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Metropolitan Influences on Migration into Poor and Nonpoor Neighborhoods*

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Abstract

Data from the Panel Study of Income Dynamics and three decennial U.S. censuses are used to examine the influence of metropolitan-area characteristics on black and white households' propensity to move into poor versus nonpoor neighborhoods. We find that a nontrivial portion of the variance in the odds of moving to a poor rather to a nonpoor neighborhood exists between metropolitan areas. Net of established individual-level predictors of inter-neighborhood migration, black and white households are more likely to move to a poor or extremely poor tract rather than to a nonpoor tract in metropolitan areas containing many poor neighborhoods and a paucity of recently-built housing in nonpoor areas. Blacks are especially likely to move to a poor tract in metropolitan areas characterized by high levels of racial residential segregation and in which poor tracts have a sizeable concentration of blacks. White households are more likely to move to a poor than to a nonpoor tract in metropolitan areas that have comparatively few African Americans.

Keywords

Neighborhood; Migration; Geographic Mobility; Poverty; Race

Growing concern over the detrimental impacts of residing in a socioeconomically disadvantaged neighborhood (Leventhal and Brooks-Gunn 2000; Mendenhall et al. 2005; Sampson et al. 2002) directs attention to the spatial concentration of poverty and the migration processes by which families and individuals attain residence in particular types of

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neighborhoods. Broadly speaking, research into the determinants of households' exposure to poor and nonpoor neighbors has adopted one of two approaches. One research design is primarily aggregate, identifying metropolitan-level patterns (Dwyer 2010) and trends (Fischer et al. 2004; Tittle and Rotolo 2010) in residential segregation by social class, and exploring how these segregation patterns—and changes therein—covary with other metropolitan-area characteristics (e.g., Fong and Shibuya 2000; Jargowsky 1996; Wagmiller 2007). A key finding from this line of research is that metropolitan-area racial inequality is strongly associated with race-specific patterns of class segregation (Massey et al. 1991; Massey and Fischer 2000). Where African Americans' residential choices are constrained largely to black neighborhoods, they are especially likely to reside in poor neighborhoods.

A second line of inquiry takes individuals or households as the units of analysis and examines the cross-sectional correlates of neighborhood economic composition (e.g., Logan and Alba 1993) and patterns of residential mobility out of and into neighborhoods of varying socioeconomic status (e.g., South and Crowder 1997). Early work in this latter tradition was predominantly descriptive, examining migration patterns between poor and nonpoor neighborhoods (Gramlich et al. 1992; Massey et al. 1994; Quillian 1999; 2003); more recent studies have explored trends in inter-neighborhood migration (Briggs and Keys 2009; Cooke 2010; Crowder and South 2005). We know from these studies that African Americans are much less likely than whites to exit poor neighborhoods and much more likely than whites to enter them, and that blacks experience substantially longer durations in disadvantaged communities (Quillian 2003; Vartanian et al. 2007). A few studies in this tradition also seek to identify nonracial characteristics that enhance or inhibit the likelihood of moving from or to poor neighborhoods (e.g., South and Crowder 1997; South et al. 2005a). By influencing the overall likelihood of moving, sociodemographic and life-cycle characteristics, such as age, homeownership, and marital status, provide the opportunity to move to a neighborhood of a different socioeconomic status. Conditional upon moving, socioeconomic resources, such as higher levels of education and income, facilitate moving out of poor neighborhoods and into nonpoor areas. For the most part, however, research in this tradition ignores the possible influence of metropolitan-area characteristics that serve prominently in aggregate studies of class segregation and the spatial concentration of poverty.

In this paper we bridge these two research traditions. Using longitudinal data from the Panel Study of Income Dynamics (PSID) for the period 1980-2005, we focus on the mobility of individual households into poor versus nonpoor neighborhoods. But in contrast to much prior research our focal explanatory variables are characteristics of the metropolitan areas in which these households reside. One advantage to our multilevel design is that, unlike studies in the aggregate tradition, we are able to control for an array of established individual-level determinants of inter-neighborhood migration while assessing the possible influence of metropolitan-area characteristics. We also exploit the multilevel nature of our data by decomposing the variance in the odds of moving to a poor versus a nonpoor neighborhood into its within-metropolitan-area and between-metropolitan-area components. This decomposition helps to determine the extent to which the likelihood of moving to a poor or a nonpoor neighborhood varies across rather than within metropolitan areas. And, we examine the degree to which recent trends in the likelihood of moving to a poor or nonpoor neighborhood can be explained by changes in individual-level and metropolitan-level predictors of inter-neighborhood migration.

Background and Hypotheses

Theories of locational attainment—that is, how individuals acquire residence in particular kinds of communities—can be categorized roughly into four types. Human capital models emphasize the effects of individuals' access to socioeconomic resources. Individuals with

high actual or potential earnings are able to afford housing in more affluent neighborhoods and are thus more likely than poorer individuals to move to, and remain in, more desirable communities (Logan and Alba 1993; South and Crowder 1997). Spatial assimilation models are in some ways a subset of human capital models, but they focus on the locational attainments of minorities and immigrants. In the main, spatial assimilation models posit that the acquisition of human and financial capital, such as higher levels of income and education, and mainstream cultural resources, such as English language proficiency and social ties to the majority group, facilitate the location of minority group members in socioeconomically advantaged neighborhoods containing comparatively large numbers of non-Hispanic whites (Alba and Nee 2003; South et al. 2005b). Both human capital and spatial assimilation models stress the importance of individual attributes as determinants of locating in more or less desirable neighborhoods.

Two other models of locational attainment have stronger implications for the influence of metropolitan-area characteristics. Place stratification theory emphasizes how powerful social groups, particularly affluent whites, distance themselves spatially from groups perceived as undesirable neighbors, African Americans in particular. This model points to the high levels of racial discrimination in metropolitan housing markets (Massey and Denton 1993; Ross and Turner 2005; Yinger 1995), and how whites' racial animus impedes blacks' access to middle-class, predominantly white neighborhoods (Charles 2006; Krysan and Farley 2002). The place stratification model also highlights the unwillingness of whites to share neighborhoods with minority residents (Crowder 2000; Crowder and South 2008; Friedman 2010; Krysan 2002). The place stratification model invokes metropolitan-area characteristics as possible influences on the likelihood of migrating into poor versus nonpoor neighborhoods partly because the concentration of blacks in poor neighborhoods, and the concentration of whites in nonpoor neighborhoods, shapes the desirability of these types of neighborhood as possible destinations. Moreover, whites are likely to express a greater aversion to having black neighbors in metropolitan areas with large black populations (Crowder and South 2008).

The housing availability model of locational attainment emphasizes more generally the ecological structure of metropolitan areas. For example, the likelihood of moving to a poor rather than to a nonpoor neighborhood is apt to be shaped by the relative numbers of poor and nonpoor neighborhoods. And, metropolitan areas with substantial supplies of new housing, most of which is built in nonpoor communities (Dwyer 2007), are likely to present enhanced opportunities to move to nonpoor neighborhoods.

Yet, while the place stratification and housing availability models of neighborhood locational attainment broadly suggest that metropolitan-area characteristics condition the likelihood of moving to poor versus nonpoor neighborhoods, few studies have rigorously investigated these influences. South and Crowder (1997) include a small number of metropolitan-area characteristics in their models of inter-neighborhood migration, but they focus primarily on the influence of individual characteristics. Moreover, South and Crowder (1997) fail to take into account the multilevel nature of their data, casting doubt on the observed influences of these metropolitan-area attributes. Given that changes in social class segregation covary with an array of metropolitan-area characteristics (e.g., Jargowsky 1996), and that class-specific inter-neighborhood migration patterns play a pivotal role driving changes in social class segregation (Briggs and Keys 2009), the influence of metropolitan-area characteristics on these migration patterns warrants renewed attention.

