Published in final edited form as:

Urban Stud. 2011 March 1; 48(4): 611–639. doi:10.1177/0042098009360684.

Bringing Proximate Neighbours into the Study of US Residential Segregation

Samantha Friedman

Department of Sociology, University of Albany SUNY, Arts and Sciences, 351, 1400 Washington Avenue, Albany, NY 12222, USA

Abstract

The race and ethnicity of neighbours are thought to be critical in shaping household mobility underlying residential segregation. However, studies on this topic have used data at the census-tract level of analysis rather than at the proximate-neighbour level. Using a non-publicly available version of the neighbour-cluster sample within the American Housing Survey, this study incorporates data on the race, ethnicity and socioeconomic characteristics of the proximate neighbours of White, Black and Latino households and examines their impact on household residential satisfaction, out- and in-mobility. Results indicate that proximate-neighbour race and ethnicity matter in influencing endpoints of the mobility process and do not necessarily parallel those at the census-tract level. Implications of these findings are discussed as they relate to the study of residential segregation.

Introduction

High levels of racial residential segregation persist in American society four decades after the passage of the Fair Housing Act (Wilkes and Iceland, 2004). Between 1980 and 2000, although the level of residential segregation between non-Latino Whites and Blacks declined by 8.7 percentage points from 73.9 to 65.2 (Logan *et al.*, 2004), the average level of White–Black segregation remains in the ‘high’ range of segregation scores (Massey and Denton, 1993, p. 20). Segregation is not a static phenomenon, however. It is built upon the residential preferences and mobility of individuals within the metropolis as well as other factors.

It has been argued that the race and ethnicity of neighbours are critical in shaping the mobility dynamics underlying segregation. Such thinking is central to the classic invasion and succession model (Park *et al.*, 1925) as well as theories on neighbourhood racial change (Duncan and Duncan, 1957; Park *et al.*, 1925; Schelling, 1971; Taeuber and Taeuber, 1965). White residential preferences for White neighbours and their mobility from and avoidance of racially mixed neighbourhoods are thought to be the main dynamic forces responsible for separating Whites from minorities within metropolitan areas (Duncan and Duncan, 1957; Farley *et al.*, 1978, 1994; Massey and Denton, 1993; Taeuber and Taeuber, 1965). Some posit that minority preferences for minority neighbours are also responsible for high levels of segregation (Clark, 1991; Thernstrom and Thernstrom, 1997).

Surprisingly, however, virtually no research to my knowledge has explicitly examined the impact of proximate neighbours on individual mobility behaviour (see Xie and McDowall, 2008 for an exception). A number of studies pose hypothetical neighbour situations to

White, Black, Latino and Asian respondents and ask them about their preference to live among neighbours who vary in terms of their race and ethnicity (Bobo and Zubrinsky, 1996; Charles, 2000; Farley *et al.*, 1978, 1994). However, one of the drawbacks with such studies is that they evoke socially desirable answers, particularly from Whites, regarding their desire to live among non-White neighbours (Krysan, 1998).

Bringing proximate-neighbour-level data back into the study of mobility and, at the same time, including larger-level neighbourhood data, are important in furthering the study of residential segregation. Very little is known about how Whites and minorities will respond to their proximate neighbours at particular endpoints of the mobility process (Xie and McDowall 2008). Will White residential satisfaction, out-mobility and destination choices be more associated with proximate-neighbour race and ethnicity than larger-neighbourhood racial and ethnic composition because of their negative out-group preferences? Will the endpoints of the mobility process of Blacks and Hispanics be shaped more by the race and ethnicity of their proximate neighbours rather than the larger-neighbourhood racial and ethnic composition, consistent with the argument that they hold strong, positive in-group preferences? Previous studies that have focused on the modifiable areal unit problem (MAUP) reveal that variables at different levels of aggregation have different effects on individual-level outcomes (Fotheringham and Wong, 1991; Hipp, 2007). There is no doubt that continuing to track segregation at the larger neighbourhood level is essential from a public policy standpoint. However, given that debate exists in the literature regarding the causes of residential segregation, further exploration of factors at different levels of aggregation is important.

The main goal of the present study is to examine the extent to which the race and ethnicity of proximate neighbours matter in influencing household residential satisfaction, out-mobility and destination choices using a specially created dataset from the 1985, 1989 and 1993 panels of the American Housing Survey (AHS) not available to the public.¹ The main feature of the dataset is that it contains data on the residential satisfaction and the mobility behaviour of Whites, Blacks and Latinos, the race and ethnicity and socioeconomic status of the neighbours immediately surrounding their housing units, the racial and ethnic and socioeconomic composition of their larger neighbourhood (i.e. the census tract) and metropolitan-level characteristics. Using these non-publicly-available AHS data, I determine the roles that proximate neighbour race and ethnicity play in influencing endpoints of the mobility process as compared with the census-tract level racial/ethnic composition and inform the current debate about the causes of residential segregation.

Residential Segregation, Mobility and Neighbours

Several theories exist in the literature to explain the persistence of high levels of residential segregation. One set of theories is based upon groups' residential preferences. Proponents of the positive in-group preferences perspective argue that such preferences are ethnocentric and benign in nature. Whites prefer to live with Whites and minorities prefer to live with other minorities simply because they feel most comfortable among members of their own racial and ethnic group (Clark, 1991; Thernstrom and Thernstrom, 1997). Proponents of the negative out-group preferences perspective, however, argue that same-group preferences result from groups' intentional desire to avoid others. White residential preferences for largely White neighbourhoods have been linked directly to their negative stereotypes against Blacks/Latinos (Bobo and Zubrinsky, 1996; Charles, 2000; Emerson *et al.*, 2001; Krysan, 2002) and their desire to maintain their superior position within the American stratification system. Black preferences for largely Black neighbourhoods result not from

¹The author had special access to these data through the ASA/NSF/Census Bureau Fellows programme.

their benign preference to live with other Blacks but instead are a reflection of the housing constraints that they experience because of White avoidance of Blacks and because of their fear of White hostility (Krysan and Farley, 2002).

Two arguments that are economic in nature have also been offered to explain why residential segregation remains high. Under the economic perspective, it is argued that minorities are less likely to live with Whites because they are less likely to be able to afford to live in White neighbourhoods (Alba *et al.*, 2000; Iceland *et al.*, 2005).² Another economically based argument is the race-proxy perspective. Proponents of this view argue that Whites are less likely to want to be neighbours with minorities, and Blacks in particular, because of the negative neighbourhood attributes such as poverty and crime found in disproportionately minority neighbourhoods (Ellen, 2000; Harris, 2001; Taub *et al.*, 1984). It is thought that this concern about race and ethnicity is not based on any prejudices; instead, race and ethnicity are used as a proxy to gauge the economic and non-economic aspects of the neighbourhood that are important to Whites in their residential decisions. If the economic or non-economic aspects of the neighbourhood are favourable to Whites, then racial composition in the area should not matter.

A final argument offered in the literature to explain high levels of segregation is the discrimination argument. Proponents of this perspective argue that discrimination in the rental and sales market constrains the housing choices of Blacks and Latinos, relative to those of Whites (Ross and Turner, 2005; Turner *et al.*, 2002; Yinger, 1995). Segregation remains high because minorities continue to experience racial steering, forcing them to rent or buy homes in areas in which their race predominates, and Whites flee from minority neighbours. The persistent discrimination within the housing market against minorities is built upon White stereotypes and prejudices to avoid living near Blacks and Latinos (Farley *et al.*, 1994).

Within the literature, debate ensues about which of these views is most salient in explaining current high levels of residential segregation in the US. The main goal of the present study, to study the effect of proximate-neighbour race and ethnicity on endpoints of the mobility process of Whites and minorities, can inform this debate. The mobility or immobility of individuals forms the building blocks upon which residential segregation is maintained in the aggregate.

Residential mobility decision-making models characterise the mobility process as involving several distinct stages (Rossi, 1955; Speare *et al.*, 1975). Individuals evaluate their residential situation, develop thoughts about moving, search for a new residence and decide to move or stay based upon their alternatives. These models assume that individuals move when they find a housing unit that suits their needs better than their current unit. It is assumed that mobility or immobility is voluntary and the direct outcome of a planned, decision-making process. Contrary to this portrayal, however, the actuation of mobility plans into behaviour for Blacks is less straightforward than for Whites (Crowder, 2001). Although Blacks are more likely to be dissatisfied with their residential circumstances, they are also less likely to move. It is likely that this involuntary immobility occurs because of discriminatory constraints that exist in the housing market for Blacks.

Because of the availability of contextual-level data, recent studies on residential mobility have been able to examine the association between neighbourhood-level racial and ethnic

²However, support for the economic argument is mixed. Several studies both at an aggregate level (for example, Massey and Denton, 1993; Massey and Fischer, 1999) and individual level (for example, Logan *et al.*, 1996) have shown that the effect of race and ethnicity on proximity to Whites persists even after controlling for socioeconomic status (Charles, 2003).

composition and residential satisfaction and mobility (for example, Crowder, 2001; Ellen, 2000; Harris, 2001). However, such studies are mixed in their findings regarding the effect of the racial and ethnic composition of the census tract (Crowder, 2000; Crowder and South, 2008; Ellen, 2000; Quillian, 2002; South and Crowder, 1998). Ellen (2000) finds no effect of racial and ethnic composition on White mobility. Consistent with the race-proxy perspective, she suggests that these findings exist because the economic and non-economic factors associated with neighbourhood decline are more important than race and ethnicity of the area. Crowder (2000), Crowder and South (2008) and Quillian (2002), on the other hand, find that the racial and ethnic composition is significant, suggesting that Whites are more likely to leave neighbourhoods with greater shares of minorities and to avoid moving to such areas because of the negative stereotypes Whites have of such out-groups, consistent with the negative in-group preferences argument.

Hypotheses

Theories on residential segregation, White flight and neighbourhood racial change suggest that proximate neighbours will be important, and may be more important than the larger neighbourhood racial and ethnic composition to households in their residential satisfaction, out- and in-mobility. Implied by these models, there exists a ‘tipping point’ at which White flight accelerates from neighbourhoods into which Blacks are moving. The notion of a ‘tipping point’ implies at an individual level a White awareness of exactly who is moving into the neighbourhood and who is moving out. Most recent studies characterise neighbourhood racial and ethnic composition at the census-tract or zip-code level, residential areas averaging a population size of at least 4000 (Crowder, 2000; Ellen, 2000; Harris, 2001). Perhaps the conflicting results about whether aggregate-level racial and ethnic composition affects mobility outcomes relate to the level of geography at which they are being characterised, with those studies at the more aggregate level decreasing the homogeneity potentially found at the proximate-neighbour level.

Ultimately, it is unknown how Whites and minorities will respond to the race and ethnicity of their proximate neighbours as compared with the racial and ethnic composition of the larger neighbourhood or census tract. There are several possible scenarios and, for each endpoint in the mobility process, a different scenario could exist. Hipp (2007, p. 674), who studied perceived social and physical disorder and crime using the same dataset, finds that “there is no single ‘appropriate’ level of aggregation”, further necessitating the study of such structural-level factors. One possible scenario is that the effects could parallel one another, indicating that aggregation from the proximate-neighbour level to the census-tract level is not necessarily problematic and that individuals view their immediate neighbourhood similarly to their larger neighbourhood.

Another alternative could be that the effects of race and ethnicity are stronger at the larger neighbourhood level than at the proximate-neighbour level. Hipp (2007) finds that the effects of racial and ethnic heterogeneity on key constructs of social disorganisation at the census-tract level are stronger than those at the proximate-neighbour level. Aggregate studies on neighbourhood racial change support the idea that larger-area racial and ethnic composition will be more important than race and ethnicity at the proximate-neighbour level, as studies have found that the strongest predictor of White flight is not the racial and ethnic composition of the tract but instead a measure of the distance of the nearest established Black neighbourhood to the tract (Denton and Massey, 1991; Massey and Mullan, 1984).

Another possible scenario could be that the effects of racial and ethnic composition differ between the two levels of analysis. In a study of White out-mobility, Crowder and South

(2008) find that, while census-tract-level minority composition has a positive impact on White mobility, the extra-local or surrounding census-tract minority composition has a negative impact on White mobility. They argue that this counter-intuitive finding may suggest that Whites are hesitant to move because the attractiveness of potential nearby destinations is diminished by the presence of minorities. A central goal of the analysis undertaken in this paper is to elucidate the impacts of proximate-neighbour-level and census-tract-level race and ethnicity on White, Black and Latino residential satisfaction and out- and in-mobility.

Data and Methods

Data

To accomplish this, the analysis relies upon a specially merged dataset of individual-level data on White, Black and Latino individuals and aggregate-level data on the race and ethnicity of their proximate neighbours and characteristics of the census tracts and metropolitan areas in which they live. This dataset is derived from four sources. This first is a non-publicly-available dataset from the neighbour cluster sample collected within the 1985, 1989 and 1993 panels of the American Housing Survey (AHS), a longitudinal survey of housing units. In selecting the data for the neighbour clusters, the AHS staff first identified a random sample of housing units from the national sample. Then they went out into the field and identified up to 15 housing units closest to this kernel housing unit. Interviews were conducted with as many occupants as could be reached within the 15 closest units.

In analysing these data, I use all of the housing units that are occupied and whose occupants have completed an interview and I do not include non-interviewed, occupied units or vacant units.³ I consider their proximate neighbours to be the other units in the cluster. Therefore, I assume that the occupants of the non-kernel units have the same neighbours as the occupants of the kernel unit.⁴ I limit the analytical sample to include housing units within neighbour clusters that are located within metropolitan areas primarily because I am interested in exploring the dynamics underlying residential segregation in such areas. In general, these data are well suited to examine endpoints of the mobility process of Whites, Blacks and Latinos because the data on housing units are longitudinal; also, the fact that the data are organised in clusters allows for the creation of measures gauging the race and economic status of individuals' proximate neighbours.

The advantage of using the version of the AHS data that are not available to the public is that geographical identifiers for the housing units are available, allowing census-tract-level data to be appended to the individual-level data on the housing units. The second source of data, the Urban Institute's Urban Underclass Database (UDB), is used to derive measures of tract-level characteristics. The UDB contains data at the census-tract level from the 1970, 1980 and 1990 decennial censuses. The distinct advantage of using these data is that 1970 and 1990 census-tract-level data are provided in terms of 1980 census-tract boundaries (see Tobin, 1993, for a discussion of the methodology used to create these data). Therefore, the user can examine changes in census-tract-level characteristics, keeping the boundaries of the tracts constant across three decades of data. Because the AHS sample used in this study is

³With respect to the latter (i.e. non-interviewed, occupied units), out of the 39 per cent of clusters that had such units, in 32 per cent (out of the 39 per cent) of the cases, the units that were not interviewed numbered only 1 or 2 within the cluster. In all clusters, the majority of the units that drop out of the analysis are vacant.

⁴Although it is impossible to know the race and ethnicity of the neighbours of non-kernel units that fall outside the neighbour cluster, in descriptive analyses not shown but available upon request of the author, kernel and non-kernel units have the same racial and ethnic distribution of neighbours. For example, White kernel units have the same racial and ethnic distribution of neighbours as White non-kernel units. Black and Latino kernel and non-kernel units also had equal racial and ethnic distributions of proximate neighbours.

based upon the 1980 decennial census, the UDB data are ideally suited for providing tract-level data to be merged to the individual-level records of the AHS. The third source of data, Adams' extract of 1980 census data (Adams, 1992), and the fourth source of data, the 1990 Census Summary Tape Files, are used to create metropolitan-level indicators for 1980 and 1990.

Two analytical datasets are used in this analysis. The first is focused on the residential satisfaction and out-mobility of households with a White, Black and Latino householder. The second is focused on the in-mobility choices of Whites, Blacks and Latinos. In the first analytical sample, I restrict my focus to housing units that were in the sample in 1989 and 1993. Because the AHS data are derived from a longitudinal sample of housing units rather than people, out-mobility is measured by comparing the occupants within the units between 1989 and 1993. Residential satisfaction is measured at one point in time and is not contingent upon who is in the unit at other points in time. However, for consistency with the analysis of out-mobility, I use the same group of housing units in the analysis of residential satisfaction. Moreover, because residential satisfaction is thought to influence out-mobility, it is important that these analyses contain the same number of cases. In total, in the 1989 to 1993 panel, there are 4020 housing units with a White householder (located in 536 neighbour clusters), 735 housing units with a Black householder (located in 189 neighbour clusters) and 463 housing units with a Latino householder (located in 187 neighbour clusters). The average and median numbers respectively, of neighbours per cluster for each group is as follows: for Whites, 8.7 neighbours (median = 9); for Blacks, 8.4 neighbours (median = 9); and for Latinos, 8.7 neighbours (median = 9). For Whites and Blacks, 95 per cent of clusters had at least 5 neighbours and for Hispanics, 95 per cent of clusters had at least 6 neighbours.

The second analytical dataset is comprised of a different set of housing units—namely, those that experienced the in-mobility of a household during the 12-month period on or before the AHS interview. Because roughly 12 per cent of households move in a given year (Long, 1988), I drew upon recent-movers data from the 1989 and 1993 AHS samples so that I have an ample number of data upon which to conduct my analysis. Over these two time-periods, there are 2817 households that were considered to be recent movers (located in 560 neighbour clusters). Because it is essential to have the characteristics of the household that previously occupied the unit, I also use data from the 1985 panel.

Dependent Variables

Using these data, I create three dependent variables to characterise the endpoints of the mobility process of interest. Within the first analytical dataset, I create measures of residential satisfaction and out-mobility. The dependent variable, residential satisfaction, is derived from the householder's response to the question, "How would you rate your neighbourhood on a scale of 1 to 10? 10 is the best, 1 is the worst". The dependent variable, out-mobility, is created by using an indicator within the AHS that denotes whether the occupants in the housing unit in 1993 are the same as those that were there in 1989. If the household members are not the same across the two time points, I consider that a move has occurred. There are two limitations with this indicator of out-mobility. First, if the household has moved, it is not possible to know whether they moved to a unit within the same neighbour cluster or census tract because the AHS follows housing units over time rather than individuals. Secondly, if the occupants of the housing unit are different between time 1 and time 2, it is assumed that the household moved. It is possible that members of the household could have died, although it is very unlikely to be the case.⁵

Within the second analytical dataset is the third dependent variable, the race and ethnicity of the in-moving householder in 1989 and 1993. As in the case in other analyses of housing

turnover (see for example, Rosenbaum, 1992), the race and ethnicity of the in-moving householder are examined as a function of the characteristics of their neighbours, the neighbourhood, housing unit, the in-mover and the race and ethnicity of the out-moving household. I use three different indicators to measure the householder's race and ethnicity: White vs non-White; Black vs non-Black; Latino vs non-Latino.

Independent Variables

The explanatory variables are created from data at the proximate-neighbour, census-tract, individual/householder and metropolitan levels of analysis. Table 1 provides a summary of the variables and indicates the models in which each of these variables is used. Table A1 in the Appendix shows the means of these variables.

Proximate-neighbour level.—The race and ethnicity of household proximate neighbours are used to create the central independent variables in this analysis. In general, neighbour-cluster-level variables are aggregated from the corresponding individual-level data in 1989 (for the residential satisfaction and out-mobility analyses) and 1989 and 1993 (for the in-mobility analysis). The racial and ethnic composition and socioeconomic status of occupants of the neighbouring units are calculated and appended to each household's record of data. Three measures are created to indicate the racial and ethnic composition of proximate neighbours: the percentage of neighbours that are non-Latino Black, Latino and of 'Other' races.⁶ An additional dummy variable is included to specify whether all three minority groups are present within the neighbour cluster.

In addition to race and ethnicity, I control for two other relevant characteristics. First, to indicate whether social disorder may be occurring within the neighbour cluster, I create a measure gauging the recent mobility occurring within the cluster. The other measure, the average income of proximate neighbours, is an indicator of their socioeconomic status.

Census-tract level.—Other key independent variables in the analysis are at the census-tract level and are derived from the UDB data. Specifically, static and dynamic measures are created from these data to measure racial, socioeconomic and demographic aspects of the neighbourhood that are expected to be associated with household residential satisfaction and out- and in-mobility. Variables from the 1990 census and changes in the variables from 1980 to 1990 are appended to the 1989 and 1993 AHS panels of individual-level data.⁷ To measure the racial composition of the larger neighbourhood, a key variable in the analysis, the tract-level percentage Black and percentage of other races are created (the reference is percentage White).⁸ I also create a dummy variable indicating whether both minority groups are present within the tract and variables measuring the change in the percentage Black and percentage Other.⁹ The tract-level average family income and the percentage change in average family income are created to indicate the neighbourhood's socioeconomic status.¹⁰ The percentage of persons residing in the same housing unit as they did 5 years before and

⁵For example, race-specific life tables, based upon 1989 to 1991 age-specific death rates, show that, given that a White person has lived to age 50 (the mean age of reference persons in the 1989–93 panel), the probability of surviving to age 51 is 99.5 per cent.

⁶'Other' races include non-Latino Asian or Pacific Islanders, American Indians, Aleutians, Eskimos, Alaskan natives, or others. The reference group is the percentage of neighbours that are non-Latino White.

⁷Although the 1990 census data are collected one year after the 1989 AHS data, it is better to use these data than the 1980 census data because it is likely that the 1990 data will better reflect the characteristics of the neighbourhood in 1989. Moreover, other research has taken this approach (for example, Ellen 2000).

⁸I use the percentage 'Other' because, in conducting sensitivity analyses of the effect of the change in racial composition of the census tract between 1970 and 1980, I was unable to use the percentage Latino. The 1970 census defined Latino differently from subsequent censuses.

⁹It should be noted that the correlations among the neighbour-cluster- and census-tract-level racial and ethnic composition variables are less than 0.6 except in one instance—between the percentage Black at the neighbour-cluster and census-tract levels, the correlation is 0.88.

the change in this percentage are created in order to gauge the stability of the larger neighbourhood.

Individual/household level.—Individual-level variables specific to the householder or household are developed from the data in 1989 (for the residential satisfaction and out-mobility analyses) and 1989 and 1993 (for the in-mobility analysis) to control for life-cycle, attachment, socioeconomic and locational characteristics that are expected to be associated with household residential satisfaction and mobility according to traditional residential mobility models. Life-cycle factors are represented by the householder's age¹¹ and dummy variables indicating whether the householder is married (versus being single) and whether there are children under age 18 present within the household. Households who are married with children are expected to be more satisfied with their residential locations, less likely than non-married and childless households to move and, if they do move, more likely to choose areas with lower crime and of higher quality. I also include a dichotomous variable indicating whether the reference person is female because it has been shown that women move more often than men (Long, 1992).

Attachment to the housing unit or neighbourhood is expected to be positively associated with residential satisfaction and negatively associated with out-mobility. A householder's ties to his or her residential location are indicated by the length of time in the unit and by a dummy variable specifying whether the household owns or rents their unit. In the analysis of out-mobility, the householder's residential satisfaction with the neighbourhood is also used. In the analyses predicting the race and ethnicity of the in-mover, the attachment variables are less likely to matter.

Socioeconomic status is measured by the householder's educational attainment (entered as three dummy variables indicating whether the householder has a high school degree, some college or a college degree or more; the reference category is the category less than a high school degree) and household income. According to traditional mobility models, households with more income as well as those with more educated householders will be more likely to decide to move and have more housing units to choose from because they will be less burdened by financial constraints and more knowledgeable of available vacancies.

Three measures gauging aspects of the housing unit's geographical context are created from the individual-level data. One is an indicator of whether the housing unit is located in the central city or the suburbs. Controlling for this variable is important because housing unit quality is likely to differ between these areas and could affect end-points of the mobility process. The second measure, which is actually a set of dummy variables, is created to control for regional differences in the mobility process. The final measure gauges the householder's perception of whether crime is bothersome within his/her neighbourhood, a characteristic important in gauging support for the race-proxy hypothesis and which has been shown to influence individual residential satisfaction and mobility (Parkes *et al.*, 2002; Xie and McDowall, 2008).

Race and Ethnicity of Previous Householder.—In the analysis of in-mover race and ethnicity, the race and ethnicity of previous householders is an important correlate, with in-movers of a particular race and ethnicity generally replacing out-movers of the same race

¹⁰In order to create the change measures, I keep the estimates of average family income in 1980 dollars. In 1990, the static measure of income is also in terms of 1980 dollars.

¹¹In the analysis of out-mobility, the quadratic term, age squared, is also included, as previous research has shown the relationship between age and out-mobility to be non-linear (Crowder, 2000). Based upon this research, it is expected that the probability of moving is highest among households with the youngest and oldest householders.

and ethnicity. Hence, three dummy variables are included in this analysis: non-Latino Black; Latino; and non-Latino Other. Non-Latino Whites form the reference group.

Metropolitan level.—Two metropolitan-level variables are created to measure housing opportunities that are available to households within a given metropolitan area. The first is the percentage of housing units built in the area within the past 10 years. The second measure is an indicator of the concentration of housing vacancies in predominantly White neighbourhoods. This variable is a coefficient measuring the correlation between tract-level percentage White and vacancy rates for tracts within a given metropolitan area (Crowder, 2000). Larger positive correlations indicate greater concentration of vacant housing units in predominantly White neighbourhoods. It is expected that the Whites will be more likely to move and more likely to choose areas with Whites if there are more vacant housing opportunities available within predominantly White neighbourhoods, because Whites prefer largely White neighbourhoods over racially mixed neighbourhoods (Farley *et al.*, 1994). Minority households, however, should be less likely to move and more likely to move into minority neighbourhoods in these circumstances.

Analytical Strategy

Descriptive analyses are undertaken to document the extent to which the proximate neighbours of Whites, Blacks and Latinos are minorities as compared with the neighbours in the census tract. Using hierarchical modelling, the impact that the race and ethnicity of proximate neighbours and the racial and ethnic composition of the larger neighbourhood may have on endpoints of the mobility process of Whites, Blacks and Latinos is assessed. For the outcome residential satisfaction, I use hierarchical linear modelling (HLM). For the outcomes, out-mobility and race and ethnicity of in-movers, I use a two-level, special case of the hierarchical generalised linear model (HGLM) where the sampling model is binomial and the link function is a logit (Raudenbush *et al.*, 2000).¹² These analyses are most appropriate for the data because they are hierarchical in nature. Individual housing units are nested within neighbour clusters and therefore share characteristics with one another. Each neighbour cluster was located in its own unique census tract, thereby not necessitating a three-level model. HLM and HGLM are used to adjust the standard errors to take into account the clustering of households that exists within neighbour clusters.

In order to examine the effects of proximate-neighbour and larger neighbourhood level race and ethnicity on endpoints of the mobility process of Whites, Blacks and Latinos, stepwise multivariate analyses are conducted and the coefficients for the race and ethnicity variables at the proximate-neighbour and census-tract levels are reported in Tables 2-5. The coefficients presented in Table 2 are from models that gauge the total effects of the racial and ethnic variables (i.e. from models that just include the proximate-neighbour variables (Panel A) or the census-tract variables (Panel B)) and from models that include both the proximate-neighbour and census-tract racial and ethnic variables (Panel C). The coefficients presented in columns 1, 3 and 5 in Tables 3, 4 and 5 add race-proxy variables to the models in Panel C of Table 2 for Whites, Blacks and Latinos respectively, predicting their residential satisfaction, out-mobility and in-mobility respectively. The coefficients in columns 2, 4 and 6 of Tables 3, 4 and 5 are the full models and thus add the remaining control variables at the proximate-neighbour, census-tract, individual and metropolitan levels to the models in columns 1, 3 and 5.

¹²Actually, the sampling model reduces to the Bernoulli distribution, a special case of the binomial distribution, because the dependent variables, out- and in-mobility only take on values of one or zero.

Results

Tables 2 and 3 present the regression coefficients for the racial and ethnic variables generated from hierarchical linear models of the residential satisfaction (1 = low rating, 10 = high rating) of Whites, Blacks and Latinos. The results reveal that the race and ethnicity of proximate neighbours or those in the neighbour cluster are a significant predictor of White residential satisfaction without other controls (panel A, column 1, Table 2) and with controls (column 2, Table 3) for other relevant factors, including the racial and ethnic variables at the census-tract level of analysis. The coefficients for percentage non-Latino Black and percentage Latino (panel A, column 1, Table 2) indicate that White residential satisfaction is lowered by 2.4 and 2.67 units respectively, for every one unit increase in the percentage of neighbours in the cluster that are non-Latino Black and Latino respectively. In the full model (column 2, Table 3), the impact of the race and ethnicity of proximate neighbours persists. White residential satisfaction is lowered by 0.69 and 0.85 units respectively, for every one unit increase in the percentage of proximate neighbours that are non-Latino Black and Latino.¹³

The race and ethnicity of the population at the larger-neighbourhood level also significantly influence White residential satisfaction and by a greater magnitude than that at the proximate-neighbour level. For every one unit increase in the percentage Black and Other at the census-tract level, White residential satisfaction decreases by 0.80 and 2.66 respectively (column 2, Table 3), controlling for all other factors. The only other racial and ethnic variable that significantly influences White residential satisfaction is change in the percentage Black. Column 2 in Table 3 reveals that, when controlling for other factors, a one percentage point increase in the census-tract percentage Black corresponds to a 2.39 decrease in White residential satisfaction. The remaining racial and ethnic variables in column 2 of Table 3 are not significantly associated with White residential satisfaction.

It is clear by comparing column 1 in Tables 2 (Panel C) and 3 that the race-proxy variables significantly reduce the effect of race and ethnicity on White residential satisfaction. The coefficients for percentage Black and Latino at the proximate-neighbour level and per cent Black at the census-tract level are reduced by half after including the race-proxy variables. The coefficient for percentage Other at the census-tract level is decreased by 25 per cent. However, all of these racial and ethnic coefficients remain significant in the final analysis. Interestingly, the coefficient for the variable gauging the change in percentage Black at the census-tract level becomes slightly stronger in magnitude with the inclusion of the raceproxy variables, from -1.81 to -1.92.

How do the race and ethnicity of neighbours, particularly of those in the neighbour cluster, shape the residential satisfaction of Blacks and Latinos? For Blacks, column 2 of Table 2 reveals negative total effects of the percentage Black at the proximate-neighbour and census-tract levels (panels A and B). However, these variables have no effect on residential satisfaction in the final analysis (column 4, Table 3). Indeed, none of the coefficients of any of the racial and ethnic variables has any effect. For Latinos, column 3 of Table 2 reveals a significant total effect of the percentage Latino at the proximate-neighbour level (panel A) but is no longer significant in the final model (column 6, Table 3). However, when controlling for all variables, a one-unit increase in the census-tract level percentage Other decreases Latino residential satisfaction by 1.96 units (column 6, Table 3). In addition to responding to those of other races negatively, