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Racial Differences in Neighborhood Attainment: The Contributions of Interneighborhood Migration and *In Situ* Change

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Abstract Recent research shows that as they age, blacks experience less improvement than whites in the socioeconomic status of their residential neighborhoods. Using data from the Panel Study of Income Dynamics and U.S. decennial censuses, we assess the relative contribution of residential mobility and *in situ* neighborhood change (i.e., change surrounding nonmobile neighborhood residents) to the black-white difference in changes in neighborhood socioeconomic status and racial composition. Results from decomposition analyses show that the racial difference in *in situ* neighborhood change explains virtually all the black-white difference in neighborhood socioeconomic status change. In contrast, racial differences in residential mobility explain the bulk of the black-white difference in neighborhood racial compositional change. Among blacks and whites initially residing in low-income and predominantly minority neighborhoods, whites experience a much greater increase than blacks in the socioeconomic status of their neighborhoods and the percentage of their neighbors who are non-Hispanic white. These differences are driven primarily by racial differences in the economic and racial composition of local (intracounty) movers' destination neighborhoods and secondarily by black-white differences in the likelihood of moving long distances.

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Introduction

A defining feature of the urban landscape in the United States is a persistent and pronounced racial disparity in neighborhood environments. Although significant improvements in neighborhood conditions have been made over the past few decades, blacks continue to reside in much different types of neighborhoods than whites (Massey and Tannen 2015). Prior research has explored how racially differentiated patterns of migration contribute to racial inequalities in neighborhood environments (Crowder et al. 2012; Lee et al., 1994; Sharkey 2012). More recently, research has begun to examine how neighborhoods inhabited by nonmobile blacks and whites change in different ways (Sharkey 2012; Timberlake 2009). This emerging perspective suggests that neighborhood change around nonmobile blacks and whites—what we refer to in this article as *in situ change*—may be at least as important as racial differences in residential mobility in driving neighborhood racial disparities (Bailey 2012).

A racial difference in neighborhood context change could result from three proximate sources: (1) a racial difference in the characteristics of the destination neighborhoods relative to the origin neighborhoods among movers; (2) a racial difference in the overall likelihood of moving between neighborhoods, given differences between origin and destination neighborhoods; and (3) a racial difference in the change in neighborhood environments among nonmobile residents (i.e., *in situ* neighborhood change). Most studies of neighborhood attainment—and racial disparities therein—have focused exclusively on neighborhood change induced by interneighborhood residential mobility (e.g., Crowder et al. 2006; Massey et al. 1994). These studies have typically compared individuals moving into or out of different types of neighborhoods, often with a focus on racial differences. However, because these studies have not considered how stationary individuals experience change in their neighborhood environment as a result of changes in the characteristics of their neighbors, they cannot quantify the relative effects of the three proximate sources of neighborhood change.

In this article, we focus on the relative contributions of local residential mobility, long-distance migration, and *in situ* change in accounting for black-white differences in changes in neighborhood attainment. We use individual-level data from the 1991 and 2001 waves of the Panel Study of Income Dynamics (PSID) in conjunction with census-based data on the economic and racial composition of respondents' census tracts. We decompose the black-white differences in neighborhood change into the portion generated by racial differences in the levels of and returns to local residential mobility and intercounty migration and the portion generated by *in situ* neighborhood change around nonmobile residents. Our study provides insights into the main *proximate* reasons why, as they age, blacks and whites experience markedly different changes in neighborhood contexts.

Theoretical Background and Hypotheses

The characteristics of individuals' residential neighborhoods can change as a result of residential mobility and *in situ* change. First, individuals can move from one type of neighborhood to another—for example, from a predominantly black to a mixed-race neighborhood. Second, even in the absence of moving, individuals' neighborhood characteristics will change when the characteristics of their neighbors change. The characteristics of individuals' neighbors could change as result of neighbors' migration if, for example, more neighbors having a given characteristic moved out of than into the neighborhood. Neighbors' characteristics could also change as a result of socioeconomic status (SES) change—for example, through an increase or decrease in their average incomes. We consider how the racial disparity in changes in neighborhood conditions can result from racial differences in residential mobility patterns and from *in situ* neighborhood change.

Racial Differences in Residential Mobility

Racial differences in neighborhood change could be driven by racial differences in the characteristics of destination neighborhoods. Two related strands of research guide current theorizing on racial differences in locational attainments. The first strand—the *spatial assimilation perspective*—notes that, on average, members of minority groups start at the bottom of the SES hierarchy and are therefore able to afford residence in only low-SES neighborhoods. However, as these groups experience socioeconomic mobility, they convert their socioeconomic resources into upward residential mobility, resulting in moves to better neighborhoods, often by leaving ethnic neighborhoods for areas containing more whites (Crowder et al. 2006; Logan et al. 1996). Racial differences in socioeconomic resources—and hence individuals' ability to purchase residences in predominantly white and affluent neighborhoods—are the main drivers of racial differences in the likelihood of moving into and out of lower- or higher-quality neighborhoods.

A different theoretical perspective on neighborhood attainment—the *place stratification model*—draws attention to the barriers that racial and ethnic minorities face in converting socioeconomic mobility into locational attainment (Alba and Logan 1991; Logan 1978; Logan and Alba 1993). In this perspective, discriminatory actions by real estate agents (Pearce 1979; Yinger 1995), local governments (Shlay and Rossi 1981), and mortgage lenders (Shlay 1988; Squires and Kim 1995) create barriers to residential attainment for minority group members (Galster 1991; Massey and Denton 1993). These barriers are posited to limit the ability of minorities—and especially blacks—to move into higher-SES and predominantly white neighborhoods. The place stratification perspective also highlights the strong preferences of whites to live with same-race neighbors and to distance themselves from minorities. Consistent with these preferences, whites tend to move out of neighborhoods with large or growing minority populations and into predominantly white neighborhoods (Crowder and South 2008; Krysan et al. 2009). Thus, black-white differences in neighborhood attainment could be driven by white movers' ostensibly stronger residential preferences and by their greater ability to relocate to higher-SES neighborhoods relative to black movers.

Because moving is often associated with an improvement in neighborhood conditions, racial differences in neighborhood change could also be driven by racial differences in the overall likelihood of moving between neighborhoods. On average, both blacks and whites experience improvements in neighborhood income when they move from one neighborhood to another; these improvements in neighborhood conditions are particularly large for long-distance (e.g., intercounty) moves (Sampson and Sharkey 2008; South et al. 2016). Prior research has shown that whites are more likely than blacks to move long distances (Farley and Allen 1987; Schachter 2001). Moreover, although blacks are more likely than whites to move short distances, some of these moves are the result of evictions or other forms of involuntary displacement (Desmond 2016; Desmond and Shollenberger 2015) that leave blacks "stuck in place" (Sharkey 2013). Thus, given that moving is often associated with an improvement in neighborhood conditions for both blacks and whites, a racial difference in the overall likelihood of moving could partially explain the black-white difference in neighborhood SES change. Even if blacks and whites moved to neighborhoods of the same SES, the higher rates of long-distance migration among whites than among blacks would generate greater improvements in neighborhood SES among whites than among blacks.

Racial Differences in *In Situ* Neighborhood Change

Although racial differences in neighborhood attainment could be driven by racial differences in levels of and returns to migration, they could also be driven by racial differences in neighborhood change around nonmobile blacks and whites (Sampson and Sharkey 2008). Nonmobile individuals can experience positive or negative change in the SES of their neighborhoods as a result of in- and out-migration of surrounding neighbors as well as change in nonmobile neighbors' socioeconomic status (Solari 2012; Teernstra 2014).

Racial differences in neighborhood socioeconomic change could result from an imbalance in the characteristics of those moving into or out of neighborhoods. Neighborhoods typically inhabited by nonmobile blacks and whites are likely to change in different ways. The classic invasion-succession model of neighborhood change suggests that residents sort themselves geographically by social status, and that neighborhoods decline in economic status as lower-SES residents (who are more likely to be members of minority groups) "invade" higher-SES neighborhoods (Hartmann 1993; Park et al. 1925). Conversely, neighborhood economic status improves when higher-SES individuals displace lower-SES residents (Owens 2012). This neighborhood change model implies that SES-selective residential mobility patterns could alter the socioeconomic composition of neighborhoods over time. High-SES (and mostly white) neighborhoods tend to attract affluent residents with comparable SES (Solari 2012), pricing out relatively lower-SES residents. In general, low-SES and predominantly minority neighborhoods frequently experience in-migration of minorities who are poor as well as out-migration of somewhat higher-status residents, leaving the remaining residents to face neighborhood deterioration (Cutler et al. 1997; Wilson 1987). Despite instances of gentrification in some locales, economically deprived black neighborhoods tend to be less attractive to affluent residents, and these neighborhoods tend to progress little in economic status (Hwang and Sampson 2014). Thus, given the types of neighborhoods that whites and blacks tend to live in, it is reasonable to hypothesize

that nonmobile whites experience greater improvements in their neighborhood SES than do nonmobile blacks.