Hypotheses

Drawing on the housing availability model of locational attainment, one metropolitan-area characteristic that is likely to influence the probability of moving into a poor rather than a

nonpoor neighborhood is the relative number of poor and nonpoor neighborhoods that serve as possible destinations for movers. The relative supply of poor versus nonpoor neighborhoods taps the simple opportunity to move to a neighborhood of a given poverty status. All else equal, in metropolitan areas with many poor neighborhoods, households will be more likely to move to a poor neighborhood. In contrast, in metropolitan areas containing few poor neighborhoods and many nonpoor neighborhoods, households will be more likely to move to a nonpoor neighborhood.

The likelihood of moving to a poor rather than a nonpoor neighborhood is also likely to vary by the population size of metropolitan areas. At a general level, large populations generate greater spatial differentiation and economic segregation (Jargowsky 1996). Moreover, it is possible that, compared to poor neighborhoods in smaller metropolitan areas, poor neighborhoods in larger metropolitan areas are more likely to exhibit positive amenities, such as avant-garde cultural institutions and practices, restaurants, and colleges and universities. These “little Bohemias” might attract in-migrants despite relatively high poverty rates. In contrast, poor neighborhoods in smaller metropolitan areas may exhibit few amenities to counterbalance the negative effect of neighborhood poverty. Thus, we hypothesize that metropolitan area population size will be positively associated with the likelihood of moving to a poor neighborhood.

The supply of newly-built housing in a metropolitan-area might also shape patterns of migration into poor and nonpoor neighborhoods. Most new housing is built in nonpoor—indeed, frequently affluent—areas (Dwyer 2007), thereby enhancing households' opportunities to move to nonpoor rather than poor neighborhoods. Even new housing built in affluent areas will create opportunities to move to nonpoor but non-affluent neighborhoods, as the movement of wealthier households from middle-class areas creates vacancies in these nonpoor neighborhoods. In contrast, metropolitan areas with stagnant supplies of housing are unlikely to afford opportunities to move to nonpoor neighborhoods because there will be few housing vacancies in such areas. Accordingly, we hypothesize that the supply of newly-built housing in metropolitan areas will be positively associated with the likelihood of moving to a nonpoor neighborhood.

The place stratification model of locational attainment points to a possible effect of metropolitan-area racial composition on migration into poor versus nonpoor neighborhoods. According to this model, whites are especially reluctant to share neighborhoods with blacks in metropolitan areas in which African American constitute a sizeable share of the population (South et al., forthcoming). In such areas, blacks are seen as a political and economic threat to whites' well-being (Blalock 1967; Lieberson 1980). Given that predominantly black neighborhoods are more likely than predominantly white neighborhoods to be poor, whites' avoidance of black neighborhoods perforce means an avoidance of poor neighborhoods. And, given that white neighborhoods tend to be nonpoor neighborhoods, blacks' exacerbated inability to share neighborhoods with whites in metropolitan areas with large black populations will translate into an attenuated ability to acquire residence in nonpoor neighborhoods. Thus, we hypothesize that the percentage of the metropolitan-area population that is black will be positively associated with the likelihood that blacks will move to a poor neighborhood, but inversely associated with the likelihood that whites will move to a poor neighborhood.

The influence of metropolitan-area population composition on inter-neighborhood migration might also find expression in an effect of the size of the foreign-born population. A sizable presence of the foreign-born may foster a generalized mixing of ethnic and racial subgroups, and thus an attendant integration of social classes. Fischer and Tienda (2006) and Logan and Zhang (2010) maintain that a large local presence of foreign-born population weakens class

divisions by increasing residential exposure to racial and ethnic diversity. Wagmiller (2007) finds that jobless men tend to be less residentially segregated from employed men in metropolitan-areas with many foreign-born residents. We thus hypothesize that the relative size of the foreign-born population in the metropolitan-area will be inversely associated with the likelihood of moving to a poor neighborhood.

The level of suburbanization in a metropolitan area might also condition migration patterns between poor and nonpoor neighborhoods. In metropolitan areas with large suburban rings, households--perhaps especially poor households--might find it difficult to move to nonpoor areas, which in highly suburbanized metropolitan areas are often distant from the central city. Highly suburbanized metropolitan areas tend to contain numerous individual suburban municipalities, which can use zoning policies and other strategies to repel the in-migration of the poor (cf. Yang and Jargowsky 2006). It is also possible that the level of suburbanization differentially affects the inter-neighborhood migration patterns of blacks and whites. Blacks may face special barriers to moving to suburban areas, where a legacy of restrictive covenants and racial animus repels their in-migration. No such barriers are likely faced by whites.

The place stratification perspective also implies that the level of racial residential segregation in the metropolitan area is related to the likelihood of moving to a poor versus a nonpoor neighborhood. In the cross-section, high levels of racial residential segregation are associated high levels of class segregation (Fong and Shibuya 2000). High levels of racial segregation are likely to reflect racially-discriminatory housing market practices that restrict blacks' movement into nonpoor neighborhoods and instead channel them to poor areas (Massey and Denton 1993; Fischer and Massey 2004; Galster 1991).

Finally, the place stratification theory implies that households take into account the racial composition of neighborhoods, as well as their economic status, when considering moving to a new neighborhood. Although both whites and blacks can be assumed to prefer nonpoor to poor neighborhoods, these preferences are likely to be conditioned by the racial composition of neighborhoods. Whites express weak preferences for neighborhoods with more than a small share of African Americans (Charles 2006). Blacks generally prefer neighborhoods that are more evenly balanced, but tend to eschew predominantly white communities (Krysan and Farley 2002). Consequently, the racial composition of poor and nonpoor neighborhoods in a metropolitan area is likely to influence blacks' and whites' movement into them. In metropolitan areas where poor neighborhoods are especially numerically dominated by blacks (and where nonpoor neighborhoods tend to contain few blacks), we would expect comparatively low rates of white migration into poor neighborhoods. In contrast, we would expect blacks to be *more* likely to move to poor neighborhoods in metropolitan areas where poor neighborhoods are also mainly black neighborhoods.

In sum, both the housing availability and place stratification perspectives on locational attainment suggest that metropolitan-area characteristics influence the likelihood of moving to a poor rather than a nonpoor neighborhood. The housing availability perspective suggests that a substantial supply of poor neighborhoods, large population size, and a deficit of newly-built housing will be positively associated with the risk of moving to a poor neighborhood. The place stratification perspective suggests that blacks' risk of moving to a poor neighborhood will be positively associated with metropolitan-area black population size, suburbanization, racial residential segregation, and the concentration of blacks in poor neighborhoods. We further hypothesize that whites' likelihood of moving to a poor neighborhood is inversely associated with these metropolitan-area characteristics. The

relative size of the foreign-born population is expected to be inversely associated with the likelihood of moving to a poor neighborhood among both blacks and whites.

Data and Methods

Data for this analysis come from several sources. Our primary source is the Panel Study of Income Dynamics (PSID), a well-known survey of U.S. residents and their families that has been used frequently to study inter-neighborhood migration (e.g., Briggs and Keys 2009; Crowder and South 2008; Quillian 1999). Starting in 1968, members of the initial panel of approximately 5,000 families were interviewed annually until 1995 and biennially thereafter. New families have been added to the panel as children and other members of original panel families "split-off" to form their own households. By 2005, a cumulative total of over 9,000 families had been included in the survey panel, providing information on more than 67,000 individuals over the course of the study.

For the purposes of this analysis we delimit the PSID sample in four ways. First, because we are interested in the residential mobility of households rather than individuals, we select only PSID participants who were household heads (or "householders") at either the beginning or the end of a migration interval (the period between successive PSID interviews). Selecting household heads rather than all family members avoids counting the same family-based residential move more than once. Second, because we are primarily interested in the effects of metropolitan area characteristics on intrametropolitan mobility, we select PSID householders who began and ended a migration interval in the same census-defined metropolitan area. Third, because members of other racial and ethnic groups are represented in too few numbers to support analysis, we select only black and white PSID householders. Fourth, because it proved impossible to construct measures of the focal metropolitan-area characteristics from the 1970 U.S. census that are comparable to those from later censuses, we select migration intervals beginning in 1980. We include migration intervals through 2005, the most recent PSID wave available at the time of our analysis. Applying these selection criteria results in a sample of 5,266 black PSID householders and 6,321 white PSID householders. Because we can observe multiple inter-neighborhood moves by the same householder, we structure the data as a series of person-intervals, each interval referring to the period between successive PSID interviews. Black householders contribute 39,153 person-intervals to the analysis and white householders contribute 50,534 intervals. The households included in our analysis are nested within 287 census-defined metropolitan areas.

The PSID's Supplemental Geocode Files record each household's census tract and metropolitan area of residence at each survey wave. Using this information, we append to each household's data record information describing the poverty status of the census tract at the beginning and end of each migration interval, as well as information describing the socioeconomic, demographic, and ecological structure of the larger metropolitan area. As in most prior work in this area, we use census tracts as our approximation of neighborhoods. Tract-level census data from the Neighborhood Change Data Base (NCDB), in which data from the 1980 and 1990 censuses have been normalized to 2000 tract boundaries (GeoLytics 2008), allow us to produce consistent measures of census tract poverty status over the study period. Because the PSID geocodes characterize households' location at each interview using the consistent set of tract codes defined by the 2000 census, we are able to distinguish actual changes in residential location and neighborhood conditions from differences produced by shifting geographic definitions. To estimate the values of the tract poverty rate for non-census years (1981-1989-1991-1999-2001-2005), we use linear interpolation and extrapolation with endpoints defined by adjacent census years.

Following the conventional conceptualization of migration as a two-stage process involving first the decision to move and secondly the choice of destination (e.g., Massey et al. 1994), our analysis includes two dependent variables. The first outcome is a dichotomous indicator of whether the householder moved out of her census tract of origin over the migration interval (0 = no, 1 = yes). The second dependent variable is a measure of the poverty status of the neighborhood of destination. Again, following much prior work in this area (e.g., Briggs and Keys 2009; Massey et al. 1994; Quillian 2003), we classify census tracts into three categories: *nonpoor tracts* have poverty rates below 20%, *poor tracts* have poverty rates between 20% and 40%, and *extremely poor tracts* have poverty rates greater than 40%.

Independent Variables

Our focal independent variables tap the economic, demographic, and ecological structure of the metropolitan areas in which the PSID households live. As with the measures of census tract poverty status, we use linear interpolation and extrapolation to estimate metropolitan-level values of these characteristics for the non-census years between 1980 and 2005. To facilitate interpretation of their effects, all continuous independent variables (including individual characteristics) are grand mean centered.

The quantity of poor tracts in the metropolitan area is measured by the percentage of all tracts that have poverty rates greater than 20 percent. Metropolitan-area population size is measured in logged form to reduce skewness. The supply of newly-built housing in nonpoor areas is measured by the percentage of housing units located in tracts with poverty rates below 20% that were built in the ten years prior to the observation period. Also included are the percentage of the metropolitan-area population that is non-Hispanic black and the percentage that is foreign-born. All of these variables are computed from the 1980, 1990, and 2000 U.S. Census of Population and Housing Summary Files (U.S. Department of Commerce 1984; 1992; 2004).

The level of suburbanization is measured by the percentage of the metropolitan-area population residing in the suburban ring of the metropolitan area. Data used to compute this measure are taken from the U.S. Department of Housing and Urban Development's State of the Cities Data Systems (U.S. Department of Housing and Urban Development 2009).

Racial residential segregation is measured by the well-known black-white index of dissimilarity. This measure is computed from tract-level racial distributions (Lewis Mumford Center 2001). To measure the racial composition of poor and nonpoor areas in the metropolitan area, we use tract-level data from the NCDB and compute, for each metropolitan area, the bivariate Pearsonian correlation between the percentage of the tract population that is black and the percentage of the tract population that is poor. High values of this correlation are indicative of metropolitan areas in which poor neighborhoods tend more than nonpoor neighborhoods to be black, while low values are indicative of metropolitan areas with a more even distribution of poor and nonpoor persons across black and nonblack neighborhoods.[1]

Although our analysis focuses primarily on the possible effects of metropolitan-area characteristics on residential moves into poor versus nonpoor neighborhoods, we also control for established individual-level predictors of inter-neighborhood migration. Householder's age is measured continuously in years. Householder's sex is a dummy variable scored 1 for female household heads and 0 for male household heads. Married

[1]Multicollinearity among the metropolitan-level predictors does not appear to be a problem. The strongest bivariate correlation is only .57, and the bulk of the correlations are weaker than .20. The largest variance inflation factor is only 2.61, a figure well below the usual threshold for suspecting that multicollinearity may be a problem (O'Brien 2007).

respondents (and long-term cohabitors) are distinguished from unmarried respondents by a dummy variable. The number of children in the household is measured continuously. Duration of residence is measured by a dummy variable scored 1 for householders who have resided in their current residence for three or more years. Homeowners are distinguished from renters with a dummy variable taking a value of 1 for those living in an owner-occupied dwelling. Household crowding is measured by the number of persons per room in the dwelling. Householder's educational attainment is measured by completed years of schooling. Family income refers to total taxable income for householders and (if present) spouses, in constant 2000 dollars. A dummy variable distinguishes employed householders from nonemployed householders. All of the independent variables except respondents' race and sex are treated as time-varying covariates.

The geographic concentration of poverty deepened during the 1980s but then reversed course in the 1990s (Jargowsky 2003; Kingsley and Petit 2003; Wheeler and La Jeunesse 2008). Some of this change may have resulted from trends in migration into poor relative to nonpoor neighborhoods. To capture such trends, we include separate dummy variables for migration intervals observed between 1990 and 1999 and between 2000 and 2005, with migration intervals in the 1980s serving as the reference category.

Analytical Strategy

We begin the analysis by presenting race-specific transition matrices showing the rates of movement between nonpoor, poor, and extremely poor census tracts. We then estimate binary multilevel logistic regression models of the odds that householders will move out of their origin census tract over the interval. Finally, we select householders who moved out of their census tract and estimate multilevel logistic regression models of the poverty status of the destination tract, while controlling for the poverty status of the origin tract. Because these models are based only on inter-tract movers, we apply a Heckman correction (entering the inverse Mills ratio into the destination regression models) for the selection of householders into the mover category. The model used to generate this sample selection term includes all of the individual-level predictors in the out-migration models.

The regression analyses involve a series of random intercept models, estimated with Mplus (Muthen and Muthen 2009), which adjust for the clustering of person-intervals within metropolitan areas. In addition, by allowing the intercept to vary across metropolitan areas, we are able to decompose the variance in the outcomes into their within- and between-metropolitan area components (Raudenbush and Bryk 2002). We account for the additional clustering of person-intervals within persons by using robust standard errors.

Results

Table 1 presents the householder neighborhood transition matrices, that is, the cross-classification of tract poverty status at the beginning of the migration interval with tract poverty status at the end of the interval. Panel A shows the matrix for blacks and Panel B shows the matrix for whites. These matrices include all person-interval observations, not just movers, so nonmovers will tend to cluster on the diagonal.

