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Racial Segregation in Iowa's Metro Areas, 1990 - 2010

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Racial Segregation in Iowa's Metro Areas, 1990-2010

Introduction

Racial segregation in neighborhoods and communities has wide-ranging negative effects that have been well-documented. The 14th Amendment to the U.S. Constitution as well as the Civil Rights Acts of 1964 and the Fair Housing Act of 1968 proscribe segregation by race and ethnicity; there are policies and regulations in place at national, state, and local levels to prevent and punish racial segregation. Yet residential racial segregation persists in housing markets across the nation.¹

Today the United States is more ethnically and racially diverse than at any point in the nation's history. Yet according to a 2012 CBS report, "segregation appears to be on the rise despite an overall increase in the number of racially and ethnically-mixed neighborhoods."² Diversity is not synonymous with integration.³ This trend towards a more diverse yet more divided society is disconcerting.

Over the last two decades, the state of Iowa and its urban areas have become remarkably more diverse. In 1990, 96.6% of the state's population was White. By 2010, this proportion had decreased to 91.3%. Social equity in Iowa depends on first understanding how increasing diversity within Iowa translates into the relative segregation or integration of its urban communities. Does segregation persist alongside increased racial and ethnic diversity in the state?

The goal of this report is to document, describe, and discuss residential racial segregation from 1990 to 2010 in Iowa's major metropolitan areas: Cedar Rapids, Council Bluffs-Omaha, Quad Cities, Des Moines, Iowa City, Sioux City, and Waterloo-Cedar Falls (see Figure 1). Residential racial segregation is measured in a variety of ways. In this report, we measured it by using the Index of Dissimilarity (or IoD). To perform IoD calculations for Iowa's urban centers, we used the geographic definition for Metropolitan Statistical Areas (referred to as MSA or metro) employed by the U.S. Census Bureau.

We report on Black-White segregation as well as segregation between Hispanics and Whites. Census data for Hispanics includes multiple racial groups; while many Hispanics are White, this report focuses on segregation trends between *non-White* Hispanics and Whites to capture the measure of dissimilarity based on racial difference. So in discussion of demographics and segregation within Iowa metros, the term Hispanic refers to non-White Hispanics.

Data used in the analysis is publicly available from the U.S. Census Bureau. While the Census Bureau provides this information at different levels of geography (such as the census tract level and census block group level) we used data at the smallest geographic level – census block group level – to enable depiction of segregation trends closest to the level of neighborhoods and communities. Accompanying maps illustrate racial concentration by census block group for 1990-2010.⁴

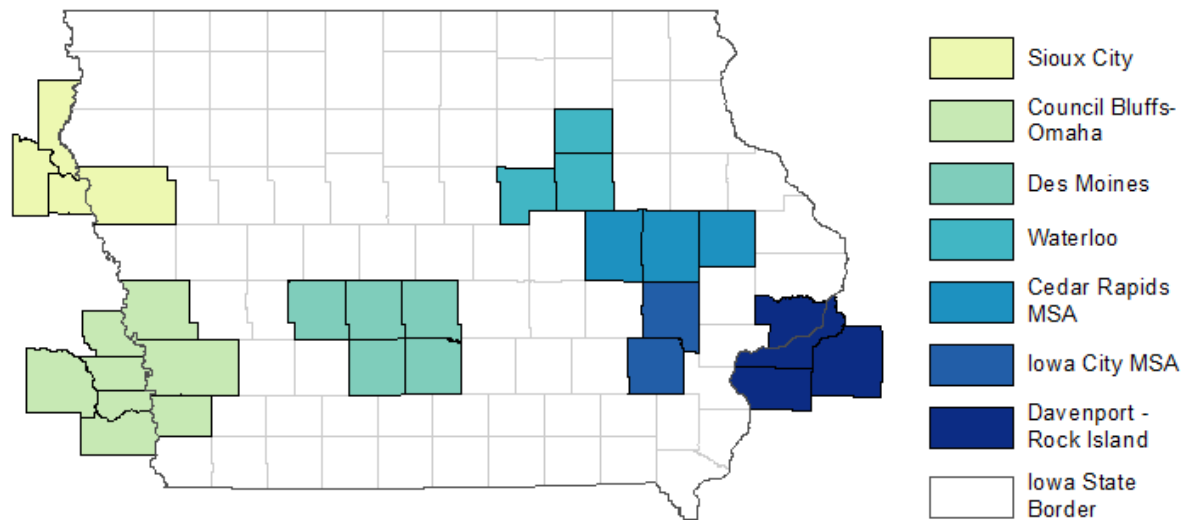
1 Glink, Ilyce. "U.S. housing market remains deeply segregated." Moneywatch. CBS Interactive Inc. 20 June 2012.

2 Ibid.

3 Wright, Richard, et al. "Patterns of Racial Diversity and Segregation in the United States: 1990-2010." *The Professional Geographer* 66.2 (2013): 173-182.

4 By definition, Metropolitan Statistical Areas encompass multiple counties. Maps primarily illustrate changes within the urban core of each metropolitan region and may not show the full extent of the metro boundary

Figure 1. Iowa Metropolitan Statistical Areas



Demographic Trends in the United States and Iowa

From 1990 to 2010, the United States became significantly more diverse; the share of minority racial and ethnic groups increased from 19.7% in 1990 to 27.6% in 2010. The Black population increased from 12.1% to 12.6%, while the (non-White) Hispanic population nearly doubled, increasing from 4.3% to 7.7% (Table 1). In comparison, the state of Iowa has not experienced a change in racial composition as large as the country as a whole. Yet as Table 2 shows, the state's White population decreased by 5.3 percentage points, from 96.6% in 1990 to 91.3% in 2010. Over the same period, the Black population increased by 1.2 percentage points, and the Hispanic population tripled from 0.5% in 1990 to 1.5% in 2000 and increased again to 2.3% in 2010. Accordingly, Iowa's metros reflect increasing diversity between 1990 and 2010, although specific demographic changes and segregation trends vary by metro. Details on the report's methodology and metro-level analyses follow below.

Table 1. Population Trends in the United States from 1990 to 2010

Demographics	1990	2000	2010
White	80.3%	75.1%	72.4%
Black	12.1%	12.3%	12.6%
Hispanic	4.3%	6.5%	7.7%
Total Population	248,709,873	281,421,906	308,745,538

Source: U.S. Census; Note: a) White data includes White Hispanics. b) Hispanic data excludes White Hispanics. c) Percentages do not add up to 100% because not all racial groups are represented.

Table 2. Population Trends in the state of Iowa from 1990 to 2010

Demographics	1990	2000	2010
White	96.6%	93.9%	91.3%
Black	1.7%	2.1%	2.9%
Hispanic	0.5%	1.5%	2.3%
Total Population	2,776,755	2,926,324	3,046,355

Source: U.S. Census; Note: See note above.

Methodology

This report utilizes the Index of Dissimilarity to analyze racial segregation trends. In the landmark book *American Apartheid: Segregation and the Making of an Underclass*, authors Douglas Massey and Nancy Denton state, “the standard measure of segregation is the Index of Dissimilarity, which captures the degree to which Blacks and Whites are evenly spread among neighborhoods in a city.”⁵ The Index of Dissimilarity (IoD) is a quantitative tool that measures the level of segregation between any two racial groups within a geographic area. As a bivariate measure, it can only compare two groups at one time.

Each of the seven MSAs analyzed in this report have two or more constituent counties. Boundaries of some MSAs changed between 1990 and 2010. To ensure that geographies compared across the three time points were consistent as possible, we revised the 1990 and 2000 boundaries to match the 2010 boundaries with concomitant changes to White, Black and Hispanic population numbers. And as noted earlier, we used data at the census block group level. This is the smallest geographic level for which race and ethnicity data is consistently available for the 1990, 2000 and 2010 censuses. A block group most closely approximates a neighborhood.

The IoD for Black-White segregation is calculated as follows:

$$\frac{1}{2} \text{ Sum} \left| \frac{b_1}{B} - \frac{w_1}{W} \right|$$

b_1 = Black population within the block group
 B = Total Black population in the MSA
 w_1 = White population within the block group
 W = Total White population in the MSA

This calculation was performed for all block groups in each MSA and for each time point (1990, 2000 and 2010) to determine Black-White dissimilarity. Hispanic-White dissimilarity was calculated by substituting non-White Hispanic population numbers in place of Black population numbers.⁶ As noted above, the term “Hispanic” denotes non-White Hispanics in the discussion of demographic and segregation trends for each Iowa metro.

IoD scores range between zero and 100, where zero indicates perfect integration and 100 indicates a completely divided society. A score of 52, for example, would mean that 52% of one racial group would need to move elsewhere to achieve perfect racial integration in the geography being analyzed. A score of 30 (or lower) indicates low segregation and fewer institutional constraints to integration. A score between 31 and 60 indicates moderate segregation, while a score above 60 indicates high or severe levels of segregation with significant institutional constraints to integration.

5 Massey, Douglas S and Nancy A Denton. *American Apartheid: Segregation and the Making of the Underclass*. Cambridge: Harvard University Press, 1993.

6 In both Black-White and Hispanic-White dissimilarity calculations, White population numbers include those who identified both as Hispanic and “White alone” on the Census.

Cedar Rapids Metro

The Cedar Rapids Metropolitan Statistical Area (or Metro) is located in East Central Iowa and encompasses three counties in Iowa: Benton, Jones, and Linn. From 1990 to 2010, the Cedar Rapids Metro steadily increased in population, gaining 20,000-30,000 people each decade. The proportion of the Cedar Rapids Metro's White population decreased 5.1 percentage points between 1990 and 2010; in numbers it increased by almost 33,000 people. At the same time, Black and Hispanic populations increased their respective proportions within the metro by a significant factor. The Cedar Rapids Metro is one of only two in Iowa to see its Black population more than double between 1990 and 2010 (the Iowa City Metro is the other). As of 2010, the Black percentage of the metro (3.4%) was larger than the statewide percentage (2.9%). The Hispanic proportion of the population tripled over the same time period.

Table 3. Cedar Rapids Metro population statistics for Whites, Blacks, and Hispanics in 1990, 2000, and 2010

Demographics	1990		2000		2010	
White	204,537	97.1%	224,563	94.7%	237,354	92.0%
Black	3,653	1.7%	5,331	2.2%	8,856	3.4%
Hispanic*	579	0.3%	1,285	0.5%	2,420	0.9%
Total Population	210,640		237,230		257,940	

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Table 4. Cedar Rapids Metro segregation trends from 1990 to 2010

Index of Dissimilarity	1990	2000	2010
Black/White	56.4	53.8	46.3
Hispanic/White	43.4	37.6	36.0

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Over the past two decades, the Cedar Rapids Metro has increased in diversity *and* racial integration (Table 4). Overall, its population was more integrated in 2010 than in 1990. Its Black-White dissimilarity score was 56.4 in 1990, indicating moderate segregation. This score decreased to 53.8 in 2000 and decreased again in 2010 to 46.3. Figure 2 (below) illustrates a shift from a concentrated Black population near the center of the metro to more moderate levels over time. Between 1990 and 2010, census block groups with an increased proportion of the metro's Black population appear first in the south of the metro's center, and then to the north and west as well.

Overall in this metro, Hispanics are more integrated with the White population than Blacks. The Hispanic-White IoD score was 43.4 in 1990, 37.6 in 2000, and 36.0 in 2010, a score just above the threshold for low segregation. The Cedar Rapids Metro is one of only two metros in the state to show a decrease in Hispanic-White segregation between 1990 and 2010 (the Sioux City Metro is the other). As Figure 3 (below) shows, the Hispanic population in Cedar Rapids is relatively well-dispersed throughout the metro area.

Figure 2. Cedar Rapids Metro spatial trends for Black population

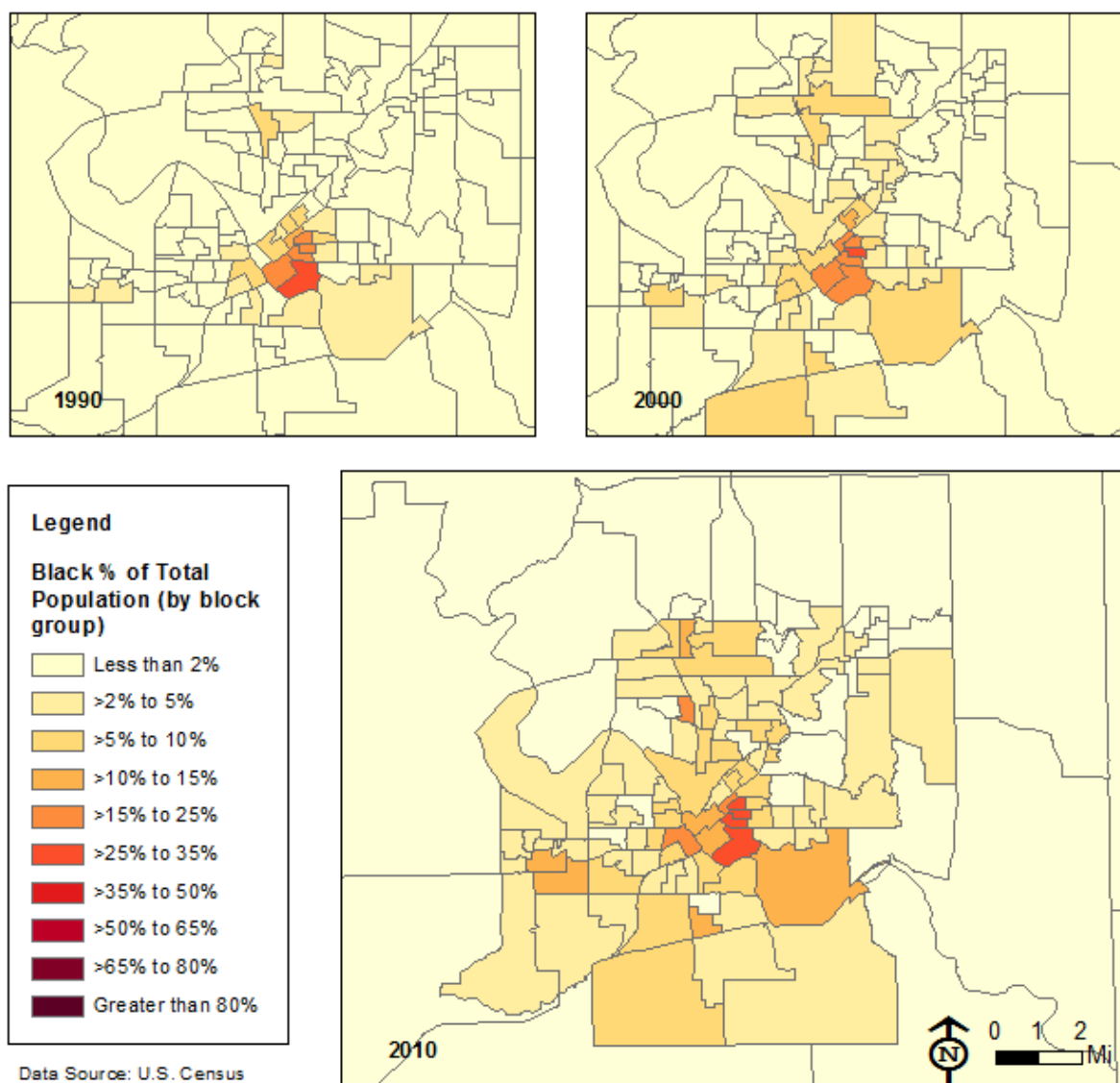
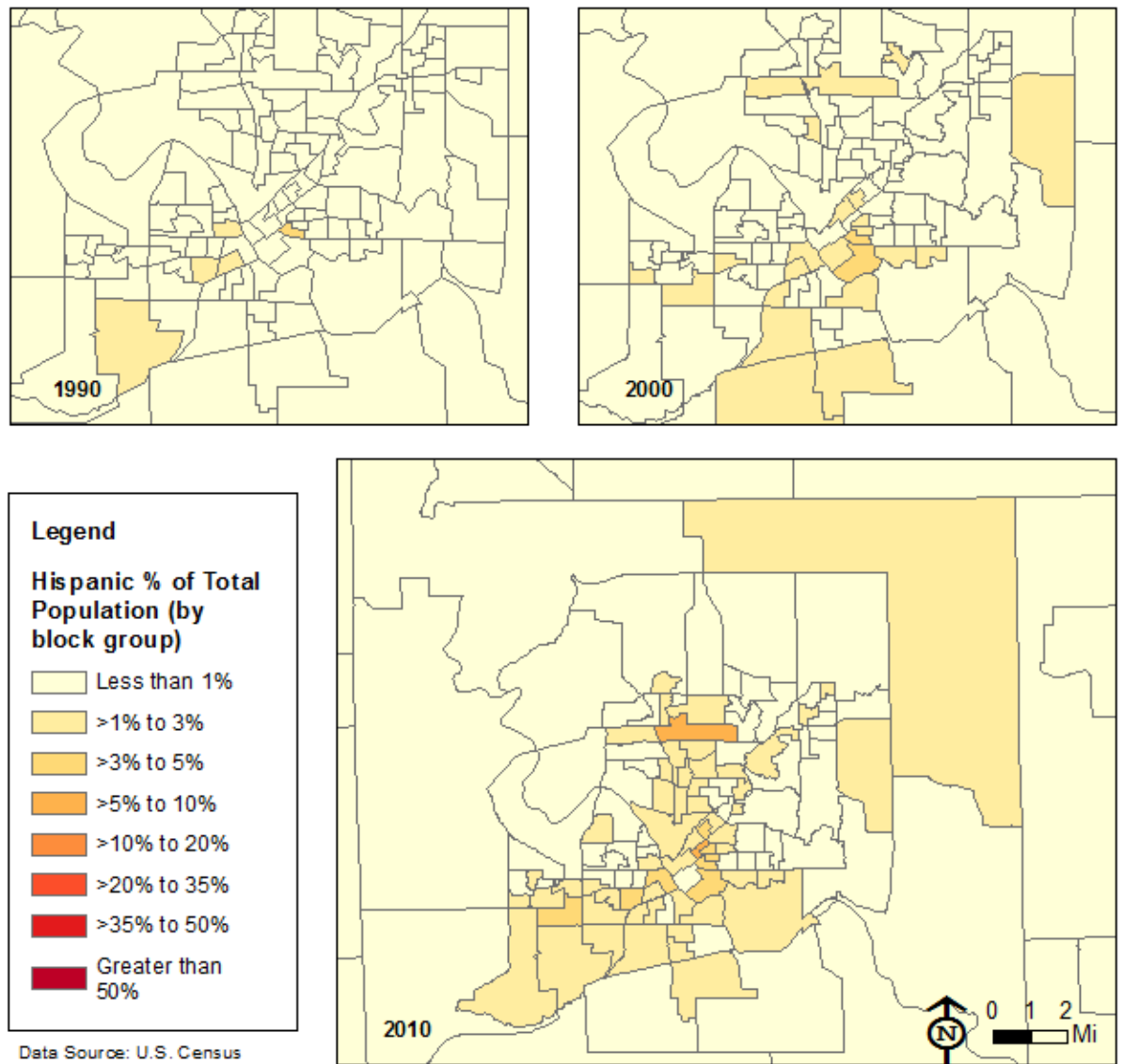


Figure 3. Cedar Rapids Metro spatial trends for Hispanic population



Council Bluffs-Omaha Metro

The Council Bluffs-Omaha Metro encompasses eight counties in Iowa and Nebraska: Harrison, Mills, and Pottawattamie Counties in Iowa; and Cass, Douglas, Sarpy, Saunders, and Washington Counties in Nebraska.⁷ As indicated in Table 5 below, the total population of this metro increased by nearly 100,000 each decade since 1990, growing from 685,797 residents to 767,041 in 2000 and to 865,350 in 2010.

Table 5. Council Bluffs-Omaha Metro population statistics for Whites, Blacks, and Hispanics in 1990, 2000, and 2010

Demographics	1990		2000		2010	
White	617,707	90.1%	660,322	86.1%	714,090	82.5%
Black	51,515	7.5%	59,522	7.8%	68,021	7.9%
Hispanic	7,282	1.1%	22,740	3.0%	44,590	5.2%
Total Population	685,797		767,041		865,350	

Source: U.S. Census; Hispanic denotes non-white Hispanic population

The Council Bluffs-Omaha Metro, like the state of Iowa, has become more diverse over the last two decades. In 1990, this metro was 90.1% White. The White share of the population decreased to 82.5% by 2010, despite an overall increase of nearly 100,000 White residents. The Black proportion of the total population remained relatively static, increasing modestly from 7.5% in 1990 to 7.9% in 2010. During that time, the Hispanic population grew dramatically, increasing by more than 37,000 people. Between 1990 and 2000, the proportion of Hispanic residents in the metro tripled. By 2010, Hispanics made up 5.2% of the total metro population, a share nearly five times larger than in 1990.

Table 6. Council Bluffs-Omaha Metro segregation trends from 1990 to 2010

Index of Dissimilarity	1990	2000	2010
Black/White	72.7	68.9	63.7
Hispanic/White	49.6	57.8	57.2

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Increasing diversity in the Council Bluffs-Omaha Metro has gone hand in hand with significant spatial segregation between racial and ethnic groups (Table 6). The IoD score for Black-White segregation in 1990 was 72.7, meaning that 72.7% of the Black or White population would have to relocate within the metro to achieve perfect integration. While this number decreased to 68.9 in 2000 and 63.7 in 2010, these levels still indicate severe levels of segregation.

Figure 4 (below) reveals a highly concentrated Black population in the northeastern portion of the metro. By 2010, the number of census blocks with Blacks composing more than 80% of the population had decreased, illustrated by lighter shades of red breaking up the deeper shades that dominate the 1990 map. The region remains highly segregated, although the improvements shown quantitatively (Table 6) are visually discernable in Figure 4.

Hispanic-White segregation has increased in the Council Bluffs-Omaha Metro. In 1990 the Hispanic-White IoD score was 49.6; this increased significantly by 8.2 points to 57.8 in 2000 before falling slightly to 57.2 in 2010. Overall, the IoD increased by 7.6 points between 1990 and 2010. A score of 57.2 is less than three points below the threshold for severe segregation, meaning over half of the Hispanic or White population would need to relocate within the metro to achieve perfect integration. Figure 5 (below) shows that the Hispanic population has become increasingly concentrated in the south and east portions of the metro, with some census blocks becoming majority Hispanic by 2010.

⁷ "Metropolitan, Micropolitan, and Combined Statistical Areas." State Data Center. Iowa.gov, 23 Aug. 2013. Web. 25 Apr. 2014. <<http://www.iowadatatcenter.org/aboutdata/statisticalareas>>.

Figure 4. Council Bluffs-Omaha Metro spatial trends for Black population

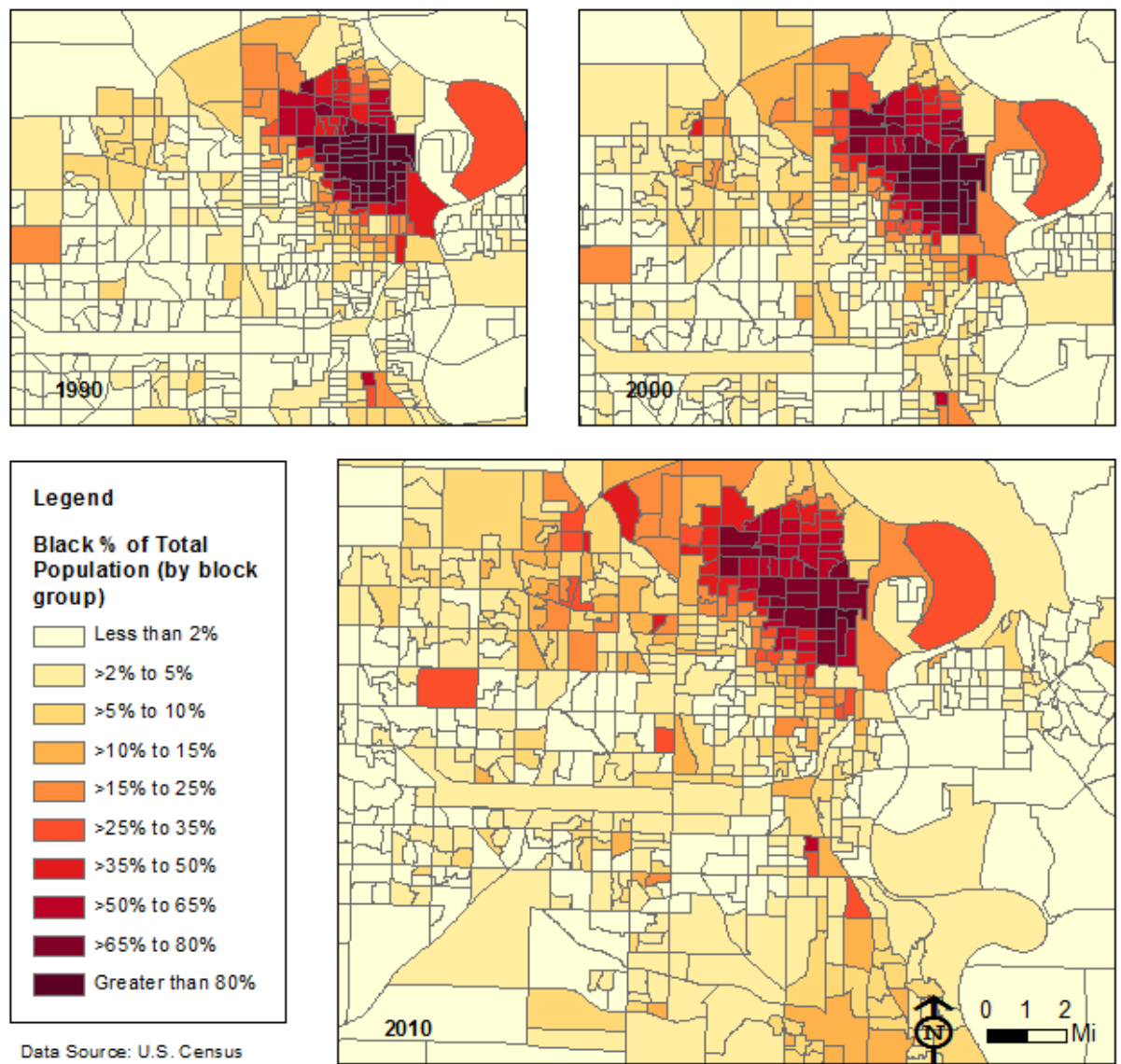
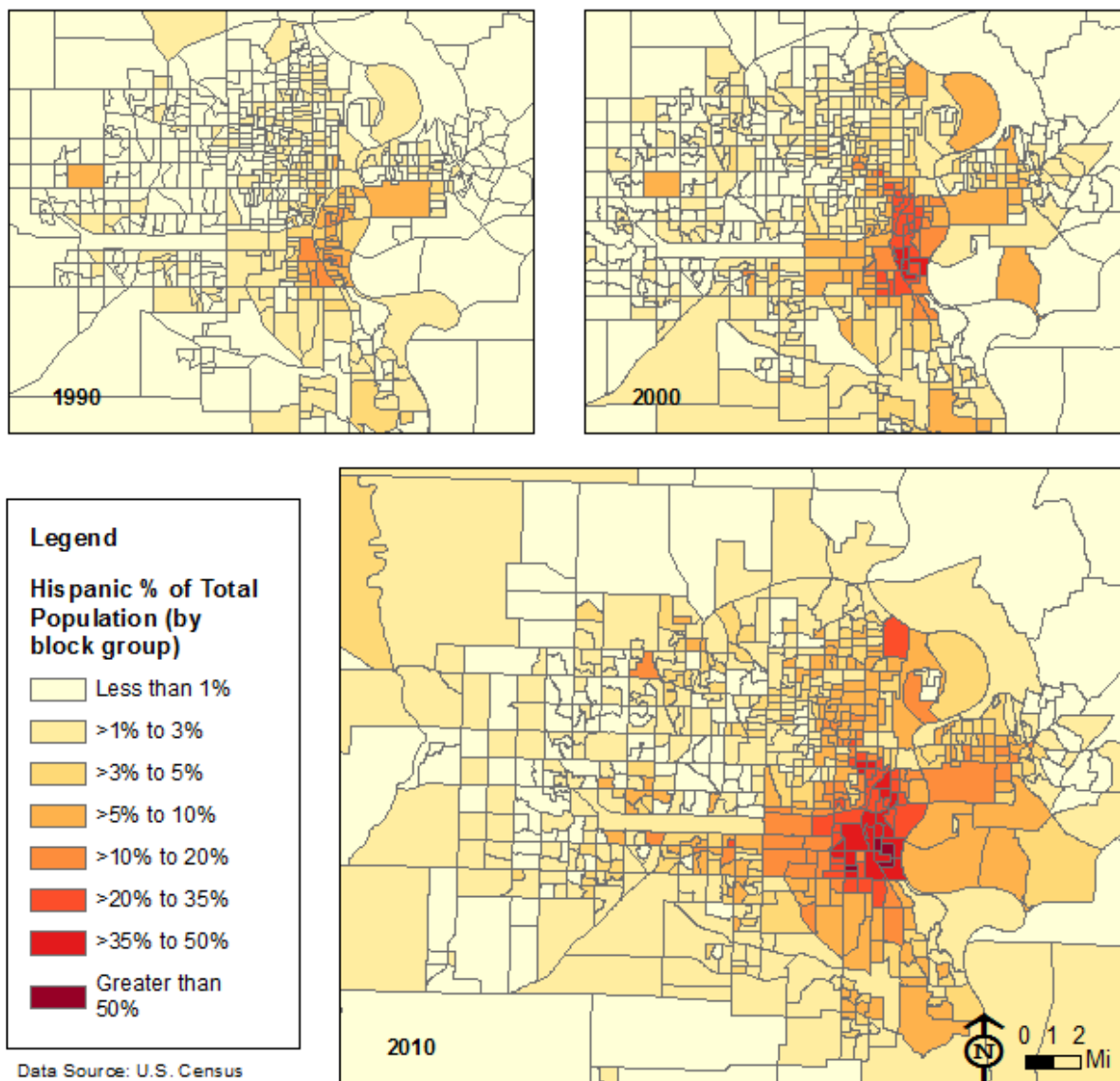


Figure 5. Council Bluffs-Omaha Metro spatial trends for Hispanic population



Davenport-Moline-Rock Island Metro

The Davenport-Moline-Rock Island Metro (henceforth referred to as the Quad Cities Metro) encompasses Scott County in Iowa; and Henry, Mercer, and Rock Island counties in Illinois. It grew slowly between 1990 and 2010, gaining approximately 11,500 residents in total while losing 13,312 White residents. While all seven metros experienced a decrease in their proportions of Whites, the Quad Cities Metro is one of only three metros where the absolute number of White residents decreased between 1990 and 2010. Meanwhile, the Black population increased by 35.1%, growing from 19,145 in 1990 to 25,860 in 2010. The Hispanic population also increased sharply, more than doubling from 5,820 in 1990 to 13,429 in 2010.

Table 7. Quad Cities Metro population statistics for Whites, Blacks, and Hispanics in 1990, 2000, and 2010

Demographics	1990		2000		2010	
White	339,960	92.3%	333,980	88.8%	326,648	86%
Black	19,145	5.2%	21,582	5.7%	25,860	6.8%
Hispanic	5,820	1.6%	11,002	2.9%	13,429	3.5%
Total Population	368,151		376,019		379,690	

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Table 8. Quad Cities Metro segregation trends from 1990 to 2010

Index of Dissimilarity	1990	2000	2010
Black/White	60.8	57.5	53.9
Hispanic/White	46.6	46.8	46.8

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Though the Quad Cities Metro contains sizeable populations of both Blacks and Hispanics, it has seen mixed results with integration. As Table 8 shows, Black-White segregation in this metro has decreased from 1990 to 2010, while Hispanic-White segregation has increased. In 1990, the Quad Cities' Black-White dissimilarity score was 60.8, indicating severe segregation. A few census block groups in the western part of the metro had Black populations of over 80% in 1990; a band of block groups across the center and to the east also showed large Black populations (Figure 6). The Black-White dissimilarity score decreased to 57.5 in 2000 and 53.9 in 2010, indicating more moderate levels of segregation. The 2010 map (below) accordingly shows census block groups with more moderate Black proportions, including areas to the north and southeast that had been predominately White in earlier decades.

On the other hand, the IoD for Hispanic-White dissimilarity rose slightly from 46.6 in 1990 to 46.8 in 2000. It did not change between 2000 and 2010. Since 1990, there has been relatively stable Hispanic-White segregation levels in the Quad Cities Metro, despite large growth in the Hispanic population. Accordingly, Figure 7 shows little variation across the three maps, although the Hispanic population may become more concentrated in the center of the metro area and in an area to the east by 2010. Despite differing trends, by 2010 the Quad Cities Metro showed moderate levels of both Black-White and Hispanic-White segregation (Table 8).

