Neighbourhood racial diversity and White residential segregation in the United States[1]

Richard Wright, Mark Ellis and Steven R. Holloway

Introduction

The current interest in multiethnic metros (see, for example, Frey and Farley, 1996), global neighbourhoods (see, for example, Logan and Zhang, 2010), and urban intermixing (see, for example, Brown and Sharma, 2010) signal the emergence of urban environments characterised by growing and sizable non-White immigrant populations and their offspring. The emphasis on multiethnicity and mixing also draws attention away from Black–White isolation, the social division that motivated much of the original research on residential racial segregation in the US (see also Chapter Two, this volume). This chapter connects these newer diversities and older segregations by taking stock of recent changes in the neighbourhood geographies of people who identify as White. Using 1990, 2000 and 2010 US Census data to analyse all metropolitan areas exceeding one million people, we showcase the increasing racial diversity in these places and their census tracts. We focus on the neighbourhoods in which Whites constitute a large majority. The number and share of these tracts is diminishing everywhere, but the pace and form of this transition to greater diversity in neighbourhood space is uneven across and within metropolitan areas. We explore these transitions and their correlates and argue that 'White flight', a term redolent of the demarcation of the Black–White colour line and White suburbanisation in the late 20th century, has not slipped away in the multiethnic, global 21st century; it has found new spatial expression.

The racial and ethnic profile of the US has changed considerably in the last few decades. Immigration from Central and South America and parts of Asia drives these new demographic diversities and they play out on the ground in complicated ways. Newcomers and their

offspring continue to settle, for the most part, in large metropolitan areas of the country. Additionally, new immigrants tend to concentrate within particular neighbourhoods, increasing Asian-White and Latino-White segregation in a number of places (Frey, 2011). At the same time, many urban neighbourhoods that were predominantly White are diversifying as non-Whites take up residence. These changes, of course, layer on top of the historic subordination of Blacks by Whites and the continued residential 'hyper-segregation' of African Americans from Whites (Massey and Denton, 1993; Wilkes and Iceland, 2004).

This chapter takes stock of these changes using decennial census data from 1990, 2000 and 2010 in three main ways. We first explain a new way of thinking about racial residential segregation and diversity. Conventional approaches to racial segregation tend to view neighbourhoods as either segregated or blended; pure segregation and complete diversity come to demark two extremes of a continuum of neighbourhood racial mix, with neighbourhoods being to some extent *either* racially segregated *or* racially diverse. The approach that racial segregation and diversity are 'mirror images of one another' (Holloway et al, 2012, p 2) fails to capture, however, the fact that segregated spaces are appearing in cities at the same time other parts of town are diversifying. Accordingly, we move away from this 'either/or' viewpoint and instead take up an approach that understands large US urban areas – metropolitan statistical areas (MSAs) and their neighbourhoods – are best characterised as *both* segregated *and* diverse. This 'both/and' lens is not only ontological but also methodological and helps resolve the paradox that racial segregation and diversity occur at the same time, sometimes in very close proximity. We are, of course, not the only scholars to notice the coincident development of neighbourhood segregation and diversity. According to Reibel and Regelson, '… within cities, trends toward greater and potentially stable diversity in some neighbourhoods co-exist with continuing White flight and re-segregation in other local areas' (2011, Abstract). They call this 'fragmented diversity'.

Operationally, we characterise the census tracts of every MSA by placing them in three basic classes of tract diversity. We then note the numerically dominant racial group in each to arrive at neighbourhood taxonomy that we use to map and assess metropolitan neighbourhood change over time and across space. In terms of measurement, these new complexities stretch single-index assessments of racial residential patterns past their limits. The argument of this chapter moves beyond such measurements, and deploys a neighbourhood classification scheme that can better pinpoint patterns of change in a demographic

environment that racially and ethnically is far more nuanced today than a generation ago. We locate change in two main ways: using neighbourhood transition matrices and cartographically. Building on these foundations, we then focus particular attention on people who identify as White.

While quite a bit of ink has been spilled about 'minority majority' populations and racial demographic change, Whites, of course, constitute the majority of the country. All population projections of which we are aware have them as the plurality for the foreseeable future. And even though most immigration is directed toward large MSAs, Whites represented the majority in the preponderance of these MSAs in 2010 and in the bulk of metropolitan neighbourhoods. As a second focus, the chapter is especially concerned with neighbourhoods that are predominantly White in the context of rising levels of neighbourhood racial diversity. Much of the growing diversity we find in MSAs stems from neighbourhoods that were heavily White (that is, over 80 per cent) becoming more diverse so that Whites in these places constitute less of a plurality. We pay attention to these transitions, as well as to predominantly White places that remained so between 1990 and 2010.

Third, we link these neighbourhood transitions to assessments of neighbourhood wealth measured by median household income at the census-tract scale. The analysis of racial and class divides in US metropolitan space is a grand theme in urban ecological analysis. Contemporary evaluations of the association between race and class tend to examine the socioeconomic status (SES) of racial and ethnic groups at the household scale and find that, for example, relatively wealthy non-White households are less segregated from non-Hispanic Whites than corresponding relatively less wealthy racialised groups (Iceland and Wilkes, 2006; Spivak et al, 2011). In contrast, we keep the analysis centred on census tracts and augment our neighbourhood classification system by analysing the median household income of tracts that remain predominantly White over the two decades and with those that have transitioned to another category.

White segregation amid increasing racial and ethnic diversity

Decades of research on residential racial segregation foregrounds the deleterious effects of neighbourhood isolation on racialised minority groups (see Charles, 2003, pp 167-9). Residents of unsafe, poorly resourced neighbourhoods, lacking educational and recreational

opportunities and access to employment and basic services such as food stores and banks, are hugely disadvantaged relative to those who live elsewhere. Non-White minority urban populations, especially Blacks, reside disproportionately in such areas of deprivation (see also Chapters Thirteen, Fifteen and Sixteen, this volume).

