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The residential segregation patterns of whites by socioeconomic status, 2000–2011

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Abstract

In light of increasing racial and ethnic diversity, a recent housing crisis, and deep economic recession, arguments pertaining to the role of socioeconomic status (SES) in shaping patterns of racial/ethnic segregation remain salient. Using data from the 2000 decennial census and the 2007–2011 American Community Survey, we provide new evidence on the residential segregation patterns of whites from minorities by SES (income, education, and poverty). Results from our comprehensive analyses indicate that SES matters for the segregation patterns of whites from minorities. In particular, we find that whites as a whole are less segregated from higher-SES minority group members than lower-SES ones. Among whites, those of higher SES are more segregated from blacks and Hispanics as a whole and less segregated from Asians, indicating the importance of SES differentials across racial/ethnic groups in shaping residential patterns. We also find that during the 2000s, white-black segregation remained stable or declined, while whites became more segregated from Hispanics and Asians by all SES indicators. Fixed-effects models indicate that increasing white-minority SES segregation was fueled in part by increases in a metropolitan area's immigrant and elderly populations, minority poverty rate, and home values, while declining segregation was associated with rising education levels and new housing construction.

Keywords

Residential segregation; Socioeconomic status; Racial inequality; Metropolitan area

1. Introduction

A longstanding research tradition has been devoted to documenting and understanding decades of racial and ethnic residential segregation in metropolitan America (Frey and Farley, 1996; Iceland, 2009; Logan and Stults, 2011; Logan et al., 2004; Massey and Denton, 1993). This literature is rich in its explorations of the causes of minority segregation from whites, including racial prejudice and discrimination (Massey and Denton, 1993; Turner and Ross, 2005), racial/ethnic residential preferences (Charles, 2000, 2006; Clark, 2002; Emerson et al., 2001; Krysan and Farley, 2002), and residential sorting along class lines (Adelman, 2004; Alba et al., 2000; Clark and Ware, 1997; Darden and Kamel, 2000; Denton and Massey, 1988; Fischer, 2003; Iceland and Wilkes, 2006; Iceland et al., 2005; Massey and Fischer, 1999; St. John and Clymer, 2000). The latter explanation—racial and ethnic differences in socioeconomic (SES) levels—has received considerable scholarly attention, but results from these studies have concluded that while SES matters for all

minority groups, it cannot fully account for the persistently high levels of black-white segregation in particular.

In light of increasing racial and ethnic diversity (Lee et al., 2012), a racialized foreclosure crisis (Rugh and Massey, 2010), and deep economic recession, arguments pertaining to SES remain salient in contemporary discussions of multiethnic residential segregation. If socioeconomic disparities among and/or between racial groups, for instance, have widened since 2000, this may be reflective of greater spatial distance between non-Hispanic whites and minorities. Indeed, prior work has suggested that compared to African Americans, income and education seem to matter more for the residential integration of Hispanics and Asians (Fischer, 2003; Iceland and Wilkes, 2006; Logan et al., 2004). The extent to which advantaged whites inhabit neighborhoods with non-whites of comparable socioeconomic levels is indicative of the residential opportunity structure across the broader urban landscape (Dwyer, 2010; Massey, 1996). Thus, an in-depth inspection of the residential segregation of whites by SES is needed to understand fully the extent to which race and class continue to drive the residential decision-making of 21st century whites.

In this paper, we provide new evidence on the residential segregation patterns of whites by socioeconomic status in US metropolitan areas. Our analysis is guided by the following four research questions.

1. Do patterns of white segregation by SES differ from those previously documented among minority groups by SES?
2. Do white segregation levels vary across SES levels and minority reference groups?
3. How has white-minority segregation by SES changed since 2000?
4. What are the metropolitan characteristics associated with changes in the socioeconomic segregation of whites from minorities?

We use data from Census 2000 and the 2007–2011 American Community Survey (ACS) to document the patterns and trends of white-minority residential segregation on the basis of socioeconomic status. Specifically, we compute segregation measures using the dissimilarity index and explore multiple socioeconomic indicators (income, poverty, and education) with non-Hispanic whites as the group of interest and blacks, Hispanics, and Asians as the comparison groups. Given the recent demographic and economic transformations in urban America, this paper also importantly investigates how white-minority socioeconomic segregation has changed since 2000. Finally, we conduct fixed-effects regression models in order to examine how changes in several characteristics of the metropolitan area (e.g., socioeconomic, housing, labor) are associated with changes in specific white SES segregation from each minority group during the 2000s. In short, this study contributes a thorough examination of the current state of white-minority residential segregation by SES, including recent changes and factors associated with such changes in white SES segregation over the last decade.

2. Background

Racial/ethnic residential segregation and the factors that contribute to it are still of major interest to scholars and policy makers alike. Recent reports using the 2010 census show that despite the continued slow and steady decline in black–white segregation over the past 40 years, African Americans remain highly segregated from whites across metropolitan America (Glaeser and Vigdor, 2012; Logan and Stults, 2011). By contrast, the segregation of Hispanics and Asians has remained at moderate levels and changed little, but as their numbers grow so does their propensity to live in urban areas with other co-ethnics (Logan and Stults, 2011). In addition, amidst rising income inequality and a serious economic

downturn in the 2000s, there are early indications that the affluent and the poor have become increasingly segregated in general, and that poor black and Hispanic families have particularly become more isolated in high-poverty neighborhoods compared to whites (Logan, 2011; Reardon and Bischoff, 2011a). The implication is that the influence of socioeconomic status on racial/ethnic segregation patterns may be changing and thus requires a closer examination.

Debates surrounding the explanations of residential segregation generally cover the role of racial prejudice and discrimination, residential preferences, and socioeconomic dimensions (income, education) (Charles, 2003; Clark, 1986; Clark and Ware, 1997; Krysan and Farley, 2002; Massey and Denton, 1993). The persistently high segregation levels of blacks compared to other minority groups has led many to conclude that the relative influence of sociodemographic and economic variables on shaping the residential outcomes for blacks is minimal compared to broader stratification forces such as racial prejudice and discrimination in the housing market (Charles, 2003; Massey and Denton, 1993; Massey and Fischer, 1999). Indeed, results from audit studies indicate that while overt discrimination in housing searches is less pervasive than in the past, blacks and Hispanics still encounter nontrivial adverse treatment in both the home sales and rental markets (for an overview, see Pager and Shepherd, 2008; Turner and Ross, 2005). This research suggests that race trumps other factors, such as income or education, if minority groups are unable to convert their human capital resources into less segregated neighborhoods with ostensibly better amenities. Accordingly, the level of residential integration is reflective of a social hierarchy that places non-Hispanic whites at the top and African Americans at the bottom, which in part explains the incongruence between blacks' low locational returns and their socioeconomic gains (Alba and Logan, 1991; Charles, 2003).

A robust literature is devoted to understanding how racial residential preferences serve to maintain high levels of segregation (Charles, 2000, 2006; Clark, 2002; Krysan and Farley, 2002). Despite recent evidence indicating more liberalized attitudes of whites regarding the residential integration of racial minorities, considerable debate still exists over whites' willingness to share neighborhoods with a sizable black or immigrant presence (Charles, 2006; Emerson et al., 2001; Krysan and Bader, 2007; Krysan et al., 2009). For instance, whites often stereotype neighborhoods based on race by associating negative qualities with black residents, such as high crime, poor schools, and declining property values (Charles, 2006; Ellen, 2000). At the same time, strong own-group preferences sustain segregation through blacks' desire to live in neighborhoods that are at least half-black, mainly because of fear of white hostility and discrimination (Adelman, 2005; Krysan and Farley, 2002). In general, these studies indicate that in-group preferences are stronger among whites than among other minority groups (Charles, 2006; Clark, 2002).

While the majority of the early work on preferences focused on whites and blacks, there has been an emergence of research examining Hispanics, Asians, and immigrants in multiethnic contexts, as well as studies that dissect preferences by SES (Charles, 2006; Clark, 2009; Lewis et al., 2011; Swaroop and Krysan, 2011). Emerson and others (2001) employed a factorial experiment to assess the residential preferences of whites while accounting for class-based neighborhood characteristics (e.g., property values, crime rates). Although the authors found that whites preferred to live in neighborhoods inhabited by few blacks, they did not find a significant relationship when Hispanics and Asians were considered. A recent study using a similar approach, however, discovered that whites were just as averse to living with a significant portion of Hispanics as they were to blacks, but were comfortable sharing neighborhoods with Asians (Lewis et al., 2011). The authors also note that minorities' preferences were not driven by race, but rather over concerns of the quality of local schools and the extent of neighborhood crime. Indeed, examining the preferences of multiple ethnic

groups can result in a nuanced view. For example, Swaroop and Krysan (2011) found that even after accounting for local socioeconomic characteristics, whites were less satisfied in neighborhoods with higher shares of minorities, while blacks' and Hispanics' neighborhood evaluations were much less about the racial makeup and more about the quality of the local living conditions. Taken together, segregation patterns are not driven entirely by whites' preferences, but also those held by blacks, Hispanics, and Asians, and how they intersect with SES-related factors (Clark, 2009).