Figure 6. Quad Cities Metro spatial trends for Black population

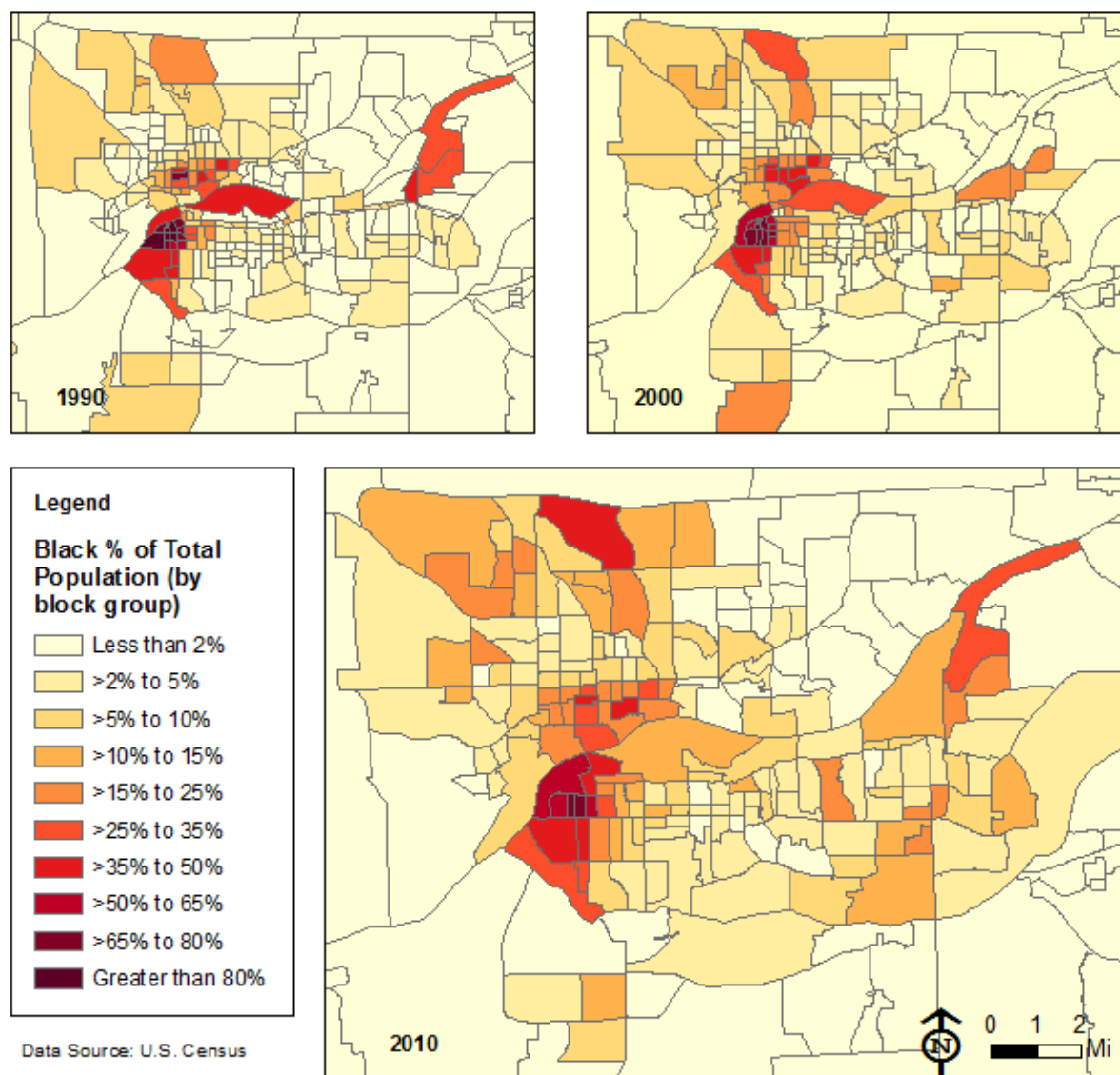
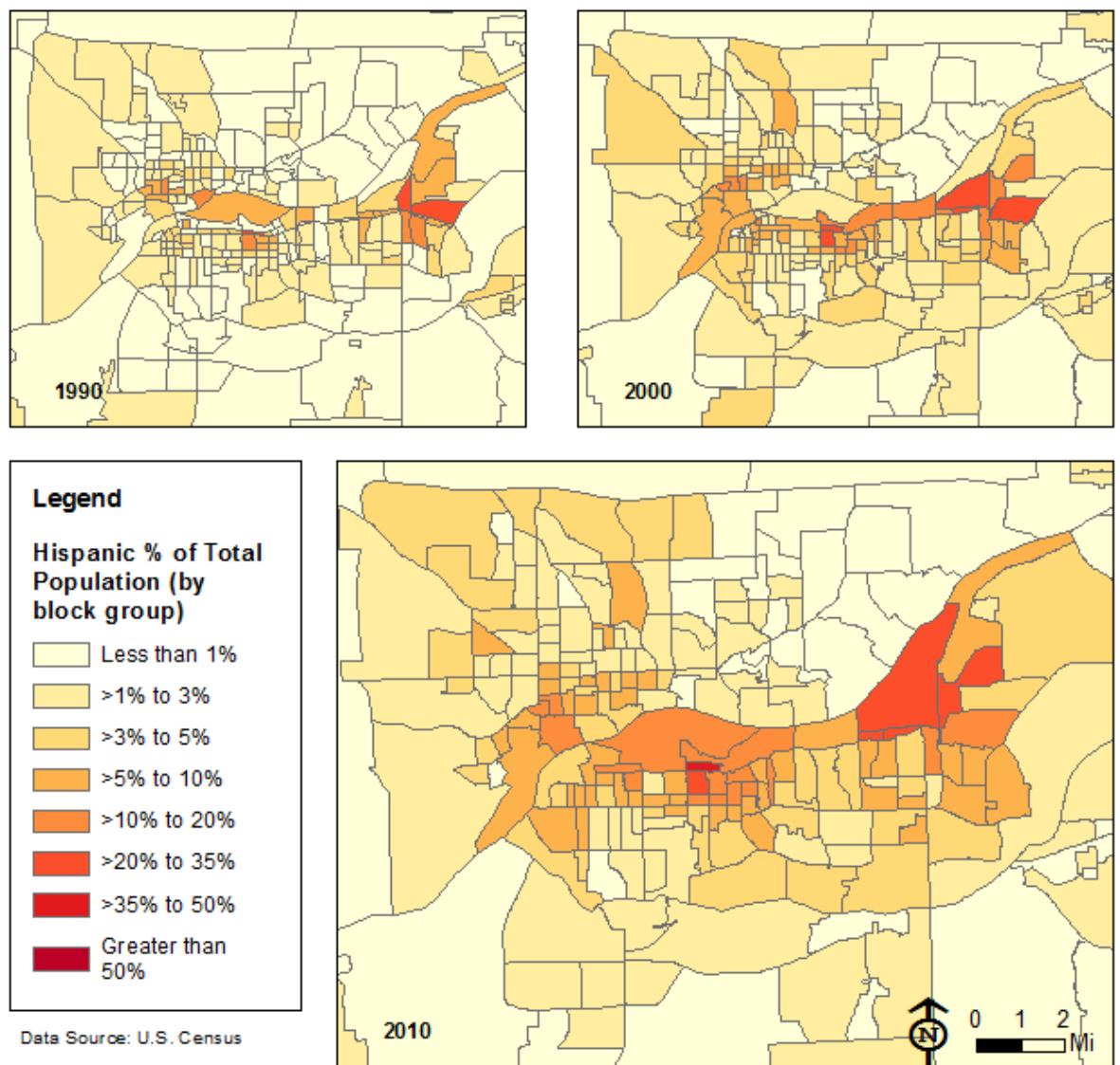


Figure 7. Quad Cities Metro spatial trends for Hispanic Population



Des Moines Metro

The population for the Des Moines metro, which includes Dallas, Guthrie, Polk, Madison, and Warren counties, has grown steadily and become increasingly diverse (Table 9). U.S. Census data shows the 1990 metro population was 94.1% White, 3.6% Black, and less than 1% Hispanic. The White population decreased between 3-4% each decade, falling to 87.2% by 2010. Between 1990 and 2000, the Hispanic percentage of the population nearly quadrupled from 0.6% to 2.3%, rising further to 3.1% by 2010. In numbers, the Hispanic population increased by about 15,000 between 1990 and 2010. The Black population increased by approximately 12,000 between 1990 and 2010, representing just under 5% of the population by 2010.

Table 9. Des Moines Metro population statistics for Whites, Blacks, and non-White Hispanics in 1990, 2000, and 2010

Demographics	1990		2000		2010	
White	391,671	94.1 %	434,428	90.2%	496,816	87.2%
Black	14,964	3.6%	18,547	3.9%	27,049	4.7%
Hispanic	2,634	0.6%	10,897	2.3%	17,622	3.1%
Total Population	416,346		481,394		569,633	

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Table 10. Des Moines Metro segregation trends from 1990 to 2010

Dissimilarity	1990	2000	2010
Black/White	67.3	60.4	53.8
Hispanic/White	48.0	57.3	55.4

Source: U.S. Census; Hispanic denotes non-white Hispanic population

The Index of Dissimilarity (IoD) for the Des Moines Metro shows that Black-White segregation is decreasing, while Hispanic-White segregation is increasing (Table 10). Between 1990 and 2000, the Black-White dissimilarity score decreased from 67.3 to 60.4. Both scores indicated severe spatial segregation between Black and White populations. Accordingly, Figure 8 (below) shows that in 1990 and 2000, two nodes of census block groups with high percentages of Black population existed near the center of the metro.

By 2010, the Black-White IoD score had decreased to 53.8, indicating much less severe levels of segregation. Overall, the Des Moines Metro had the largest decrease in Black-White segregation (13.5 points) out of all seven MSAs between 1990 and 2010. The 2010 map in Figure 8 shows a discernible increase in block groups with moderate percentages of Black population (between 15% and 35%) radiating outward from where previous high concentrations were located. Several areas that were almost exclusively White (with less than 5% Black) in 1990 and 2000 gained a higher percentage of Blacks by 2010, particularly towards the southern and eastern portions of the metro.

The IoD score for Hispanic-White segregation in the Des Moines Metro peaked in 2000 at 57.3—an increase of 9.3 points over the 1990 score—before decreasing slightly to 55.4 in 2010. Overall, this is a 7.4-point increase since 1990. A modest increase in the 2010 IoD score would push Hispanic-White segregation in the Des Moines Metro to a severe classification. The Des Moines Metro is one of only two metros to have a higher level of Hispanic-White segregation than Black-White segregation by 2010 (the Sioux City Metro is the other). As Figure 9 shows, a few census block groups near the center of the metro have Hispanic populations between 20% and 35%, while the majority of census blocks in the region are less than 5% Hispanic. Over time, block groups to the south and east of the metro have become more highly populated by Hispanics.

Figure 8. Spatial Trends for Black Population in Des Moines Metro

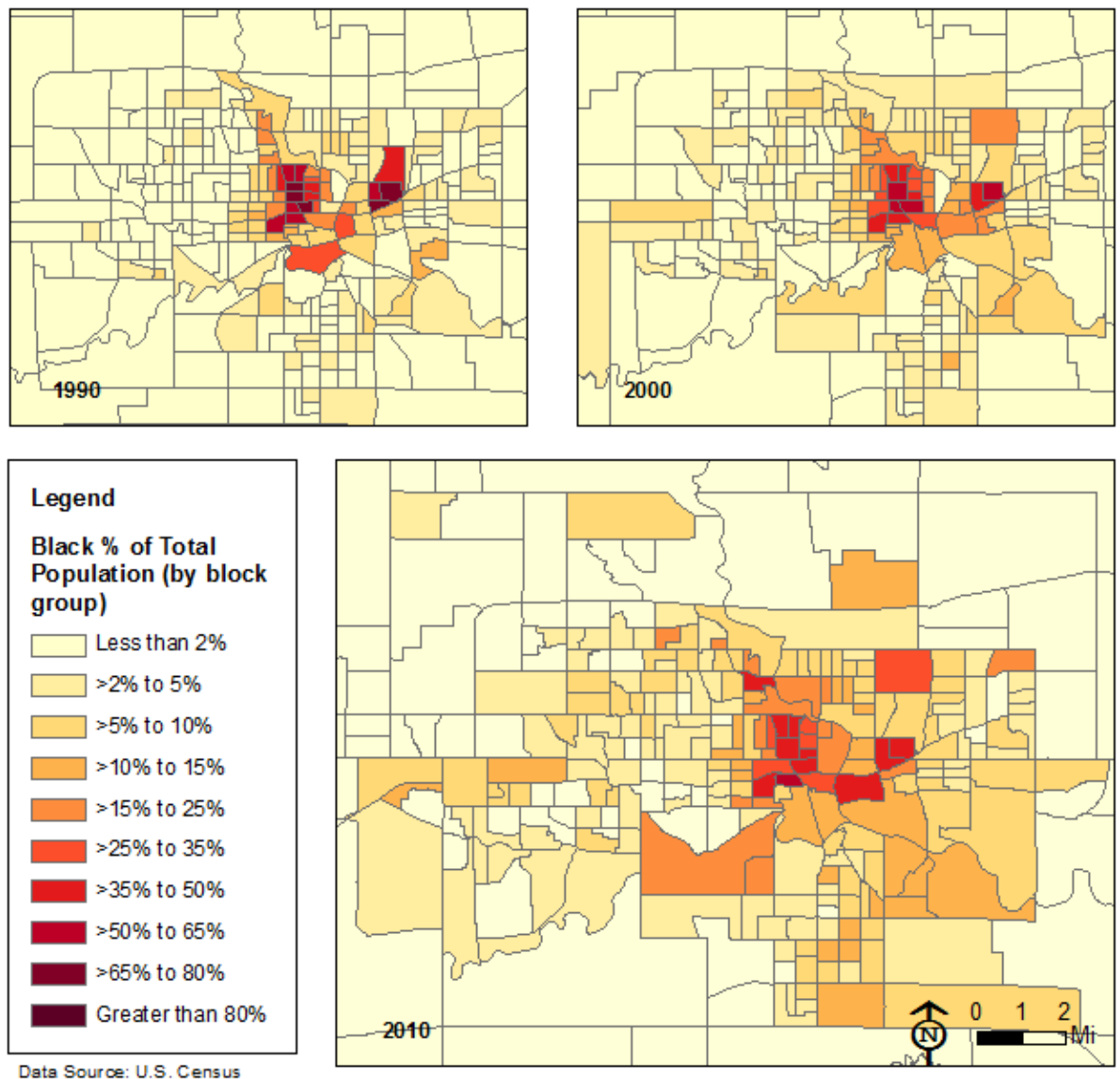
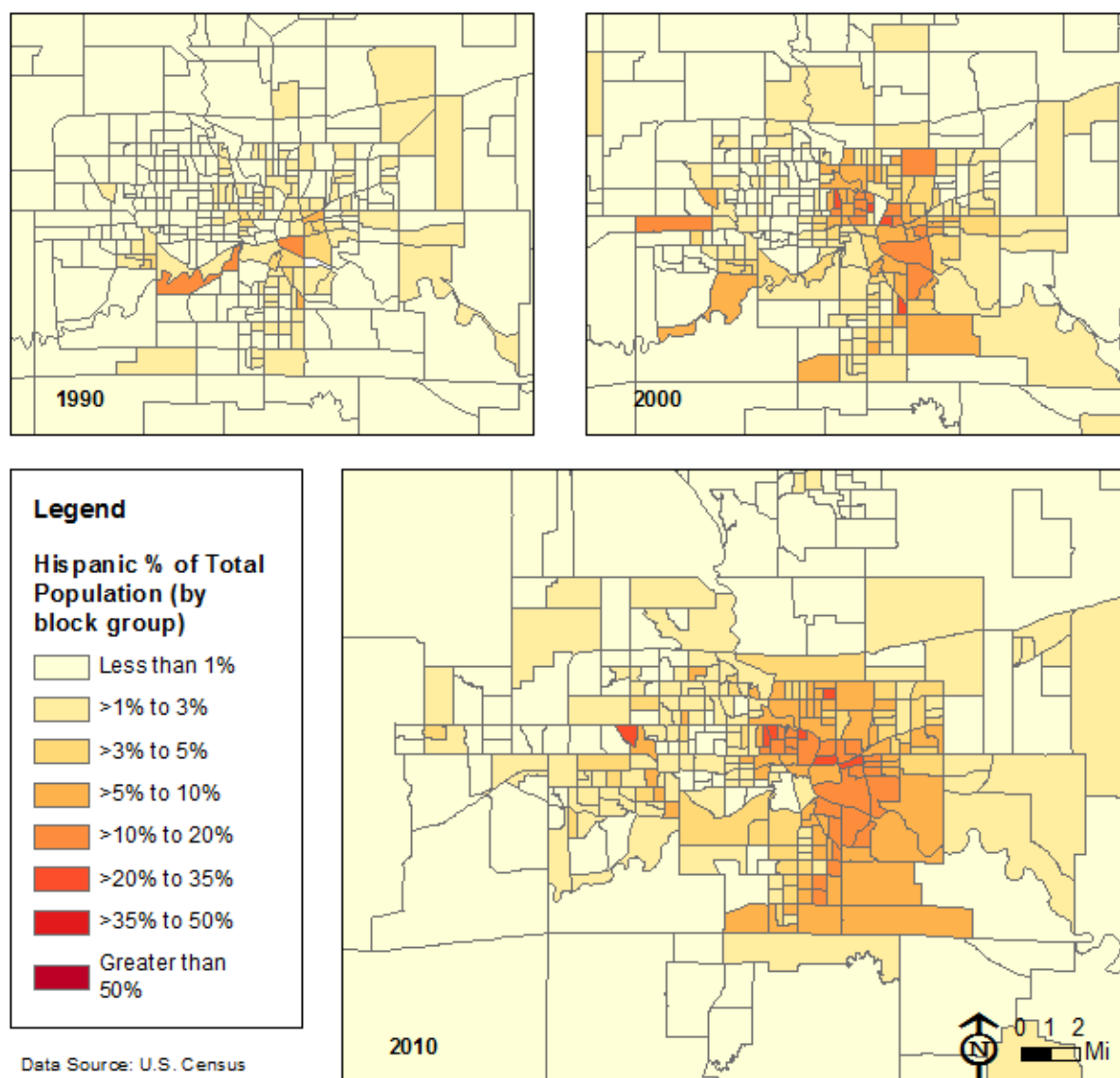


Figure 9. Spatial Trends for Hispanic Population in Des Moines Metro



Iowa City Metro

The Iowa City Metro consists of Johnson and Washington counties. Between 1990 and 2010, it experienced population growth each decade, as shown in Table 11. Like the rest of the state, the Iowa City Metro has become increasingly diverse. In 1990, 94.2% of the population was White, 1.8% was Black, and 0.5% was Hispanic. By 2010, the White population had decreased to 87.1%, while Black and Hispanic populations increased to 4.2% and 2.2%, respectively. In raw numbers, the Black population tripled between 1990 and 2010, increasing by over 4,000 people. The Hispanic population grew by almost 3,000 in the same , increasing more than six-fold.

Table 11. Iowa City Metro population statistics for Whites, Blacks, and Hispanics in 1990, 2000, and 2010

Demographics	1990		2000		2010	
White	109,052	94.2%	120,110	91.2%	132,879	87.1%
Black	2,069	1.8%	3,283	2.5%	6,451	4.2%
Hispanic	541	0.5%	1,692	1.3%	3,340	2.2%
Total Population	115,731		131,676		152,586	

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Table 12. Iowa City Metro segregation trends from 1990 to 2010

Dissimilarity	1990	2000	2010
Black/White	40.6	43.0	45.6
Hispanic/White	36.2	33.7	43.6

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Increasing diversity in the Iowa City Metro has come with rising levels of segregation. It is the only metro of the seven in the state to show increasing levels of *both* Black-White and Hispanic-White segregation. This must be addressed, especially in light of the significant growth in both Black and Hispanic populations.

In 1990, the Black-White IoD score was 40.6. This score rose to 43.0 in 2000 and to 45.6 in 2010 (see Table 12). Taken at face value, these scores indicate the lowest level of Black-White segregation among all seven metros in 1990, 2000, and 2010. Yet examined over time, the IoD scores give cause for concern: in contrast with statewide trends showing decreasing levels in Black-White segregation, the Iowa City Metro showed an increase of 5 points in its dissimilarity index. It is the only metro to show an increase in Black-White segregation between 1990 and 2010. As of 2010, block groups northwest and southwest of the metro center, as well as to the southeast, show a concentrated Black population (Figure 10).

Hispanic-White segregation decreased between 1990 and 2000, and then increased from 2000 to 2010. In 1990, the Hispanic-White dissimilarity score was 36.2; it fell to a low of 33.7 in 2000, concurrent with a large increase in the Hispanic population over that decade. The IoD then rose dramatically by 9.9 points to 43.6 in 2010, resulting in an overall increase of 7.4 points between 1990 and 2010. The Hispanic population, like the Black population, is becoming increasingly segregated from the White population in the Iowa City Metro. Figure 11 (below) shows an increasing concentration of the Hispanic population in census block groups directly north, south, and east of the central metro area.

Figure 10. Iowa City Metro spatial trends for Black population

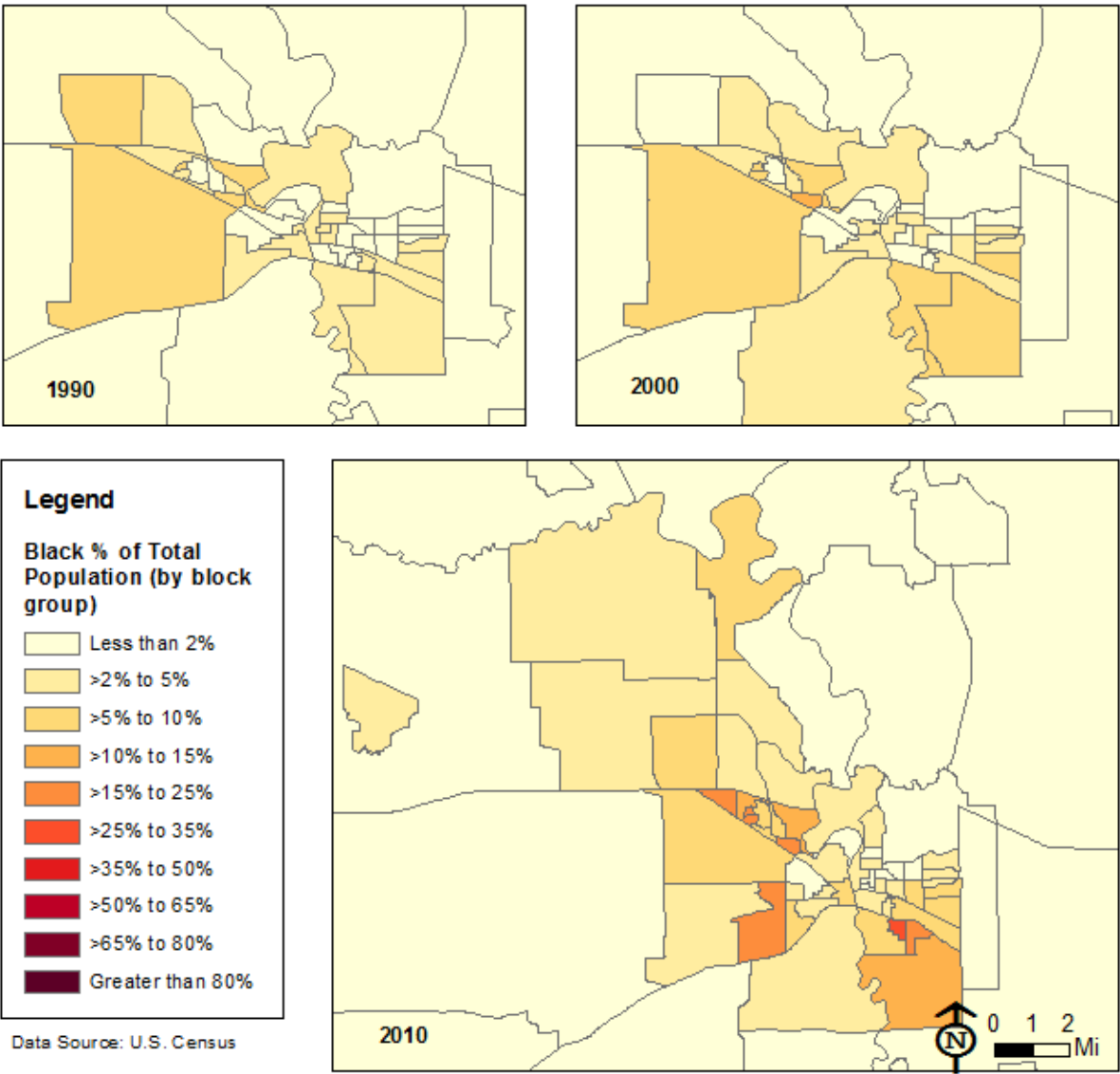
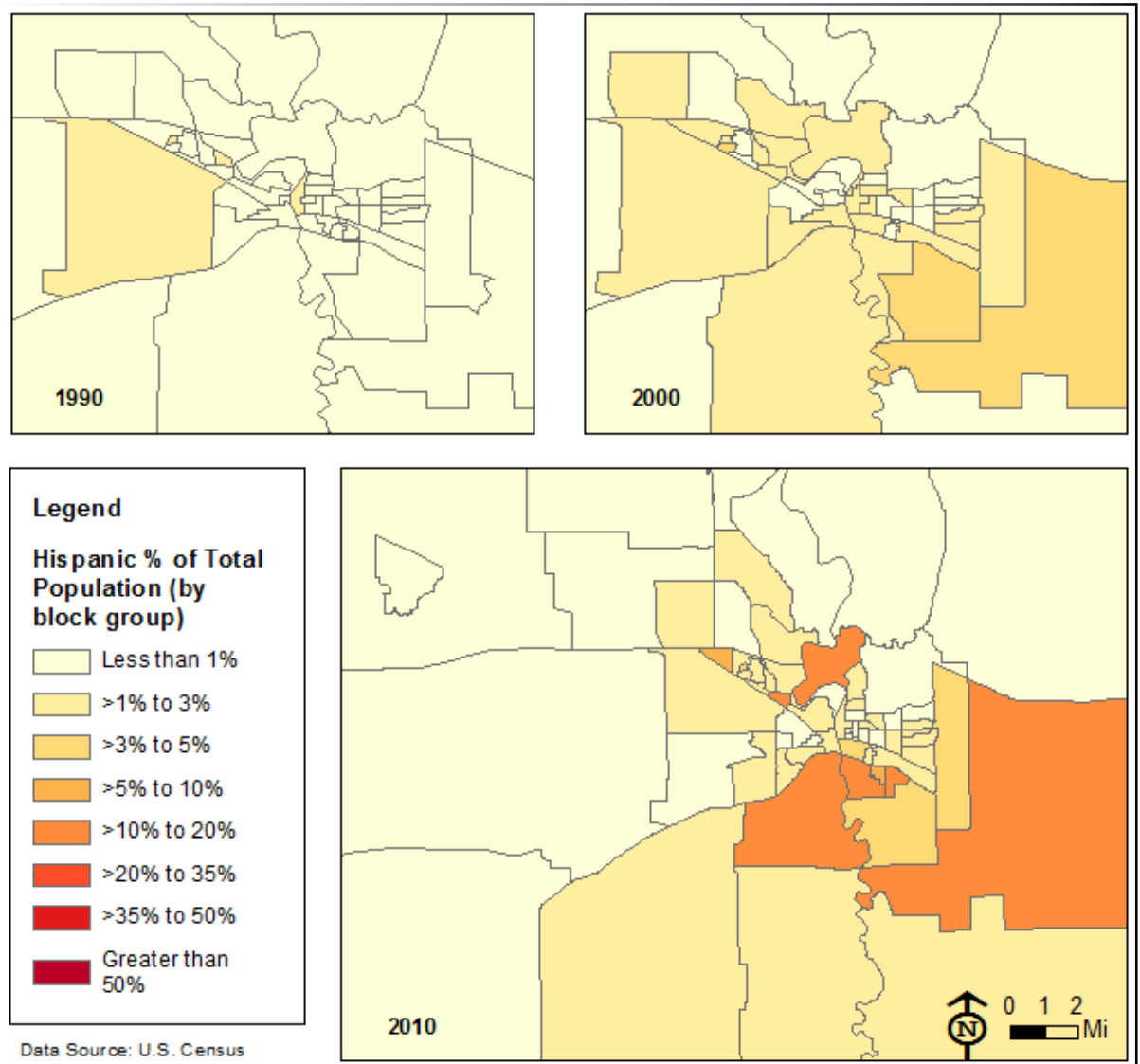


Figure 11. Iowa City Metro spatial trends for Hispanic population



Sioux City Metro

The Sioux City Metro consists of five counties across three states: Dixon and Dakota counties in Nebraska, Woodbury County in Iowa, and Union County in South Dakota⁸. In 2010, the Sioux City Metro population was 143,577. The metro's largest city is Sioux City; there are no other large urban municipalities in this metro.