Du Bois famously predicted the colour line would be the problem of the 20th century, and social science research from Du Bois' analysis of segregation 100 years ago to Myrdal (1944) to the *Black metropolis* (Drake and Cayton, 1945) to Clark (1965) to tipping-point studies (Schelling, 1971) to hyper-segregation and *American apartheid* (Massey and Denton, 1993) to present-day assessments (for example, Kennedy, 2011) confirm Du Bois' prescience (Du Bois, 1989). Other groups also live in segregated neighbourhoods and residential segregation analysis, of course, includes not only studies of Black–White neighbourhood segregation and concentration, but also that associated with immigrants. This scholarship on immigrant segregation also reaches back a century, to Park (1998 [1928]) and the analysis of the assimilation of immigrants. In both types of study, spatial distribution becomes a barometer of social distribution and the geography of White populations is often used as a benchmark for both (Wright et al, 2005).

It follows that one concern we have with research on 'the colour line' is that attention tends to fall on only one side of that boundary. It has been entirely appropriate to point out the social failures that have led to apartheid conditions in the US. It is vitally important that we expose and counter the forces that produce racialised inequality and subordination. When we devote exclusive attention to the spatial isolation of racialised non-White minorities, however, we often implicitly dis-acknowledge that Whites are segregated too. Segregation research tends to draw attention to places where Whites are relatively absent rather than where they are numerically dominant.

Only a handful of studies report on *White* segregation per se (for example, Iceland, 2004, 2011). More often, Whites are used as the referent in studies of segregation and spatial assimilation. Using Whites as a referent acknowledges them as socioeconomically politically dominant. But such research tendencies also veer toward using proximity to Whites and their spaces as a standard of social membership. Put bluntly, segregation studies have failed for the most part to engage with Whiteness studies. That scholarship aims to shift research away from the place where race is 'always an issue of Otherness that is not white' (hooks, 1990, p 54). Whiteness studies have additional goals, one of which alluded to by hooks – to bring attention to bear on the racialisation of Whites and to deconstruct the White category. In

this chapter, we do not deconstruct the 'White' category in any way. Iceland (2011), for example, examines three different definitions of 'White' in calculating White segregation and isolation in large MSAs. We do, however, examine White neighbourhood segregation from several standpoints.

Segregation has different consequences for Whites than non-Whites. In that sense, this chapter (see also Chapter Thirteen, this volume) joins the conversation on what segregation means for different groups (Peach, 1996; Borjas, 1998; Marcuse, 1997; Wacquant, 1997). Following in the footsteps of those scholars, Beaulieu and Continelli (2011) develop a simple model wherein segregation is more likely to facilitate economic, political and cultural advantage for Whites while reinforcing disadvantages for Blacks. As others have shown, Black segregation is part of a vicious cycle wherein spatial isolation increases the odds of being poor, and this in turn leads to deteriorating neighbourhood resources, such as schools, which hamper the ability of future generations to escape adverse economic circumstances (see Chapter Ten, this volume). White segregation produces the opposite; it enhances social stability and fosters social and economic investment in communities. White segregation is thus a mechanism to ensure the future benefits of being White, or what Lipsitz (1998) calls, in the very title of his book, the 'possessive investment in whiteness.'

As US urban areas become more diverse at the metropolitan scale, and as White segregation from other groups slowly declines, the question arises about how Whites, and, crucially, which class of Whites, will maintain this 'possessive investment' through residential segregation. We approach this issue by situating White segregation relative to *both* (1) the residential segregation of racialised groups, including Whites, *and* (2) the increasing rates of overall demographic diversity and increasing neighbourhood diversity. We are particularly interested in the socioeconomic characteristics of White neighbourhood spaces that diversified between 1990 and 2010 compared to those that did not.

We expect to find that White neighbourhoods have higher median incomes than other neighbourhoods. We also expect that White-dominated tracts with lower median incomes are less likely to remain in this state than those with higher median incomes. Our reasoning is that higher-income White neighbourhoods are better able to retain their racial composition – their investment in Whiteness – because of the income barriers to entry. As the population of less well-off minority populations swells, selected members of these groups will find it easier to buy into moderate- than high-income White neighbourhoods. Thus the White spaces that remain in US MSAs in

the face of increasing diversification are increasingly the preserve of higher-income groups.

In the last 20 years or so, the US has become more unequal economically, with the upper echelon of the income distribution garnering an increased share of the national wealth. Those in the top fraction are disproportionately White, and this group is best able to maintain a degree of separation from others. Whites, whose incomes are below these relatively well-off ranks, do not have the resources to buy into upscale neighbourhoods. We expect, therefore, that neighbourhoods with concentrations of Whites that also are home to medium- and low-income subpopulations are the places most likely to transition to higher diversity. White neighbourhood space under this process becomes increasingly associated with higher income and socioeconomic privilege.

Finally we estimate a simple model that predicts the gap between median income in what we come to call low-diversity White-dominated (LDW) tracts and those that transitioned from LDW status as a function of change in metropolitan racial and ethnic composition. We anticipate that where LDW tracts decline the most, the gap in median income between LDW tracts and others should be the largest. The idea here is that, again, the growing diversity in neighbourhood space – specifically the pace of that change – transforms remaining White-dominated spaces into wealthier enclaves of Whites. Racial and ethnic composition may mediate this process: where Asians and Latinos are numerous, we may find this relationship attenuated if well-off Whites can find spaces with suitable housing and other amenities where there are significant numbers of these other groups.

Methods

Reibel (2011) provides a useful recent review of the main approaches to neighbourhood taxonomy. He points out that, for many years, social scientists tended not to perform neighbourhood analysis based on racial or ethnic classification schemes. This stems back to the origins of research on residential segregation. Blacks and Whites in the US have been so starkly divided socially and geographically for much of the last 100 years, the notion of neighbourhood classification along the lines of race was redundant. What was important, and remains so, are means by which to assess the levels of segregation between and Whites and Blacks (and not just in neighbourhoods). So segregation measures came of age, as it were, aimed at calibrating the degree to which Blacks and Whites were segregated from one another.

The changes in the racial and ethnic composition of US society in the last few decades require, however, that we adjust the assessment of the relative residential geographies of racialised groups. First we must set aside segregation for a moment. Given the increases in overall racial and ethnic diversity of the US population and its constituent urban areas, our approach begins by measuring the extent to which groups live together using an effective and widely used method of evaluating compositional diversity – scaled entropy. Our classification system grew out of a set of explorations of the impact on scaled entropy of many configurations of ethnic/racial composition spread across six racialised groups (Whites, Blacks, Asians, Latinos, Native Americans and others).

Tract diversity measured by entropy is:

$$E_j = s\left(-\sum_{i=1}^{k}\left(p_i \times \ln(p_i)\right)\right) \tag{1}$$

where E_j references the entropy of census tract j and p_i refers to group i's proportion of a particular area's population. The maximum value of E_j is the natural log of the number of groups (k=6 in our case), and occurs only when a tract's population is evenly divided among the six racial groups. Because this maximum value for E_j is a function of the number of groups in the analysis, we include a scaling constant s (1/ ln(k)) so that E_j ranges from 0 to 1. Entropy is a widely used measure of neighbourhood diversity (White, 1986; Brown and Sharma, 2010; Farrell and Lee, 2011; Sandoval, 2011; Wilson, 2011).

Our scheme produced three basic classes of tracts, the rationale for which[2] appear in Holloway et al (2012):

- 'Low diversity' tracts have scaled entropy values less than or equal to 0.3707, with one group constituting at least 80 per cent of the population.
- 'High diversity' tracts are those with scaled entropy greater than or equal to 0.7414. This insures that (a) no group constitutes more than 45 per cent of the tract's population; (b) a tract's largest two groups have a combined percentage of no more than 80 per cent of the total population; and (c) the third and fourth ranking groups have meaningful representation because the value of E_j is sensitive to the population shares of the third and fourth largest groups. (E_j takes on larger values, that is, more diversity, when the numerically smaller groups in a tract have relatively equal shares of the remaining population. When the remaining population is concentrated in only one of the groups, entropy takes on a lower value.)

• 'Moderately diverse' tracts are those not captured by the other two categories.

We take the additional step of identifying the numerically dominant racial group in the low-diversity and moderate-diversity tracts.

We end up with a taxonomy wherein we talk about places that are 'low diversity, White dominant' (LDW), 'moderately diverse, Asian dominant' (MDA), and so on. We explicitly avoid terms such as 'enclave', 'ghetto' or even 'ethnoburb'. This discursive choice is important. Our system identifies different types of segregation and diversity without attaching a value-laden label, and avoids falling into the territorial trap, so to speak, of drawing attention to places where the density of non-White people is relatively high and thus away from locales where Whites retain a considerable plurality (cf Wright and Ellis, 2006; see also Holloway et al, 2012; Chipman et al, 2012, for details).

In our sample of MSAs, only a few tracts were Native American Indian-dominated, and people claiming 'some other race' numerically dominated only one metropolitan tract (in 1990). Although such tracts do not play a significant role in the narrative we develop about racial segregation and diversity, Native Americans and 'others' do factor in calculations of neighbourhood diversity. Note also that, following convention, we defined as 'Latino' all census respondents who reported having Hispanic origin, regardless of their reported race. We are fully aware of the limitations of this classification, and the other single race categories, to capture the rich and varied histories and contemporary realities of racial identity.

Being interested not only in patterns of both segregation and diversity but also in how they have changed over the last couple of decades, we also had to develop a consistent racial/ethnic taxonomy across a time period. The fact that the US census tinkers with racial and ethnic categorisation in almost every census complicated matters and forced us to adopt the census classification schema from 1990 for all three time periods. This had implications for two groups: Asians and census respondents who claimed a multiracial identity. Our 'Asian and Pacific Islander' category is a combination of two categories on the 2000 Census that mirrors the 1990 classification of Asian and Pacific Islander. Similarly, we aggregated Asian Indians, Chinese, Filipinos, Other Asians, Japanese, Koreans, Vietnamese, Native Hawaiians, Guamanians or Chamorros, Samoans and Other Pacific Islanders from 2010 into 'Asian and Pacific Islander'.

In line with other researchers who have compared 1990 with 2000, and noting that only 2.4 per cent of the population claims 2+ races in

2000 and 2.9 per cent in 2010, we collapsed mixed-race individuals into the set of single-race categories using a method of proportional assignment to non-White categories (cf Logan and Zhang, 2010). Individuals reporting multiple racial categories in 2000 and 2010 were allocated into single, non-White, racial categories using a minority preference proportional weighting algorithm. Specifically, we used the whole-race assignment method – largest group other than White – recommended by the Office of Management and Budget. This technique most closely resembles the choice multiracials would have faced on the 1990 Census form, before the option to 'check more than one (race) box' was available. This crosswalk must occur 'backwards' (we cannot change 1990 racial and ethnic groupings to approximate those in 2000 or 2010; we can match 2000/2010 to match 1990). These decisions produced six race/ethnicity classes: White, Black, Latino, Asian, Native American and 'Some other race' (or 'Other').

Just as racial categories change slightly with each census, so too do some census tract boundaries. As population densities change, the census must rearrange the boundaries of a proportion of tracts. To produce consistent census tracts in 1990, 2000 and 2010, we boundary-matched the 1990 and 2010 boundaries to 2000 tracts, using Census Bureau tables of changed tracts. We dropped from subsequent analysis any tract that had a population of less than 50. This yields a consistent set of tracts and groups for all locations.