2.1. Previous research on segregation and SES

The idea that differences in socioeconomic conditions help to explain racial/ethnic residential segregation is best understood from the spatial assimilation perspective. From this logic, more affluent and well-educated households are simply able to live in better neighborhoods often located in suburban white communities with superior amenities (Alba and Logan, 1993; Massey and Denton, 1985). Other economic market forces, such as job locations, also play a role in maintaining SES inequalities that separate whites from minorities (Clark, 1986; Wilson, 1987). In addition to socioeconomic mobility, acculturation is a vital component to spatial mobility when immigrant groups are considered (Iceland, 2009; Rosenbaum and Friedman, 2007). This provides some reasoning as to why segregation may be higher in some immigrant gateways because tight ethnic communities provide important economic and emotional resources for recent immigrants that help ease the adaptation process (Alba and Nee, 2003; Clark and Blue, 2004). Observed racial/ethnic disparities across income and education should ultimately produce a certain amount of segregation across racial/ethnic groups, but after accounting for these differences, white-minority segregation should be more moderate.

Previous studies that examined how residential segregation patterns vary by SES have generally shown that Asians and Hispanics have been more successful than blacks in converting their socioeconomic gains into less segregated, higher-quality neighborhoods (Denton and Massey, 1988; Fischer, 2003; Iceland and Wilkes, 2006; Massey and Fischer, 1999; Rosenbaum and Friedman, 2007). That is not to say that SES does not explain some of the high levels of black segregation, but that other unobserved factors potentially related to race (i.e., prejudice, discrimination) may be operating here (Darden and Kamel, 2000; Denton and Massey, 1988; Farley, 1995; Iceland et al., 2005; Massey and Fischer, 1999). For example, while middle-class blacks tend to be more integrated with whites than poorer blacks, the communities in which middle-class blacks reside are less affluent and more exposed to crime than those of their middle-class white counterparts (Adelman, 2004; Alba et al., 2000). Other research reported that while there appears to be little difference in the segregation of whites and blacks of the same SES along the SES continuum, high-SES blacks were more integrated with all whites compared to their low-SES counterparts (Iceland et al., 2005; St. John and Clymer, 2000). Likewise, Clark's (2007) study of black suburbanization indicated that increases in human capital (income, education, and homeownership) were associated with a greater propensity to live in more integrated, suburban communities.

Studies that expanded their focus beyond whites and blacks to include Hispanics and Asians have also found that SES matters for the residential separation of whites and these minority groups (e.g., Clark and Blue, 2004; Clark and Ware, 1997; Denton and Massey, 1988; Fischer, 2003; Iceland and Wilkes, 2006; Logan et al., 2004; Massey and Fischer, 1999). Iceland and Wilkes (2006), for instance, found that socioeconomic differences played a large role in the segregation patterns of Hispanics and Asians, but less so for African Americans. However, the authors (2006) concluded that the effect of SES on black-white segregation increased during the 1990s, thus signaling a potential increase in the spatial assimilation of urban blacks. In their analyses of large multiethnic immigrant gateways,

Clark and colleagues found that income and, particularly, education had significant effects on the residential integration of Hispanics, Asians, and blacks with whites (Clark and Blue, 2004; Clark and Ware, 1997). Logan et al. (2004) also found that as the incomes for all three minority groups approached parity with white income levels, so did their respective residential integration. In addition, Fischer (2003) showed that from 1970 to 2000, the relative importance of income in shaping segregation patterns significantly increased, but at the same time, poor blacks remained the most segregated minority group.

In summary, the literature suggests that while the role of race may have declined in recent decades, particularly for blacks, socioeconomic differences may have increased in explaining residential segregation patterns. We reiterate that not one explanation for segregation—racial prejudice and discrimination, residential preferences, socioeconomic status—alone accounts for the residential segregation of whites from minority groups. Rather, residential decision-making is a complex and dynamic process that encompasses all three of these factors to influence residential mobility, or lack thereof, and the broader metropolitan racial/ethnic landscape. With this in mind, we provide an updated examination of the role of socio-economic status in shaping segregation patterns of whites from blacks, Hispanics, and Asians from the perspective of the average white resident in urban America.

The present study builds upon existing studies of racial segregation and socioeconomic status in three ways. First, we provide a comprehensive account of white segregation patterns across SES (income, education, poverty) by reporting average segregation scores for all possible combinations of SES for whites and each minority group (these detailed comparisons are missing in the literature). Second, we update previous work on minority-white SES segregation by using the most recent ACS data (2007–2011) to analyze changes in white segregation from minority groups on the basis of SES during the most recent decade. Lastly, we run fixed-effects regression models to systematically gauge which metropolitan area characteristics (e.g., racial/ethnic composition, poverty, unemployment) are associated with changes in white-minority SES segregation. Our study is the first among those that have focused on white SES to conduct these rigorous analyses.

3. Data and methods

The data for this analysis come from the 2000 decennial census and the 2007–2011 American Community Survey (ACS). We use census tracts as our measure of neighborhoods. Census tracts generally have a population between 2500 and 8000, and are by far the unit most used in research on residential segregation (e.g., Logan et al., 2004; Massey and Denton, 1993). We use the Longitudinal Tract Database crosswalk files to normalize census tract boundaries from 2000 to 2010 tract boundaries (Logan et al., forthcoming). The benefit of this approach is that comparisons over time are unaffected by changes in tract boundaries from one census to the next.

We choose to focus our study of SES segregation on metropolitan areas because they approximate the housing and labor markets in which racial and ethnic groups reside and work.¹ To ensure comparability of the two time points, we use 2009 metropolitan area boundaries, as defined by the Office of Management and Budget. By these definitions, there are 366 metropolitan areas in the US—each with a population of at least 50,000 people. However, we restrict all of our analyses to the top 100 largest metropolitan areas (based on the 2007–2011 ACS population counts) for two reasons.² First, because the ACS is a

¹Given our research questions, we are taking the typical approach of looking at segregation across census tracts within metropolitan areas; however, we acknowledge that it is important to examine segregation generated at multiple geographic scales, including places, counties, and regions (see Fischer et al., 2004; Massey et al., 2009).

smaller survey (1 in 15 sample) than the decennial census (1 in 6 sample), five years of summary file data are needed to produce estimates of the composition of all neighborhoods in the US, which results in larger standard errors. Prior work has also demonstrated that segregation indexes are less reliable when computed with relatively small populations.³

3.1. Measuring segregation and SES

To measure residential segregation we use the dissimilarity index (D). A measure of evenness, dissimilarity captures the differential distribution of the subject population vis-à-vis a reference group across neighborhoods in a metropolitan area. Dissimilarity is computed as:

$$D = \frac{1}{2} \left(\sum_{j=1}^n |x_i/X - y_i/Y| \right)$$

where n is the number of tracts in a metropolitan area, x_i is the population of the white group of interest in tract i , X is the total metropolitan population of the white group of interest, y_i is the population of the minority reference group in tract i , and Y is the total metropolitan population of the minority reference group. The index ranges from 0 (complete integration) to 1 (complete segregation), and indicates the proportion of a group's population that would have to change residence (and be replaced by the other group) for each neighborhood to have the same proportion of that group as the total metropolitan area. By convention, indexes less than .30 indicate low segregation levels, scores within .30 and .60 are moderate, and those over .60 indicate high levels of segregation (Massey and Denton, 1993).⁴

This study is principally concerned with the residential segregation patterns of non-Hispanic whites of varying SES levels. Because the Census Bureau does not distinguish Hispanic origin by race for the socioeconomic variables of minority groups, the racial and ethnic designations of the reference groups used in all segregation calculations are broader panethnic categories of black, Hispanic, and Asian. While there is slight overlap in panethnic groups (e.g., black Hispanics are in both blacks and Hispanics), our segregation indexes are pair-wise comparisons in which the two groups compared are mutually exclusive. We examine three indicators of socioeconomic status: (1) income, (2) education, and (3) poverty. Income and education have been by far the most commonly evaluated markers of class in segregation studies that intersect race and SES (e.g., Clark and Ware, 1997; Darden and Kamel, 2000; Fischer, 2003; Iceland and Wilkes, 2006; Iceland et al., 2005; St. John and Clymer, 2000). We split income groups into four categories, represented by approximate household income quartiles: (1) less than \$25,000; (2) \$25,000–49,999; (3) \$50,000–99,999; and (4) \$100,000 or more. For consistency across the two time points, we adjust both 2000 and 2007–2011 household incomes to 2010 dollars using the Consumer

²These metropolitan areas range from Los Angeles-Long Beach-Santa Ana, CA with the largest population at 12,777,695 to Harrisburg-Carlisle, PA with a

³Random factors and geocoding errors are more influential in determining the settlement patterns of racial and ethnic groups when fewer members are present, causing these indexes to contain greater volatility (Iceland et al., 2002). We also conducted analyses using the top 50 largest metropolitan areas and found no substantive differences in our results.

