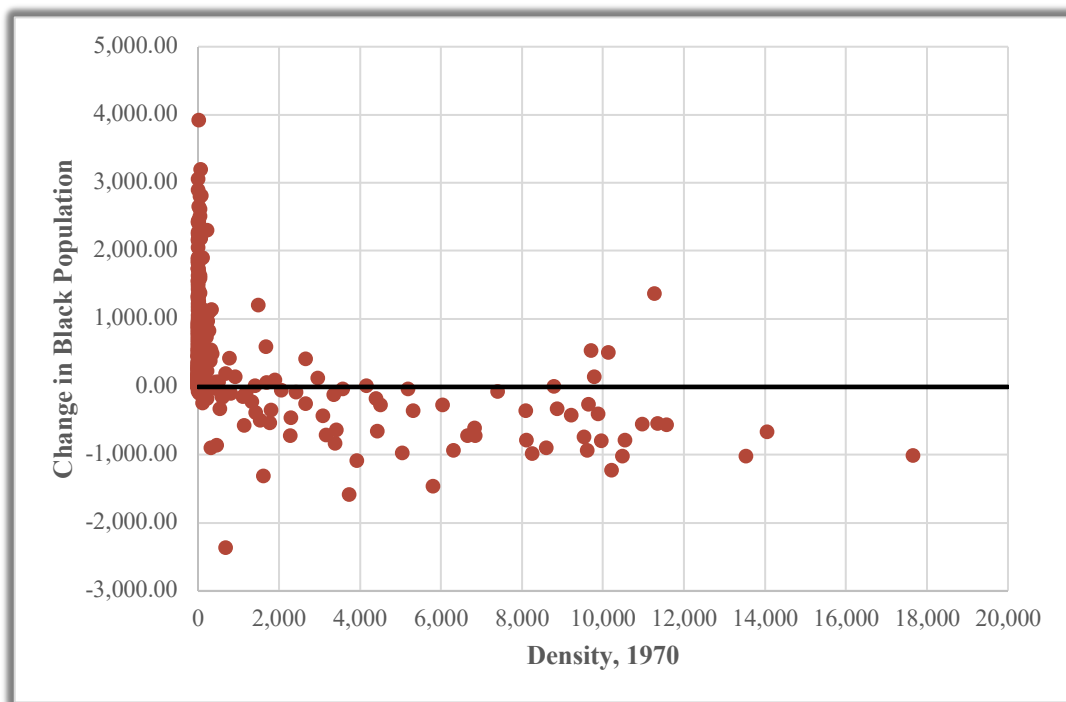


Figure 5. Change in Black Population by Census Tract, 1990-2000

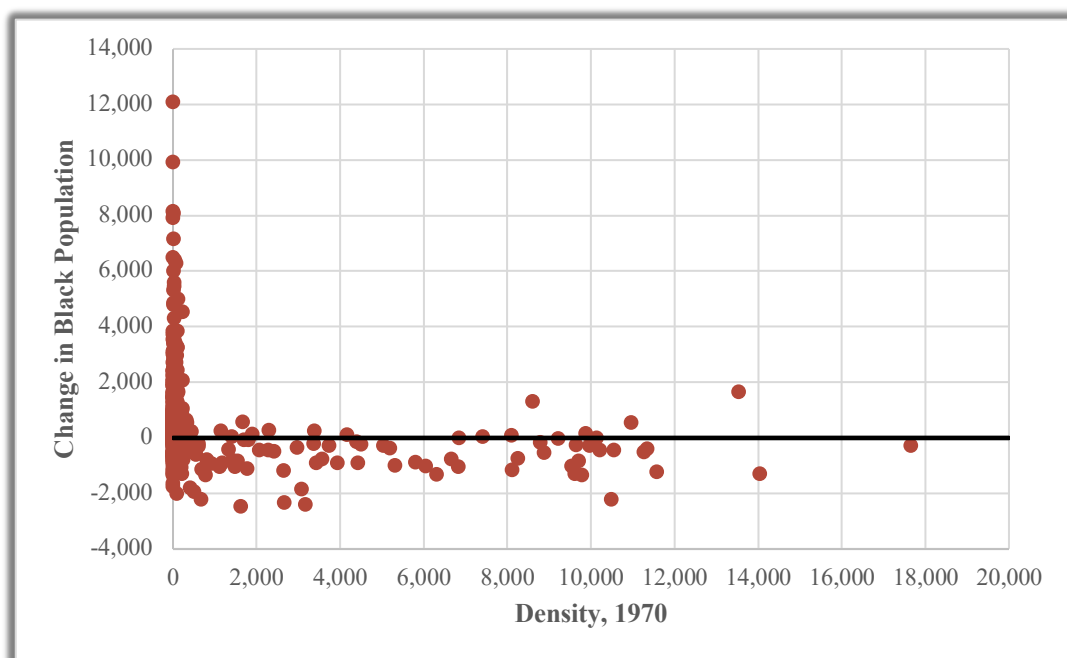


Figure 6. Change in Black Population by Census Tract, 2000-2010

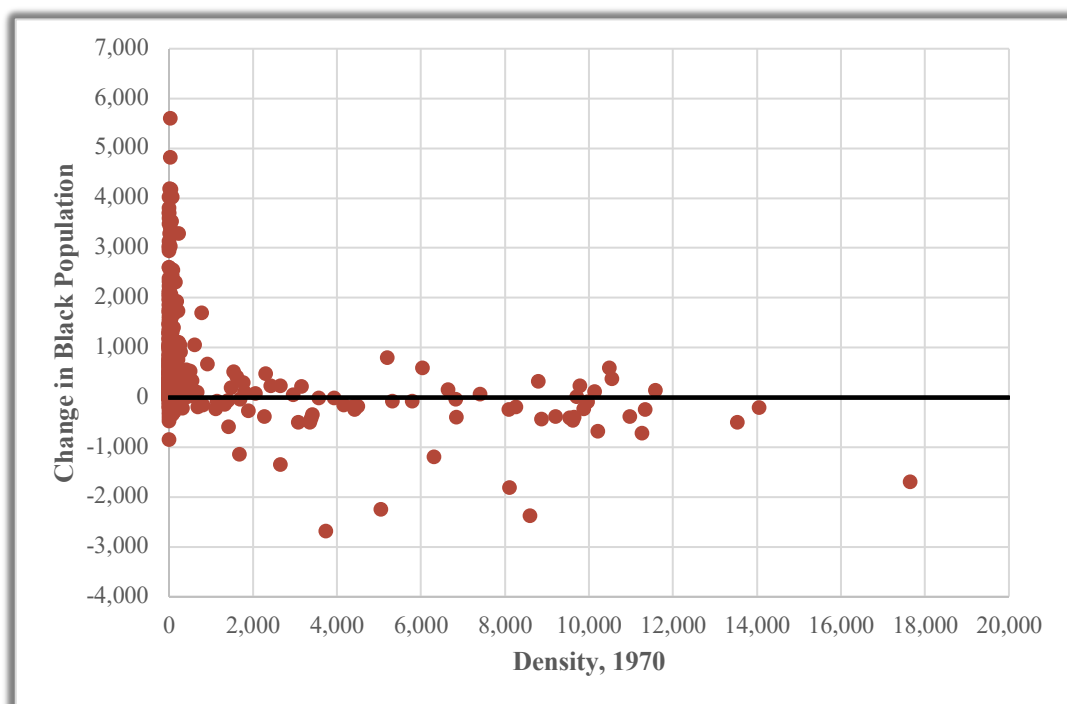
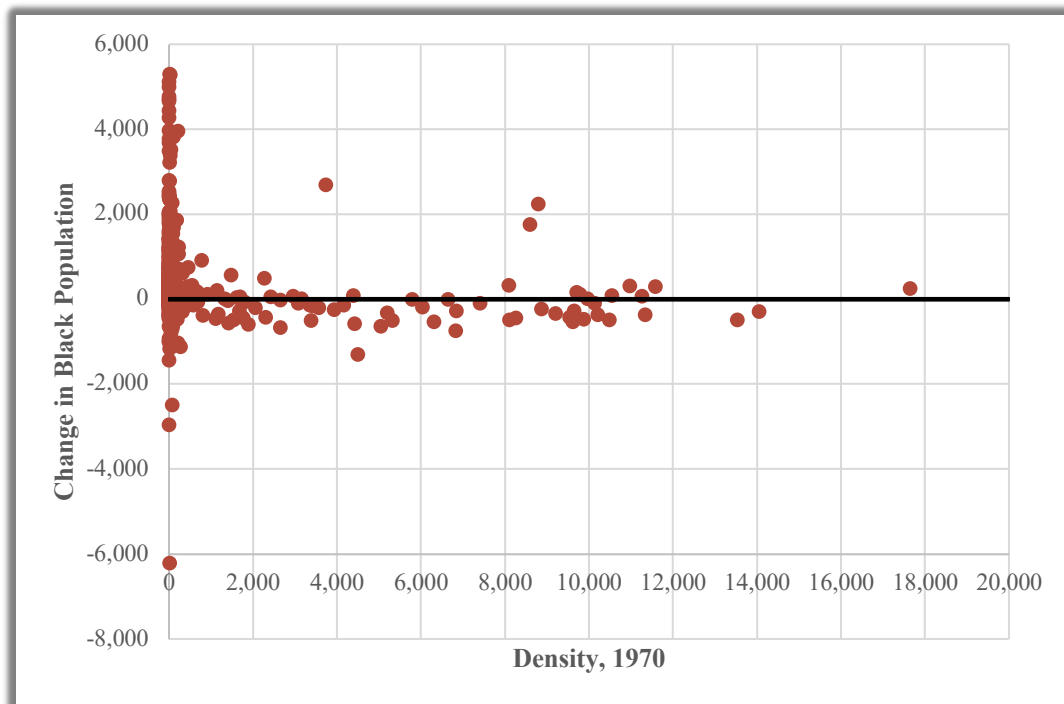


Figure 7. Change in Black Population by Census Tract, 2010-2020



The implication is that after passage of the 1968 Fair Housing Act Blacks moved out of census tracts with high 1970 Black population density and moved into census tracts that had smaller Black population densities.²⁹ It appears that this adjustment to a more preferred density took several decades.

As the adjustment process played out, we expect to observe that the number of census tracts with dense Black population would decline over the period, which is what we do observe. In 1970, 36 census tracts had Black population density that exceeded 5,000, while in 1990, 26 census tracts exceeded that level, and in 2020, only 20 census tracts did. Of the 36 census tracts with a Black density that exceeded 5,000 in 1970, 31 had lower density in 1980 and 35 had lower density in 2020. Thirty-three of these tracts lost population in three or more decades; only half experienced a population decrease in the 2010 decade.

We also observe that in the 2010-2020 decade, Blacks begin to move into census tracts with high existing Black population density; for example, 9 of the 18 census tracts with 2010 Black density greater than 5,000 experienced an increase in Black population in the 2010 decade. This is perhaps because more relocating and new residents were choosing to locate in denser, closer-in census tracts rather than less dense, more distance census tracts. By 2010, the growth in Black population had reduced the number of census tracts with small Black density at any given distance to the CBD, so that selecting a low Black density census tract required locating further from the CBD. Faced with a choice between living further from the CBD or living in more dense census tracts, people appear to have chosen to live in more dense census tracts.

²⁹We do not know if Blacks who left census tracts with large Blacks population densities moved within the Atlanta region, only that Blacks moved out of census tracts with large Black population densities and were not replaced by other Blacks.

BLACK PREFERENCE TO LIVE WITH OTHER BLACKS

It has been suggested, for example by Thernstrom and Thernstrom (1997) and Patterson (1997), that one cause of racial segregation is the preference of Blacks to live in or near neighborhoods occupied by other Blacks. However, the relevant supporting empirical evidence for this is mixed (see Ihlanfeldt and Scafidi 2002). If Blacks do desire to live near other Blacks, we should observe that increases in Black population would occur in census tracts with significant numbers of Black residents in or near the census tract. We find mixed evidence in support of this hypothesis.

First, Map 22 shows that census tracts that added a large number of Blacks in the 1970s are located near census tracts with large Black populations in 1970 (see Map 1). The same is true for the next three decades. This is supportive of the hypothesis that new or relocating Blacks prefer to locate in census tracts with significant numbers of Blacks.

However, many census tracts throughout the region that added a small number of Blacks each but that are not located near census tracts with large existing Black populations. To explore this, we calculated for each census tract the sum of the number of Blacks in that census tract and within 3 kilometers of the census tract at the beginning of each decade. We then related that to the census tract growth in Black population in that decade. Two things stand out. First, consistent with what we observed above, census tracts with a large number of Blacks within 3 kilometer in 1970 and 1980 lost Black population on average. Second, 52.35 percent of the increase in Black population during the 1970s occurred in census tracts that had less than 2,000 Blacks within 3 kilometers in 1970. (Note that a census tract with 2,000 or fewer Blacks are those with fewer than two red dots in Maps 1 – 6.) For the 1980s, 1990s, and 2000s we observe a similar pattern. The percent of Blacks locating in census tracts that had 2,000 or fewer Blacks within 3 kilometers was 70.69 percent in the 1980s, 30.99 percent in the 1990s, and 56.00 percent in the 2000-2010 decade. Thus, a substantial percentage of Blacks located in census tracts with relatively few Blacks located nearby, which is contrary to the hypothesis. The pattern for the 2010-2020 period differs from the other 4 decades, perhaps because the number of census tracts with less than 2,000 Blacks within 3 kilometer in 2010 is only 125 compared to 589 in 1970.

Of course, census tracts that have few Blacks nearby at the beginning of the decade will have more Blacks nearby after Blacks move in. Thus, those moving into a census tract later in the decade are moving into census tracts with more Blacks nearby.

WHITE AVOIDANCE OF BLACK NEIGHBORHOODS

A related hypothesis is that many whites are unwilling to live in neighborhoods that have more than a moderate Black population share. One way this unwillingness is manifested is for whites to leave census tracts when Blacks move in, a phenomenon commonly called white flight.

The relationships between the change in Black population and the change in white population are shown in Figures 8 – 12. Consistent with the hypothesis, in the first three decades many of the census tracts that experienced an increase in Black population experienced a decrease in white population. But over time, that relationship became less pronounced, so that in the 2010-2020 decade the change in white

population in census tracts that experienced an increase in Black population are less likely to be negative. This is highlighted by the simple linear regression line (trend line) shown in red. The lines get flatter over time, implying that the effect gets smaller; the slope is near zero in 2010.

Figure 8. Change in Black and White Population by Census Tract, 1970-1980

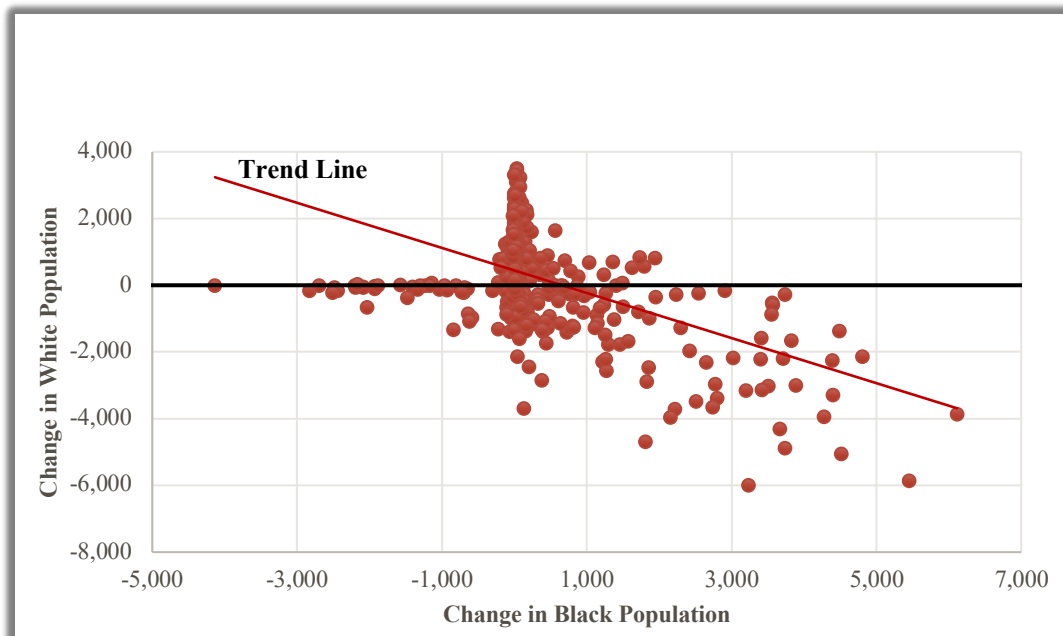


Figure 9. Change in Black and White Population by Census Tract, 1980-1990

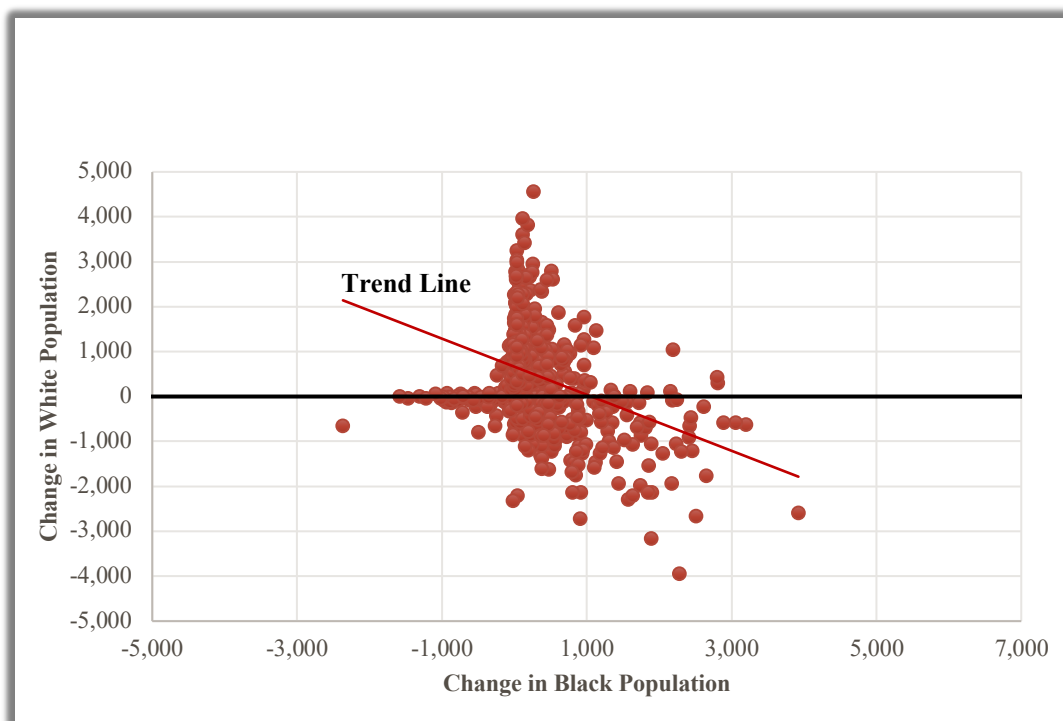


Figure 10. Change in Black and White Population by Census Tract, 1990-2000

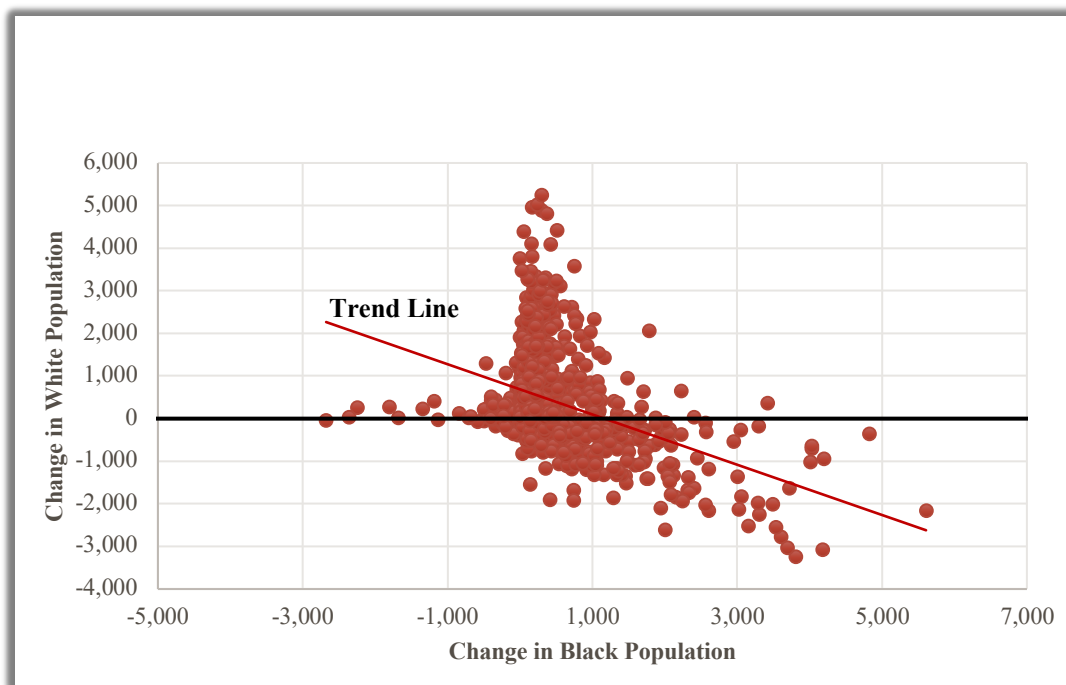


Figure 11. Change in Black and White Population by Census Tract, 2000-2010

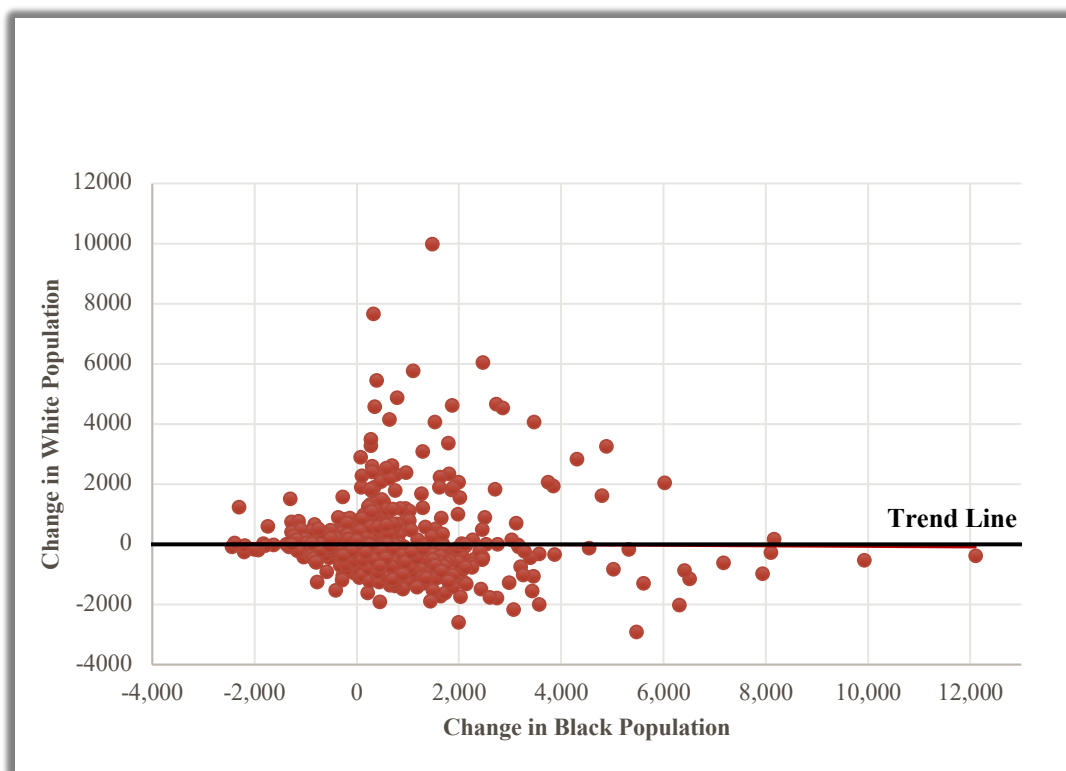
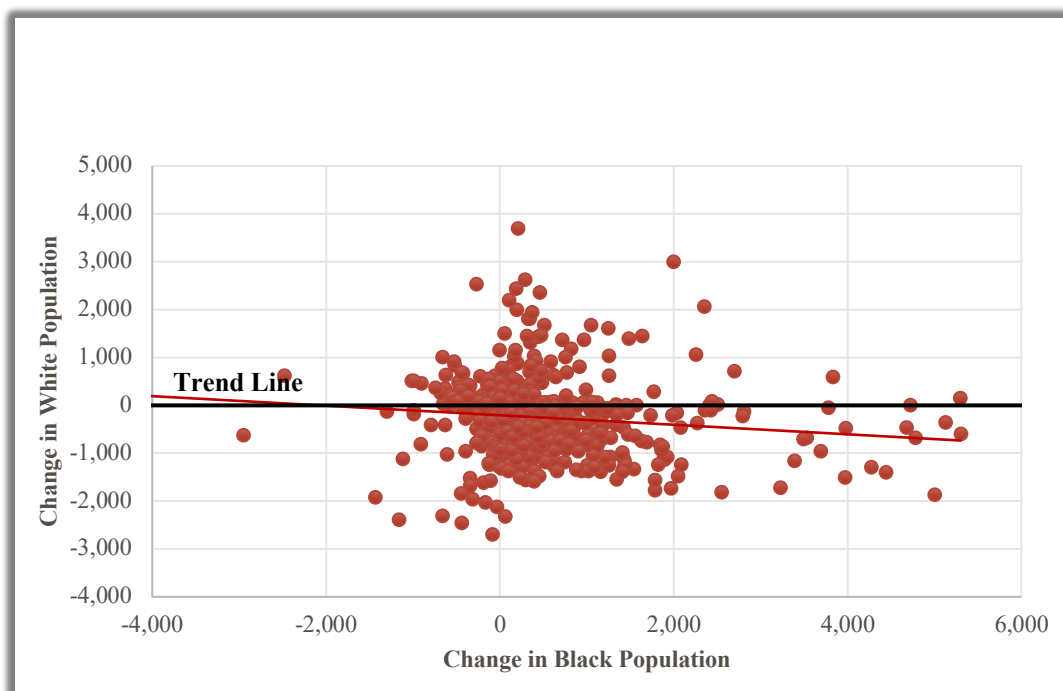


Figure 12. Change in Black and White Population by Census Tract, 2010-2020



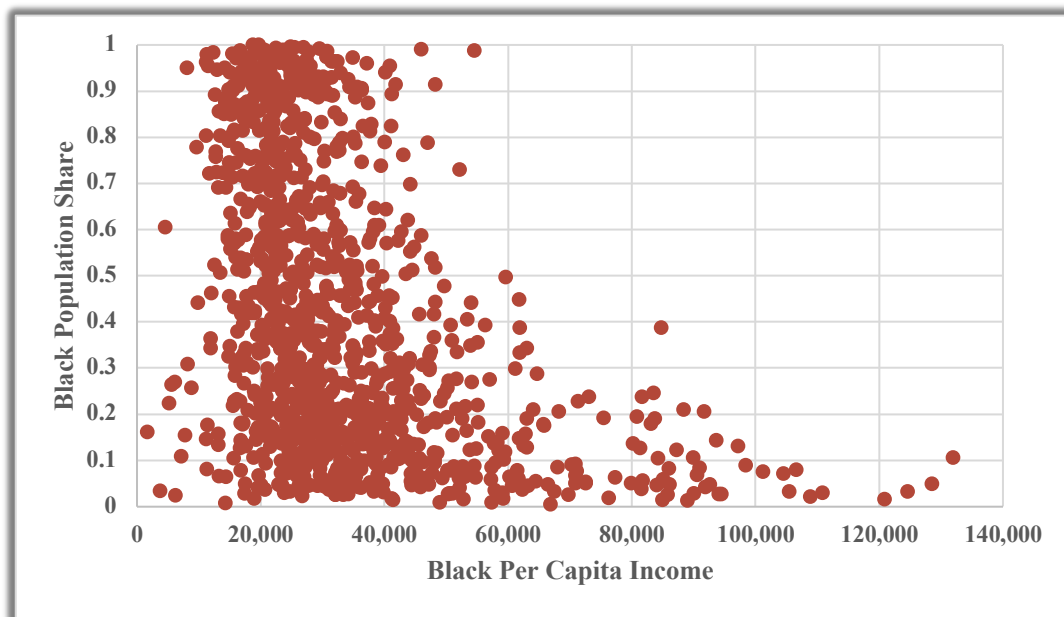
Note that these figures imply correlation, not causation. Thus, these figures are also consistent with the argument that as whites move into a neighborhood Blacks move out, a dynamic sometimes referred to as gentrification. However, if gentrification is the explanation, the implication is that gentrification was more important in the 1970s than in later decades. This does not seem likely. However, the difference in relationship pre- and post-2000 might be explained by gentrification in the later years.

INCOME DIFFERENCES

One of the hypotheses is that racial residential segregation results from racial differences in income. If individuals segregate by income and there are large racial differences in income distributions, there will be racial segregation. The implication is that lower income Blacks are more likely to live in segregated neighborhoods. We do not have individual household income, but we do have per capita income for each census tract. If the hypothesis is correct, we would expect that the Black share of population will be larger in census tracts with low Black per capita income. Figure 13 is a plot of Black per capita income and the Black share of the population for 2020 by census tract. Since the plots for other years are similar, we do not include them.³⁰

³⁰The main difference is that there are fewer census tracts with Black shares between 20 percent and 80 percent in the earlier years.

Figure 13. Black Share and Black Per Capita Income, 2020



For incomes below \$25,000, there is essentially zero correlation (-0.02) between Black per capita income and Black population share, which is contrary to the hypothesis. For census tracts with Black incomes above \$25,000, Black income and Black population share are negatively correlated (-0.31). This is consistent with evidence from other studies that racial residential segregation is smaller for higher income Blacks.