Over two decades, the White proportion of the Sioux City population dropped by more than 10 percentage points, from 94.2% in 1990 to 83.2% in 2010. In raw numbers, there was a decrease of more than 4,000 White residents. Over the same time period, the Hispanic proportion of the population more than quintupled from 1.6% to 8.8%, increasing by over 10,000 people. The Black population remained relatively stable, increasing by about 1,300 people (a change of less than one percentage point) between 1990 and 2010.

Table 13. Sioux City Metro population statistics for Whites, Blacks, and Hispanics in 1990, 2000, and 2010

Demographics	1990		2000		2010	
White	123,794	94.2%	125,029	87.4%	119,503	83.2%
Black	1,977	1.5%	2,267	1.6%	3,229	2.2%
Hispanic	2,112	1.6%	8,723	6.1%	12,615	8.8%
Total Population	131,350		143,053		143,577	

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Table 14. Sioux City Metro segregation trends from 1990 to 2010

Dissimilarity	1990	2000	2010
Black/White	62.4	51.6	49.6
Hispanic/White	59.1	57.4	53.7

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Out of seven metros, the Sioux City Metro had the second largest decrease (12.8 points) in Black-White segregation between 1990 and 2010, decreasing its level of segregation from severe to moderate (Table 14). The greatest decrease occurred between 1990 and 2000, with the IoD score falling more than 10 points from 62.4 to 51.6.⁹ Despite this improvement, the Sioux City Metro is still far from being well-integrated.

Hispanic-White segregation in the Sioux City Metro has also decreased, making this one of only two metros to have a lower level of Hispanic-White segregation in 2010 than in 1990. The IoD decreased a total of 5.4 points in two decades, from a near-severe score of 59.1 in 1990 to 53.7 by 2010. Although the decrease signals progress, Hispanic-White segregation still remains high. The 2010 IoD score of 53.7 means more than half of the metro's residents would have to relocate to other census block groups in order to achieve even integration of Hispanics and Whites.

Figure 14 shows a concentrated Hispanic population in the northeastern portion of the central metro area, as well as directly south and west of this area. Especially if trends in Hispanic population growth continue into the future, the Sioux City Metro must strive for further progress to become an integrated community.

⁸ Plymouth County was not consistently counted by the U.S. Census as part of the Sioux City MSA, so it has been left out of all calculations.

⁹ This large decrease may have been caused, in part, by changes within block groups with relatively low populations outside the central metro area; for example, one census block in 1990 had a majority Black population but only a population of eight people in total (Figure 12).

Figure 12. Sioux City Metro spatial trends for Black population

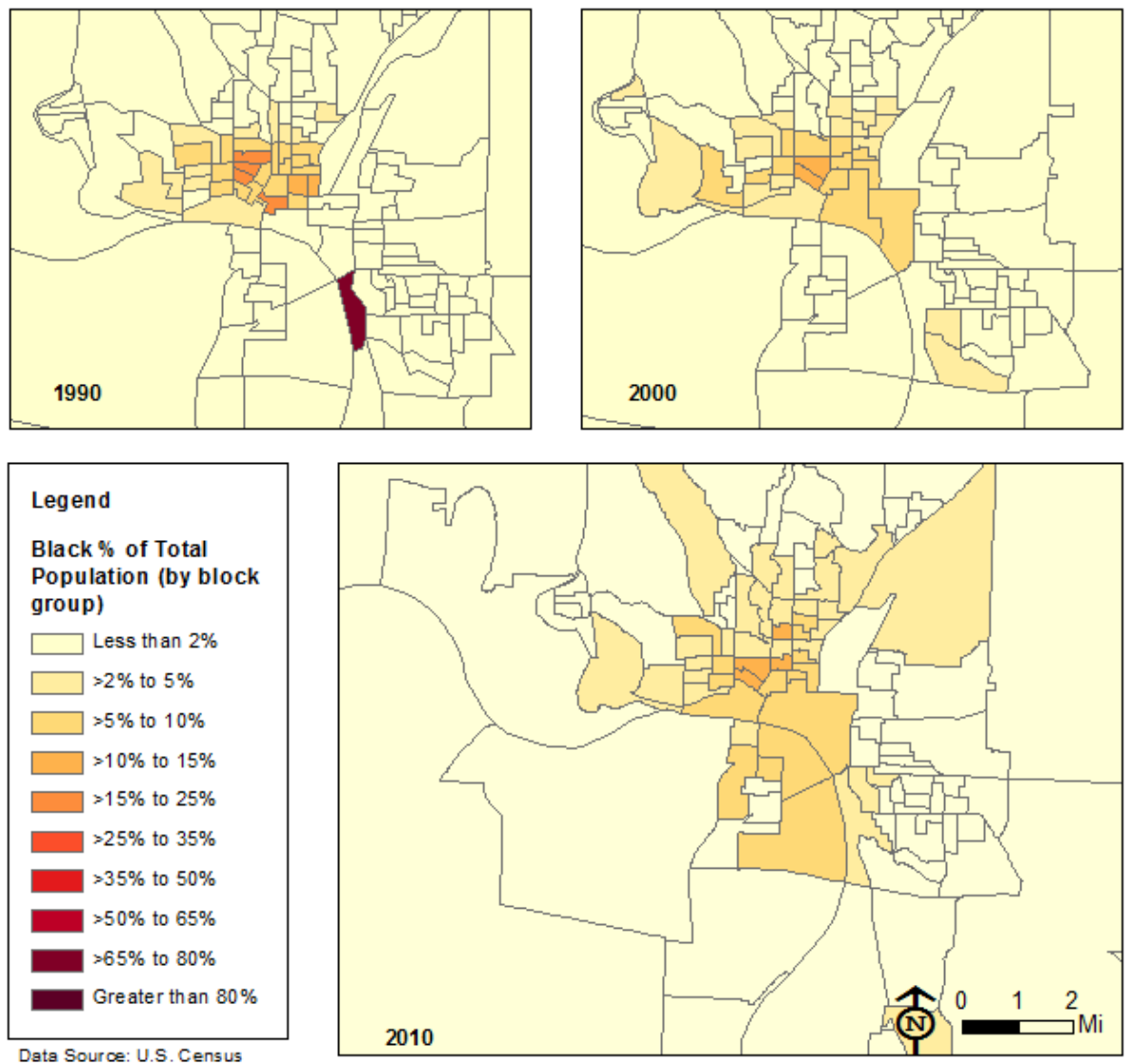
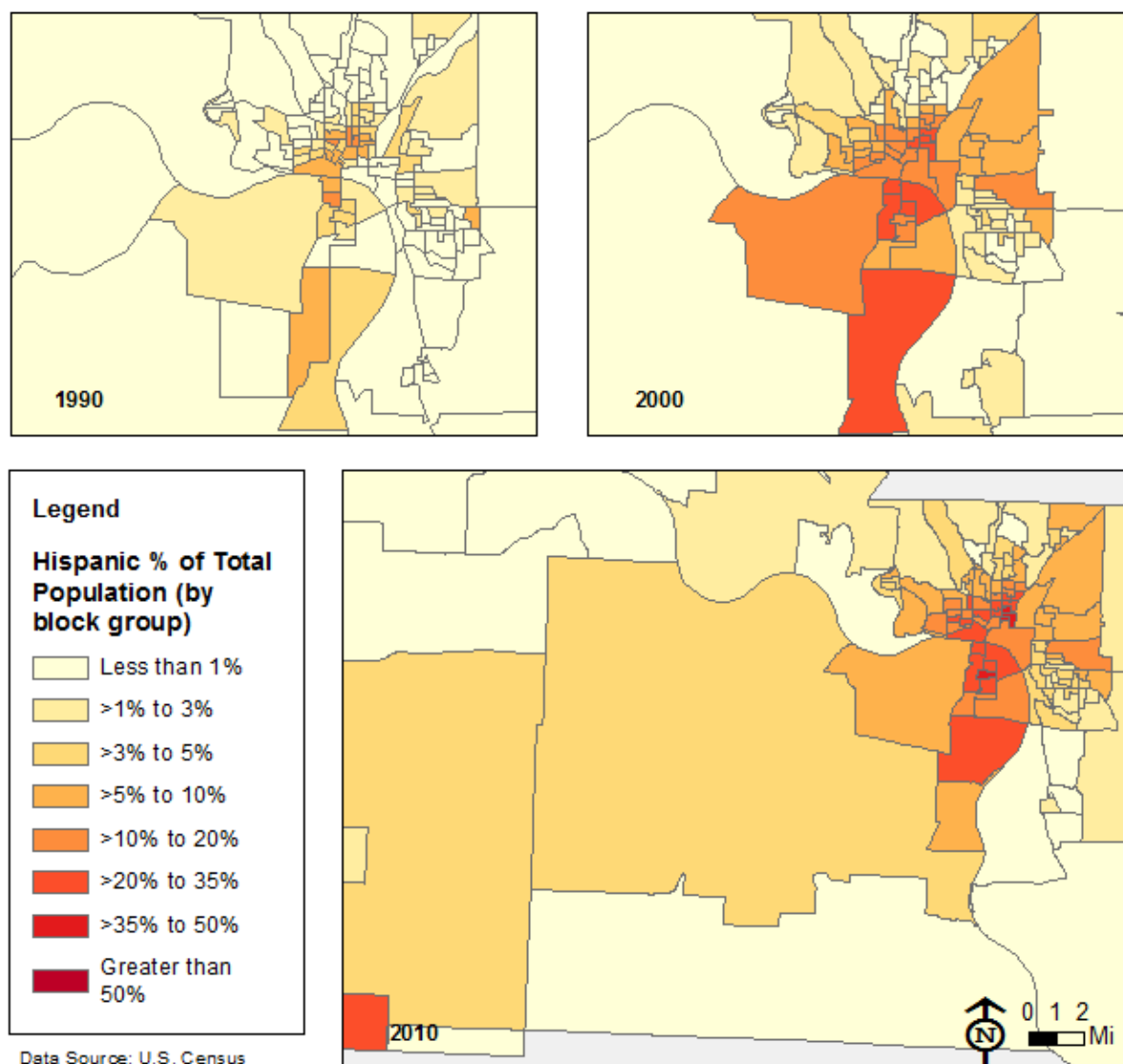


Figure 13. Sioux City Metro spatial trends for Hispanic population



Waterloo-Cedar Falls-Cedar Falls Metro

The Waterloo-Cedar Falls-Cedar Falls metro (henceforth referred to as the Waterloo-Cedar Falls Metro) encompasses Black Hawk, Bremer, and Grundy counties. In both proportion and in numbers, the White population in the metro decreased slightly between 1990 and 2010, while growth occurred for both Black and Hispanic populations. Of all the metros in the state, the Waterloo-Cedar Falls Metro had the second highest proportion of Black population in 1990 (5.4%, second only to Council Bluffs-Omaha). The Black population grew by over 3,000 people by 2010. In 1990, the Hispanic population was below 400, constituting only 0.2% of the metro's population. Yet over 20 years, the number of Hispanics increased over seven-fold to about 3,000 people.