Neighborhood improvement or decline in SES around nonmobile residents can also occur through social status change among nonmobile neighbors. Recent research has suggested that increases in neighborhood income tend to be driven as much by upward social mobility among individuals who remain in the neighborhood as by SES-selective migration (Hochstenbach and van Gent 2015; Teernstra 2014). Given high level of white-black residential segregation, the increasing earning and wealth disparities between whites and blacks may create different trajectories of neighborhood change for whites and blacks as well (Kochhar et al. 2011; Oliver and Shapiro 2006; Shapiro et al. 2014). For example, residents of high-SES and predominantly white neighborhoods tend to experience greater income growth than residents of low-SES and predominantly minority neighborhoods. Therefore, the racial disparity in neighborhood SES change could result in lesser neighborhood socioeconomic improvement among nonmobile blacks than among nonmobile whites.

Because race is an ascribed characteristic that does not change over time, *in situ* change in neighborhood racial composition can occur only through racial differences in net migration. The increasing racial diversity of neighborhoods (Fong and Shibuya 2005) and concomitant reduction in the number of all-white areas (Glaeser and Vigdor 2001, 2012) may suggest that neighborhoods typically inhabited by whites tend to become increasingly populated by racial minorities. Therefore, whites are likely to experience a greater decrease than blacks in the percentage of their neighbors who are white because of minorities' entry into previously all-white areas and the growth of multiethnic neighborhoods (Logan and Zhang 2010, 2011). At the same time, however, changes in whites' exposure to minority neighbors and blacks' exposure to white neighbors will be tempered by whites' strong preference to reside in white neighborhoods (Clark 1991; Krysan et al. 2009; Schelling 1971), their strong tendency to move out of them when significant proportions of minorities are present (Charles 2006; Crowder 2000; Crowder et al. 2012), and their ability to prevent the in-migration of minorities (Seitles 1988). In some cases, gentrification may mitigate and even reverse white flight, but white gentrifiers usually prefer already white or racially mixed neighborhoods (Hwang and Sampson 2014), and blacks in all-black neighborhoods are likely to remain segregated (Friedman 2008; Logan and Zhang 2010). Therefore, whites' exposure to same-race neighbors may decrease as a result of increasing racial diversity of neighborhoods in general, whereas blacks are likely to see little, if any, increase in their exposure to white neighbors.

Racial Differences in Neighborhood Change Among Residents of Low-Income and Minority Neighborhoods

The degree to which racial differences in residential mobility and *in situ* change can account for racial differences in neighborhood change may differ based on individuals' initial neighborhood conditions. Of particular concern for both theory and social policy is the plight of residents of relatively poor and largely minority neighborhoods. State efforts and structural influences occurring in low-income and/or predominantly minority neighborhoods could either amplify or dampen the relative contributions of

residential mobility and *in situ* change to racial differences in neighborhood conditions. Recent work has emphasized the changing role of governmental and structural forces in altering the trajectories of low-income and predominantly minority neighborhoods (e.g., Newman and Ashton 2004; Wilson 2010). On the one hand, such factors as changes in mortgage lending practices and the use of housing vouchers may enhance the impact of residential mobility and migration on changes in individuals' neighborhood environments—and racial differences therein. For example, changes in housing voucher programs and mortgage lending practices may have combined to improve blacks' access to financial resources and their opportunities to move into better neighborhoods. On the other hand, physical and economic changes occurring in these disadvantaged neighborhoods as a result of state actions (e.g., housing investments) and structural forces (e.g., growth of a middle-class minority population) may have elevated the role of *in situ* change in shaping individuals' neighborhood conditions (Adelman 2004; Ellen and O'Regan 2008). In particular, revitalization efforts in the form of public housing projects and capital investment in previously low-income and minority neighborhoods could directly improve residents' economic fortunes and neighborhood conditions more generally (Hackworth 2007; Hyra 2012; Wacquant 2008). These efforts could also send signals to developers, corporate actors, and other stakeholders that encourage further investment, thus indirectly promoting *in situ* neighborhood upgrading for nonmobile residents.

To summarize, we anticipate that racial differences in age-related changes in both neighborhood SES and neighborhood racial composition could be driven by racial differences in returns to short- and long-distance moves (i.e., intracounty and inter-county migration), by racial differences in the overall likelihood of moving between neighborhoods (either short or long distances), and/or by racial differences in neighborhood change among nonmovers. However, the relative contribution of these factors to neighborhood change either among the general population of blacks and whites or specifically among residents of poor or minority neighborhoods remains an open question that our analysis attempts to answer.

Data and Methods

Data for this analysis come from the Panel Study of Income Dynamics (PSID) and the 1990 and 2000 U.S. censuses. The PSID is a well-known nationally representative, longitudinal survey of U.S. residents and their families (PSID 2013). Beginning in 1968 with approximately 5,000 families, the sample has been interviewed annually until 1997 and biennially thereafter, and new families are added to the sample when children of the original families form their own household. By 2011, more than 9,000 families had been included in the survey panel, providing a sample of more than 70,000 individuals over the course of the study.

Sample

For this analysis, we select non-Hispanic black and non-Hispanic white heads of PSID households who were interviewed in both the 1991 and 2001 survey waves. We do not include Hispanic respondents for this period because the PSID Latino sample was

followed only from 1990 to 1995, and the PSID immigrant refresher sample was not added until 1997. We focus on change in the PSID respondents' neighborhood characteristics between 1991 and 2001, a period characterized by a fairly robust housing market albeit declining rates of migration (Molloy et al. 2011). Moreover, the 1990s saw important declines in residential segregation and both growth in, and frequent stabilization of, racially integrated neighborhoods (Bader and Warkentien 2016; Hall et al. 2016; Logan and Zhang 2010; Timberlake and Iceland 2007). Given our desire to measure change in individuals' neighborhood environments over time, we include in our sample household heads if they appeared in both the 1991 and 2001 surveys. The 10-year interval selected here aligns closely with the spacing between 1990 and 2000 decennial census years. We further restrict the sample to respondents who were between ages 25 and 54 in 1991 (and who were thus ages 35 to 64 in 2001). We select this age group because the interneighborhood migration patterns of youth (who often move to attend college) and the elderly (who often move for retirement reasons) may differ from the patterns exhibited by those of labor force age. However, supplemental analyses indicated that our substantive conclusions are unaffected by the age range of the sample. Our selection criteria result in a sample of 1,855 white and 1,031 black household heads.

Variables

We use three measures to capture changes between the PSID respondents' 1991 neighborhood and their 2001 neighborhood; we emphasize that this may or may not be the same neighborhood. To construct these measures, we first identify the socioeconomic characteristics and racial composition of respondents' neighborhoods at the two selected waves. Following prior research in this area (Sampson and Sharkey 2008; South et al. 2016; Teernstra 2014), the SES of respondents' neighborhoods is measured by the average family income of their residential census tracts, in constant 2000 dollars.[1] Neighborhood racial composition is measured by the percentage of the tract population that is non-Hispanic white and the percentage that is non-Hispanic black. Census tract boundaries are normalized to 2010 (GeoLytics 2014), and linear interpolation is used to estimate values of the neighborhood characteristics for 1991 and 2001 in our sample. Our outcome of interest is the *change* in individuals' neighborhood average family income and neighborhood racial composition (i.e., percentage non-Hispanic white and percentage non-Hispanic black) between 1991 and 2001.

We distinguish between two types of residential movers: (1) respondents who between 1991 and 2001 moved out of their census tract of origin but remained in the same county (intracounty movers), and (2) respondents who between 1991 and 2001 moved to a different county (intercounty migrants). Although differentiating intracounty moves from intercounty moves may not capture all relevant differences in types of interneighborhood moves, this distinction provides a reasonable approximation of short- and long-distance migration. Respondents who lived in the same tract in 1991 and 2001 are referred to as "nonmovers" or "nonmobile respondents."