References

- Ahern, Joseph. March 30, 2020. *A (Short) History of the Race Question on the Decennial Census*. The Center for Community Solutions. Available at www.communitysolutions.com/short-history-race-question-decennial-census/
- Allen, Frederick. 1996. *Atlanta Rising: The Invention of an International City, 1946-1996*. Atlanta: Longstreet Press.
- Ambinakudige, Shrinidhi, Domenico Parisi, Giorgio Carlo Cappello, and Aynaz Lotfata, 2017. "Diversity or Segregation? A Multi-decadal Spatial Analysis of Demographics of Atlanta Neighborhoods." *Spatial Demography* 5(2): 123-144.
- Bayor, Ronald H. 1996. *Race and the Shaping of Twentieth-Century Atlanta*. Chapel Hill, NC: The University of North Carolina Press.
- Boustan, Leah Platt. 2013. "Racial Residential Segregation in American Cities." NBER Working Paper 19045, Cambridge, MA: National Bureau of Economic Research.

- Clark, W.A.V. 1986. "Residential Segregation in American Cities: A Review and Interpretation." *Population Research and Policy Review* 5: 95-127.
- Cutler, David M. and Edward L. Glaeser. 1997. "Are Ghettos Good or Bad?" *Quarterly Journal of Economics* 112: 827-872.
- Dawkins, Casey. J. 2004. "Recent Evidence on the Continuing Causes of Black-White Residential Segregation." *Journal of Urban Affairs* 26(3): 379–400.
- Frey, William H. 2004. *The New Great Migration: Black American's Return to the South: 1965-2000*. Washington, DC: Center on Urban and Metropolitan Policy, The Brookings Institution,
- Hanna, Mary and Jeanne Batalova. 2020. "Immigrants from Asia in the United States," *Online Journal of the Migration Policy Institute*. www.migrationpolicy.org/article/immigrants-asia-united-states-2020
- Holmes, Bob, ed. 1993. *The Status of Black Atlantan, 1993*. Atlanta, GA; Southern Center for Studies in Public Policy.
- Ihlanfeldt, Keith R. and Benjamin Scafidi. 2002. "Black Self-Segregation as a Cause of Housing Segregation: Evidence from the Multi-City Study of Urban Inequality." *Journal of Urban Economics* 51(2): 366-390.
- Keating, Larry. 2001. *Atlanta: Race, Class, and Urban Expansion*. Philadelphia, PA: Temple University Press.
- Kim, Jinyhup. 2020. "Why is Black-White Residential Segregation Persistent? A Review of Recent Empirical Evidence." *Journal of Real Estate Literature* (online). doi.org/10.1080/09277544.2020.1791559.
- Orfield, Gary and Carol Ashkinaze. 1991. *The Closing Door*. Chicago: University of Chicago Press.
- Parker, Kim, Juliana Menasce Horowitz, Rich Morin, and Mark Hugo Lopez. 2015. *Chapter 1: Race and Multiracial Americans in the U.S. Census in Multiracial in America: Proud, Diverse and Growing in Number*. Pew Research Center. Available at: www.pewresearch.org/social-trends/2015/06/11/chapter-1-race-and-multiracial-americans-in-the-u-s-census/
- Patterson, Orlando. 1997. *The Ordeal of Integration: Progress and Resentment in America's 'Racial' Crisis*. Washington, DC: Civitas/Counterpoint.
- Pomerantz, Gary M. 1996. *Where Peachtree Meets Sweet Auburn*. New York: Scribner.
- Sjoquist, David L. ed. 2000. *The Atlanta Paradox*. New York: Russell Sage Foundation.
- Strait, John Byron and Gag Gong. 2015. "The Impact of Increased Diversity on the Residential Landscape of a Sunbelt Metropolis: Racial and Ethnic Segregation Across the Atlanta Metropolitan Region, 1990–2010." *Southeastern Geographer* 55(2): 119-142.
- Stone, Clarence N. 1989. *Regime Politics: Governing Atlanta, 1946-1988*. Lawrence, KS: University Press of Kansas.

Thernstrom, Stephan and Abigail Thernstrom. 1997. *American in Black and White: One Nation, Indivisible*. New York: Simon and Schuster.

Wong, David W., Michael Reibel, and Casey J. Dawkins. 2007. "Introduction—Segregation and Neighborhood Change: Where are We After More Than a Half-Century of Formal Analysis," *Urban Geography* 28 (4): 305-311.

Appendix A: Data Sources and Adjustments

Decennial census Summary File 1 data files were obtained from IPED at the Minnesota Population Center at the University of Minnesota. County and census tract data were taken directly from these files.

For the 1970 through the 2000 censuses, the Census Bureau reported census tract values based on the decennial census. Because census tracts boundaries change over the decades, we had to adjust the data so that they are reported for consistent census tract geographies. We used the 2010 census tract boundaries as the basis for the analysis. To report population by constant 2010 census tract boundaries we adopted the following procedure, which we illustrate for 1970.

First, we compared 1970 and 1980 census tracts. For tracts that were split, we used the fraction of the 1980 population in the split tracts to assign the 1970 population to the 1980 census tract geography. We then compared the 1980 census tracts to the 1990 census tracts. For tracts that were split in 1990, we used the fraction of the 1990 population in the split tracts to assign the 1970 assigned population in the 1980 census tract to the 1990 census tract geography. We repeated this procedure for each subsequent decade. We perform this calculation separately for each racial and ethnic group.