Table 15. Waterloo-Cedar Falls Metro population statistics for Whites, Blacks, and Hispanics in 1990, 2000, and 2010

Demographics	1990		2000		2010	
White	148,222	93.4%	148,345	90.6%	148,085	88.2%
Black	8,591	5.4%	10,301	6.3%	11,859	7.1%
Hispanic	389	0.2%	1,472	0.9%	2,800	1.7%
Total Population	158,640		163,706		167,819	

Source: U.S. Census; Hispanic denotes non-white Hispanic population

Table 16. Waterloo-Cedar Falls Metro segregation trends from 1990 to 2010

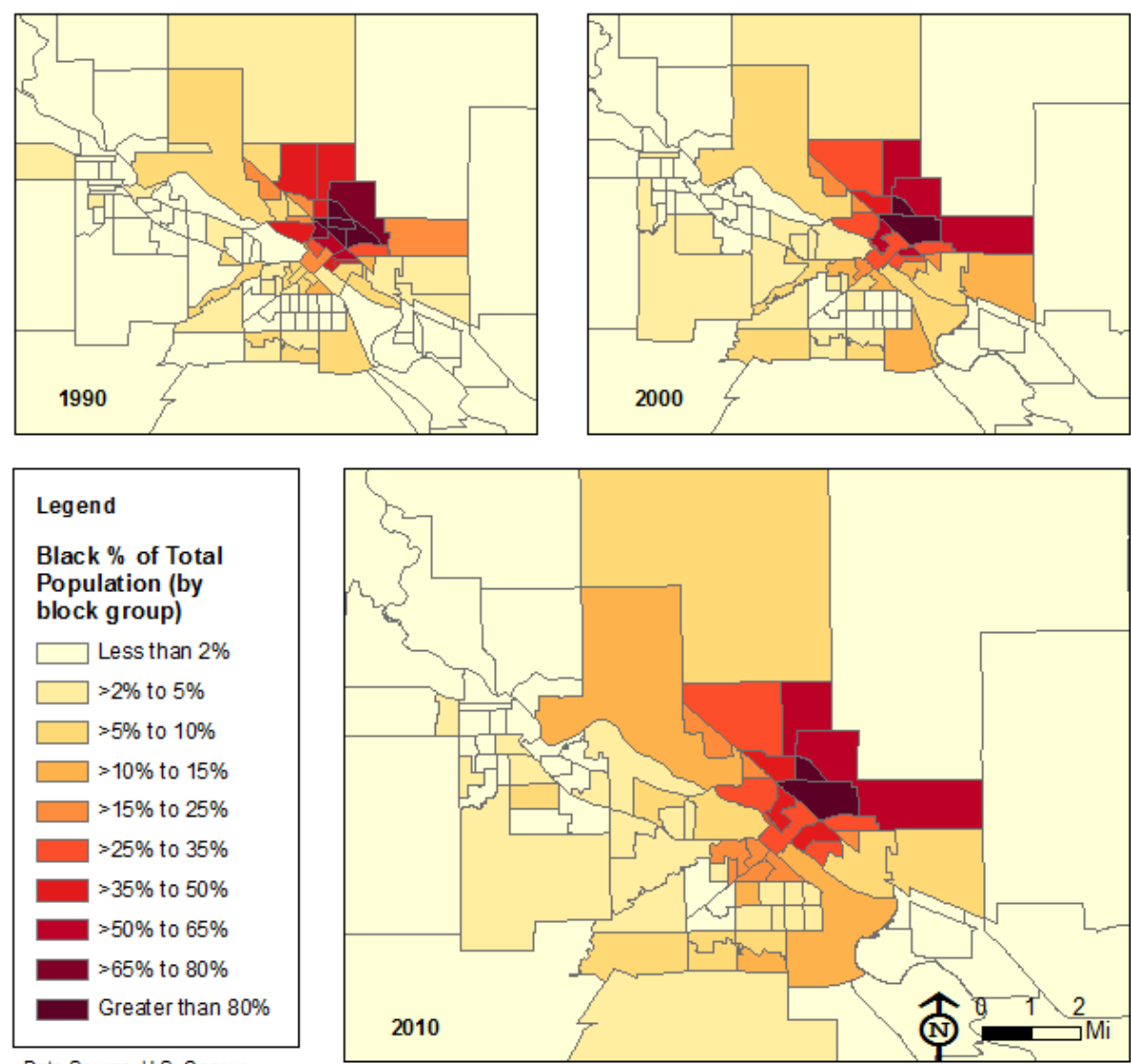
Dissimilarity	1990	2000	2010
Black/White	72.1	69.9	64.8
Hispanic/White	44.9	50.3	51.9

Source: U.S. Census; Hispanic denotes non-white Hispanic population

The Waterloo-Cedar Falls Metro has seen mixed trends in segregation levels. The metro has historically had high levels of Black-White segregation. In 1990, its IoD score was 72.1, reflecting persistent and severe levels of segregation. The IoD decreased to 69.9 in 2000 and to 64.8 in 2010. While the declining score indicates movement towards a moderate level of segregation, the region is still severely segregated (see Figure 15). The Cedar River (not pictured) cuts through the metro region diagonally from the northwest to the southeast corner, discernible in the arrangement of census block groups. The Black population is largely concentrated in census block groups north and east of this geographic divide. In 1990, 2000 and 2010, several census block groups in this metro contained populations that were more than 80% Black.

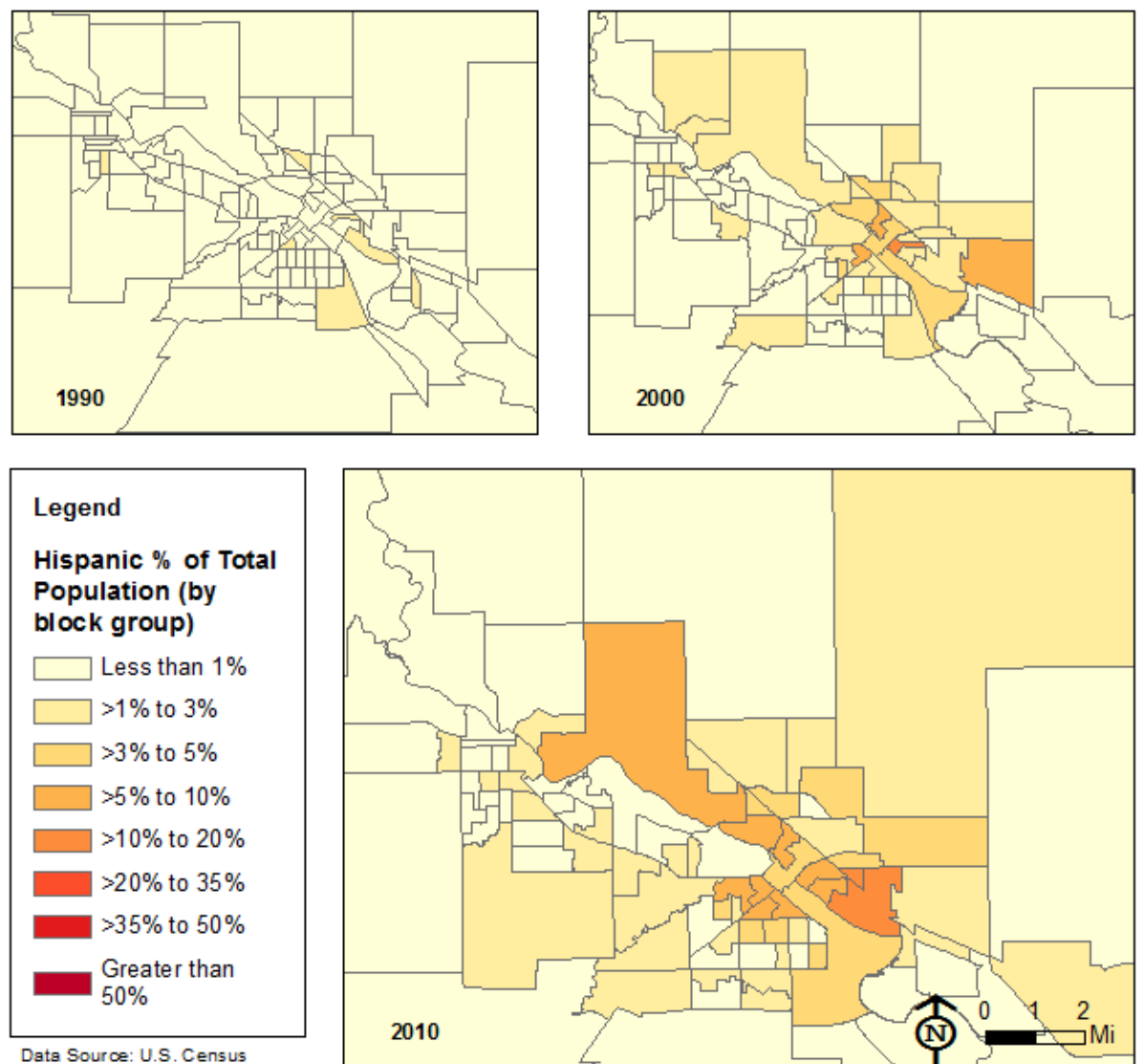
Hispanic-White segregation in the Waterloo-Cedar Falls Metro has risen over time. In 1990, the Hispanic-White IoD score was 44.9; it increased to 50.3 in 2000 and rose again slightly to 51.9 in 2010. Figure 16 shows a similar spatial pattern as Figure 15. Census block groups along the north side of the diagonal described above have relatively higher concentrations of the metro's Hispanic population, with the highest concentration occurring in the eastern area of the metro.

Figure 14. Waterloo-Cedar Falls Metro spatial trends for Black population



Data Source: U.S. Census

Figure 15. Waterloo-Cedar Falls Metro spatial trends for Hispanic population



Conclusion

Summary of state trends

Iowa has become an increasingly diverse state. Both the number and proportion of people of color in the state grew between 1990 and 2010. However, in the state's seven largest metros, the increase in diversity has not brought about a consistent decrease in racial segregation. Between 1990 and 2010, Black-White segregation decreased across the state, though it remains near-severe in most metros. In the same time period, Hispanic-White segregation increased in the majority of metro areas, though it has not yet reached severe levels.

Table 17 presents the Black-White IoD scores for all seven metro areas discussed in this paper, arranged in increasing order by 2010 dissimilarity scores. Excluding the Iowa City Metro, Black-White dissimilarity scores decreased significantly from 1990 to 2010. Going against this trend, the Iowa City Metro saw a 5-point increase in Black-White segregation, despite having the lowest dissimilarity scores among the seven metros examined in this study. Barriers to Black-White integration in this metro are likely increasing, making it an outlier in light of state trends.

Table 17. Black/White Dissimilarity in Metropolitan Iowa 1990 to 2010

MSA	1990	2000	2010	Change in IoD	Segregation in 2010
Iowa City	40.6	43.0	45.6	+5.0	Moderate
Cedar Rapids	56.4	53.8	46.3	-10.1	Moderate
Sioux City	62.4	51.6	49.6	-12.8	Moderate
Des Moines	67.3	60.4	53.8	-13.5	Moderate
Quad Cities	60.8	57.5	53.9	-6.9	Moderate
Council Bluffs-Omaha	72.7	68.9	63.7	-9.0	Severe
Waterloo-Cedar Falls	72.1	69.9	64.8	-7.3	Severe

Although Black-White segregation decreased in six of the seven metros in the state of Iowa, none of them attained IoD scores below 30 (indicating low levels of segregation). Two of the six metros (Council Bluffs-Omaha and Waterloo-Cedar Falls) still showed severe levels of Black-White segregation in 2010.

How does Black-White segregation in the state compare in the context of national trends? Findings in this report concur with the results of a 2003 study analyzing Black-White dissimilarity scores in the 50 largest metros in the U.S. Over a twenty-year period, Black-White segregation decreased in nearly half of the metros studied, yet it remained more severe in Midwestern metros than in other parts of the country. The study found that while Black-White segregation generally decreased across the U.S., Black-White segregation in the Midwest has been most resistant to change.¹⁰ Though no metros in Iowa were included in the 2003 study, this report finds similar trends more than a decade later. Persistent severe and near-severe segregation remains a reality for the state.

10 Charles, Camille Zubrinsky. "The dynamics of racial residential segregation." Annual review of sociology (2003): 167-207.