This taxonomy applies the same 'grid' to any location within the US; it translates easily across contexts within the country. Unlike some related schemes, our measures of diversity or racial dominance are not relative to the MSA under investigation. Maly (2005) and Logan and Zhang (2010), for example, both adopt variants of such an approach. A relative system has the advantage of tailoring a local context relative to the larger metropolitan region of which it is a part, but in our view the disadvantages outweigh any advantages. The main problem for us is this. Consider two tracts that have precisely the same population and proportions of racial groups, but one is in, say, Los Angeles, and one in Cincinnati. The tracts could be classed differently – a relative system stymies inter-metropolitan comparison.

While our classification system applies generally to places in the US and facilitates straightforward comparisons across time and space (we focus on census tracts in this analysis, but the scheme works at various scales from the nation as whole to states, to MSAs to tract to blocks; see Wright et al, 2014), it is not 'universal' in the sense that it does not easily translate across international contexts. Johnston, Poulsen and Forrest's (see, for example, Johnston et al, 2006; Chapter Two, this volume)

neighbourhood classification translates across national context. Like all such classification schemes, theirs, too, has some weaknesses (see Wright et al, 2011, for a critique and appreciation). One of the main strengths of their taxonomy is that it allows researchers to compare patterns of segregation in different metropolitan areas in different countries. This opens up a set of important research questions concerning public policy, comparative rates of spatial assimilation and differential levels of housing market discrimination in an international context.

We sought to produce a set of classes that made sense and, importantly, that could be mapped. So while a classification scheme with, say, 15 groups might have some strengths, that number of groups would pose a huge, probably insurmountable, cartographic challenge. This is a distinguishing feature of our work and sets it apart from related recent research (see, for example, Logan and Zhang, 2010; Farrell and Lee, 2011; cf Sandoval, 2011; Chipman et al, 2012). By restricting the analysis to six groups, this opens up the possibility to map and visually differentiate between low, moderate and high diversity tracts using proportional shading techniques. This move is only possible using different colours to represent different racial and ethnic groups. It is also an explicit response to the recent call by Johnston et al (2006) to the effect that although geographers have done a lot to infuse studies of segregation with a spatial perspective (notably the work of Wong – see Chapter Three, this volume) there remains plenty of room, as it were, to put even more geography into such research.

The exercise of actually mapping segregation leads research toward thinking about neighbourhood numerical dominance and away from approaches to segregation that summarises the relative (un)evenness of different racialised groups. We have published maps for each of the 53 MSAs and 50 US states in an interactive web-based atlas, www.mixedmetro.com. Some of those maps are reproduced in this chapter as part of our analysis. The cartographic symbology of these maps highlights both the diversity of each tract and the locally dominant racial group. For each state or metropolitan area, the reader can compare maps from the 1990, 2000 and 2010 Census years.

Analysis

We begin by examining the aggregate trends by aggregating counts in all the large MSAs in the US and comparing the distribution of tracts by classification in 1990 with 2010.

Starting with all low diversity neighbourhoods, between 1990 and 2010 these tracts declined from 24,712 to 14,792, driven largely by

massive decline in LDW tracts. This type of tract dropped from 21,332 in 1990 to 11,112 in 2010: a reduction of 48 per cent. The majority of this decline occurred in the first 10 years. Between 1990 and 2000, the number dipped from 21,332 to 15,371, a decline of 5,961. Between 2000 and 2010, the count of LDW tracts shrank by 4,259 (15,371 to 11,112). Put differently, LDW tracts constituted 58.5 per cent of all tracts in these 53 MSAs in 1990; in 2010, they made up 30.5 per cent. The number of LDB tracts (low-diversity, Black-dominated) also declined but not as steeply as LDWs. The number of LDBs dropped from 2,685 in 1990 to 2,472 in 2010, an 8 per cent decrease. Their share of all tracts therefore contracted from 7.4 per cent to 6.8 per cent. In contrast, the number of LDL (low-diversity, Latino-dominated) tracts grew from 672 to 1,164, a 73 per cent increase. The handful of LDA (low-diversity, Asian-dominated) tracts in 1990 more than tripled to a total of 31 by 2010. That 2010 count, however, represents about 0.04 per cent of the total number of tracts in these MSAs.

The decline in the overall number of low-diversity tracts was, of course, taken up by increases in other types of neighbourhood. Between 1990 and 2010, such neighbourhoods grew 80 per cent, from 11,551 to 20,754. Half of that expansion was accounted for by growth in MDWs (moderate-diversity, White-dominated) (7,795 to 13,167, a 70 per cent increase). MDW tracts supplanted LDW tracts as the modal category in 2010. There was an explosive growth in MDLs (moderate-diversity, Latino-dominated) from 1,795 to 4,162, an increase of 132 per cent. MDLs now make up almost 11.5 per cent of the total number of tracts in these large MSAs. The highest rate of growth was recorded among MDAs (moderate-diversity, Asian-dominated): 214 per cent, with 745 such tracts representing about 2 per cent of the total. MDB tracts also increased significantly, from 4.7 per cent to over 7 per cent of the total. Tracts classified as 'high diversity' grew by 738 per cent between 1990 and 2010, from 188 to 905. Most of this growth was in the first half of this period (not shown). From 2000 to 2010, the number of highly diverse tracts increased from 811 to 905.[3]

The aggregate data in Table 6.1 conceal variation by region. To illustrate this, Table 6.2 shows the changing geography of LDW and MDW tracts grouped census region. The West and South were home to the MSAs that had sharpest rates of decline in LDWs. The Northeast and Mid West still had regional rates of decline, 37 and 34 per cent respectively.