For 2010, the Census Bureau reported census tract populations based on its 5-year American Community (ACS) data rather than the decennial census data. We compared the aggregate census tract population for each county to the county population based on the decennial census and found sizable differences in the two values, with the differences differing by race and county.

Given this issue, instead of using the ACS census tract values, we used census block data from the decennial census (the census block data are used from redistricting purposes.) For each of the two years (2010 and 2020) we aggregated the block level population data by race to the 2010 census tracts geographies.

Appendix B: Two or More Races Category

In 2000, the Census Bureau began allowing individuals to report two or more races. In the 2000 and 2010 decennial censuses, the number of individuals reporting two or more races was very small, so it had little effect on the ability to compare the racial makeup between the censuses. However, in 2020, 8.05 percent of individuals in the ARC region reported two or more races. To see how this might have affected the reporting of the racial composition of the ARC population, we first calculated the distribution by race for those individuals who reported just one race (see columns 1 and 2 in Table B1. As can be seen, 42.52 percent of these individuals reported being white and 41.67 percent reported being Black, while 15.79 percent report another race.

Appendix Table B1. Race Alone and Two or More Races, 2020

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
	REPORTING A SINGLE RACE		REPORTING TWO OR MORE RACES		REPORTING THIS RACE ^A		PROBABILITY OF REPORTING THIS RACE
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	
White	1,844,049	42.52%	323,428	41.11%	2,167,477	42.30%	45.96%
Black	1,807,074	41.67%	115,593	14.69%	1,922,667	37.53%	40.77%
American Indian and Alaska Native	25,422	0.59%	63,091	8.02%	88,513	1.73%	1.88%
Asian	33,804	7.81%	47,875	6.09%	386,679	7.55%	8.20%
Native Hawaiian and Other Pacific Islander	2,387	0.05%	4,852	0.62%	7,239	0.14%	0.15%
Some Other Race	319,014	7.34%	231,896	29.48%	550,910	10.75%	11.68%
Total	4,336,750		786,735		5,123,485		

^a Reporting a given race either alone or with another race.

In 2020, 379,481 individuals (8.05 percent of the population) in the ARC region reported being of two or more races. Column 3 is the number of times these 379,481 individuals listed a particular race. Thus, if someone reported being white and Black, we counted one Black and one white. The total number of races reported either alone or by individuals reporting two or more races was 786,735. Column 4 is the percentage distribution of the total number of mentions. Column 5 is the sum of columns 1 and 3, and column 6 is the percentage distribution.

Column 7 show the probabilities that a person picked at random from the ARC region would report the race listed in the first column, either alone or with another race. Thus, the probability of someone picked at random would report they were either Black or Black and another race is 40.77 percent. The probabilities in column 7 do sum to one since an individual who reports two or more races will be included in two or more rows.

Our analysis in this report relies on the data in column 1. We are interested in how allowing individual to report multiple races might affect our analysis. We don't know what race such a person would list if the option of claiming two races was not allowed. However, comparing columns 2 and 7 provides some idea of the potential effect.

The percentage of those reporting one race who report being Black is 41.67 percent, while the probability that someone picked at random reports Black as a race, either alone or with another race, is 40.77 percent. This reflects that a relatively small percentage of those reporting two or more races lists Black as one of their races.

The implication is that ignoring those who report multiple races means that our data slightly overstates the likelihood that a person claims Black as their race or one of their races. It bares noting that someone who reports being Black and another race is not the same as someone who reports Black as the sole race.

About the Authors

Lakshmi Pandey is a senior research associate with the Fiscal Research Center. He specializes in working with administrative data and also provides analytical and technical support on research projects, such as welfare to work, the Supplemental Nutrition Assistance Program and unemployment insurance for U.S. Department of Agriculture, census data analysis, geographical information systems, incorporation and cityhood studies, and many others. He received his doctorate from Banaras Hindu University in India and has worked at Washington State University and State University of New York at Buffalo prior to Georgia State University.

David Sjoquist is a faculty member in the Andrew Young School of Policy Studies at Georgia State University. A specialist in the field of public finance, Sjoquist has an extensive interest in urban economics, especially local economic development, central city poverty, and education policy. He has published extensively on topics, such as analysis of public policies, tax allocation districts, teenage employment, local government fiscal conditions, and the urban underclass. His current research interests include property taxation, school financing, local sales taxes and income taxes. His work has been published in such journals as *American Economic Review*, *Journal of Public Economics*, *National Tax Journal*, and *Review of Economics and Statistics*. He holds a doctorate from the University of Minnesota.

About the Center for State and Local Finance

The Center for State and Local Finance's (CSLF) mission is to develop the people and ideas for next generation public finance by bringing together the Andrew Young School's nationally ranked faculty and the broader public finance community. CSLF conducts innovative, nonpartisan research on tax policy and reform, budget and financial management, education finance, and economic development and urban policy. Additionally, it provides premier executive education in public finance for state and local finance officials and works with local and state partners on technical assistance projects on fiscal and economic policy.

CSLF Reports, Policy Briefs, and other publications maintain a position of neutrality on public policy issues in order to safeguard the academic freedom of the authors. Thus, interpretations or conclusions in CSLF publications should be understood to be solely those of the author(s).

For more information on the Center for State and Local Finance, visit our website at: cslf.gsu.edu.