⁴Other studies of SES segregation have used the isolation and/or interaction index to measure segregation (e.g., Clark and Ware, 1997; Iceland et al., 2005). In this analysis, we calculated interaction indexes to gauge the level of contact between white SES groups and minorities of varying SES, but we choose to focus on the dissimilarity results for three reasons. First, the interaction results are substantively similar to the dissimilarity results, such that higher white dissimilarity is, on average, accompanied by lower white-minority interaction. Second, exposure indexes are sensitive to the relative size of the group population whereby contact is higher when reference group populations are larger, and here we are more concerned with how *evenly* whites and minorities are distributed across neighborhoods by SES. Finally, our focus on dissimilarity keeps our analysis succinct and parsimonious, given the already numerous white-minority by SES comparisons presented in the text.

Price Index. Educational attainment is grouped into four categories: (1) less than high school, (2) high school graduate, (3) some college, and (4) college graduate. We also include poverty status, which is simply categorized as the population who are poor and those who are not (Fischer, 2003; Iceland and Wilkes, 2006). These SES groups are cross-tabulated with each racial and ethnic group to be used as inputs into our segregation indexes.⁵

3.2. Analytical strategy

Our analysis begins with a descriptive account of the residential segregation patterns of whites and minority groups by SES over the last decade. Specifically, we present mean dissimilarity indexes for whites and minorities at all SES levels weighted by the size of the metropolitan white population of the socioeconomic group being examined. We consider this the most appropriate approach because it puts the segregation situation of the average white at the forefront, which is the substantive focus of our study. For example, the affluent white-black segregation index is weighted by the number of affluent white households, which represents the situation where the average affluent white household lives. This type of multi-SES comparative view provides a thorough look into white segregation, such as by examining the segregation of low-status whites from high-status minorities and vice versa.

To better understand the metropolitan characteristics associated with changes in white SES segregation levels, and whether these effects are consistent across minority groups, we conduct a series of race-specific fixed-effects regression models for each SES variable. We follow past research on racial/ethnic residential segregation and SES in our choice of metropolitan correlates to examine (Iceland and Wilkes, 2006; Jargowsky, 1996; Logan et al., 2004; Reardon and Bischoff, 2011b). The spatial distribution of individuals and households by socioeconomic status should be influenced by changes in a metropolitan area's socioeconomic and demographic compositions, as well as changes in the labor and housing markets (Jargowsky, 1996; Logan et al., 2004). Accordingly, we include the following variables in our fixed-effects models: white and minority group's proportion of the population, proportion of the minority group that is foreign-born, white-to-minority group income ratio (average household incomes), white and minority group educational attainment compositions, white and minority group poverty rates, white and minority group unemployment rates, metropolitan population size (logged), occupational composition (proportions white-collar, white-collar low-paying, and blue-collar jobs),⁶ proportion of the population aged 65 and over, proportion of housing units recently built, homeownership rates, and the mean value of owned homes in the metro area (logged).

Given the time-series cross-sectional data structure, fixed-effects regression is an appropriate modeling strategy to analyze changes in white-minority SES segregation. An important advantage of fixed-effects modeling is that it removes the effects of unobserved stable metropolitan-specific characteristics, thus reducing the risk of endogeneity bias (Allison, 2009). Although not explicitly causal, our examination of within-metro change over the 2000s provides conservative estimates of the sociodemographic, housing, economic, and labor factors associated with changes in socioeconomic segregation. Moreover, by removing intermetropolitan variation, we are able to explore racial/ethnic differences in white SES segregation by running models separately for blacks, Hispanics, and Asians. In this study, we rely on the change score approach to fixed-effects modeling,

⁵It should be noted that our population universe changes across socioeconomic status variables. Segregation scores for educational attainment are limited to individuals aged 25 and over, income scores only include households and omit those in group quarters, while poverty indexes are specific to those in the poverty universe—which omits people in institutions, military group quarters, college dormitories, and unrelated individuals under 15 years old.

⁶Examples of white-collar occupations are those in management, business, science, and arts; lower-paying white-collar refers to jobs that are service, sales, and office-related; and blue-collar occupations are those in construction, maintenance, production, and transportation.

which is ideal for analyzing changes with two periods of data (Allison, 2009; Johnson, 2005). Our race-specific fixed-effects regression models take the form of the following change score equation:

$$(Y_{i2} - Y_{i1}) = \beta_1(X_{i2} - X_{i1}) + \alpha_i + e_i$$

where $(Y_{i2} - Y_{i1})$ is the change in the segregation index of the particular white SES group of interest from the entire minority group for metropolitan area i , $(X_{i2} - X_{i1})$ represents the change in metropolitan area characteristics between the two periods, β_1 are the coefficients for these predictors and can be interpreted as a change in X by one unit results in an increase or decrease in the segregation index by β_1 units for a given metro area, α_i is the constant term based on the nondifferenced means of the variables, and e_i is the error term. To execute our fixed-effects models, the data are pooled into metropolitan area-period observations, yielding a final analytic sample of 200 metro-periods. Due to this sort of clustering, we produce robust standard errors to account for the correlated error structure in our data.

4. Results

Table 1 presents population/household distributions by socioeconomic status and race/ethnicity for our sample of US metropolitan areas in 2000 and 2007–2011. Several striking class differences emerge across racial and ethnic groups over the last decade. First, blacks and Hispanics are substantially more likely to be in the lowest socioeconomic categories by every indicator compared to non-Hispanic whites and Asians. For example, the share of black households in the lowest income quartile in 2007–2011 (34.7%) is roughly twice as high as the percentage of whites (17.6%) and Asians (17.8%). There is a stark contrast in the level of affluence (\$100 k+) as well; the affluent shares of Asian and white households more than double those of blacks and Hispanics. It is therefore unsurprising that blacks and Hispanics are roughly two to three times as likely to be impoverished than are whites and Asians. There are also racial/ethnic disparities in educational attainment, such that Asians and whites are the most educated groups with Hispanics and blacks having finished the least amount of schooling. In 2007–2011, for example, over half of all Asians held at least a bachelor's degree compared to only one in five blacks and 14% of Hispanics. A significant share of Hispanics have less than a high school degree, which is indicative of the lower education levels held by Latin American immigrants (Bean and Stevens, 2003; White and Glick, 2009).

Since 2000, there have been some interesting changes in the SES distributions of all racial and ethnic groups. For example, with the exception of Asians, all groups have become slightly poorer and experienced slight increases in their shares of the lower income categories (less than \$50 k). However, all four major racial/ethnic groups in metropolitan America have become decidedly more educated, as evidenced by substantial declines in the percentages of the population without a high school education, accompanied by average increases in the percentages of college degrees. Overall, the figures in Table 1 highlight how SES delineates the advantaged (whites and Asians) and the disadvantaged (blacks and Hispanics), and these disparities are likely to play a role in shaping patterns of racial/ethnic residential separation.

4.1. White segregation patterns by SES

To evaluate segregation patterns by household income, we present white dissimilarity indexes from minority groups for 2007–2011 and the percentage change over the last decade in Table 2. From the multiple racial and SES comparisons we report several findings. First, consistent with past research, whites are more segregated from blacks than they are from

Asians and Hispanics, and this is largely seen for all income category comparisons. For example, all whites have a .626 dissimilarity index from all blacks, while it is .494 and .476 for Hispanics and Asians, respectively. In addition, affluent whites (\$100 k or greater) are highly segregated from all blacks and all Hispanics (.711 and .601, respectively) and more moderately segregated from all Asians at .496. Second, mean white segregation is higher from all blacks and Hispanics for each increase in white income category, whereas white segregation levels from all Asians declines modestly as income increases. In general, higher-SES minority group members are less segregated from all whites than lower-SES minority group members, which is in line with results from prior work that focused on minority-white segregation (Clark and Ware, 1997; Iceland and Wilkes, 2006; Iceland et al., 2005).

A third important finding is that when we focus on the segregation of affluent whites from varying minority income groups, whites are more integrated with minorities of higher incomes. This suggests that, consistent with spatial assimilation, some measure of white segregation from minorities (blacks and Hispanics in particular) is due to SES differentials across groups. Fourth, income seems to matter more for white segregation when Asians are considered, and to a lesser extent Hispanics, than it does for black households. Our multiple comparisons flesh out this finding: first, the difference in affluent white segregation from the poorest (less than \$25 k) and richest (\$100 k+) income groups is .142 (.810–.668) for blacks, while the difference is roughly .22 for both Hispanics and Asians. Additionally, when affluent minorities are the reference group, the difference in segregation between affluent whites and poor whites is only .031 (.699–.668) for blacks, but the gap is substantially higher for Hispanics at .088 (.618–.530) and especially for Asians at .167 (.681–.514). When examining white-minority segregation of the same income group, we find that segregation patterns do not vary that much across income categories for blacks compared to Hispanics and Asians. In particular, high-income whites are considerably less segregated from high-income Asians than are low-income whites from low-income Asians. While we cannot definitively explain this pattern with our data, it could be that low-income Asians—a high proportion of whom are foreign-born—may be more likely to rely on ethnic networks when finding jobs and residences than higher-income Asians, and this draws them into living in ethnic enclaves (Portes and Rumbaut, 2006).

A final takeaway from Table 2 concerns changes in white-minority income dissimilarity since 2000. In general, average white-minority segregation increased at every higher minority income category across all minority groups, but the magnitude of the increases was much higher for Hispanics and Asians than it was for black households. White segregation slightly declined across white income groups when the reference group is all blacks, but increased from all Hispanics and all Asians during the 2000s. What is more remarkable is the extent to which non-Hispanic whites have become increasingly segregated from minorities with higher household incomes, and this pattern is more stark when Hispanics and Asians are considered. Descriptively, these patterns tend to mirror those from recent studies reporting an increase in income segregation and affluent segregation in particular (Reardon and Bischoff, 2011a, 2011b).

Table 3 supplements the household income results with an examination of white segregation by poverty status over the last decade. Indeed, the residential patterns here resemble those presented for income in that whites are generally more segregated from blacks than from Hispanics and Asians. Additionally, the most recent figures show that whites are more integrated with minorities who are not poor, yet white dissimilarity from nonpoor blacks remains high at .622. Unsurprisingly, nonpoor whites are more segregated from all blacks and Hispanics, but less segregated from all Asians than are poor whites, which reflects the poverty differentials for these groups shown in Table 1. Moreover, nonpoor whites are substantially more integrated with the nonpoor of all minority groups, but in line with the

income results we find that this reduction in segregation is more pronounced for Hispanics and Asians than it is for blacks. This difference in dissimilarity is only .136 (.766–.630) for blacks, but .216 and .272 for Hispanics and Asians, respectively. Given that poverty status is a function of income, we again find that, on average, SES is influential in shaping the residential patterns of whites and Asians, less so for Hispanics, and is more limited when considering blacks. We also find that nonpoor whites are less segregated from all three same-SES minority groups (i.e., nonpoor blacks, Hispanics, and Asians) than poor whites are from poor minority groups. Though not detectable in our data, this finding could reflect different social processes, such as the stigmatization of poor blacks (and perhaps poor Hispanics), or less prejudicial attitudes among nonpoor whites than poor whites.

During the most recent decade, white segregation from blacks slightly declined across poverty groups, while it was stable from Hispanics, but increased from Asians. While these patterns are quite similar to those exhibited by nonpoor whites, changes in the segregation of poor whites from minorities are worth noting here. Although mean poor white segregation from blacks did not appreciably change in the 2000s, poor white segregation increased by 6.5% from all Hispanics and by 11.2% from all Asians. On one hand, these findings are consistent with other reports that show increasing isolation of Hispanics and Asians from whites (Logan, 2011), but on the other hand, they may reflect the slight bump in impoverished whites (Table 1) in the wake of the Great Recession. To shed light on this finding, future research may explore changes in the racial/ethnic composition of neighborhoods where the share of poor whites significantly increased.

In Table 4, we present white dissimilarity by educational attainment for 2007–2011 and the percentage change since 2000. In large part, the average residential segregation patterns of whites and minorities based on education are similar to those by household income and poverty status. For example, when all members of the minority group are considered, white segregation is substantially higher from blacks than it is from Hispanics and Asians, and whites are markedly more integrated with minorities of higher educational attainment. Whites with higher levels of education are more segregated from all blacks and all Hispanics than whites with lower levels of education. However, the integration of whites with all Asians increases with whites' educational attainment in a linear fashion. Similar to income, education seems to play a more prominent role in the residential segregation of whites from Hispanics and Asians than it does for blacks. If we focus on college-educated whites, the difference in the dissimilarity scores of blacks without a high school diploma and those with a college degree is .172 (.787–.615), compared to .289 (.733–.444) for Hispanics and .250 (.710–.460) for Asians. Likewise, when college-educated blacks are the reference group, there is only a .034 difference (.649–.615) in the index for whites with less than a high school diploma and those with at least a college degree. This disparity, by contrast, is substantial when the reference groups are college-educated Hispanics (.120) and college-educated Asians (.190). When white-minority segregation of the same education level is compared, we witness a linear decline in dissimilarity, but the magnitude of the decline is greater for Hispanics and Asians than it is for blacks. All in all, these findings are in line with prior work that has shown educational attainment to perhaps be a stronger predictor of white-minority integration than income (Clark and Blue, 2004; Iceland and Wilkes, 2006).

The changes in white-minority segregation across education categories are relatively on par with what we have reported for household income. While whites experienced decreases in segregation from blacks, they became more segregated from Hispanics and Asians. Again, the magnitudes of increases were greater for Asians, compared to Hispanics, ranging from roughly 6% to 14%. A possible contributing factor could be the recent demographic transformations of metropolitan America characterized by the growth of the Hispanic and Asian populations, and those who are now at least 25 years old in particular. This trend

coupled with continued educational advancements from Hispanics and Asians may expand the residential opportunities to fulfill certain preferences beyond the quality of the neighborhood, which may include the desire to live with other co-ethnics.

4.2. Fixed-effects models of white segregation by SES

Thus far, our descriptive account of white-minority segregation by socioeconomic status suggests that SES matters for the residential integration of whites and minorities, such that higher SES levels are generally indicative of less segregation. In this next section, we present a series of fixed-effects models to explore the metropolitan area characteristics associated with changes in white-minority segregation by SES. Recall that, as a part of this investigation, we examine a number of metropolitan factors that have been shown to influence socioeconomic segregation, including sociodemographic, housing, economic, and labor characteristics. We present three separate tables, one for each SES indicator, with racially stratified fixed-effects models predicting changes in the segregation of the specific white SES group from the entire minority group (e.g., affluent white-all black dissimilarity).

We begin by showing fixed-effects results of white-minority segregation by household income in Table 5. We see that the effects associated with changes in white-black dissimilarity over the 2000s do not vary much across income category. More specifically, metropolitan areas with a larger presence of immigrant blacks and those with larger populations are associated with increases in white-black segregation over all white income groups, while those metros with larger proportions of white- and blue-collar jobs are associated with decreases in white-black segregation. Other significant factors contributing to a rise in the lowest white income segregation from blacks include the retirement age population and average home values, while an increase in the white poverty rate results in a reduction in white-black segregation. When the middle income groups of whites are the focus, an increase in the share of the black population, white unemployment rate, and recent housing construction result in less segregation, while the black poverty rate increases the separation of middle-income whites and all blacks. Finally, one additional correlate associated with a decline in the segregation of affluent whites from blacks is, unsurprisingly, an increase in the proportion of blacks with a college degree.

We now turn to white income dissimilarity models with Hispanics and Asians as the reference groups. Of the fewer metro correlates that attain significance, the Hispanic poverty rate, proportion of Hispanic immigrants, and increases in the metro population are associated with significant increases in white-Hispanic segregation across white income groups. Also, on average metros with increasing shares of Hispanics with at least a bachelor's degree experienced increases in the integration of middle-income whites and all Hispanics. White households of lower incomes (less than \$50 k) became more segregated from Asians in metro areas with increases in the white unemployment rate, proportions of white- and blue-collar occupations, metro population, retirement age proportion, and the average home prices, while low-income whites were more integrated in metros that experienced a rise in the Asian poverty rate. Also, increases in the proportion of college-educated whites and the homeownership rate reduced the segregation of upper-income whites from Asians. In sum, the results from Table 5 show that after accounting for time-invariant characteristics inherent in our fixed-effects design, we find that race-specific poverty and unemployment rates, an immigrant presence, occupational structure, and other housing factors are associated with changes in white income segregation over the last decade.

Table 6 supplements our household income results with fixed-effects models of white segregation by poverty status. First, we find that regardless of poverty status, whites became significantly more segregated from blacks in metropolitan areas that had population gains

and an increase in the concentration of black immigrants, while increases in white-black integration were accompanied by a rise in the shares of white- and blue-collar jobs. Poor whites were also more segregated with blacks in areas with an increase in the proportion of the elderly population. Declines in nonpoor white-black separation are related to increases in metro-level white unemployment and new housing construction, while average home values are associated with increases in segregation.