Looking first at the row marginals, it is clear that black and white households tend to reside in neighborhoods with vastly different levels of poverty. Forty-one percent of the mobility intervals for black households (16,082/39,153) originate in a nonpoor tract, 43% originate in a poor (or high-poverty) tract (16,768/39,153), and over 16% originate in an extremely poor tract (6,303/39,153). In sharp contrast, almost 92% of the mobility intervals for white households originate in a nonpoor census tract (46,402/50,534), fewer than 8% originate in a

poor tract (3,783/50,534), and fewer than 1% originate in an extremely poor tract (349/50,534).

Blacks also experience higher rates than whites of transitioning out of nonpoor tracts and into poor tracts. Over 10% (100 – 89.3) of blacks who began an interval in a nonpoor tract were living in a poor or extremely poor tract by interval's end; fewer than 2% of whites (100 – 98.5) experienced this type of neighborhood transition. Among blacks originating in poor tracts, 9.6% transitioned to a nonpoor tract and 5% transitioned to an extremely poor tract over the mobility interval. In contrast, almost 18% of the smaller number of whites originating in a poor tract transitioned to a nonpoor tract and only slightly more than 1% transitioned to an extremely poor tract. Because so few whites originate in extremely poor tracts, racial comparisons are more tenuous for households beginning a mobility interval in these areas. However, the few whites who initially reside in an extremely poor tract are substantially more likely to transition to a nonpoor tract (over 17%) than are blacks who originate in an extremely poor tract (5.4%).

Table 2 presents descriptive statistics on the key variables used in our analysis, separately for the black and white mobility intervals. Blacks exit their neighborhoods more frequently than do whites. Blacks move from their census tract of origin in 22% of the mobility intervals, compared to 15% for whites. Reinforcing the findings in Table 1, conditional upon moving from the origin tract, blacks move to tracts that are poorer than the tracts whites move to. Forty-six percent of black inter-tract movers move to a nonpoor tract, 41% move to a poor tract, and 14% move to an extremely poor tract. Among white inter-tract movers, 90% move to a nonpoor tract, 9% move to a poor tract, and only 1% move to an extremely poor tract.

Blacks and whites differ substantially on several of the individual-level variables that might influence these mobility outcomes. Compared to white PSID householders, black PSID householders are more likely to be female (49% of blacks versus 24% of whites) and less likely to be married (38% of black intervals versus 65% of white intervals). The black respondents are slightly younger than the white respondents (mean age for blacks = 40; mean age for whites = 44). On average, the black PSID households in our sample have more children present (1.19 versus .78 for whites) and are more crowded (.68 persons per room for blacks versus .50 for whites). Black householders are less likely than whites to have lived in the current house for three or more years (51% versus 59%), and black householders are substantially less likely than white householders to own their homes (37% versus 68%). On average, black householders have completed two fewer years of schooling than white householders (mean for blacks = 11.7 versus 13.6 for whites), are less likely to be employed (64% versus 77%), and have lower family incomes (mean for blacks = $32k versus $64k for whites).

In general, blacks and whites reside in metropolitan areas with similar values on the focal independent variables. Compared to the metropolitan areas in which the white migration intervals originate, the metropolitan areas in which the black intervals begin tend to have a slightly greater percentage of poor census tracts and larger total populations. They also tend to have slightly more new housing in nonpoor tracts and larger suburban rings. The metropolitan areas in which blacks live are characterized by higher levels of racial residential segregation and by stronger correlations between tract-level percent black and the poverty rate, although the correlation is high for both groups (r = .66 for blacks, .59 for whites). The exception to this pattern of modest racial differences in metropolitan-area characteristics is racial composition. The black migration intervals originate in metropolitan areas that average 22% non-Hispanic black. In contrast, the white intervals originate in metropolitan areas that are, on average, only 12% non-Hispanic black.

Table 3 presents the results of multilevel logistic regression models of the odds that householders will move out of their census tract of origin. We estimate models for the racially-pooled sample (Model 1) as well as separately for blacks (Model 2) and whites (Model 3). Given the very small number of whites originating in, or moving to, extremely poor tracts, in this and subsequent analyses of white migration we combine extremely poor tracts with other poor tracts.

Four findings from these analyses are worth noting. First, most of the demographic and life-cycle determinants of residential mobility operate as expected. The likelihood of moving out of the origin census tract declines significantly with age and number of children, and is significantly lower for married householders, long-term residents, homeowners, and employed persons. Household crowding is positively associated with the likelihood of moving. Education is significantly and negatively related to the likelihood of moving out of the neighborhood, while family income is significantly and positively associated with inter-tract migration. Among whites but not blacks, women are significantly more likely than men to move from the tract of origin.[2]

Second, although blacks are more likely than whites to move out of their neighborhood absent controls for other predictors (Table 2), this difference is reversed when the other covariates of neighborhood out-migration are controlled (Table 3, Model 1). Net of the effects of the other explanatory variables, blacks' odds of out-migration are 6% lower than the corresponding odds for whites [$.060 = 1- e^{(-.062)}$], a difference of borderline significance ($p < .10$). Examination of models in which the covariates are entered singly reveals that this reversal is primarily (but not exclusively) a result of controlling for homeownership; blacks are less than likely than whites to own their home, and homeowners are much less likely than renters to move. When racial differences in homeownership are adjusted for, blacks are observed to be less likely than whites to move out of their neighborhood.

Third, controlling for the other determinants of inter-tract mobility, black residents of extremely poor tracts are significantly less likely than black residents of nonpoor tracts to move from their origin census tract (Table 3, Model 2), and the difference between residents of poor and nonpoor areas is borderline significant ($p < .10$). In contrast, white residents of poor (and extremely poor) tracts appear slightly *more* likely than residents of nonpoor tracts to move out, although the difference is not statistically significant (Model 3). Thus, high levels of neighborhood poverty serve as more of a barrier to out-migration for blacks than for whites.

Fourth, the odds of leaving the tract of origin are significantly associated with several characteristics of the metropolitan area. Both blacks and whites are more likely to move out of their census tract in large metropolitan areas, and they are less likely to move out in metropolitan areas characterized by high levels of black-white residential segregation. Whites, but not blacks, are more likely to move from their tract of origin in metropolitan areas with substantial supplies of new housing in nonpoor tracts.

To estimate how much variation in tract out-migration exists across metropolitan areas, we estimated models that include the period dummies, origin tract poverty status, and the individual-level covariates, but that exclude the metropolitan-area covariates (models not shown). We computed both the intraclass correlation (ICC) and the median odds ratio (MOR) (Larsen and Merlo 2005). Although somewhat problematic in interpretation for

[2]The coefficients for the period dummy variables should be interpreted cautiously because of the PSID's switch to biennial rather than annual interviewers beginning in 1995. Mobility intervals beginning in 1995 refer to a two-year rather than a one-year interval, which results in higher observed migration propensities in later years.

categorical outcomes, the ICC provides a rough estimate of the proportion of variation in the response variable that exists across level-2 units—here, metropolitan areas. The MOR compares two observations from randomly chosen (different) metropolitan areas, and gives the median odds ratio between the observation with the higher out-migration propensity and the observation with the lower out-migration propensity. The MOR will be equal to one if there is no variation between metropolitan areas and will be large if there is considerable variation between metropolitan areas. For the racially pooled out-migration model, the ICC is .031 and the MOR is 1.36. The ICC and the MOR for the black model are .045 and 1.45; the corresponding values for the white model are .026 and 1.33. Thus, the odds of moving out of the origin tract vary modestly but, at least as indicated by the median odds ratio, nontrivially across metropolitan areas.[3]

Modeling the Poverty Status of Destination Neighborhoods

Although the influence of metropolitan-area characteristics on neighborhood out-migration is important for understanding migration patterns into poor and nonpoor neighborhoods, the influence of these attributes on the poverty status of the neighborhood of destination speaks more directly to this issue. For these analyses, we select mobility intervals in which the PSID respondent moved from the tract of origin and estimate multilevel (i.e., random intercept) logistic regression models of the poverty status of the tract of destination. For the analyses of black migration, there are three destination types—nonpoor, poor, and extremely poor—and thus we estimate random intercept multinomial logistic models. For whites there are two destination types—nonpoor and poor—so here we estimate random intercept binary logistic models. As noted above, all models include a sample selection term (inverse Mills ratio) to correct for the nonrandom selection of respondents into the category of mover and the models employ robust standard errors to account for the use of multiple observations for the same household.[4]

Table 4 presents the results for blacks. Model 1 includes as predictors only the poverty status of the tract of origin, the period dummy variables, and the sample selection term. Blacks who begin the mobility interval residing in a poor or extremely poor tract are significantly more likely to move to a poor or extremely poor tract rather than to a nonpoor tract. Others have also observed that much inter-neighborhood residential mobility is between neighborhoods of similar socioeconomic status (e.g., Briggs and Keys 2009;South and Crowder 1997), which may in part reflect these areas' geographic proximity. The coefficients for the period dummy variables reveal significant downward trends from the 1980s to the 2000s in black households' odds of moving to a poor tract or an extremely poor tract relative to a nonpoor tract. The significant negative coefficient for the sample selection term suggests that black households with a high latent probability of moving are less likely to move to a poor or extremely poor tract rather than to a nonpoor tract when they do move.

Model 2 of Table 4 adds to Model 1 the individual-level covariates. As predicted by the human capital and spatial assimilation perspectives, socioeconomic resources are important for averting a move to a poor neighborhood. Higher levels of education and income and being employed significantly diminish the likelihood of moving to either a poor or an extremely poor tract relative to a nonpoor tract. In addition, married-couple households are less likely than other households to move to poor or extremely poor tracts, while more

[3]In a null (intercept-only) model, the ICC and MOR for the racially pooled out-migration model are .058 and 1.53, respectively. For blacks, they are .070 and 1.61, and for whites, .054 and 1.50. Thus, some of the total inter-metropolitan variation in tract out-migration is explained by the predictor variables included in Table 3.

[4]We also estimated supplemental models on the pooled sample of black and white households. Consistent with prior studies, we found that blacks are far more likely than whites to move to a poor rather than a nonpoor tract and that this difference is only modestly attenuated by controls for individual-level and metropolitan-level covariates. Results are available from the authors upon request.

crowded households are more likely to make these types of residential moves. Older householders and homeowners are significantly less likely than their younger and renting counterparts to move to an extremely poor tract than to a nonpoor tract. Being married, employed, and a homeowner appear especially important in averting moving to an extremely poor (rather than merely a poor) tract.

Controlling for the individual-level predictors of destination tract poverty status sharply attenuates the time trends in the odds of moving to a poor or extremely poor tract rather than to a nonpoor tract. Indeed, the coefficients for the period dummy variables drop to statistical nonsignificance when these predictors are included in the model. Supplementary analyses indicated that, although no single covariate completely accounts for the diminution in the coefficients for the period dummy variables, the most important factors accounting for the historical decline in black households' mobility into poor and extremely poor neighborhoods are their rising levels of homeownership, education, and income. When entered into the model individually, each of these characteristics explains about 15% to 20% of the decline.

The level-2 (MSA) variance component from Model 2 can be used to estimate how much black households' odds of moving to a poor or extremely poor tract vary between metropolitan areas. For the first contrast (moving to a poor tract rather than a nonpoor tract), the ICC is .074 and the MOR is 1.63. In substantive terms, 7% of the variance in the odds of moving to a poor rather than to a nonpoor tract exists between metropolitan areas, and differences in metropolitan area characteristics affect the odds of making this type of move by a factor of 1.63. For the second contrast (moving to an extremely poor tract versus a nonpoor tract), the ICC is .255 and the MOR is 2.75. Thus, for blacks, the odds of moving to an extremely poor tract varies substantially more across metropolitan areas than the odds of moving to a merely poor tract, although inter-metropolitan variation in both types of moves is nontrivial.[5]

Of central importance for our purposes are the effects of the metropolitan-area covariates, which are added to Model 3. Four of these variables display statistically significant net effects on the odds that black householders move to a poor census tract rather than to a nonpoor census tract. Consistent with a hypothesis derived from the housing availability perspective, the proportion of tracts in the metropolitan area that are poor is positively associated with blacks' risk of moving to a poor tract. Contrary to a hypothesis drawn from the place stratification framework, in metropolitan areas with relatively large black populations, blacks are less likely to move to a poor tract. However, consistent with two other hypotheses drawn from the place stratification perspective, both the level of black-white residential segregation and the spatial concentration of the poor in black neighborhoods (as measured by the tract-level correlation between percent in poverty and percent black) are positively associated with black households' odds of moving to a poor neighborhood. The metropolitan-area covariates explain about 85% [(.263 - .039) / .263] of the Model 2 between-metropolitan-area variance in blacks' odds of moving to a poor rather than to a nonpoor neighborhood. The median odds ratio drops from 1.63 to 1.21 when the metropolitan-area covariates are controlled.

A somewhat similar but not identical set of metropolitan-area characteristics emerges as significant predictors of black households' migration into *extremely poor* census tracts. As with black households' migration into poor tracts, black households are significantly more

[5]In the null (intercept-only) model of the contrast between moving to a poor versus a nonpoor tract, the ICC is .163 and the MOR is 2.14. In the null model of the contrast between moving to an extremely poor versus a nonpoor tract, the ICC is .391 and the MOR is 4.00. Thus, a moderate portion of the overall variance in the poverty status of mobile black households' tract of destination exists between metropolitan areas.

likely to move to an extremely poor tract (rather than a nonpoor tract) in metropolitan areas containing many poor tracts and exhibiting a comparatively high tract-level correlation between percent black and the poverty rate. In addition, black households are significantly more likely to move to an extremely poor tract in larger metropolitan areas and they are significantly less likely to move to an extremely poor in metropolitan areas that are large and characterized by much newly-built housing in nonpoor tracts, as anticipated by the housing availability perspective. Together, the metropolitan-area covariates explain 53% [(1.128 - .531) / 1.128] of the Model 2 inter-metropolitan variance in the odds of moving to an extremely poor rather than to a nonpoor census tract. Controlling for the metropolitan-area covariates reduces the median odds ratio from 2.75 to 2.00.

Table 5 presents the analysis of destination tract poverty status for mobile white households, contrasting moving to a poor or extremely poor tract combined with moving to a nonpoor tract. Model 1 includes as predictors tract origin type, the period dummy variables, and the sample selection term. As was the case for blacks, mobile whites who begin the mobility interval in a poor or extremely poor tract rather than a nonpoor tract are significantly more likely to move to a poor or extremely poor tract rather than a nonpoor tract. White households were significantly less likely to move to a poor/extremely poor tract during the 1990s than the 1980s, although the trend leveled off from 2000 to 2005. As indicated by the coefficient for the sample selection term (inverse Mills ratio), white householders with a high latent probability of moving are less likely than other whites to move to a poor tract.