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[1] In supplemental analysis, we used alternative indicators of neighborhood SES, including median family income and the poverty rate. The results from analyses using these alternative indicators were very similar to those generated using neighborhood average family income.

Analytical Strategy

We apply a conventional Blinder-Oaxaca regression decomposition (Blinder 1973; Oaxaca 1973) to assess the relative contributions of racial differences in interneighborhood migration and *in situ* neighborhood change to racial differences in neighborhood change between 1991 and 2001. This approach is based on the estimation of linear and additive race-specific equations to determine the relationship between residential mobility and changes in neighborhood characteristics. We use robust standard errors clustered at the family level in the regression analyses to account for nonindependence of observations within families. The coefficients in these race-specific regression models indicate how much neighborhood change is associated with intra- and intercounty mobility, respectively. Race-specific *in situ* neighborhood changes are captured by the constants of the regression models.[2] The two equations are then used to quantify the portion of the racial difference in neighborhood change that is attributable to the racial difference in the constants, the racial difference in the levels of residential mobility, the racial difference in the returns to mobility, and the interaction between the racial difference in the levels of residential mobility and returns to it. We use a model recommended by Jones and Kelley (1984) that clearly separates these components:

$$\overline{Y}_w - \overline{Y}_b = \left(\beta_0^w - \beta_0^b\right) + \Sigma\beta_j^b\left(\overline{X}_j^w - \overline{X}_j^b\right) + \Sigma\overline{X}_j^b\left(\beta_j^w - \beta_j^b\right) + \left[\Sigma\left(\beta_j^w - \beta_j^b\right)\left(\overline{X}_j^w - \overline{X}_j^b\right)\right].$$

The left side of the equation $(\overline{Y}_w - \overline{Y}_b)$ is the difference between whites and blacks in the mean neighborhood economic and racial composition changes. The first term on the right side, $(\beta_0^w - \beta_0^b)$, represents the contribution of the racial gap in the constants—that is, the white-black difference in neighborhood change among nonmovers. $\Sigma\beta_j^b\left(\overline{X}_j^w - \overline{X}_j^b\right)$ represents the total contribution of racial differences in the two groups' mean mobility rates, weighted by the black coefficients (the endowments component, or E). This term represents the amount by which the racial difference in neighborhood change would shrink if whites and blacks had the same levels of intra- and intercounty migration while keeping their respective neighborhood destinations unchanged. $\Sigma\overline{X}_j^b\left(\beta_j^w - \beta_j^b\right)$ captures the total contribution of racial differences in the outcomes of intra- and intercounty migration, weighted by the black mean migration rates (the coefficients component, or C). This component represents the amount by which the racial difference in neighborhood change would change if the association between residential mobility and neighborhood changes were the same across racial groups while keeping their respective neighborhood mobility levels unchanged. The final product $\left[\Sigma\left(\beta_j^w - \beta_j^b\right)\left(\overline{X}_j^w - \overline{X}_j^b\right)\right]$ represents the interaction effect between E and C (E × C). This term captures the portion of racial gap that arises from the simultaneous differences in the levels of residential mobility and the residential destinations among blacks and whites (Jann 2008).

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[2] We do not include other covariates in the models because we are interested in the overall contributions of interneighborhood migration and *in situ* change, rather than in their contributions net of the correlates of these processes.

   Our use of whites as the standard population allows us to determine how much the racial gap in neighborhood change would be altered if blacks experienced the same levels of, and returns to, residential mobility as whites. However, supplemental analysis reveals that very similar results are obtained if blacks are used as the standard population. Because the results of the decomposition can also vary depending on which group is chosen as the reference category for dummy variables, we also performed the decomposition using transformed coefficients for the residential mobility dummy variables, as described by Jann (2008) and Yun (2005). Results from these analyses were generally similar to those we report.

Results

Table 1 presents descriptive statistics for the variables used in the analysis, separately for the white and black respondents. Also shown are the component variables used to generate the neighborhood change scores. Consistent with the findings of much prior research (e.g., Sharkey 2012), on average, blacks and whites lived in neighborhoods of much different economic status, both at the beginning (1991) and the end (2001) of the

Table 1 Descriptive statistics for variables used in the analysis of neighborhood change, by race: Panel Study of Income Dynamics, 1991–2001

Variable	White	Black	White-Black Difference
Dependent Variables and Components			
Neighborhood average family income in 1991 (in 000s)	62.88	41.85	21.03***
	(28.86)	(17.53)	
Neighborhood average family income in 2001 (in 000s)	71.50	47.61	23.89***
	(29.84)	(17.30)	
Change in neighborhood average family income between 1991 and 2001 (in 000s)	8.62	5.76	2.86***
	(23.19)	(16.81)	
Neighborhood % non-Hispanic white in 1991	87.57	35.76	51.81***
	(14.49)	(30.93)	
Neighborhood % non-Hispanic white in 2001	84.28	33.39	50.89***
	(16.81)	(28.27)	
Change in neighborhood % non-Hispanic white between 1991 and 2001	–3.29	–2.37	–0.92
	(13.01)	(26.80)	
Neighborhood % non-Hispanic black in 1991	5.25	56.62	–51.37***
	(9.85)	(32.44)	
Neighborhood % non-Hispanic black in 2001	6.00	56.18	–50.18***
	(10.82)	(30.85)	
Change in neighborhood % non-Hispanic black between 1991 and 2001	0.75	–0.44	1.19
	(8.71)	(29.17)	
Independent Variable			
Nonmover	0.44	0.36	0.08***
Intracounty migrant between 1991 and 2001	0.27	0.45	–0.18***
Intercounty migrant between 1991 and 2001	0.29	0.19	0.10***
N	1,855	1,031	

Note: Standard deviations are shown in parentheses.

***p < .001

mobility interval. The neighborhoods inhabited by white respondents had an average family income of $62,880 and $71,500, respectively, in 1991 and 2001, compared with average family incomes of $41,850 and $47,610 in the neighborhoods inhabited by blacks. Most importantly for our purposes, although both white and black respondents tended to experience an increase in their neighborhood family income between 1991 and 2001, the increase in neighborhood income was larger for whites than for blacks ($8,620 vs. $5,760).

Racial differences in neighborhood racial composition are more pronounced than racial differences in neighborhood average family income. In both 1991 and 2001, whites lived in neighborhoods with a population more than 80 % non-Hispanic white and less than 6 % non-Hispanic black. In contrast, blacks lived in neighborhoods with a population only approximately one-third non-Hispanic white and more than 50 % non-Hispanic black in both 1991 and 2001. However, racial differences in neighborhood racial compositional *change* are small. Both whites and blacks experienced a decline over time in the percentage of their neighbors who were non-Hispanic white—3.29 percentage points for whites and 2.37 percentage points for blacks. Yet, whereas blacks experienced a slight decline in the percentage of same-race neighbors (0.44 percentage points), whites experienced a slight increase in their exposure to black neighbors (0.75 percentage points). These race-specific changes in neighborhood racial composition likely reflect declining levels of racial residential segregation along with the growth of the Hispanic and nonwhite, nonblack population of the United States over this period.

Table 1 also presents descriptive statistics for the residential mobility variables. Forty-four percent of white respondents and 36 % of black respondents lived in the same census tract in 2001 as they did in 1991. Blacks were more likely than whites to move across tracts within counties (45 % vs. 27 %, $p < .001$), but they were less likely than whites to move across counties (19 % vs. 29 %, $p < .001$).

Sources of Racial Differences in Neighborhood Change

To begin exploring the sources of these racial disparities in neighborhood change, we first estimate race-specific regression models in which the 1991–2001 change in individuals' neighborhood average income and racial composition is expressed as a function of intra- and intercounty migration. Models 1 and 2 of Table 2 present the results for change in neighborhood average income. For whites, the effects of intra- and intercounty migration are roughly the same. These two types of moves are associated with an approximate $3,700 improvement in neighborhood family income, relative to the change among stayers (Model 1). For blacks, intra- and intercounty migration are associated with a $2,700 and a $3,490 improvement in neighborhood family income, respectively (Model 2). Although both intra- and intercounty migration are associated with a greater improvement for whites than for blacks, these racial differences in the effect of mobility on changes in neighborhood income are not statistically significant. The constant in Model 1 indicates that white residents who do not move enjoy a $6,570 improvement in their neighborhood average income, compared with a $3,880 improvement for nonmobile black residents (Model 2), yielding a statistically significant difference of $2,690.