Many LDWs transitioned into MDWs over this 20-year period, but certainly not all. In western MSAs, many transitioned into Latino-dominated tracts and in certain MSAs in that region (especially San

Table 6.1: US aggregate transition matrix for the 53 largest metropolitan areas: 1990-2010

Rows = 1990 neighbourhood classification; Columns = 2010 neighbourhood classification. (All MSAs)

1990 \ 2010	White, low diversity	Black, low diversity	Asian, low diversity	Latino, low diversity	American Indian, low diversity	White, moderate diversity	Black, moderate diversity	Asian, moderate diversity	Latino, moderate diversity	American Indian, moderate diversity	Other, moderate diversity	High diversity	Total	% 1990	% 2010
White, low diversity	11,009	54	–	16	–	9,259	423	32	392	–	–	147	21,332	58.52	30.48
Black, low diversity	1	2,052	–	1	–	37	556	–	35	–	–	3	2,685	7.37	6.78
Asian, low diversity	–	–	6	–	–	–	–	3	–	–	–	–	9	0.02	0.09
Latino, low diversity	1	–	–	568	12	–	–	–	91	–	–	–	672	1.84	3.19
American Indian, low diversity	–	–	2	–	1	9	–	1	1	–	–	–	14	0.04	0.04
White, moderate diversity	95	107	5	93	–	3,559	802	431	2,123	–	–	580	7,795	21.38	36.12
Black, moderate diversity	3	259	–	13	–	166	862	14	328	–	–	75	1,720	4.72	7.35
Asian, moderate diversity	–	–	18	–	–	5	3	178	21	–	–	12	237	0.65	2.04
Latino, moderate diversity	3	–	–	472	–	129	23	53	1,090	1	–	24	1,795	4.92	11.42
American Indian, moderate diversity	–	–	–	–	–	–	2	–	–	1	–	–	3	0.01	0.01
Other, moderate diversity	–	–	–	–	–	1	–	–	–	–	–	–	1	0.00	0.00
High diversity	–	–	–	1	–	2	7	33	81	1	–	62	188	0.52	2.48
Total	11,112	2,472	31	1,164	13	13,167	2,678	745	4,162	2	0	905	36,451		

Table 6.2: Changes in the diversity of white dominated tracts by census region: 1990 to 2010

	Low diversity, White			Moderate diversity, White		
	1990	2010	% change	1990	2010	% change
North East	6,290	3,935	−37.44	1,473	2,938	99.46
Mid West	5,718	3,729	−34.78	886	2,171	145.03
South	5,072	1,943	−61.69	2,263	3,910	72.78
West	4,252	1,505	−64.60	3,173	4,148	30.73
Total	21,332	11,112	−47.91	7,795	13,167	68.92

Francisco and Los Angeles), a considerable proportion became Asian-dominated.

To provide a different view of how the 'both/and-' ness of segregation and diversity transitions played out in different places, we highlight patterns gleaned from several selected MSAs. Baltimore, Charlotte and San Diego represent three different MSAs. Baltimore – older, highly segregated along a Black–White divide. Charlotte is in the New South; it is smaller than the other two, but fast growing, like San Diego. San Diego is western, and relatively young; unlike Baltimore, but like Charlotte, it experienced rapid growth in last 20 years.

Table 6.3 shows the distribution of tracts by neighbourhood classification for 1990 and 2010. In 1990, over 80 per cent of tracts in each MSA were white-dominant. (Note that the proportion in all 53 MSAs was 79.9 per cent.) Between 1990 and 2010, the proportion of LDWs dropped considerably, and in each the percentage of MDWs also grew. San Diego experienced rapid growth in the number of Latino-dominated neighbourhoods, from about 12 per cent of the total to about 30 per cent. Growth occurred in both MDL and LDL

## Table 6.3: Changes in tract diversity in three metropolitan areas: 1990 to 2010

	San Diego		Charlotte		Baltimore	
	1990	2010	1990	2010	1990	2010
White, low diversity (%)	41.11	11.24	74.00	32.33	62.86	35.21
White, moderate diversity (%)	40.60	52.18	11.00	44.33	16.08	33.44
Black, low diversity (%)	–	–	9.00	6.33	15.43	19.61
Black, moderate diversity (%)	1.34	0.00	6.00	14.00	5.63	11.25
Asian, low diversity (%)	–	–	–	–	–	–
Asian, moderate diversity (%)	1.34	4.53	–	–	–	0.16
Latino, low diversity (%)	1.85	4.53	–	–	–	–
Latino, moderate diversity (%)	10.07	25.34	–	2.33	–	0.32
High diversity (%)	3.69	2.18	–	0.67	–	–
Number of tracts	596		300		622	

classes. Seven tracts in Charlotte became MDL, two in Baltimore. San Diego had few Black–dominated neighbourhoods in 1990 and none in 2010. In Charlotte the number of LDB tracts declined while MDBs grew, gaining from transitions from both LDB and white-dominated tracts. The count of both LDB and MDB types of tracts in Baltimore increased in 1990 and 2010.

One of the advantages of our method of neighbourhood classification over some others is that we can map a metropolitan area at different points in time. Viewing patterns of neighbourhood racial dominance and diversity cartographically provides additional insight into the structures of urban morphology and change. To illustrate the geographies of neighbourhood transitions in the contemporary US, we provide maps of San Diego and Baltimore in 1990 and 2010.

Both Figures 6.1 and 6.2 depict the geography in the decline in LDW tracts in two very different metropolitan contexts. In San Diego, that decline in LDW tracts (from 245 in 1990 to 67 in 2010) leaves a