Model 2 of Table 5 adds to Model 1 the individual-level covariates. For the most part these effects parallel those observed for black households in Table 4. White householders with higher levels of education and income and who are employed are significantly less likely than others to move to a poor rather than to a nonpoor tract. Older and married householders are also less likely to enter this type of neighborhood, while more crowded households are more likely to move to a poor rather than to a nonpoor tract. As was the case among black households, controlling for the individual-level predictors erases the decline from the 1980s to the 1990s in whites' likelihood of moving to a poor rather than a nonpoor tract. Supplemental analyses indicate that this attenuation in the time trend is attributable largely to whites' increasing levels of education and income over this period.

The ICC for this model indicates that, net of the individual-level covariates, 12% of the variance in white households' odds of moving to a poor versus a nonpoor tract exists across metropolitan areas. The MOR of 1.90 indicates that differences in metropolitan-area characteristics almost double white households' odds of moving to a poor than to a nonpoor tract.[6]

Model 3 of Table 5 adds to Model 2 the hypothesized metropolitan-area predictors of inter-neighborhood migration. Consistent with a hypothesis drawn from the housing availability perspective, and analogous to the effect among blacks, the percentage of tracts in the metropolitan area that are poor is positively associated with the likelihood that white households will move to a poor, rather than a nonpoor, tract. Also consistent with expectations, whites are less likely to move to a poor tract in metropolitan areas containing a relative abundance of newly-built housing in nonpoor tracts. Consistent with a hypothesis derived from the place stratification perspective, whites are less likely to move to a poor tract in metropolitan with relatively large black populations. And, at a borderline significance level ($p < .10$), the metropolitan-area level of black-white residential segregation is inversely associated with whites' odds of moving to a poor, rather than a nonpoor, census tract. The metropolitan-area covariates explain 75% [(.449 - .113) / .449] of

[6]In the null model, the ICC is .194 and the MOR is 2.34.

the Model 2 between-metropolitan areas variance in white households' odds of moving to a poor rather than to a nonpoor census tract. The MOR drops from 1.90 to 1.38 when the metropolitan-area covariates are controlled, also indicating that a substantial proportion of the inter-metropolitan variance in the poverty status of mobile white households' destination neighborhoods can be explained by the measured metropolitan-area characteristics.

Discussion and Conclusion

Research documenting effects of neighborhood characteristics on individual behavior raises important questions regarding the processes by which people attain residence in more or less desirable communities. Of particular concern have been intrametropolitan migration patterns between neighborhoods of varying economic status. But while prior studies have described in detail these migration patterns and have examined how they covary with individual demographic and socioeconomic characteristics, little attention has been given to the influence of the broader metropolitan context. This gap in our knowledge is perhaps surprising given evidence that residential segregation by social class varies significantly across metropolitan areas (Jargowsky 1996).

The research reported here redresses this omission by examining the impact of metropolitan-area characteristics on the likelihood that U. S. black and white households will move to poor versus nonpoor neighborhoods. Using a quarter-century of longitudinal data from the Panel Study of Income Dynamics, in conjunction with decennial census and allied data for tracts and metropolitan areas, we examine how the likelihood of moving from an origin neighborhood, and of relocating to a poor versus nonpoor neighborhood, covaries with an array of metropolitan-area attributes. Given the multilevel nature of our data, we estimate random-intercept logistic regression models that take advantage of the clustering of observations within metropolitan areas. Three broad conclusions emerge from our analysis.

First, consistent with prior research, we find that blacks are much less able than whites to move from poor to nonpoor neighborhoods. Moreover, even when blacks are able to attain residence in nonpoor neighborhoods, they are much less likely than whites to remain there.

Second, we find that a nontrivial proportion of the variance in the likelihood that black and white households will move to a poor rather than to a nonpoor neighborhood exists between metropolitan areas even after adjusting for inter-metropolitan differences in the individual-level determinants of residential mobility. Granted, the vast bulk of the variance in the odds of exiting the neighborhood of origin, and of relocating to a poor (or extremely poor) neighborhood rather than a nonpoor neighborhood, exists within metropolitan areas. We find that this within-metropolitan area variance is significantly shaped by life-cycle, demographic, and socioeconomic characteristics. For example, consistent with human capital and spatial assimilation models of residential attainment, socioeconomic resources such as education and income facilitate moving into nonpoor neighborhoods among both blacks and whites. Yet, metropolitan areas do differ in the opportunities that they afford households to move into neighborhoods of varying economic status. There is more variance across metropolitan areas in the poverty status of the neighborhood of destination than in the likelihood of leaving the neighborhood, and a particularly large portion of the variance in mobile black households' odds of moving to an *extremely poor* neighborhood exists across metropolitan areas.

Third, a substantial portion of this inter-metropolitan variance can be explained by measured demographic, economic and ecological characteristics of metropolitan areas. Black and white households are more likely to move out of their neighborhood in large metropolitan areas characterized by low levels of racial residential segregation. Perhaps more importantly,

metropolitan-area characteristics condition mobile households' likelihood of moving to a poor rather than to a nonpoor tract. For example, in metropolitan areas containing many poor neighborhoods, both blacks and whites are more likely to move to a poor (and among blacks, extremely poor) rather than to a nonpoor neighborhood. This association likely stems from the limited availability of housing options in nonpoor neighborhoods in metropolitan areas containing relatively more poor neighborhoods. Somewhat similarly, blacks and whites are more likely to move to a nonpoor neighborhood in metropolitan areas containing relatively copious supplies of new housing in nonpoor areas. These associations are consistent with hypotheses derived from the housing availability model of local residential mobility. Differential migration into poor and nonpoor neighborhoods appears to be driven in part by the relative supply of housing in different types of neighborhoods that serve as possible destinations for intrametropolitan movers.

However, even after controlling for the distribution of residential options, other metropolitan-area characteristics affect migration behavior in ways that are consistent with the place stratification perspective on locational attainment, which points broadly to the racially-stratified nature of urban housing markets. For example, black households are more likely to move to a poor rather than a nonpoor neighborhood in metropolitan areas in which blacks are highly segregated from whites. In contrast, white households are *less* likely (at a borderline significance level) to move to a poor neighborhood in metropolitan areas with high levels of black-white residential segregation, as well as in metropolitan areas with large black populations. Moreover, black households are more likely to move to poor or extremely poor neighborhoods in metropolitan areas in which poor neighborhoods have especially large black populations. Whether this association results from blacks' preference for neighborhoods dominated by co-ethnics or because blacks are especially likely to be repelled from nonpoor neighborhoods when those neighborhoods are numerically dominated by nonblacks cannot be determined with these data; perhaps both mechanisms play important roles. As the place stratification model suggests, however, understanding the inter-neighborhood migration patterns of blacks and whites requires attending not only to economic status of neighborhoods, but to their racial composition as well.

Future research might profit from pursuing three lines of inquiry. First, although this study has identified several metropolitan-level correlates of neighborhood out-migration and in-migration, it is likely that other metropolitan-area characteristics also play important roles. Overall levels of socioeconomic status and commuting patterns might facilitate or diminish the need to relocate to a poor (or nonpoor) neighborhood. Changes in the demographic, ecological, and socioeconomic structure of metropolitan areas might also be important to consider. The degree to which poor neighborhoods exhibit positive or negative amenities, or are geographically proximate to (un)desirable neighborhoods (e.g., Crowder and Downey 2010), might also shape inter-metropolitan migration patterns. And, aligning specific metropolitan-area characteristics with broader theoretical perspectives and frameworks is a critical task for advancing this area of research.

Second, in increasingly multi-ethnic metropolitan areas (Fong and Shibuya 2005), the inter-neighborhood migration patterns of blacks and whites capture an ever-shrinking share of the urban locational attainment process. Accordingly, future research in this area might attempt to incorporate other racial and ethnic groups, particularly Latinos and Asians. Patterns of migration between poor and nonpoor neighborhoods might also vary by nativity and generation. More directly for our purposes, metropolitan-area characteristics might affect the inter-neighborhood mobility patterns of nonblack minority groups and immigrants differently than for blacks and whites. In particular, the concentration of ethnic and immigrant groups in selected metropolitan areas might shape their patterns of geographic mobility between poor and nonpoor neighborhoods.

Third, future research might benefit from greater theoretical and empirical integration of the individual-level and metropolitan-level determinants of migration into poor and nonpoor neighborhoods. Our analysis demonstrates that both individual endowments and metropolitan-area characteristics play important roles in shaping households' inter-neighborhood mobility. However, with the exception of our analysis of racial differences, we have for the most part treated these influences separately. This strategy may be an oversimplification, inasmuch as the influence of individual-level determinants may vary across metropolitan areas. For example, it is possible that the effect of individual socioeconomic resources (e.g., education, income) on the likelihood of moving from, or to, a poor neighborhood might vary by characteristics of the metropolitan area. Exploring the impact of metropolitan-area characteristics on the migration patterns of poor and nonpoor households would also speak more directly to how and why the spatial deconcentration of poverty varies across metropolitan regions. Even in the absence of such cross-level interactions, however, the analysis presented here suggests strongly that comprehensive explanations for why some households can escape or avert moving to poor neighborhoods will require consideration of both individual-level determinants of mobility as well as features of the larger metropolitan area in which these households and neighborhoods are embedded.

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Table 1

Neighborhood Transition Matrices, by Race: Black and White Household Heads from the Panel Study of Income Dynamics, 1980-2005

Panel A: Blacks	***Destination Neighborhood Type***			
Origin Neighborhood Type	**Nonpoor**	**Poor**	**Extremely Poor**	**Total**
Nonpoor	14,364	1,456	262	16,082
Row %	89.3	9.1	1.6	100.0
Poor	1,616	14,321	831	16,768
Row %	9.6	85.4	5.0	100.0
Extremely Poor	339	854	5,110	6,303
Row %	5.4	13.6	81.1	100.0
Total	16,319	16,631	6,203	39,153
Row %	41.7	42.5	15.8	100.0

Panel B: Whites	***Destination Neighborhood Type***			
Origin Neighborhood Type	**Nonpoor**	**Poor**	**Extremely Poor**	**Total**
Nonpoor	45,682	689	31	46,402
Row %	98.5	1.5	.1	100.0
Poor	673	3,062	48	3,783
Row %	17.8	80.9	1.3	100.0
Extremely Poor	60	29	260	349
Row %	17.2	8.3	74.5	100.0
Total	46,415	3,780	339	50,534
Row %	91.9	7.5	.7	100.0

Table 2

Descriptive Statistics for Variables Used in the Analysis of Inter-Neighborhood Migration, by Race: Black and White Household Heads from the Panel Study of Income Dynamics, 1980-2005

	Black Respondents		White Respondents	
	Mean	**Stand. Dev.**	**Mean**	**Stand. Dev.**
Dependent Variables				
Moved from origin tract	.22	.42	.15	.36
Nonpoor tract at destination[a]	.46	.50	.90	.30
Poor tract at destination[a]	.41	.49	.09	.29
Extremely poor tract at destination[a]	.14	.35	.01	.08
Tract- and Individual-Level Independent Variables				
Nonpoor tract at origin	.41	.49	.92	.27
Poor tract at origin	.43	.49	.07	.26
Extremely poor tract at origin	.16	.37	.01	.08
Female (1=yes)	.49	.50	.24	.43
Married (1=yes)	.38	.49	.65	.48
Age	40.37	15.34	44.11	16.69
Number of children	1.19	1.37	.78	1.09
Persons per room	.68	.44	.50	.30
Same house 3+ years	.51	.50	.59	.49
Home owner (1=yes)	.37	.48	.68	.47
Education (in years)	11.69	2.82	13.59	3.15
Employed (1=yes)	.64	.48	.77	.42
Family income ($1,000s)	32.38	28.27	63.73	65.36
Period				
1980s	.52	.50	.50	.50
1990s	.39	.49	.41	.49
2000s	.08	.28	.09	.29
Metropolitan-Area Independent Variables				
% poor tracts	21.96	9.36	17.98	9.22
Population size (ln)	14.39	.98	13.94	1.19
% new housing in nonpoor tracts	19.71	7.77	18.02	8.51
% black	22.49	9.30	12.31	9.58
% foreign born	6.66	8.00	6.91	7.73
% pop. living in suburban area	54.53	26.20	54.21	26.09
Black-white residential segregation	68.26	10.95	64.30	13.73
Correlation between % black and % poverty (tract –level)	.66	.14	.59	.18
N of person-intervals	39153		50534	
N of respondents	5266		6321	
N of movers	3465		3768	

[a] These statistics based only on inter-tract movers.

Table 3

Multilevel Logistic Regression Models of Migration Out of Origin Neighborhood, by Race: Black and White Household Heads from the Panel Study of Income Dynamics, 1980-2005

	Racially Pooled Model 1	Blacks Model 2	Whites Model 3
	β (s.e.)	β (s.e.)	β (s.e.)
Tract- and Individual-Level Independent Variables			
Black (1=yes)	-.062 (.034)		
Poor tract at origin (ref. nonpoor)	-.055 (.034)	-.072 (.041)	.093 (.070)
Extremely poor tract at origin (ref. nonpoor)	-.197 (.059) **	-.199 (.057) **	
Female (1=yes)	.085 (.038) *	.059 (.063)	.120 (.046) **
Married (1=yes)	-.329 (.039) ***	-.256 (.052) ***	-.402 (.039) ***
Age	-.042 (.001) ***	-.041 (.002) ***	-.044 (.002) ***
Number of children	-.103 (.014) ***	-.054 (.019) **	-.186 (.017) ***
Persons per room	.325 (.028) ***	.271 (.035) ***	.404 (.046) ***
Same house 3+ years	-.357 (.028) ***	-.418 (.035) ***	-.274 (.039) ***
Home owner (1=yes)	-1.149 (.031) ***	-1.179 (.042) ***	-1.113 (.044) ***
Education (in years)	-.028 (.004) ***	-.022 (.006) ***	-.034 (.007) ***
Employed (1=yes)	-.118 (.027) ***	-.096 (.033) **	-.221 (.041) ***
Family income ($1,000s)	.002 (.000) ***	.004 (.001) ***	.001 (.000) ***
Period			
1990s (ref. 1980s)	.302 (.038) ***	.273 (.054) ***	.320 (.040) ***
2000s (ref. 1980s)	.817 (.064) ***	.739 (.100) ***	.881 (.067) ***
Metropolitan-Area Independent Variables			
% poor tracts	.001 (.003)	-.001 (.005)	.003 (.003)
Population size (ln)	.198 (.040) ***	.307 (.067) ***	.161 (.038) ***
% new housing in nonpoor tracts	.000 (.004)	-.010 (.006)	.007 (.004) *
% black	.007 (.004)	.007 (.008)	.001 (.004)
% foreign born	.000 (.005)	-.008 (.006)	-.001 (.005)
% pop. living in suburban area	.003 (.002)	.007 (.003)	.000 (.002)
Black-white residential segregation	-.021 (.004) ***	-.030 (.006) ***	-.015 (.003) ***
Correlation between % black and % poverty (tract –level)	.141 (.197)	.166 (.341)	.295 (.201)
Intercept	-.916 (.054) ***	-.774 (.086) ***	-1.026 (.068) ***
MSA Variance Component	.105 (.025) ***	.154 (.043) **	.089 (.023) ***
Intraclass Correlation Coefficient (ICC)	.031	.045	.026
Median Odds Ratio (MOR)	1.36	1.45	1.33
N level-one	89687	39153	50534
N level-two	287	169	279