Table 2 Linear regression analysis of neighborhood change, by race: Panel Study of Income Dynamics, 1991–2001

Variable	Change in Neighborhood Average Income (in 000s)			Change in Neighborhood % Non-Hispanic White			Change in Neighborhood % Non-Hispanic Black		
	Model 1 White	Model 2 Black	White-Black Difference	Model 3 White	Model 4 Black	White-Black Difference	Model 5 White	Model 6 Black	White-Black Difference
Intracounty Migrant	3.70**	2.70*	1.00	2.92***	3.21*	–0.29	–1.98***	–4.86**	2.88
	(1.26)	(0.93)		(0.67)	(1.48)		(0.50)	(2.03)	
Intercounty Migrant	3.68*	3.49*	0.19	2.96***	5.44*	–2.48	–0.99*	–4.26	3.27
	(1.43)	(1.44)		(0.82)	(2.75)		(0.48)	(2.87)	
Constant	6.57***	3.88***	2.69***	–4.93***	–4.86***	–0.07	1.57***	2.57***	–1.00
	(0.35)	(0.43)		(0.23)	(0.51)		(0.16)	(0.54)	
N	1,855	1,031		1,855	1,031		1,855	1,031	

Notes: Reference category is nonmover. Standard errors are shown in parentheses.

$*p < .05$; $**p < .01$; $***p < .001$

Models 3 and 4 of Table 2 present results for neighborhood change in percentage non-Hispanic white, and Models 5 and 6 present the results for neighborhood change in percentage non-Hispanic black. Among whites, both intra- and intercounty movers experience almost a 3 percentage point increase in neighborhood percentage non-Hispanic white (Model 3), and a 1.98 (intracounty) and 0.99 (intercounty) percentage point decrease in neighborhood percentage non-Hispanic black, compared with stayers (Model 5). Among blacks, moving between neighborhoods (but within a county) is associated with a 3.21 percentage point increase in neighborhood non-Hispanic percentage white (Model 4), and a 4.86 percentage point decrease in neighborhood percentage non-Hispanic black (Model 6). The analogous percentage point changes for black intercounty movers are 5.44 and –4.26, respectively. Similar to the racial differences in neighborhood income change among movers, white-black differences in the association between residential mobility and neighborhood racial changes are statistically nonsignificant.

In contrast to the large and significant racial differences in neighborhood income change among nonmovers (Models 1 and 2), the racial differences in *in situ* neighborhood racial change are small and statistically nonsignificant. Nonmobile white residents experience a 4.93 percentage point reduction in same-race neighbors and a 1.57 percentage point increase in black neighbors; nonmobile black residents experience a comparable loss of white neighbors and a 2.57 percentage point increase in black neighbors.

Decomposition of Racial Differences in Neighborhood Change

Table 3 presents the results of the decomposition of the white-black difference in 1991–2001 changes in neighborhood average income and racial composition. The top portion of Table 3 presents the white-black differences in neighborhood change. In the subsequent portion, these racial gaps are decomposed into several parts. The first part reflects the difference due to the white-black difference in *in situ* change around nonmovers (the intercept component). The second set of entries shows the contribution of the racial difference in mean levels of intra- and intercounty migration (the endowments component). These entries show how much the racial gap in neighborhood change would increase or decrease if blacks moved within and between counties at the same rate as whites while retaining the same returns to these moves. The third set of entries shows the amount of the racial gap in the outcomes that is attributable to the difference in the effects of, or returns to, intra- and intercounty migration (the coefficients component). These entries show how much the racial gap in neighborhood change would increase or decrease if blacks retained their levels of intra- and intercounty migration but experienced the same returns as white movers. The final term captures the contribution of simultaneous differences in endowments and coefficients (the interaction component). The bottom portion of Table 3 expresses each of the components of the racial difference as a percentage of the total racial difference in neighborhood change.

As shown in the top portion of Model 1 of Table 3, between 1991 and 2001, white respondents experienced an average improvement in neighborhood income $2,860 greater than that experienced by black respondents. As shown in the intercept component, by far the most important source of the white-black difference in neighborhood income change is the racial difference in intercepts, or *in situ* change. The white-black

Table 3 Blinder-Oaxaca decomposition of racial differences in neighborhood change: Panel Study of Income Dynamics, 1991–2001

Variable	Change in Neighborhood Average Income (in 000s) Model 1	Change in Neighborhood % Non-Hispanic White Model 2	Change in Neighborhood % Non-Hispanic Black Model 3
White	8.62	–3.29	0.75
Black	5.76	–2.37	–0.44
Difference	2.86	–0.92	1.19
Difference Due to *In Situ* Change (intercept)	2.69	–0.07	–1.00
Difference Due to Endowments (E)			
Due to levels of intracounty migration	–0.48	–0.57	0.87
Due to levels of intercounty migration	0.33	0.51	–0.40
Difference Due to Coefficients (C)			
Due to levels of intracounty migration	0.45	–0.13	1.30
Due to returns to intercounty migration	0.04	–0.47	0.63
Interaction (E × C)	–0.16	–0.18	–0.21
Proportion Explained by Different Components			
% Due to *in situ* change	94	7	–84
% Due to levels of intracounty migration	–17	63	73
% Due to levels of intercounty migration	12	–56	–33
% Due to returns to intracounty migration	16	14	109
% Due to returns to intercounty migration	1	52	53
% Explained by interaction between E and C	–6	20	–18
N	2,886	2,886	2,886

difference in intercepts accounts for $2,690 of the $2,860 difference, or approximately 94 % of the total (2,690 / 2,860). Thus, the vast bulk of the racial difference in neighborhood income change results from less improvement in the economic status of the neighborhoods inhabited by nonmobile blacks than the neighborhoods inhabited by nonmobile whites.

As shown in the other rows of Model 1 of Table 3, racial differences in intra- and intercounty migration play less important and somewhat counterbalancing roles. The positive contribution of the white-black difference in intercounty migration levels indicates that approximately $330 of the $2,860 is attributable to the fact that whites are more likely than blacks to move long distances. In contrast, the negative contribution of racial differences in the level of intracounty migration (–0.48) indicates that if blacks moved short distances at the same rate as whites, the racial gap in neighborhood income change would actually expand by $480. Thus, racial differences in levels of local residential mobility and long-distance migration serve as countervailing influences on the racial difference in neighborhood income change. As shown in the *coefficients* panel, racial differences in the returns to intracounty migration account for $450 of $2,860, or 16 % of the total difference in neighborhood income change, but racial differences in the returns to long distance migration contribute only trivially to the racial gap in neighborhood income change ($40 of the $2,860).

Model 2 presents the results of a parallel decomposition of the white-black difference in the change in percentage of the neighborhood population that is non-Hispanic white. As noted earlier and as shown in the top rows, on average, whites experience a slightly greater

decline than blacks in the percentage of their neighbors who are non-Hispanic white—a difference of 0.92 percentage points. In contrast to the case of racial differences in neighborhood income change, much of the white-black difference in neighborhood racial change is driven by racial differences in levels of, and returns to, residential mobility and migration. The portion of total white-black difference explained by the levels of racial differences in intracounty migration is 0.57 of the total 0.92 percentage point difference. Thus, if blacks were as locally mobile as whites but retained their same neighborhood returns to mobility, the white-black difference in change in neighborhood percentage non-Hispanic white would have decreased by 63 %.

The racial gap in neighborhood racial change is also partly attributable to racial differences in the returns to moving. The white-black difference in the coefficient for intercounty migration accounts for 0.47 percentage points of the 0.92 percentage point difference, or 52 % of the total. This finding derives from the earlier observation that when blacks move between counties, the percentage of their neighbors who are non-Hispanic white increases more sharply than among intercounty white movers (see Table 2, Models 3 and 4). In other words, if long-distance black movers moved to destination neighborhoods with the same racial composition as the destination neighborhoods of long-distance white movers, the racial gaps in neighborhood racial change would have declined by about 50 %.