Next, we highlight the white segregation by poverty results from the Hispanic and Asian fixed-effects models in Table 6. Similar to our income models, white-Hispanic segregation increased in metros with increases in the Hispanic poverty rate and population growth, while the proportion of Hispanics with some college is associated with declines in nonpoor white-Hispanic dissimilarity. Interestingly, a significant correlate of poor white segregation from all Asians is the proportion of Asians in the metropolitan area—an inverse relationship. In addition, a higher share of college-educated whites tends to further segregate impoverished whites from Asians. Segregation between nonpoor whites and Asians is found to be significantly associated with the Asian poverty rate as well as significant growth in the metro population.

Table 7 shows fixed-effects models for white-minority segregation by educational attainment. Because the results for white-black segregation by education are comparable to the income patterns (e.g., increase in black immigrants, white unemployment, share of educated blacks), we highlight some noteworthy patterns from the Hispanic and Asian models. When considering the segregation of low-educated whites (high school graduate or less) from Hispanics, we see that increases in the presence of Hispanic immigrants, the proportion of whites, and Hispanic poverty rate result in greater separation, perhaps reflecting more prejudicial attitudes of low-educated whites coupled with the propensity for poor Hispanic immigrants to reside among other co-ethnics. The key to the residential integration of whites with Hispanics appears to be education. In particular, increases in the proportions of Hispanics with at least some college serve to reduce the segregation of educated whites with all Hispanics. As we witnessed in Table 4, whites became more segregated from Asians across all white education levels. Our fixed-effects models in Table 7 indicate that a growing share of Asian immigrants as well as the white poverty rate largely drove increases in low-educated white-Asian segregation, while a clear pattern did not emerge for higher-educated whites. Overall, increases in white-minority segregation by education over the last decade are consistently associated with growth in the immigrant populations of all minority groups.

5. Discussion and conclusion

The goal of this paper was to provide new evidence on the residential segregation patterns between whites and minorities by socioeconomic status in US metropolitan areas. Using data from Census 2000 and the most recent American Community Survey (2007–2011), we computed metropolitan-area segregation indexes for multiple white-minority SES comparisons. To explore the metropolitan characteristics associated with changes in white-minority segregation by SES, we conducted race-specific fixed-effects regression models for income, poverty, and education. Results from our analyses point to several conclusions, which come with varying degrees of optimism for the current state of racial residential integration.

Overall, we find significant variation in non-Hispanic white segregation across socioeconomic variables (and categories) and the racial/ethnic reference group in question. First, as expected, we find that whites are less segregated from minorities as minority SES increases. Whites are also more segregated from blacks and Hispanics as white SES

increases, but less segregated from Asians along the SES continuum, likely reflecting observed SES differentials between the more advantaged (whites and Asians) and the disadvantaged (blacks and Hispanics). When white-minority segregation of the same SES is considered, members of higher-SES groups are more integrated with each other (especially when considering education) than lower-status individuals. We may be observing this pattern because greater socioeconomic resources may allow for entry into more affluent neighborhoods with higher-quality amenities, such as in many suburban locations, and these opportunities today exist for members of all racial and ethnic groups. Furthermore, with increasing education comes a softening of racial prejudice accompanied by a greater acceptance and understanding of out-group members, whereby whites, for example, should hold an increased willingness to live in neighborhoods with non-white households.

Another important takeaway from our segregation analyses is that across all SES indicators and levels, whites are more segregated from blacks than they are from Hispanics and Asians. This suggests that blacks are not able to convert their socio-economic gains into integrated neighborhoods at the same rate as Hispanics and Asians—a finding consistent with prior work that concludes the effect of SES is limited for blacks compared to Hispanics and Asians (Iceland and Wilkes, 2006). As we illustrated in Table 2, affluent whites were just as segregated from affluent blacks as poor whites were from poor blacks. Despite these persistently high levels of separation between whites and blacks, it is encouraging that during the 2000s, on average, whites became more integrated with blacks in general, as well as across most socioeconomic variables and comparisons. Our fixed-effects models of white-black SES segregation showed that these declines were partly fueled by increases in the poverty and unemployment rates of whites, the availability of white-collar and blue-collar jobs, and the extent of new housing construction in the metropolitan area.

The finding that white segregation from Hispanics and particularly Asians is increasing across all SES categories raises cause for concern. To the extent that these patterns are to the detriment or benefit of these groups is rather unclear. Given the much higher household incomes for Asians than all other groups, we may be witnessing more self-segregative behavior due to residential preferences for co-ethnics (Clark, 2009), or that these patterns may be a consequence of the residential mobility decisions of natives in response to continuing immigration (Crowder et al., 2011).

Rising class segregation between whites and Hispanics may be operating under alternative conditions. More specifically, at the neighborhood level, Hispanics may be disadvantaged and racialized in ways similar to blacks, especially if there are increasing concentrations of high-poverty barrios in metropolitan America (Jargowsky, 2005; Logan, 2011). Recent research has shown that compared to whites, blacks' and Hispanics' residential preferences are less about the racial makeup of the neighborhood and more about the overarching quality and amenities (i.e., safety, good schools) (Swaroop and Krysan, 2011). With increasing numbers of Hispanics in multiethnic metropolitan areas, whites may have also begun to prefer to live in neighborhoods with fewer Hispanics than previously reported (Lewis et al., 2011). If the importance of race and class in shaping residential segregation is changing, this suggests that different forms of spatial processes of assimilation and stratification may be emerging. Nonetheless, results from our comprehensive analyses point to the significance of education in reducing white-Hispanic separation.

A more complete understanding of the mechanisms through which these evolving white-minority segregation patterns operate is needed, particularly on the heels of a foreclosure crisis that hit minorities and low-income groups especially hard (Bocian et al., 2011; Rugh and Massey, 2010). Indeed, housing policies in the 1990s facilitated the transition to homeownership for many traditionally disadvantaged groups; thus, metropolitan areas with

high rates of foreclosure may find these households slipping back to renting in lower-status racially isolated neighborhoods. Though the recent ACS data do not completely capture the full time period of the housing crisis, there is some recent evidence suggesting that blacks and Hispanics—even those who are more socioeconomically well-off—are living in high-poverty areas at a higher rate than whites and Asians (Logan, 2011).

In addition, growing income inequality in the United States over the past several decades has troubling implications for racial residential segregation and racial inequality overall. To the extent that blacks and Hispanics in particular are overrepresented in low-SES income and educational groups, widening racial gaps in income serve to magnify the distance between blacks and Hispanics and the “American mainstream.” Thus, as long as income inequality continues to grow, so too will the challenges faced by low-SES minority groups striving to achieve upward social mobility.

The determinants of racial and ethnic residential segregation are indeed complex and entail several micro- and macro-level processes—far too many to cover in this paper. The research herein, however, has provided empirical evidence that SES still matters in shaping the segregation patterns of whites vis-à-vis racial and ethnic minorities of broad panethnic groups. Given the ever-changing racial and ethnic structure of the US population, future research should attempt to dissect these categorizations further (e.g., separating out black and white Hispanics) by SES, as well as examine immigrant groups. Indeed, racial and ethnic diversity is ubiquitous across the US, ranging from rural counties to cosmopolitan urban centers, and as more places become minority-majority, the extent to which whites and minorities adjust their preferences will have implications for both racial and socioeconomic segregation (Lee et al., 2012).

A more diverse America not only has implications for the demographic makeup of the country, but also for how scholars gauge incorporation. Although small relative to other racial/ethnic groups, the mixed-race population continues to grow, and their residential outcomes should be assessed more closely. Clark and Maas (2009) have reported, for example, that mixed-race individuals earn more than their single-race counterparts, in addition to living in more integrated neighborhoods. Increasing rates of intermarriage, education, and multiple language proficiency (outside of English), should be accompanied by a growing tolerance of other groups and ostensibly more integration, regardless of SES. Hence, while the lion’s share of prior work has focused exclusively on whites (i.e., middle-class whites) as a definition for the American mainstream (Alba and Nee, 2003), future work might profit from shifting this classification to higher-SES whites (or even Asians) to measure socioeconomic and residential incorporation.