* $p < .05$;

** $p < .01$;

*** $p < .001$

Table 4

Multilevel Multinomial Regression Models of the Poverty Status of Destination Neighborhood for Mobile Black Household Heads from the Panel Study of Income Dynamics, 1980-2005

	Model 1		Model 2		Model 3	
	Poor Tract vs. Nonpoor Tract	Extremely Poor Tract vs. Nonpoor Tract	Poor Tract vs. Nonpoor Tract	Extremely Poor Tract vs. Nonpoor Tract	Poor Tract vs. Nonpoor Tract	Extremely Poor Tract vs. Nonpoor Tract
	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)
Tract- and Individual-Level Independent Variables						
Poor tract at origin (ref. nonpoor)	.819 (.079) ***	1.016 (.109) ***	.631 (.078) ***	.716 (.102) ***	.628 (.079) ***	.682 (.105) ***
Extremely poor tract at origin (ref. nonpoor)	1.165 (.085) ***	1.886 (.161) ***	.846 (.092) ***	1.318 (.165) ***	.850 (.091) ***	1.217 (.160) ***
Inverse Mills ratio	-.265 (.110) *	-.436 (.105) ***	.303 (.292)	1.313 (.407) **	.116 (.271)	1.697 (.390) ***
Female (1=yes)			.094 (.051)	.034 (.099)	.083 (.051)	.043 (.099)
Married (1=yes)			-.269 (.075) ***	-.462 (.093) ***	-.252 (.076) **	-.516 (.095) ***
Age			-.006 (.006)	-.031 (.009) **	-.002 (.005)	-.040 (.009) ***
Number of children			.034 (.030)	.029 (.034)	.042 (.029)	.020 (.034)
Persons per room			.167 (.076) *	.332 (.084) ***	.149 (.070) *	.376 (.086) ***
Same house 3+ years			-.026 (.070)	-.155 (.090)	-.038 (.069)	-.163 (.089)
Home owner (1=yes)			-.265 (.184)	-.853 (.330) **	-.163 (.165)	-1.062 (.309) **
Education (in years)			-.096 (.016) ***	-.147 (.025) ***	-.093 (.015) ***	-.153 (.025) ***
Employed (1=yes)			-.194 (.063) **	-.555 (.070) ***	-.189 (.062) **	-.589 (.069) ***
Family income ($1,000s)			-.009 (.002) ***	-.009 (.003) **	-.009 (.002) ***	-.008 (.002) **
Period						
1990s (ref. 1980s)	-.221 (.052) ***	-.400 (.086) ***	-.105 (.061)	-.044 (.084)	-.072 (.068)	-.174 (.077) *
2000s (ref. 1980s)	-.425 (.067) ***	-.725 (.185) ***	-.145 (.114)	.095 (.152)	-.067 (.136)	.007 (.190)
Metropolitan-Area Independent Variables						
% poor tracts					.025 (.005) ***	.064 (.009) ***
Population size (ln)					.067 (.064)	.282 (.139) *
% new housing in nonpoor tracts					-.005 (.006)	-.042 (.013) **
% black					-.013 (.006) *	-.014 (.013)

	Model 1		Model 2		Model 3	
	Poor Tract vs. Nonpoor Tract	**Extremely Poor Tract vs. Nonpoor Tract**	**Poor Tract vs. Nonpoor Tract**	**Extremely Poor Tract vs. Nonpoor Tract**	**Poor Tract vs. Nonpoor Tract**	**Extremely Poor Tract vs. Nonpoor Tract**
	β (s.e.)	**β (s.e.)**	**β (s.e.)**	**β (s.e.)**	**β (s.e.)**	**β (s.e.)**
% foreign born					-.007 (.004)	-.003 (.009)
% pop. living in suburban area					.001 (.001)	.001 (.002)
Black-white residential segregation					.022 (.006) ***	.005 (.013)
Correlation between % black and % poverty (tract –level)					1.087 (.319) **	1.894 (.822) *
Intercept	-.351 (.152) *	-1.830 (.241) ***	-.931 (.312) **	-3.444 (.479) ***	-.628 (.289) *	-3.522 (.552) ***
MSA Variance Component	.334 (.094) ***	1.216 (.289) ***	.263 (.070) ***	1.128 (.266) ***	.039 (.028)	.531 (.132) ***
MSA Covariance	.507 (.134)***		.421 (.108)***		.045 (.048)	
Intraclass Correlation Coefficient (ICC)	.092	.27	.074	.255	.012	.139
Median Odds Ratio (MOR)	1.74	2.86	1.63	2.75	1.21	2.00
N level-one	8789	8789	8789	8789	8789	8789
N level-two	136	136	136	136	136	136

* p < .05;

** p < .01;

*** p < .001

Table 5

Multilevel Multinomial Regression Models of the Poverty Status of Destination Neighborhood for Mobile White Household Heads from the Panel Study of Income Dynamics, 1980-2005

	Model 1		Model 2		Model3	
	Poor/Extremely Poor Tract vs. Nonpoor Tract		Poor/Extremely Poor Tract vs. Nonpoor Tract		Poor/Extremely Poor Tract vs. Nonpoor Tract	
	β	(s.e.)	β	(s.e.)	β	(s.e.)
Tract- and Individual-Level Independent Variables						
Poor/extremely poor tract at origin (ref. nonpoor)	.976	(.127) ***	.888	(.127) ***	.841	(.124) ***
Inverse Mills ratio	-.470	(.123) ***	.648	(.447)	.710	(.453)
Female (1=yes)			-.040	(.107)	-.010	(.107)
Married (1=yes)			-.344	(.149) *	-.369	(.149) *
Age			-.018	(.009) *	-.020	(.009) *
Number of children			-.072	(.055)	-.077	(.057)
Persons per room			.446	(.115) ***	.487	(.114) ***
Same house 3+ years			-.041	(.118)	-.055	(.119)
Home owner (1=yes)			-.402	(.258)	-.444	(.260)
Education (in years)			-.061	(.022) **	-.066	(.023) **
Employed (1=yes)			-.401	(.111) ***	-.411	(.111) ***
Family income ($1,000s)			-.007	(.002) **	-.006	(.002) **
Period						
1990s (ref. 1980s)	-.268	(.090) **	-.067	(.102)	-.255	(.105) *
2000s (ref. 1980s)	-.290	(.162)	.201	(.193)	-.054	(.193)
Metropolitan-Area Independent Variables						
% poor tracts					.040	(.006) ***
Population size (ln)					-.108	(.073)
% new housing in nonpoor tracts					-.015	(.007) *
% black					-.021	(.008) *
% foreign born					-.009	(.010)
% pop. living in suburban area					.000	(.002)

	Model 1		Model 2		Model3	
	Poor/Extremely Poor Tract vs. Nonpoor Tract		Poor/Extremely Poor Tract vs. Nonpoor Tract		Poor/Extremely Poor Tract vs. Nonpoor Tract	
	β	(s.e.)	β	(s.e.)	β	(s.e.)
Black-white residential segregation					-.012	(.007)
Correlation between % black and % poverty (tract –level)					-.142	(.326)
Intercept	-1.710	(.193) ***	-2.606	(.477) ***	-2.654	(.472) ***
MSA Variance Component	.527	(.144) ***	.449	(.132) **	.113	(.043) *
Intraclass Correlation Coefficent (ICC)		.138		.120		.033
Median Odds Ratio (MOR)		2.00		1.90		1.38
N level one		7635		7635		7635
N level two		244		244		244

* p < .05;

** p < .01;

*** p < .001