These contributions of racial differences in residential mobility are partially counterbalanced by the contribution of the racial difference in the rate of intercounty migration. The portion of total white-black gap explained by racial differences in intercounty migration is 0.51 percentage points: if blacks had converged to the same levels of long-distance migration as whites but kept their neighborhood returns to mobility unchanged, the white-black difference in neighborhood racial change would have actually increased by 56 %. Notably, racial differences in *in situ* neighborhood change play only a trivial role in accounting for whites' larger decline than blacks' over time in the percentage of their neighbors who are non-Hispanic white.

Model 3 of Table 3 presents a similar decomposition analysis of the white-black difference in the change in neighborhood percentage non-Hispanic black. The racial difference of 1.19 percentage points in neighborhood percentage non-Hispanic black is driven by both the loss of same-race neighbors among blacks and by an increase in whites' exposure to black neighbors. Not surprisingly, the relative contributions of racial differences in the levels of, and returns to, residential mobility are fairly similar to that observed in the decomposition of the white-black difference in change in neighborhood percentage white (Table 3, Model 2). The racial difference in the level of intracounty migration explains 73 % of the racial difference in neighborhood change in percentage non-Hispanic black. The racial differences in the returns to mobility also play nontrivial roles.

The contributions of racial differences in the returns to residential mobility and migration are partially offset by the contribution of the racial difference in the level of intercounty migration. If blacks increased their level of intercounty migration to the same level as whites but kept their neighborhood destination characteristics unchanged, the racial difference in neighborhood change in percentage non-Hispanic black would be amplified by 33 %. Therefore, eliminating the racial difference in the levels of intercounty migration would serve to exacerbate the white-black difference in neighborhood change in percentage black.

The racial difference in *in situ* change suppresses the racial difference in neighborhood change in non-Hispanic percentage black. The negative contribution of racial differences in *in situ* change (–1.00) indicates that if nonmobile blacks experienced neighborhood racial change similar to nonmobile whites, the racial gap in neighborhood change in percentage black would increase by 84 %. This finding reflects the tendency for the neighborhoods inhabited by nonmobile blacks to experience a larger increase in the number of their black neighbors compared with the neighborhoods inhabited by nonmobile whites (see Table 2, Models 5 and 6).

Sources of Racial Differences in Neighborhood Change Among Residents of Low-Income and Minority Neighborhoods

The preceding analyses decompose the racial difference in neighborhood change for the full sample of blacks and whites. However, as suggested earlier, the dynamics of neighborhood change among residents of low-income and largely minority neighborhoods deserve special attention. Moreover, the amount of neighborhood change experienced by individuals might vary by initial neighborhood conditions because of floor and ceiling effects. For example, whites who reside in the whitest neighborhoods cannot experience much of an increase in the percentage of their neighbors who are white. We explore this issue by replicating the decomposition analysis for black and white respondents who in 1991 resided in the lowest tritile of neighborhood family income, the lowest tritile of neighborhood percentage non-Hispanic white, and the highest tritile of neighborhood percentage non-Hispanic black. The descriptive statistics for these subsamples and the parameter estimates from the regression models are shown in Tables 5 and 6 (in the appendix), respectively.

Table 4 presents the results of the decomposition analysis for these subsamples. As shown in the top rows under Model 1, between 1991 and 2001 the neighborhood income of whites originating in low-income neighborhoods improved substantially more than that of blacks ($12,600 vs. $9,910). In sharp contrast to the decomposition results generated from the full sample (Table 3), most of the white-black difference in neighborhood income improvement among residents of the poorest neighborhoods is attributable to racial differences in levels of, and returns to, intra- and intercounty migration. Whites' greater returns to intra- and intercounty migration account for 62 % and 26 % of the difference, respectively, and whites' higher level of intercounty migration accounts for 49 % of the difference. In contrast, eliminating the racial difference in the levels of intracounty migration would widen the racial gap in neighborhood income change by 49 %. Unlike the results from the full sample, among residents of poor neighborhoods, the racial difference in *in situ* change accounts for only approximately one-fifth (21 %) of the racial difference in neighborhood income change.

Models 2 and 3 of Table 4 present the decomposition of the white-black difference in neighborhood racial composition change among respondents originating in neighborhoods of the lowest tritile of non-Hispanic white and the highest tritile of non-Hispanic black. The top rows of Models 2 and 3 reveal large differences between blacks and whites in neighborhood racial change. On average, and in contrast to the sample as a whole, whites originating in these predominantly minority neighborhoods experience an increase in the percentage of their neighbors who are non-Hispanic white that is 8.83 percentage points greater than the corresponding increase experienced by

Table 4 Blinder-Oaxaca decomposition of racial differences in neighborhood change for blacks and whites originating in low-income and minority neighborhoods: Panel Study of Income Dynamics, 1991–2001

	Change in Neighborhood Average Income (in 000s)[a] Model 1	Change in Neighborhood % Non-Hispanic White[b] Model 2	Change in Neighborhood % Non-Hispanic Black[c] Model 3
White	12.60	12.03	–8.93
Black	9.91	3.20	–4.91
Difference	2.69	8.83	–4.02
Difference Due to *In Situ* Change (intercept)	0.58	–5.60	0.05
Difference Due to Endowments (E)			
Due to levels of intracounty migration	–1.33	–1.42	1.10
Due to levels of intercounty migration	1.31	3.85	–1.41
Difference Due to Coefficients (C)			
Due to returns to intracounty migration	1.67	8.26	–3.48
Due to returns to intercounty migration	0.71	2.88	–0.69
Interaction (E × C)	–0.26	0.84	0.41
Proportion Explained by Different Components			
% Due to *in situ* change	21	–63	–1
% Due to levels of intracounty migration	–49	–16	–27
% Due to levels of intercounty migration	49	44	35
% Due to returns to intracounty migration	62	94	87
% Due to returns to intercounty migration	26	33	17
% Due to interaction between E and C	–10	10	–10
N	954	953	981

[a] Sample consists of blacks and whites initially residing in neighborhoods in the lowest tritile of average family income.

[b] Sample consists of blacks and whites initially residing in neighborhoods in the lowest tritile of % non-Hispanic white.

[c] Sample consists of blacks and whites initially residing in neighborhoods in the highest tritile of % non-Hispanic black.

blacks. Similarly, the few whites originating in largely black neighborhoods experience a greater decline than blacks in their exposure to non-Hispanic black neighbors—a difference of 4.02 percentage points.

Similar to what was observed in Models 2 and 3 of Table 3, the decomposition analysis for these respondents originating in the least white and most black neighborhoods suggests that the bulk of white-black difference in racial neighborhood change is attributable to racial differences in levels of, and returns to, residential mobility. Among blacks and whites originating in the predominantly minority neighborhoods, 94 % of the racial gap in change in neighborhood percentage non-Hispanic white (Model 2), and 87 % of the gap in change in neighborhood percentage non-Hispanic black (Model 3), is attributable to the racial difference in returns to intracounty migration—that is, to white local movers' tendency to relocate to neighborhoods that are much more white and less black than the neighborhoods where black local movers relocate. Additionally, the racial difference in the returns to intercounty migration account for one-third of the white-black difference in changes in neighborhood percentage non-Hispanic white. These results illustrate the importance of white movers' avoidance of minority neighborhoods as a driver of racial residential segregation. The racial difference in the overall

levels of moving between counties also plays a role. The racial gap in change in neighborhood percentage non-Hispanic white would decrease by 44 %, and the racial gap in change in neighborhood percentage non-Hispanic black would decrease by 35 %, if blacks were as likely as whites to move across counties.

In contrast, the white-black difference in *in situ* change accounts for virtually none of the racial difference in change in neighborhood percentage non-Hispanic black, and actually suppresses the racial difference in change in neighborhood percentage non-Hispanic white. The white-black difference in change in neighborhood percentage non-Hispanic white would increase by 63 % if the neighborhoods inhabited by nonmobile whites and blacks changed similarly. Overall, the key finding from this analysis is that among blacks and whites originating in largely minority areas, the racial difference in neighborhood racial change is driven primarily by racial differences in residential mobility, and particularly white local movers' tendency to relocate to neighborhoods that contain more whites and fewer blacks than the neighborhoods that blacks move to.