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References

- Adelman, Robert M. Neighborhood opportunities, race, and class: the black middle class and residential segregation. *City & Community*. 2004; 3:43–63.
- Adelman, Robert M. The roles of race, class, and residential preferences in the neighborhood racial composition of middle-class blacks and whites. *Social Science Quarterly*. 2005; 86:209–228.
- Alba, Richard D.; Logan, John. Variations on two themes: racial and ethnic patterns in the attainment of suburban residence. *Demography*. 1991; 28:431–453. [PubMed: 1936377]

- Alba, Richard D.; Logan, John. Minority proximity to whites in suburbs: an individual-level analysis of segregation. *American Journal of Sociology*. 1993; 98:1388–1427.
- Alba, Richard; Nee, Victor. *Remaking the American Mainstream: Assimilation and Contemporary Immigration*. Cambridge, MA: Harvard University Press; 2003.
- Alba, Richard D.; Logan, John; Stults, Brian J. How segregated are middle-class African Americans? *Social Problems*. 2000; 47:543–558.
- Allison, Paul D. Series: *Quantitative Applications in the Social Sciences*. Vol. vol. 160. Sage Publications, Inc.; 2009. *Fixed Effects Regression Models*.
- Bean, Frank D.; Stevens, Gillian. *America's Newcomers and the Dynamics of Diversity*. New York: Russell Sage Foundation; 2003.
- Bocian, Debbie G.; Wei, Li; Ernst, Keith S. Foreclosures by Race and Ethnicity: The Demographics of a Crisis. Center for Responsible Lending Research Report; 2011. <<http://www.responsiblelending.org>>
- Charles, Camille Zubrinsky. Neighborhood racial-composition preferences: evidence from a multiethnic metropolis. *Social Problems*. 2000; 47:379–407.
- Charles, Camille Zubrinsky. The dynamics of racial residential segregation. *Annual Review of Sociology*. 2003; 29:167–207.
- Charles, Camille Zubrinsky. *Race, Class, and Residence in Los Angeles*. New York: Russell Sage Foundation; 2006. *Won't You Be My Neighbor?*.
- Clark, William AV. Residential segregation in American cities: a review and interpretation. *Population Research and Policy Review*. 1986; 5:95–127.
- Clark, William AV. Ethnic preferences and ethnic perceptions in multi-ethnic settings. *Urban Geography*. 2002; 23:237–256.
- Clark, William AV. Race, class, and place evaluating mobility outcomes for African Americans. *Urban Affairs Review*. 2007; 42:295–314.
- Clark, William AV. Changing residential preferences across income, education, and age findings from the multi-city study of urban inequality. *Urban Affairs Review*. 2009; 44:334–355.
- Clark, William AV.; Ware, Julian. Trends in residential integration by socioeconomic status in southern California. *Urban Affairs Review*. 1997; 32:825–843.
- Clark, William AV.; Maas, Regan. The geography of a mixed-race society. *Growth and Change*. 2009; 40:565–593.
- Clark, William AV.; Blue, Sarah A. Race, class and segregation patterns in US immigrant gateway cities. *Urban Affairs Review*. 2004; 39:667–688.
- Crowder, Kyle; Hall, Matthew; Tolnay, Stewart E. Neighborhood Immigration and native out-migration. *American Sociological Review*. 2011; 76:25–47. [PubMed: 21731082]
- Darden, Joe T.; Kamel, Sameh M. Black residential segregation in the city and suburbs of Detroit: does socioeconomic status matter? *Journal of Urban Affairs*. 2000; 22:1–13.
- Denton, Nancy; Massey, Douglas S. Residential segregation of blacks, Hispanics, and Asians by socioeconomic status and generation. *Social Science Quarterly*. 1988; 69:797–817.
- Dwyer, Rachel E. Poverty, prosperity, and place: the shape of class segregation in the age of extremes. *Social Problems*. 2010; 57:114–137.
- Ellen, Ingrid Gould. *Sharing America's Neighborhoods: The Prospects for Stable Racial Integration*. Cambridge, MA: Harvard University Press; 2000.
- Emerson, Michael O.; Yancy, George; Chai, Karen J. Does race matter in residential segregation? Exploring the preferences of white Americans. *American Sociological Review*. 2001; 66:922–935.
- Farley, John. Race still matters: the minimal role of income and housing cost as causes of housing segregation in St. Louis, 1990. *Urban Affairs Review*. 1995; 31:244–254.
- Fischer, Claude S.; Stockmayer, Gretchen; Stiles, Jon; Hout, Michael. Distinguishing the geographic levels and social dimensions of US metropolitan segregation, 1960–2000. *Demography*. 2004; 41:37–59. [PubMed: 15074124]
- Fischer, Mary J. The relative importance of income and race in determining residential outcomes in US urban areas, 1970–2000. *Urban Affairs Review*. 2003; 38:669–696.

- Frey, William H.; Farley, Renyolds. Latino, Asian, and black segregation in US metropolitan areas: are multiethnic metros different? *Demography*. 1996; 33:35–50. [PubMed: 8690139]
- Glaeser, Edward; Vigdor, Jacob. The end of the segregated century: racial separation in America's neighborhoods, 1890–2010. *Manhattan Institute Civic Reports*. 2012; 66
- Iceland, John. *Where We Live Now: Immigration and Race in the United States*. Berkeley: University of California Press; 2009.
- Iceland, John; Wilkes, Rima. Does socioeconomic status matter? Race, class, and residential segregation. *Social Problems*. 2006; 53:248–273.
- Iceland, John; Sharpe, Cicely; Steinmetz, Erika. Class differences in African American residential patterns in US metropolitan areas: 1990–2000. *Social Science Research*. 2005; 34:252–266.
- Iceland, John; Weinberg, Daniel H.; Erika, Steinmetz. *Racial and Ethnic Residential Segregation in the United States: 1980–2000*. Washington, DC: US Census Bureau, Census Special Report, CENSR-3. US Government Printing Office; 2002.
- Jargowsky, Paul A. Take the money and run: economic segregation in US metropolitan areas. *American Sociological Review*. 1996; 61:984–998.
- Jargowsky, Paul A. *The Brookings Institution Living Cities Census Series*. Washington, DC: The Brookings Institution Center on Urban and Metropolitan Policy; 2005. *Stunning Progress, Hidden Problems: The Dramatic Decline of Concentrated Poverty in the 1990s*.
- Johnson, David. Two-wave panel analysis: comparing statistical methods for studying the effects of transitions. *Journal of Marriage and the Family*. 2005; 67:1061–1075.
- Krysan, Maria; Farley, Reynolds. The residential preferences of blacks: do they explain persistent segregation? *Social Forces*. 2002; 80:937–980.
- Krysan, Maria; Bader, Michael. Perceiving the metropolis: seeing the city through a prism of race. *Social Forces*. 2007; 86:699–733.
- Krysan, Maria; Couper, Mick P.; Farley, Reynolds; Forman, Tyrone A. Does race matter in neighborhood preferences? Results from a video experiment. *American Journal of Sociology*. 2009; 115:527–559.
- Lee, Barrett A.; John, Iceland; Gregory, Sharp. *Racial and Ethnic Diversity Goes Local: Charting Change in American Communities Over Three Decades*. US2010 Project Report; 2012. <<http://www.s4.brown.edu/us2010>>
- Lewis, Valerie A.; Emerson, Michael O.; Klineberg, Stephen L. Who we'll live with: neighborhood racial composition preferences of whites, Blacks and Latinos. *Social Forces*. 2011; 89:1385–1407.
- Logan, John R. *Separate and Unequal: The Neighborhood Gap for Blacks, Hispanics and Asians in Metropolitan America*. US2010 Project Report; 2011. <<http://www.s4.brown.edu/us2010>>
- Logan, John R.; Stults, Brian J. *The Persistence of Segregation in the Metropolis: New Findings from the 2010 Census*. US2010 Project Report; 2011. <<http://www.s4.brown.edu/us2010>>.
- Logan, John R.; Stults, Brian J.; Farley, Reynolds. Segregation of minorities in the metropolis: two decades of change. *Demography*. 2004; 41:1–22. [PubMed: 15074122]
- Logan, John R.; Zengwang, Xu; Brian, Stults. *Interpolating US Decennial Census Tract Data from as Early as 1970 to 2010: A Longitudinal Tract Database*. *Professional Geographer*. forthcoming.
- Massey, Douglas S. The age of extremes: concentrated affluence and poverty in the twenty-first century. *Demography*. 1996; 33:395–412. [PubMed: 8939412]
- Massey, Douglas S.; Fischer, Mary J. Does rising income bring integration? New results for blacks, Hispanics, and Asians in 1990. *Social Science Research*. 1999; 28:316–326.
- Massey, Douglas S.; Denton, Nancy. Spatial assimilation as a socioeconomic outcome. *American Sociological Review*. 1985; 50:94–106.
- Massey, Douglas S.; Denton, Nancy. *American Apartheid: Segregation and the Making of the Underclass*. Cambridge: Harvard University Press; 1993.
- Massey, Douglas S.; Rothwell, Jonathan; Domina, Thurston. The changing bases of segregation in the United States. *The ANNALS of the American Academy of Political and Social Science*. 2009; 626:74–90.
- Pager, Devah; Shepherd, Hana. The sociology of discrimination: racial discrimination in employment, housing, credit, and consumer markets. *Annual Review of Sociology*. 2008; 34:181–209.