Figure 6.1: Changes in both racial segregation and diversity in Baltimore: 1990–2010
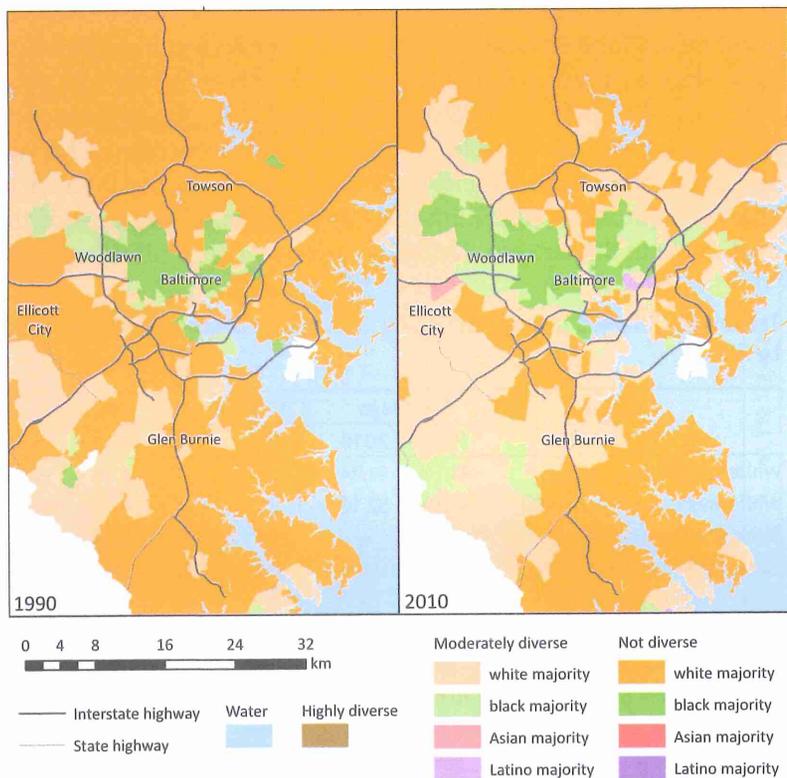
Figure 6.2: Changes in both racial segregation and diversity in San Diego: 1990–2010
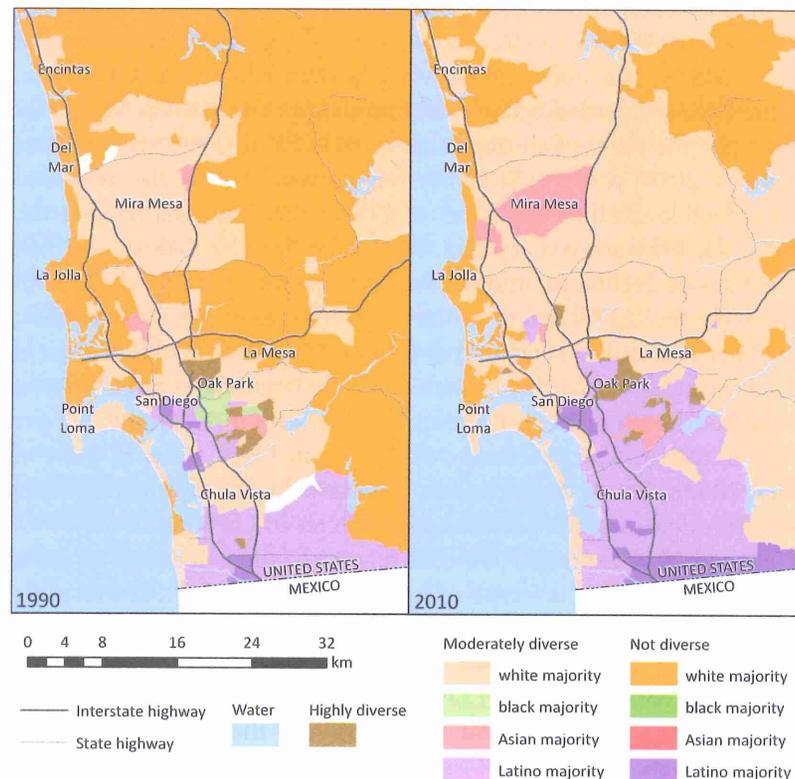
string of LDW neighbourhoods hugging the coast with a few sparsely settled tracts in the rural centre. In Baltimore, the count of LDWs drops from 391 to 219, occurring in the metropolitan area's outer suburbs. Both MSAs also experience growth in minority-dominated low-diversity neighbourhoods. In San Diego's case, the cluster of LDL and MDL tracts projecting north from the Mexican border more than doubles (71 to 177). In Baltimore, the count of Black–dominated tracts also increases, from 125 to 192. Both metropolitan areas have very different histories and different demographic trajectories, yet both exhibit in their own ways what we are calling the 'both/and-' ness of segregation and diversity.

The narrative about neighbourhood transition becomes more nuanced when we consider not just the racial make-up of neighbourhoods, but also the concentration of Whites in White-dominated tracts. In other words, we can build on our basic classification scheme to peel back another layer of the racial dynamics

in MSAs. We simply connect our classification scheme with data on population counts by tracts to observe the changing concentration of Whites in tracts we designate as LDW.

Between 1990 and 2010, the percentage share of LDWs decreased in all MSAs, and not a single MSA bucked this trend. Of course, some MSAs recorded a faster decline than others. In Las Vegas, for example, the share of all tracts that were LDW in 1990 was 68.5 per cent; in 2010, it was 9.7. Other fast-growing MSAs also recorded considerable declines in shares of LDWs (notably Atlanta, Seattle, Orlando, Oklahoma City and West Palm Beach). MSAs that had low rates of decline partitioned into two main groups: (a) those with relatively few LDW tracts to start with (for example, Los Angeles; 22.7 per cent in 1990 and 4.4 per cent in 2010) and (b) older MSAs in the Northeast and Midwest, with relatively large shares of LDW-type neighbourhoods in 1990 (Pittsburgh; 90 per cent in 1990 and 76.7 per cent in 2010). The percentage of Whites in LDW tracts in most of these MSAs did not decline as fast. We show this for each metropolitan area by calculating the percentage of Whites in LDW tracts for 1990, 2000 and 2010 expressed as a ratio relative to the percentage of tracts that are LDW. This is a type of location quotient (LQ). If this value is 1, then the percentage of Whites in LDW equals the percentage of LDWs in a metropolitan area. If it is greater than one, then Whites tend to be concentrated in LDWs.