Discussion and Conclusion

Recent research has shown that as they age, blacks and whites experience different trajectories of change in neighborhood context. Most importantly, blacks enjoy lesser improvement than whites in the economic status of their residential neighborhoods. However, the proximate sources of this racial difference in neighborhood change are not well understood. Minimally, such differences could stem from racially differentiated patterns of residential mobility and migration and/or from differences in how the neighborhoods typically inhabited by nonmobile blacks and whites change over time. Using individual-level data from the PSID and tract-level data from 1990 and 2000 U.S. censuses, we quantify the relative contributions of racial differences in levels of, and returns to, residential mobility, as well as racial differences in *in situ* change, to racial disparities in how individuals' neighborhoods changed between 1991 and 2001.

Our results highlight the importance of *in situ*—or "unselected" (Sharkey 2012)—neighborhood change as a process that exacerbates racial neighborhood economic inequality (Coulter and van Ham 2013; Coulter et al. 2016). We find that for the full sample of black and white PSID respondents, the vast bulk of the difference in the degree to which blacks and whites experience economic improvement in their residential neighborhoods is attributable to greater improvements in the neighborhoods typically inhabited by whites than the neighborhoods typically inhabited by blacks. This racial disparity in neighborhood economic change could stem from a combination of factors including changing economic fortunes among nonmobile neighbors and differences in the economic characteristics of in-migrants versus out-migrants (Teernstra 2014). That is, the difference could result from different net migration patterns in the neighborhoods where whites and blacks tend to reside, with the neighborhoods inhabited by whites experiencing higher net migration of high-income residents than the neighborhoods inhabited by blacks. This difference could also arise from greater improvements in the SES of the neighbors of nonmobile whites relative to the neighbors of nonmobile blacks. Future research might attempt to quantify the relative contributions of net migration (and the components of net migration) and neighbors' changing economic circumstances in generating differences between nonmobile blacks and whites in the economic status of their residential neighborhoods.

In contrast, for the sample as a whole, racial differences in residential mobility play only a trivial role in accounting for the black-white difference in neighborhood economic change. Consistent with prior studies (Farley and Allen 1987; Schachter 2001), we find that blacks are more likely than whites to move locally but less likely than whites to move between counties. However, we find little evidence that the *change* in neighborhood economic status upon moving varies substantially between blacks and whites (cf. Sampson and Sharkey 2008). As a result, for the general population of blacks and whites, racial differences in the levels of and returns to residential mobility play only small roles in accounting for the racial gap in neighborhood economic change.

We observe a somewhat different pattern among black and white residents of low-income neighborhoods. In our analysis of neighborhood change among blacks and whites initially residing in low-income neighborhoods, the racial difference in *in situ* change no longer plays a predominant role in accounting for the different degree of neighborhood economic change between blacks and whites. The difference between our results for the full sample and our results for the residents of low-income neighborhoods could perhaps be explained by structural influences and governmental policies that were particularly relevant to low-income neighborhoods in the 1990s. Forces such as a strong economy, changes in welfare and income support policies, and public housing revitalization efforts may have benefited nonmobile black and white residents in low-income neighborhoods similarly. Among blacks and whites initially residing in low-income neighborhoods, the bulk of the racial difference in neighborhood income change is driven by white movers' relocation to neighborhoods with higher incomes than the neighborhoods blacks move to. This difference in the economic status of black and white movers' destination neighborhoods could result from several sources, including but not limited to blacks' lesser ability to afford housing in more-advantaged neighborhoods and their attachment and spatial proximity to poor neighborhoods (Jargowsky 2003; Kingsley and Pettit 2003).

Although we find a widening black-white difference in neighborhood income, for the sample as whole, we observe only small racial differences in neighborhood racial composition. Over the period covered by our study, both blacks' and whites' neighborhoods came to be populated less and less by non-Hispanic whites, while evincing almost no change in the population of non-Hispanic blacks. The decline in the relative representation of non-Hispanic whites likely reflects more general demographic and distributional trends, including the growth of the Hispanic and Asian populations and reductions in racial residential segregation (Iceland et al. 2002; Logan and Zhang 2010; Timberlake and Iceland 2007).

For the sample as a whole, the small black-white differences in neighborhood racial composition change are generated by counterbalancing forces. Among both blacks and whites, moving within and between counties is associated with an increase in the percentage of neighbors who are non-Hispanic white, and thus blacks' higher rate of local residential mobility but lower rate of intercounty mobility offset one another. Our results suggest that if blacks moved locally at the same rate as whites, the racial gap in the percentage of white neighbors would diminish. Conversely, if blacks moved long distances (i.e., between counties) at the same rate as whites, the racial gap in the percentage of white neighbors would increase. Roughly similar offsetting dynamics operate to generate little racial difference in the growth of the neighborhood black population.

The importance of racial differences in residential mobility for generating racial differences in neighborhood racial composition change is particularly evident in our analysis of blacks and whites initially residing in predominantly minority neighborhoods. We find that

virtually all these differences are accounted for by racial differences in the levels of, and returns to, moving. The vast majority of the black-white difference in neighborhood racial composition change is attributable to white local movers relocating to neighborhoods that contain more whites and fewer blacks than the neighborhoods that blacks move to. More than one-third of the difference is attributable to whites' greater likelihood of moving long distances, which is associated with an increase in the proportion of neighbors who are non-Hispanic white for black and white migrants alike.

Quantifying the relative contributions of racial differences in *in situ* change and residential mobility to racial differences in neighborhood change may contribute to existing urban policy discussions. In general, policies designed to redress racial disparities in neighborhood attainment follow one of two approaches. One policy response, exemplified by the Gautreaux and Moving-to-Opportunity (MTO) projects (Rosenbaum et al. 2002), is to promote the residential mobility of individuals—particularly racial minorities—away from deprived neighborhoods and into more advantaged communities. An alternative response is to target disadvantaged neighborhoods with additional resources through area-based initiatives (Parkinson 1998). Evidence regarding the effectiveness of these policies is mixed (Andersson and Bråmå 2004; Clampet-Lundquist and Massey 2008; Ludwig et al. 2008; Rhodes et al. 2003). Because racial differences in changes in neighborhood income and neighborhood racial composition among residents of low-income and predominantly minority neighborhoods are driven mainly by racial differences in intra- and intercounty migration, policies that enhance blacks' ability to move out of disadvantaged areas may be an effective strategy for reducing racial inequality in neighborhood environments. In particular, reducing the racial gap in change in neighborhood racial composition and economic status will likely entail eliminating the large racial gap between mobile blacks and whites in the racial composition and economic status of their destination neighborhoods. Policies that facilitate blacks' ability to move between counties will also help to reduce the black-white disparity in change in neighborhood environments.

Future research on racial differences in neighborhood attainment might profit from addressing some of the limitations of this study. Our analysis focuses on changes in individuals' neighborhood environments over a single decade: 1991 to 2001. Racial differences in neighborhood attainment might have changed since that time. Moreover, the relative contribution of residential mobility and *in situ* neighborhood change to the racial difference in changing neighborhood characteristics might also vary over time, as well as by age, cohort, and geographic location. Future research might benefit from expanding the current study to consider how racial differences in neighborhood change and the proximate sources of such change vary by individual demographic characteristics and across historical periods (Firebaugh and Farrell 2016). Future research might also benefit from incorporating data from other racial and ethnic groups. Our analysis includes only non-Hispanic blacks and whites because the PSID does not provide sufficient sample sizes for the analysis of other racial groups over the study period. Whether the findings from this analysis are generalizable to the neighborhood attainments of other racial and ethnic groups deserves further attention.

Appendix

Table 5 Descriptive statistics for variables used in the analysis of neighborhood change for blacks and whites originating in low-income and minority neighborhoods: Panel Study of Income Dynamics, 1991–2001

Variables	White[a]	Black[a]	White-Black Difference	White[b]	Black[b]	White-Black Difference	White[c]	Black[c]	White-Black Difference
Dependent Variables and Components									
Neighborhood average family income in 1991 (in 000s)	36.77 (39.47)	32.63 (8.58)	4.14***						
Neighborhood average family income in 2001 (in 000s)	49.37 (17.31)	42.54 (13.80)	6.83***						
Change in neighborhood average family income between 1991 and 2001 (in 000s)	12.60 (21.98)	9.91 (15.96)	2.69*						
Neighborhood % non-Hispanic white in 1991				48.93 (14.41)	12.78 (12.80)	36.15***			
Neighborhood % non-Hispanic white in 2001				60.95 (22.38)	15.98 (22.97)	44.97***			
Change in neighborhood % non-Hispanic white between 1991 and 2001				12.03 (12.02)	3.20 (24.09)	8.83***			
Neighborhood % non-Hispanic black in 1991							32.52 (15.54)	66.04 (26.78)	−33.52***
Neighborhood % non-Hispanic black in 2001							23.59 (26.10)	61.13 (27.69)	−37.54***
Change in neighborhood % non-Hispanic black between 1991 and 2001							−8.93 (20.55)	−4.91 (27.63)	−4.02

Table 5 (continued)

Variables	White[a]	Black[a]	White-Black Difference	White[b]	Black[b]	White-Black Difference	White[c]	Black[c]	White-Black Difference
Independent Variable									
Nonmover	0.45	0.36	0.09**	0.31	0.36	−0.05	0.38	0.37	0.01
Intracounty migrant between 1991 and 2001	0.29	0.48	−0.19***	0.31	0.47	−0.16**	0.33	0.45	−0.12**
Intercounty migrant between 1991 and 2001	0.26	0.16	0.10***	0.38	0.17	0.21***	0.29	0.18	0.11***
N	337	617		156	797		132	849	

Note: Standard deviations are shown in parentheses.

[a] Sample consists of blacks and whites initially residing in neighborhoods in the lowest tritile of average family income.

[b] Sample consists of blacks and whites initially residing in neighborhoods in the lowest tritile of % non-Hispanic white.

[c] Sample consists of blacks and whites initially residing in neighborhoods in the highest trtitile of % non-Hispanic black.

*$p < .05$; **$p < .01$; ***$p < .001$

Table 6 Linear regression analysis of neighborhood change for blacks and whites originating in low-income and minority neighborhoods: Panel Study of Income Dynamics, 1991–2001

Variable	Change in Neighborhood Average Income (in 000s)[a]			Change in Neighborhood % Non-Hispanic White[b]			Change in Neighborhood % Non-Hispanic Black[c]		
	Model 1 White	Model 2 Black	White-Black Difference	Model 3 White	Model 4 Black	White-Black Difference	Model 5 White	Model 6 Black	White-Black Difference
Intracounty Migrant	10.38***	6.90***	3.48	26.29***	8.72***	17.57***	−18.03***	−10.38***	−7.65
	(1.91)	(1.26)		(3.91)	(1.82)		(4.02)	(2.02)	
Intercounty Migrant	18.43***	14.05***	4.38	35.55***	18.12***	17.43***	−18.54***	−14.41***	−4.13
	(1.99)	(1.71)		(3.72)	(2.44)		(4.34)	(2.69)	
Constant	4.87***	4.30***	0.57	−9.51***	−3.91**	−5.60**	2.26	2.21	0.05
	(1.19)	(0.95)		(2.74)	(1.37)		(2.77)	(1.49)	
N	337	617		156	797		132	849	

Notes: Reference category is nonmover. Standard errors are shown in parentheses.

[a] Sample consists of blacks and whites initially residing in neighborhoods in the lowest tritile of average family income.

[b] Sample consists of blacks and whites initially residing in neighborhoods in the lowest tritile of % non-Hispanic white.

[c] Sample consists of blacks and whites initially residing in neighborhoods in the highest tritile of % non-Hispanic black.

**p < .01; ***p < .001

References

Adelman, R. M. (2004). Neighborhood opportunities, race, and class: The black middle class and residential segregation. *City & Community, 3,* 43–63.

Alba, R. D., & Logan, J. R. (1991). Variations on two themes: Racial and ethnic patterns in the attainment of suburban residence. *Demography, 28,* 431–453.

Andersson, R., & Bråmå, A. (2004). Selective migration in Swedish distressed neighbourhoods: Can area-based urban policies counteract segregation processes? *Housing Studies, 19,* 517–539.

Bader, M. D. M., & Warkentien, S. (2016). The fragmented evolution of racial integration since the civil rights movement. *Sociological Science, 3,* 135–166.

Bailey, N. (2012). How spatial segregation changes over time: Sorting out the sorting processes. *Environment and Planning A, 44,* 705–722.

Blinder, A. S. (1973). Wage discrimination: Reduced form and structural estimates. *Journal of Human Resources, 8,* 436–455.

Charles, C. Z. (2006). *Won't you be my neighbor? Race, class, and residence in Los Angeles.* New York, NY: Russell Sage Foundation.

Clampet-Lundquist, S., & Massey, D. S. (2008). Neighborhood effects on economic self-sufficiency: A reconsideration of the moving to opportunity experiment. *American Journal of Sociology, 114,* 107–143.

Clark, W. A. (1991). Residential preference and neighborhood racial segregation: A test of the Schelling segregation model. *Demography, 114,* 107–143.

Coulter, R., & van Ham, M. (2013). Following people through time: An analysis of individual residential mobility biographies. *Housing Studies, 28,* 1037–1055.

Coulter, R., van Ham, M., & Findlay, A. M. (2016). Re-thinking residential mobility: Linking lives through time and space. *Progress in Human Geography, 40,* 352–374.

Crowder, K. (2000). The racial context of white mobility: An individual-level assessment of the white flight hypothesis. *Social Science Research, 29,* 223–257.

Crowder, K., Pais, J., & South, S. J. (2012). Neighborhood diversity, metropolitan constraints, and household migration. *American Sociological Review, 77,* 325–353.

Crowder, K., & South, S. J. (2008). Spatial dynamics of white flight: The effects of local and extralocal racial conditions on neighborhood out-migration. *American Sociological Review, 73,* 792–812.

Crowder, K., South, S. J., & Chavez, E. (2006). Wealth, race, and inter-neighborhood migration. *American Sociological Review, 71,* 72–94.

Cutler, D. M., Glaeser, E. L., & Vigdor, J. L. (1997). The rise and decline of the American ghetto. *Journal of Political Economy, 107,* 455–506.

Desmond, M. (2016). *Evicted: Poverty and profit in the American city.* New York, NY: Crown.

Desmond, M., & Shollenberger, T. (2015). Forced displacement from rental housing: Prevalence and neighborhood consequences. *Demography, 52,* 1751–1772.

Ellen, I. G., & O'Regan, K. (2008). Reversal of fortunes? Lower-income urban neighbourhoods in the US in the 1990s. *Urban Studies, 45,* 845–869.

Farley, R., & Allen, W. R. (1987). *The color line and the quality of life in America.* New York, NY: Russell Sage Foundation.

Firebaugh, G., & Farrell, C. R. (2016). Still large, but narrowing: The sizeable decline in racial neighborhood inequality in metropolitan America, 1980–2010. *Demography, 53,* 139–164.

Fong, E., & Shibuya, K. (2005). Multiethnic cities in North America. *Annual Review of Sociology, 31,* 285–304.

Friedman, S. (2008). Do declines in residential segregation mean stable neighborhood racial integration in metropolitan America? A research note. *Social Science Research, 37,* 920–933.

Galster, G. C. (1991). Housing discrimination and urban poverty of African-Americans. *Journal of Housing Research, 2,* 87–122.

GeoLytics. (2014). *Census CD Neighborhood Change Database tract data from 1970–2010.* Retrieved from http://www.geolytics.com/USCensus,Neighborhood-Change-Database-1970-2000,Products.asp

Glaeser, E. L., & Vigdor, J. L. (2001). *Racial segregation in the 2000 census: Promising news* (Brookings Institution Survey Series). Washington, DC: Brookings Institution Center on Urban and Metropolitan Policy.

Glaeser, E. L., & Vigdor, J. L. (2012). *The end of the segregated century: Racial separation in America's neighborhoods, 1890–2010* (Civic Report No. 66). New York, NY: Manhattan Institute.

Hackworth, J. (2007). *The neoliberal city: Governance, ideology, and development in American urbanism.* Ithaca, NY: Cornell University Press.

Hall, M., Tach, L., & Lee, B. A. (2016). Trajectories of ethnoracial diversity in American communities, 1980–2010. *Population and Development Review, 42,* 271–297.

Hartmann, D. J. (1993). Neighborhood succession: Theory and patterns. In R. Hutchison (Ed.), *Research in urban sociology: Urban sociology in transition* (Vol. 3, pp. 59–81). Greenwich, CT: JAI Press.

Hochstenbach, C., & van Gent, W. P. (2015). An anatomy of gentrification processes: Variegating causes of neighbourhood change. *Environment and Planning A, 47,* 1480–1501.

Hwang, J., & Sampson, R. J. (2014). Divergent pathways of gentrification: Racial inequality and the social order of renewal in Chicago neighborhoods. *American Sociological Review, 79,* 726–751.

Hyra, D. S. (2012). Conceptualizing the new urban renewal: Comparing the past to the present. *Urban Affairs Review, 48,* 498–527.

Iceland, J., Weinberg, D. H., & Steinmetz, E. (2002). *Racial and ethnic residential segregation in the United States: 1980–2000* (U.S. Census Bureau, Series CENSR-3). Washington, DC: U.S. Government Printing Office.

Jann, B. (2008). The Blinder-Oaxaca decomposition for linear regression models. *Stata Journal, 8,* 453–479.

Jargowsky, P. A. (2003, May). *Stunning progress, hidden problems: The dramatic decline of concentrated poverty in the 1990s* (Living Cities Census Series). Washington, DC: The Brookings Institution.

Jones, F. L., & Kelley, J. (1984). Decomposing differences between groups: A cautionary note on measuring discrimination. *Sociological Methods & Research, 12,* 323–343.

Kingsley, T. G., & Pettit, K. L. S. (2003). *Concentrated poverty: A change in course.* Washington, DC: The Urban Institute.

Kochhar, R., Fry, R., & Taylor, P. (2011). *Wealth gaps rise to record highs between whites, blacks and Hispanics.* Washington, DC: Pew Research Center.

Krysan, M., Couper, M. P., Farley, R., & Forman, T. (2009). Does race matter in neighborhood preferences? Results from a video experiment. *American Journal of Sociology, 115,* 527–559.

Lee, B. A., Oropesa, R. S., & Kanan, J. W. (1994). Neighborhood context and residential mobility. *Demography, 31,* 249–270.

Logan, J. R. (1978). Growth, politics, and the stratification of places. *American Journal of Sociology, 84,* 404–416.

Logan, J. R., & Alba, R. D. (1993). Locational returns to human capital: Minority access to suburban community resources. *Demography, 30,* 243–268.

Logan, J. R., Alba, R. D., & Leung, S. Y. (1996). Minority access to white suburbs: A multiregional comparison. *Social Forces, 74,* 851–881.

Logan, J. R., & Zhang, C. (2010). Global neighborhoods: New pathways to diversity and separation. *American Journal of Sociology, 115,* 1069–1109.

Logan, J. R., & Zhang, C. (2011). *Global neighborhoods: New evidence from census 2010* (US2010 Project Report). New York, NY, and Providence, RI: Russell Sage Foundation and the American Communities Project of Brown University.

Ludwig, J., Liebman, J. B., Kling, J. R., Duncan, G. J., Katz, L. F., Kessler, R. C., & Sanbonmatsu, L. (2008). What can we learn about neighborhood effects from the moving to opportunity experiment? *American Journal of Sociology, 114,* 144–188.

Massey, D. S., & Denton, N. A. (1993). *American apartheid: Segregation and the making of the underclass.* Cambridge, MA: Harvard University Press.

Massey, D. S., Gross, A. B., & Shibuya, K. (1994). Migration, segregation, and the geographic concentration of poverty. *American Sociological Review, 59,* 425–445.

Massey, D. S., & Tannen, J. (2015). A research note on trends in black hypersegregation. *Demography, 52,* 1025–1034.

Molloy, R., Smith, C. L., & Wozniak, A. (2011). Internal migration in the United States. *Journal of Economic Perspectives, 25,* 173–196.

Newman, K., & Ashton, P. (2004). Neoliberal urban policy and new paths of neighborhood change in the American inner city. *Environment and Planning A, 36,* 1151–1172.

Oaxaca, R. (1973). Male–female wage differentials in urban labor markets. *International Economic Review, 14,* 693–709.

Oliver, M. L., & Shapiro, T. M. (2006). *Black wealth, white wealth: A new perspective on racial inequality.* New York, NY: Routledge.

Owens, A. (2012). Neighborhoods on the rise: A typology of neighborhoods experiencing socioeconomic ascent. *City & Community, 11,* 345–369.

Panel Study of Income Dynamics (PSID). (2013). *Restricted use dataset.* Ann Arbor: Institute for Social Research Survey Research Center, University of Michigan.

Park, R. E., Burgess, E., & McKenzie, R. D. (1925). *The city.* Chicago, IL: University of Chicago Press.

Parkinson, M. (1998). *Combating social exclusion: Lessons from area-based programmes in Europe*. York, UK: Policy Press for the Joseph Rowntree Foundation.

Pearce, D. M. (1979). Gatekeepers and homeseekers: Institutional patterns in racial steering. *Social Problems, 26,* 325–342.

Rhodes, J., Tyler, P., & Brennan, A. (2003). New developments in area-based initiatives in England: The experience of the single regeneration budget. *Urban Studies, 40,* 1399–1426.

Rosenbaum, J. E., Reynolds, L., & Deluca, S. (2002). How do places matter? The geography of opportunity, self-efficacy and a look inside the black box of residential mobility. *Housing Studies, 17,* 71–82.

Sampson, R. J., & Sharkey, P. (2008). Neighborhood selection and the social reproduction of concentrated racial inequality. *Demography, 45,* 1–29.

Schachter, J. (2001). *Why people move: Exploring the March 2000 Current Population Survey: March 1999 to March 2000* (Current Population Report No. P23-204). Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau.

Schelling, T. C. (1971). Dynamic models of segregation. *Journal of Mathematical Sociology, 1,* 143–186.

Seitles, M. (1988). The perpetuation of residential racial segregation in America: Historical discrimination, modern forms of exclusion, and inclusionary remedies. *Journal of Land Use & Environmental Law, 14,* 89–124.

Shapiro, T., Meschede, T., & Osoro, S. (2014). The widening racial wealth gap: Why wealth is not color blind. In R. Cramer & T. Williams Shanks (Eds.), *Assets perspective—The rise of asset building and its impact on social policy* (pp. 99–122). New York, NY: Palgrave Macmillan.

Sharkey, P. (2012). Temporary integration, resilient inequality: Race and neighborhood change in the transition to adulthood. *Demography, 49,* 889–912.

Sharkey, P. (2013). *Stuck in place: Urban neighborhoods and the end of progress toward racial equality.* Chicago, IL: University of Chicago Press.

Shlay, A. B. (1988). Not in that neighborhood: The effects of population and housing on the distribution of mortgage finance within the Chicago SMSA. *Social Science Research, 17,* 137–163.

Shlay, A. B., & Rossi, P. H. (1981). Keeping up the neighborhood: Estimating net effects of zoning. *American Sociological Review, 46,* 703–719.

Solari, C. D. (2012). Affluent neighborhood persistence and change in U.S. cities. *City & Community, 11,* 370–388.

South, S. J., Huang, Y., Crowder, K., & Spring, A. (2016). Neighborhood attainment over the adult life course. *American Sociological Review, 81,* 1276–1304.

Squires, G. D., & Kim, S. (1995). Does anybody who works here look like me: Mortgage lending, race, and lender employment. *Social Science Quarterly, 76,* 823–838.

Teernstra, A. (2014). Neighbourhood change, mobility and incumbent processes: Exploring income developments of in-migrants, out-migrants and non-migrants of neighbourhoods. *Urban Studies, 51,* 978–999.

Timberlake, J. M. (2009). "Scratchin' and surviving" or "movin' on up?" Two sources of change in children's neighborhood SES. *Population Research and Policy Review, 28,* 195–219.

Timberlake, J. M., & Iceland, J. (2007). Change in racial and ethnic residential inequality in American cities, 1970–2000. *City & Community, 6,* 335–365.

Wacquant, L. (2008). Relocating gentrification: The working class, science and the state in recent urban research. *International Journal of Urban and Regional Research, 32,* 198–205.

Wilson, W. J. (1987). *The truly disadvantaged.* Chicago, IL: University of Chicago Press.

Wilson, W. J. (2010). Why both social structure and culture matter in a holistic analysis of inner-city poverty. *Annals of the American Academy of Political and Social Science, 629,* 200–219.

Yinger, J. (1995). *Closed doors, opportunities lost: The continuing costs of housing discrimination*. New York, NY: Russell Sage Foundation.

Yun, M.-S. (2005). A simple solution to the identification problem in detailed wage decompositions. *Economic Inquiry, 43,* 766–772.