- Portes, Alejandro; Rumbaut, Ruben G. *Immigrant America: A Portrait*. 3rd ed.. Berkeley: University of California Press; 2006.
- Reardon, Sean F.; Kendra, Bischoff. Growth in the Residential Segregation of Families by Income, 1970–2009. US2010 Project Report; 2011a. <<http://www.s4.brown.edu/us2010>>.
- Reardon, Sean F.; Bischoff, Kendra. Income inequality and income segregation. *American Journal of Sociology*. 2011b; 116:1092–1153.
- Rosenbaum, Emily; Friedman, Samantha. *The Housing Divide: How Generations of Immigrants Fare in New York’s Housing Market*. New York: New York University Press; 2007.
- Rugh, Jacob S.; Massey, Douglas S. Racial segregation and the American foreclosure crisis. *American Sociological Review*. 2010; 75:629–651.
- St. John, Craig; Clymer, Robert. Racial residential segregation by level of socioeconomic status. *Social Science Quarterly*. 2000; 81:701–715.
- Swaroop, Sapna; Krysan, Maria. The determinants of neighborhood satisfaction: racial proxy revisited. *Demography*. 2011; 48:1203–1229. [PubMed: 21706255]
- Turner, Margery A.; Ross, Stephen L. How racial discrimination affects the search for housing. In: de Souza Briggs, Xavier, editor. *The Geography of Opportunity: Race and Housing Choice in Metropolitan America*. Washington, DC; Brookings Institution Press; 2005. p. 81-100.
- Wilson, William J. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago, IL: University of Chicago; 1987.
- White, Michael J.; Glick, Jennifer E. *Achieving Anew: How New Immigrants Do in American Schools, Jobs, and Neighborhoods*. New York: Russell Sage Foundation; 2009.

Table 1

Distribution of the metropolitan area population by race/ethnicity and socioeconomic status, 2000 and 2007–2011.

SES variables	Whites		Blacks		Hispanics		Asians	
	2000	2007–2011	2000	2007–2011	2000	2007–2011	2000	2007–2011
<i>Household income</i>								
Less than \$25,000	15.0	17.6	31.2	34.7	25.6	28.4	17.6	17.8
\$25,000–49,999	21.0	21.4	26.4	27.0	28.4	29.2	18.2	18.1
\$50,000–99,999	34.1	32.1	28.4	26.0	31.3	28.9	31.5	30.1
\$100,000 or more	29.9	28.9	13.9	12.3	14.8	13.5	32.7	34.0
<i>Poverty status</i>								
Poor	6.5	8.0	22.9	23.6	21.8	22.1	12.3	11.4
Nonpoor	93.5	92.0	77.1	76.4	78.2	77.9	87.7	88.6
<i>Educational attainment</i>								
Less than high school	12.2	7.8	25.3	16.6	47.0	37.0	19.4	14.2
High school graduate	27.2	26.1	28.8	30.6	21.9	26.7	16.0	16.0
Some college	28.9	29.1	30.0	32.7	20.1	22.3	20.7	19.5
College graduate	31.7	36.9	15.9	20.1	11.0	14.0	43.9	50.3

Notes: Numbers are in percent. Sample is 100 largest metropolitan areas.

Table 2

Mean white dissimilarity from minority groups by household income, 2000–2011.

Minority reference group	2007–2011					Percent change 2000–2011				
	All Whites	Less than \$25 k	\$25–50 k	\$50–100 k	\$100 k or more	All Whites	Less than \$25 k	\$25–50 k	\$50–100 k	\$100 k or more
<i>Blacks</i>										
All blacks	.626	.593	.604	.633	.711	-2.9	-1.6	-1.5	-2.5	-2.1
Less than \$25,000	.729	.669	.701	.742	.810	-1.8	-0.7	-0.8	-1.5	-1.0
\$25,000–49,999	.685	.645	.656	.690	.768	0.0	2.2	1.7	-0.1	-0.4
\$50,000–99,999	.646	.639	.631	.644	.716	1.5	3.9	3.6	1.4	0.1
\$100,000 or more	.656	.699	.679	.654	.668	5.8	7.2	7.2	5.4	1.9
<i>Hispanics</i>										
All Hispanics	.494	.470	.471	.500	.601	1.6	4.2	4.3	2.0	0.8
Less than \$25,000	.653	.595	.621	.666	.748	1.3	4.0	3.3	1.6	0.8
\$25,000–49,999	.600	.563	.569	.605	.698	3.5	7.2	6.5	3.6	2.0
\$50,000–99,999	.534	.537	.521	.529	.617	6.0	9.1	9.4	6.2	2.8
\$100,000 or more	.543	.618	.590	.547	.530	10.8	11.7	12.4	10.6	4.2
<i>Asians</i>										
All Asians	.476	.528	.509	.491	.496	6.2	7.2	8.4	6.1	2.6
Less than \$25,000	.697	.683	.697	.707	.733	5.5	8.4	7.9	5.1	2.5
\$25,000–49,999	.639	.651	.645	.644	.670	9.0	11.5	11.8	8.7	4.6
\$50,000–99,999	.566	.616	.593	.568	.577	10.9	10.9	12.8	10.9	5.9
\$100,000 or more	.583	.681	.650	.601	.514	10.5	7.6	9.4	10.2	8.8

Notes: Sample is 100 largest metropolitan areas. Segregation scores are weighted by the metropolitan area population of the white group of interest. Calculations are based on households. Dollars for both 2000 and 2007–2011 are adjusted to 2010 dollars.

Table 3

Mean white dissimilarity from minority groups by poverty status, 2000–2011.

Minority reference group	2007–2011		Percent change 2000–2011			
	All whites	Poor	Nonpoor	All whites	Poor	Nonpoor
<i>Blacks</i>						
All blacks	.634	.599	.644	-3.9	-0.4	-3.6
Poor	.756	.684	.766	-1.5	0.7	-1.3
Nonpoor	.622	.603	.630	-3.3	0.9	-3.2
<i>Hispanics</i>						
All Hispanics	.505	.484	.515	0.0	6.5	0.2
Poor	.693	.622	.704	1.0	5.7	1.1
Nonpoor	.480	.481	.488	0.4	7.7	0.4
<i>Asians</i>						
All Asians	.480	.553	.482	6.7	11.2	6.3
Poor	.747	.718	.753	6.6	11.1	6.4
Nonpoor	.481	.569	.481	8.3	11.6	7.9

Notes: Sample is 100 largest metropolitan areas. Segregation scores are weighted by the metropolitan area population of the white group of interest. Calculations are based on the population for whom poverty status was determined.

Table 4
Mean white dissimilarity from minority groups by educational attainment, 2000–2011.

Minority reference group	2007–2011				Percent change 2000–2011				
	All whites	Less than high school	High school graduate	Some college graduate	All Whites	Less than high school	High school graduate	Some college graduate	
<i>Blacks</i>									
All Blacks	.618	.611	.622	.612	.668	–4.2	–4.3	–4.6	–4.2
Less than high school	.744	.698	.734	.747	.787	–0.1	–0.8	–0.4	–1.0
High school graduate	.690	.656	.680	.685	.742	–0.7	–1.3	–1.6	–1.3
Some college	.639	.631	.640	.631	.689	–0.9	–1.3	–1.1	–1.2
College graduate	.598	.649	.631	.600	.615	0.8	0.5	1.6	0.8
<i>Hispanics</i>									
All Hispanics	.493	.486	.490	.488	.568	1.2	0.1	–0.3	–0.5
Less than high school	.667	.612	.647	.659	.733	3.6	5.2	2.1	1.9
High school graduate	.573	.542	.555	.562	.650	7.8	9.5	6.6	4.4
Some college	.493	.512	.498	.479	.561	8.4	9.2	7.7	5.6
College graduate	.451	.564	.525	.468	.444	5.0	6.4	7.0	5.7
<i>Asians</i>									
All Asians	.472	.579	.537	.487	.463	6.4	8.7	8.7	4.3
Less than high school	.690	.709	.704	.687	.710	11.8	12.9	12.2	8.1
High school graduate	.633	.673	.654	.629	.652	13.5	12.9	14.1	10.8
Some college	.574	.644	.611	.572	.583	12.4	11.0	13.3	11.3
College graduate	.510	.650	.600	.536	.460	5.9	6.5	8.7	7.5

Notes: Sample is 100 largest metropolitan areas. Segregation scores are weighted by the metropolitan area population of the white group of interest. Calculations are based on the population aged 25 or more.

Table 5
Fixed-effects regression models of white-minority dissimilarity by household income 2000–2011.

Metropolitan area correlates	White segregation from all Blacks			White segregation from all Hispanics			White segregation from all Asians				
	Less than \$25 k	\$25–50 k	\$50–100 k or more	Less than \$25 k	\$25–50 k	\$50–100 k or more	Less than \$25 k	\$25–50 k	\$50–100 k or more		
Racial/ethnic concentration											
Proportion minority group	-.25	-.43	-.79*	.30	-.02	-.10	.20	-.84	-.33	-.50	-.62
Proportion white	.12	.06	-.14	.20	.12	.12	.29	-.01	.25	.10	.16
Proportion minority foreign-born	.42***	.41***	.43***	.02	.04	.08	.18*	-.02	-.05	.02	.04
White-to-minority income ratio	.03	-.04	.00	-.04	-.02	.01	.03	-.01	-.01	-.01	.02
Poverty rate											
Minority group	.17	.35*	.21	.42*	.33*	.36*	.24	-.26**	-.08	.07	.17
White	-.12*	-.41	-.25	-.24	.04	.00	.66	.60	.41	.51	.68
Unemployment rate											
Minority group	.14	.02	-.10	-.33	-.22	-.26	-.20	-.02	-.13	-.20	-.30
White	-.55	-.109**	-.106*	-.21	.04	.39	-.17	.17	.74*	.56	-.06
Educational attainment											
Minority group (ref = high school grad)											
Less than high school	.07	.19	.22	.11	.00	.02	.05	.08	.13	.14	.04
Some college	-.13	-.22	-.08	-.19	-.37	-.24	-.29	.29	.19	.27	.19
College graduate	-.17	-.18	-.35	-.19	-.44*	-.38*	-.31	.03	.11	.15	.05
White (ref = high school grad)											
Less than high school	-.15	.03	-.25	-.03	.17	.04	-.75	-.94	-.74	-.85	-.97
Some college	-.42	-.10	-.33	.24	.09	.14	-.49	-.42	-.21	-.46	-.75
College graduate	-.38	.12	-.03	.29	.33	.17	-.05	-.77	-.76	-.90*	-.58
Occupational structure (ref = lower white)											
White collar	-.14***	-.87**	-.108**	-.19	-.33	-.01	-.60	.76*	1.07**	.50	-.50
Blue collar	-.96***	-.65	-.97**	-.25	-.28	.09	-.31	.45	.61*	.23	-.66
Metropolitan population (logged)	.10*	.10*	.09	.05	.10*	.06	.08	.05	.09*	.05	.05
Proportion aged 65 and over	1.32**	.85	.76	.83	.35	.30	.05	1.57**	1.02*	1.03	.97

Metropolitan area correlates	White segregation from all Blacks			White segregation from all Hispanics			White segregation from all Asians				
	Less than \$25 k	\$25-50 k	\$50-100 k or more	Less than \$25 k	\$25-50 k	\$50-100 k or more	Less than \$25 k	\$25-50 k	\$50-100 k or more		
New housing construction	-.24	-.31**	-.34*	.08	.06	-.01	-.03	-.11	-.04	.06	.09
Homeownership rate	-.10	-.08	-.07	-.29	-.06	-.15	-.24	-.32	-.26	-.39	-.52*
Mean home value (logged)	.07**	.07**	.02	.04	.03	.02	-.02	.05	.05*	.05	.03
Constant	-.92	-1.26	.12	-.79	-1.28	-.68	.01	-.59	-1.75	-.73	.24

Notes: Number of cases is 200 (100 metros in each time period). Standard errors adjusted for clustering.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 6
Fixed-effects regression models of white-minority dissimilarity by poverty status, 2000–2011.

Metropolitan area correlates	White segregation from all Blacks		White segregation from all Hispanics		White segregation from all Asians		White segregation from all Nonpoor	
	Poor	Nonpoor	Poor	Nonpoor	Poor	Nonpoor	Poor	Nonpoor
Racial/ethnic concentration								
Proportion minority group	-.06	-.49	.09	.18	-.96*	.61		
Proportion white	.01	.09	.30	.41	.24	.13		
Proportion minority foreign-born	.22*	.21*	.11	.11	-.11	.16		
White-to-minority income ratio	.00	.00	.00	-.02	.00	-.01		
Poverty rate								
Minority group	.03	.14	.06	.28	-.02	.19*		
White	-.78	-.31	.71	.15	.55	.61		
Unemployment rate								
Minority group	-.23	-.17	-.03	-.15	.18	-.10		
White	-.59	-.93	-.88	.06	.26	.34		
Educational attainment								
Minority group (ref = high school grad)								
Less than high school	.21	.22	.06	.13	.13	.17		
Some college	-.05	.02	-.29	-.46*	.21	.17		
College graduate	.03	-.32	-.12	-.29	.10	.04		
White (ref = high school grad)								
Less than high school	-.09	.38	-.55	-.49	.19	-.86		
Some college	-.36	.00	-.39	-.35	1.08	-.36		
College graduate	.04	.30	.50	-.02	1.17**	-.32		
Occupational structure (ref = lower white)								
White collar	1.07***	1.32**	.92	.22	.30	.29		
Blue collar	-1.17***	-1.33***	-.43	.12	.32	.21		
Metropolitan population (logged)	.12**	.13**	.15*	.11*	.08	.10*		
Proportion aged 65 and over	1.36**	.41	.92	.06	.37	.69		

Metropolitan area correlates	White segregation from all Blacks		White segregation from all Hispanics		White segregation from all Asians	
	Poor	Nonpoor	Poor	Nonpoor	Poor	Nonpoor
New housing construction	-.26	-.27	.04	-.04	-.07	.03
Homeownership rate	-.51	-.07	-.34	-.00	-.29	-.22
Mean home value (logged)	.04	.05	.03	.02	.03	.03
Constant	-.60	-1.17	-1.65	-1.42	-1.81*	-1.41

Notes: Number of cases is 200 (100 metros in each time period). Standard errors adjusted for clustering.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 7

Fixed-effects regression models of white-minority dissimilarity by educational attainment, 2000–2011.

Metropolitan area correlates	White segregation from all Blacks			White segregation from all Hispanics			White segregation from all Asians				
	Less than high school	High school graduate	Some college	Less than high school	High school graduate	Some college	Less than high school	High school graduate	Some college	College graduate	
Racial/ethnic concentration											
Proportion minority group	-.24	-.58	-.70*	-.44	.08	.13	.07	-.15	-.32	-.52	-.44
Proportion white	.24	.11	.03	.23	.65*	.40	.31	.35	.27	.29	.31
Proportion minority foreign-born	.26*	.21*	.22**	.22**	.21*	.20*	.18*	.37*	.13	.04	-.12
White-to-minority income ratio	.04	.01	.01	.02	-.05	-.05	-.03	.02	.03	.00	-.03
Poverty rate											
Minority group	-.07	-.04	.00	.09	.32*	.28*	.17	-.03	-.07	-.03	.05
White	-.28	-.30	-.20	-.23	.16	-.49	-.07	1.34*	.78	.61	.59
Unemployment rate											
Minority group	-.06	.03	.10	.16	-.27	-.20	-.16	-.19	-.05	.05	.07
White	-1.06**	-.93*	-1.04**	-.90*	-.14	.18	.23	.32	.36	.22	-.39
Educational attainment											
Minority group (ref = high school grad)											
Less than high school	-.06	.13	.16	.10	-.13	-.07	-.02	-.30*	.01	.13	.27
Some college	-.08	-.16	-.11	-.23	-.19	-.41	-.59**	-.12	.12	.20	.36
College graduate	-.17	-.15	-.36*	-.46**	-.01	-.40	-.66**	-.11	.07	.08	.00
White (ref = high school grad)											
Less than high school	-.10	.26	-.08	-.22	-.29	-.05	-.55	-.97	-.94	-1.50**	-1.47*
Some college	-.85	-.36	-.58	-.57	-.31	-.21	-.54	-.48	-.48	-.74	-.84
College graduate	-.21	-.18	-.23	-.21	.19	-.02	-.04	.02	-.38	-.61	-.34
Occupational structure (ref = lower white)											
White collar	-1.08**	-1.21***	-1.04***	-1.09***	-.37	-.02	.11	-.09	.43	.61	-.24
Blue collar	-.86*	-1.11***	-.87**	-.81***	-.16	-.22	.13	.72	.43	.38	-.32
Metropolitan population (logged)	.19***	.14***	.11**	.12***	.21***	.11*	.11*	.07	.10*	.14**	.11

Metropolitan area correlates	White segregation from all Blacks			White segregation from all Hispanics			White segregation from all Asians				
	Less than high school	High school graduate	Some college	Less than high school	High school graduate	Some college	Less than high school	High school graduate	Some college		
Proportion aged 65 and over	1.37**	.53	.23	-08	1.51**	.90	.34	-.50	.58	1.27*	.51
New housing construction	-.39**	-.49***	-.48***	-.31***	.05	.04	-.01	-.11	.07	.05	.03
Homeownership rate	-.20	.19	.29	.61***	-.27	-.28	-.11	-.01	-.36	-.37	-.28
Mean home value (logged)	.02	.05*	.03	.03	.03	.04	.00	.01	.02	.00	.00
Constant	-1.54	-1.20	-.53	-.99	-3.11**	-1.52	-.92	-.29	-1.29	-1.52	-.58

Notes: Number of cases is 200 (100 metros in each time period). Standard errors adjusted for clustering.

* $p < .05$.

** $p < .01$.

*** $p < .001$.