Table 18. Hispanic/White Dissimilarity in Metropolitan Iowa 1990 to 2010

MSA	1990	2000	2010	Change in IoD	Segregation in 2010
Cedar Rapids	43.4	37.6	36.0	-7.4	Moderate
Iowa City	36.2	33.7	43.6	+7.4	Moderate
Quad Cities	46.6	46.8	46.8	+0.2	Moderate
Waterloo-Cedar Falls	44.9	50.3	51.9	+7.0	Moderate
Sioux City	59.1	57.4	53.7	-5.4	
Des Moines	48.0	57.3	55.4	+7.4	Moderate
Council Bluffs-Omaha	49.6	57.8	57.2	+7.6	Moderate

Although Hispanic-White segregation is less severe than Black-White segregation in five of Iowa's seven metros (Council Bluffs-Omaha, Quad Cities, Des Moines, Iowa City, and Waterloo-Cedar Falls), Hispanic-White segregation is on the rise. Out of these five, the IoD increase in the Quad Cities Metro was marginal (less than one point), while the increase in the other four metros was over seven points on average. In 2010, the Council Bluffs-Omaha Metro and Des Moines Metro had the highest Hispanic-White dissimilarity scores. The Cedar Rapids and Sioux City Metros were the only two with decreasing levels of Hispanic-White segregation. Between these two metros, Hispanic-White segregation in Cedar Rapids (36.0) is nearing the 'low' classification, while Hispanic-White segregation levels in Sioux City remain moderate-to-severe.

Why does racial segregation persist?

The disconcerting trends in the State of Iowa are clear, but the root causes of persistent segregation are complex and require careful investigating by policymakers. A commonly held belief is that racial segregation persists because members of minority racial and ethnic groups prefer to live in close proximity to each other. Several studies have examined this notion and generally find limited to no support for it. They find evidence to the contrary. Camille Charles reports those surveyed from minority racial/ethnic groups have positive views towards living in integrated neighborhoods.¹¹ In fact, a 2001 study found Black preferences for living in all-Black neighborhoods played a lesser role in explaining Black-White dissimilarity levels than White self-segregation.¹²

In the study, extensive surveys help to explain the role of preferences in residential segregation and particularly the isolation of Black communities. When surveyed about their willingness to live in proximity to other racial groups, Whites, Blacks, and Hispanics respondents indicated differing preferences regarding mixed neighborhoods.¹³ Whites are considered the most desirable group to live in close proximity to by Whites, Blacks, and Hispanics. Blacks are found to be the least preferred by the same three populations. This hierarchy of preferences complicates the common narrative of minority self-selection and perhaps explains why Black-White segregation is higher overall than Hispanic-White segregation in Iowa's metro areas. Yet it does not fully account for the rise in Hispanic-White segregation across the state. Alternative factors are discussed below.

Self-segregation implies that out of available options, minority families choose to live in non-mixed neighborhoods. In the case of Blacks, and perhaps increasingly for Hispanics in Iowa, it is far more likely that those who would live in racially-mixed neighborhoods cannot do so because of unaffordable costs, an unwillingness of other races to live in mixed neighborhoods, and discriminatory housing practices.¹⁴ The persistence of racial segregation may be caused by the persistence of an income gap between Whites on the one hand, and Blacks and Hispanics on the other. A report from the University of Delaware's Center for Community Research and Service highlights the connection between minority status, poverty, and residential segregation. While major U.S. metropolitan areas have shown decreasing racial segregation in recent decades (noted above), national trends show increasing economic segregation. This may threaten how much progress can

11 Charles, Camille Zubrinsky. "The dynamics of racial residential segregation." Annual review of sociology (2003): 167-207.

12 Ibid.

13 Ibid.

14 Ihlanfeldt, Keith R., and Benjamin Scafidi. "Black self-segregation as a cause of housing segregation: Evidence from the multi-city study of urban inequality." Journal of Urban Economics 51, no. 2 (2002): 366-390.

be made towards integration. As minority households “often experience disproportionately high rates of poverty, increases in concentration of poverty works against the residential integration” of minorities.¹⁵

Furthermore, although the Fair Housing Act of 1968 and related legislation have outlawed discrimination by race and ethnicity, racial biases still play a role in the housing market. For example, processes like steering perpetuate systemic disparities. During the housing search process, minorities are often steered to high-minority and lower-income neighborhoods, even if the families themselves are middle- and upper-income families. A 2012 study conducted by the U.S. Department of Housing and Urban Development (HUD) affirms that racial discrimination is evident in the house search process.¹⁶ Thus, in a world that is increasingly interconnected, racially and ethnically diverse, and even deemed ‘colorblind,’ race still matters.¹⁷

How does segregation impact communities?

Massey and Denton assess the negative impacts of segregation specifically for Black communities, and conclude that in spatially segregated areas health and opportunity diminish considerably. Segregation isolates Black communities and “systematically undermines the social and economic well-being of Blacks in the United States.”¹⁸ Even though spatial integration does not equal social integration, different racial groups need opportunities to interact and build informal connections. A relatively small decrease in spatial segregation can have far-ranging and positive social effects.¹⁹

The level of segregation within schools directly impacts life opportunities for students and is another outflow of racial segregation within housing markets and neighborhoods. A 2014 report published by the Economic Policy Institute makes the connection explicit between housing and schools. The report asserts, “the most important school policies are housing policies.”²⁰ Neighborhood demographics directly impact school demographics. Benefits from school integration indicate the positive outcomes that could accrue from policies promoting residential integration and subsequent school integration. A 2014 National Bureau of Economic Research report, examining the effects of school integration from 1954-2011, noted that Blacks who attended integrated schools were more likely to graduate from high school and seek higher levels of education, have higher incomes, be healthier, and less likely to spend time in jail than Blacks who attended segregated schools.^{21&22} Neighborhood integration, and its effects on schools, should be a key consideration in decreasing racial segregation in the U.S.

Iowa has a long-standing reputation as a desirable place to live and to raise a family in. Policymakers in Iowa need to ensure this remains true for all people who call Iowa home. Currently, racial segregation persists at near-severe or severe levels for many major metro areas across the state. Segregation accompanies a whole range of negative consequences for the communities it isolates. It robs all racial and ethnic groups the opportunity for daily interactions and relationships that characterize understanding in a diverse *and* integrated society. Leaders and policymakers in Iowa must create a policy environment to ensure that as the state grows more diverse, neighborhoods and communities become more, rather than less, integrated.

15 Leland Ware, and Steven W Peuquet. Delaware Analysis of Impediments to Fair Housing Choice. Delaware State Housing Authority, University of Delaware, University of Delaware Center for Community Research and Service, 2003.

16 Turner, Margery Austin, et al. Housing Discrimination Against Racial and Ethnic Minorities 2012. Executive Summary. Washington D.C.: U.S. Department of Housing and Urban Development, 2013.

17 Charles, Camille Zubrinsky. “The dynamics of racial residential segregation.” Annual review of sociology (2003): 167-207. <http://www.jstor.org/stable/30036965>.

18 Massey, Douglas S and Nancy A Denton. American Apartheid: Segregation and the Making of the Underclass. Cambridge: Harvard University Press, 1993.

19 Charles, Camille Zubrinsky. “The dynamics of racial residential segregation.” Annual review of sociology (2003): 167-207. <http://www.jstor.org/stable/30036965>.

20 Rothstein, Richard. Brown v. Board at 60 Why Have We Been So Disappointed? What Have We Learned? Rep. Washington DC: Economic Policy Institute, 2014. Web. 9 May 2014. <<http://www.epi.org/publication/brown-at-60-why-have-we-been-so-disappointed-what-have-we-learned/>>

21 Hannah-Jones, Nikole. Segregation Now. Rep. New York City: ProPublica, 2014. Web. 9 May 2014. <<http://www.propublica.org/article/segregation-now-full-text>>.

22 Johnson, Rucker C. Long-run Impacts of School Desegregation & School Quality on Adult Attainment. Rep. Cambridge: National Bureau of Economic Research, 2014. Web. 9 May 2014.

Data sources

- 1) All 1990 demographic data for Metropolitan Statistical Areas was acquired from Population and Race data from the 1990 Census for the United States, the state of Iowa, and for appropriate counties within Iowa, Illinois, Nebraska, and South Dakota via Social Explorer, Table T1: Total Population, Table T12: Race, and Table T13: Hispanic Origin by Race. Data for non-White Hispanics was found by subtracting the number of people counted as **both** “Hispanic” **and** “White Alone” from the total number of Hispanics.
U.S. Census Bureau. “T1: Total Population.” 1990 Decennial Census. Social Explorer. April 25, 2014.
U.S. Census Bureau. “T12: Race.” 1990 Decennial Census. Social Explorer. April 25, 2014.
U.S. Census Bureau. “T13: Hispanic Origin by Race.” 1990 Decennial Census. Social Explorer. April 25, 2014.
- 2) All 2000 demographic data for Metropolitan Statistical Areas was acquired from Population and Race data from the 2000 Census for the United States, the state of Iowa, and for appropriate counties within Iowa, Illinois, Nebraska, and South Dakota via Social Explorer, Table T1: Total Population, Table T14: Race, and Table T15: Hispanic or Latino by Race. Data for non-White Hispanics was found by subtracting the number of people counted as **both** “Hispanic or Latino” **and** “White Alone” from the total number of Hispanics and Latinos.
U.S. Census Bureau. “T1: Total Population.” 2000 Decennial Census. Social Explorer. April 25, 2014.
U.S. Census Bureau. “T14: Race.” 2000 Decennial Census. Social Explorer. April 25, 2014.
U.S. Census Bureau. “T15: Hispanic or Latino by Race.” 2000 Decennial Census. Social Explorer. April 25, 2014.
- 3) All 2010 demographic data for Metropolitan Statistical Areas was acquired from Population and Race data from the 2010 Census for the United States, the state of Iowa, and for appropriate counties within Iowa, Illinois, Nebraska, and South Dakota via Social Explorer, Table T1: Total Population, Table T54: Race, and Table T55: Hispanic or Latino by Race. Data for non-White Hispanics was found by subtracting the number of people counted as **both** “Hispanic or Latino” **and** “White Alone” from the total number of Hispanics and Latinos.
U.S. Census Bureau. “T1: Total Population.” 2010 Decennial Census. Social Explorer. April 25, 2014.
U.S. Census Bureau. “T54: Race.” 2010 Decennial Census. Social Explorer. April 25, 2014.
U.S. Census Bureau. “T55: Hispanic or Latino by Race.” 2010 Decennial Census. Social Explorer. April 25, 2014.

Notes on Map Creation

All map layers were located and extracted from the U.S. Census Bureau website. Block group layers were downloaded, by state and county, as cartographic boundary files.²³ Several metropolitan areas stretch into other states (Illinois, Nebraska, and South Dakota), so the four states' block group layers were merged together to form one overall layer; this made later steps, particularly joining by FIPS codes and symbolizing layers, much easier. TIGER/Line Shapefiles were also downloaded from the US Census Bureau website.²⁴ These included the state of Iowa's boundary and all Iowa, Illinois, Nebraska, and South Dakota counties. In order to create a layer with only the counties contained in the metropolitan areas, those counties were selected and exported as a feature class. This layer was used to label the counties within the metropolitan regions.

The block group layers from the U.S. Census Bureau contain FIPS codes used to join data not included in the layer. In this case, population data was gathered from Social Explorer²⁵ for each block group, and for each census year. This data included total population, as well as population broken up into "Black or African American" and "Hispanic or Latino". Once the data was gathered, the percent of the population that was "Black or African American", and the percent of the population that was "Non-White Hispanic" were calculated. Tables from Social Explorer were downloaded as CSV files in order to use FIPS codes (other formats do not include these codes). The population data was then joined to the block group layer by their FIPS codes.

In order to show only those block groups within the metropolitan areas of interest, all block groups that had their centroid within the metropolitan area boundaries layer (created using steps detailed above) were selected and then exported as a feature class. This layer that contains the metropolitan areas' block groups, and all the population data, was used to symbolize the percent of the population that are "Black or African American" and "Non-White Hispanic" in the map images throughout this document. Classification levels were held constant by race variable across all metropolitan regions so that maps can be compared across MSAs.

23 1990, 2000, and 2010 US Census Bureau cartographic boundary files found at http://www.census.gov/geo/maps-data/data/cbf/cbf_blkgrp.html

24 2010 TIGER/Line Shapefiles found at <http://www.census.gov/cgi-bin/geo/shapefiles2010/main>

25 US Census population and race data for 1990, 2000, and 2010 by block group gathered from <http://www.socialexplorer.com/>