In 48 out of the 53 MSAs in the analysis,[4] the quotient for 2010 is larger than 2000 or 1990, meaning that the percentage share of Whites in LDW tracts is increasing. In other words, while the share of White-dominated tracts decreased between 1990 and 2010, the rate of decline in the number of tracts was not accompanied by a similar rate of decline in the proportion of Whites in those tracts. This resulted in an increase in the concentration of Whites in LDW neighbourhoods. This is another example of what we are calling the 'both/and-' ness of segregation and diversity; while many White-dominated tracts became MDW or other types, almost every MSA recorded a greater proportional concentration of Whites in those tracts that remained LDW. Some of the most racially diverse or 'immigrant gateway' MSAs (for example, Houston, New York, Los Angeles and Miami) registered some of the highest of these LQs in 2010. Similarly San Antonio is now majority Latino and has the highest LDW LQ for any of the 53 MSAs in the study. Again, segregation and diversity can occur at the time in the same places.

For perspective, we performed a parallel analysis of LDB tracts. Some MSAs have few such tracts; some have none. LDB tracts offer

no consistent pattern of shrinkage. Atlanta, for example, had 112 LDB tracts in 1990, 123 in 2000 and 115 in 2010. Pittsburgh, one of the more segregated MSAs in the US based on Black–White dissimilarity, had 31 LDB tracts in 1990, 29 in 2000 and 24 in 2010. The number of such tracts increased in St Louis in the 20-year period; they stayed the same in West Palm Beach. Using the same LQ formula, however, we can also observe changing patterns of *Black* concentration in LDB tracts. While the degree of Black concentration in Black-dominated tracts is far higher than White concentration is in heavily White-dominated tracts, unlike the patterns we see in Whites, Black concentrations are lower in 2010 than 2000, and lower in 2000 than 1990 – *across the board*. So while Whites are increasingly concentrating in predominantly White tracts, Blacks are becoming less concentrated in predominantly Black tracts.

The final phase of the analysis exploits the temporality of the dataset in another way. We connect patterns of change or lack thereof (1990 to 2000 to 2010) in White-dominated tracts to average tract median household income at the midpoint (2000). As context, we note that the median household income for Blacks has been between 55 and 60 per cent that of Whites over the last few decades. Latinos have median household incomes roughly 70 per cent that of Whites. Asian median household income is higher by about 15 per cent (DeNavas-Walt et al, 2011, p 8).

Table 6.4, Panel A, contains all the transition 'paths' for LDW tracts in 1990[5] and can be read in the following way. Between 1990 and 2000, 15,273 tracts 'transitioned' from LDW to LDW. The chance of that occurring was 0.716. Of those tracts, 10,925 were recorded as LDW in 2010 and, of those, another 4,325 transitioned to MDW in 2010. The chance of a tract remaining LDW throughout was 0.512; the probability of following an LDW-LDW-MDW path was 0.203. The right-hand column records the weighted average median household income in 2000 for each set of transition possibilities.

Tracts that remained LDW from 1990 to 2010 were almost always the wealthiest. Others that started as LDW but transitioned to another category almost always had lower average median household incomes (Dallas, Las Vegas, Miami, Orlando, San Antonio, Seattle, Tampa and DC are the exceptions [not shown]; in these places, LDW-LDW-MDW tracts had higher average median household incomes than LDW-LDW-LDW tracts). Generally speaking, the higher the density of Whites in a path, the higher the median neighbourhood income. The path that stands apart from that comment is the one with 31 tracts that transitioned from LDW to MDW to MDA. The weighted

Table 6.4: Transition paths for low and moderately diverse white-dominated tracts: 1990-2010

All MSAs	1990	2000	2010	Tract count	Transition probability	Weighted median HH income
Panel A						
	LDW	LDW	–	15,273	0.716	61,666
	LDW	LDW	LDW	10,925	0.512	62,695
	LDW	LDW	MDW	4,325	0.203	59,212
	LDW	LDW	MDB	17	0.001	49,870
	LDW	MDW	–	5,830	0.273	52,942
	LDW	MDW	LDW	84	0.004	54,059
	LDW	MDW	MDW	4,931	0.231	54,183
	LDW	MDW	MDB	306	0.014	45,046
	LDW	MDW	MDA	31	0.001	73,468
	LDW	MDW	MDL	335	0.016	42,207
	LDW	MDW	HD	137	0.006	47,939
	LDW	MDB	–	145	0.007	41,870
	LDW	MDB	LDB	47	0.002	43,968
	LDW	MDB	MDB	96	0.005	41,078
	LDW	MDL	–	63	0.003	40,438
	LDW	MDL	LDL	14	0.001	43,197
	LDW	MDL	MDL	46	0.002	39,597
	LDW	HD	–	18	0.001	45,481
LDW total				21,332	1.000	59,001
Panel B						
	MDW	LDW	–	96	0.012	65,802
	MDW	LDW	LDW	40	0.005	64,566
	MDW	LDW	MDW	54	0.007	66,857
	MDW	LDB	–	30	0.004	45,708
	MDW	LDB	LDB	29	0.004	45,911
	MDW	LDL	–	20	0.003	34,705
	MDW	LDL	LDL	19	0.002	34,789
	MDW	MDW	–	4,898	0.628	49,958
	MDW	MDW	LDW	51	0.007	49,132
	MDW	MDW	MDW	3,368	0.432	50,539
	MDW	MDW	MDB	256	0.033	42,210
	MDW	MDW	MDA	182	0.023	69,286
	MDW	MDW	MDL	807	0.104	44,381
	MDW	MDW	HD	233	0.030	54,579
	MDW	MDB	–	696	0.089	38,967
	MDW	MDB	LDB	77	0.010	46,773
	MDW	MDB	MDW	46	0.006	34,212
	MDW	MDB	MDB	508	0.065	38,362

(continued)

Table 6.4: Transition paths for low and moderately diverse white-dominated tracts: 1990-2010 (continued)

All MSAs	1990	2000	2010	Tract count	Transition probability	Weighted median HH income
Panel B (continued)						
	MDW	MDB	MDL	53	0.007	35,574
	MDW	MDA	–	226	0.029	61,945
	MDW	MDA	MDA	208	0.027	61,677
	MDW	MDL	–	1,232	0.158	38,604
	MDW	MDL	LDL	74	0.009	36,738
	MDW	MDL	MDW	33	0.004	34,272
	MDW	MDL	MDL	1,106	0.142	38,919
	MDW	HD	–	597	0.077	43,313
	MDW	HD	MDW	53	0.007	37,706
	MDW	HD	MDB	29	0.004	36,722
	MDW	HD	MDA	37	0.005	52,041
	MDW	HD	MDL	151	0.019	41,585
	MDW	HD	HD	327	0.042	44,516
MDW total				7,795	1.000	46,880

average median household income for these tracts is over US$73,000 and echoes the aggregate patterns of household income we find in the country as a whole. This particular finding is affected by six high-income neighbourhoods that followed this path in San Francisco. We also note that in every MSA but one, Las Vegas, the average median household income is higher in LDWs than in other tracts. In over half, it exceeds US$10,000; in Los Angeles, this difference is over US$40,000.[6]

By way of contrast, we repeat the same analysis for MDW tracts (Panel B). It is an obvious thing to say, even removing the transition sequences that had 10 or fewer tracts, Panel B shows that range possibilities for tracts that started out in 1990 is far greater than for those that started as LDW. The most common sequence of transition is MDW-MDW-MDW (MDW*3), but this probability is 0.432, meaning that 57 per cent of the tracts that started in 1990 as MDW ended up as some other status. Individual MSAs that had a relatively limited set of transition types tended to be in the Northeast or Mid West. Columbus, for example, had three (MDW*3; MDW-MDW-MDB; MDW-MDB-MDB). Dallas, on the other hand, had 18. MSA size, more than anything else, shaped the variety of transition path types, reminding us that urban racial diversity (usually immigrant-driven) remains a large MSA phenomenon. As before, adding a consideration of household income reveals a pattern wherein those tracts that become Whiter

or more Asian are associated with higher neighbourhood median household incomes. Tracts that became Black or Latino-dominated were poorer. MDW neighbourhoods in 1990 that became highly diverse (HD) in 2010 tended to have median incomes in between those of Whites and non-Whites.

We can look at this relationship between racial diversity and White relative wealth from a different angle, by changing the scale of analysis. We ask how these transition sequences, these pathways, relate to overall metropolitan racial and ethnic change. Again, we focus on heavily White tracts that did not transition – the LDW*3s. Hypothesising a positive relationship between median household income in LDW*3 tracts averaged across the MSA and *metropolitan*-level diversity (that is, where Ej now references the entropy of metropolitan area j), we find the correlation between median household income in LDW*3 in 2000 by MSA entropy in 2000 to be +0.56 (significant at $\alpha=0.01$). In other words, metropolitan areas that have the higher median incomes in White-dominant neighbourhoods that remained so from 1990 to 2010 also tend to be the more racially diverse.

Conclusion

The inauguration of Barack Obama did not erase the colour lines in US society (Kennedy, 2011); in some subtle ways, it actually redrew them. Using several different perspectives on the changing racial demarcations in large US urbanised areas, this chapter shows the complexity of these patterns and how they vary by geographical context. In most instances, however, we also demonstrate that Whites leverage considerable advantage from their segregation, and those Whites able to retain this spatialised form of their possessive investment in Whiteness are increasingly the most well-off.

This chapter is not so much concerned with 'White flight' per se in the classic Schelling sense, that is, seeking tipping points and so on. Rather, we used a new neighbourhood racial taxonomy to isolate new forms of White concentration and the persistence of *White* segregation. Our chapter contributes to the literature on Whiteness studies. Such scholarship challenges the idea that Whites are unmarked, ordinary and taken-for-granted. Accordingly, research on such White segregation moves Whites from being a point of reference and off to the side to centre-stage.

Our chapter also asks other questions relating Whites and Whiteness to racial diversity. What do increases in such diversity hold for US metropolitan areas? How does that actually translate into everyday life? There is a tendency in recent work on residential diversity to be celebratory. The focus on residential mixing and multiethnic metros sometimes comes very close to an anodyne understanding of our contemporary social condition. It's as if the subprime crisis, with its devastating effects particularly concentrated in non-White neighbourhoods, hardly happened. Moreover, the disconnection between the work on super-diversity, hyper-hybridity, diaspora space, new cosmopolitanisms and so on and the segregation/inequality literature is vast. Even when blending in new forms of social theory and offering new critiques of old approaches, much of this research is simply reinvented liberal multiculturalism or hybridity (dressed up in new terms – 'super-diversity', or some compound noun involving cosmopolitanism) divorced from class politics and global political economy dynamics.

Notes

[1] Sandy Wong, Akikazu Onda and Jonathan Chipman, Director of the Laboratory for Geographic Information Science and Applied Spatial Analysis at Dartmouth College, provided valuable research support. Grants from the National Science Foundation and the Russell Sage Foundation as well as a CompX Faculty grant from the Neukom Institute for Computational Science at Dartmouth College helped make this research possible.

[2] The thresholds used are specific to analyses using six racial groups. They could be modified for other studies using a different number of groups in the analysis.

[3] Tracts with significant numbers of Native Americans are few in number but regionally important. The number of metropolitan area tracts that were low diversity Native American stayed about the same.

[4] Dallas, Portland, Raleigh, Richmond and San Diego were the exceptions.

[5] Transition types involving less than 10 tracts (for example, LDW-LDW-LDB where $n=1$) are not included.

[6] This finding needs more analysis (space limits preclude it here), but we observe for now that between 1990 and 2010, Las Vegas was the fastest growing MSA in this sample. LDWs in Las Vegas were likely relatively poorer neighbourhoods in the building boom. And this place attracted lots of Latino and Asian migrants from southern California who were, by Las Vegas standards, relatively prosperous.

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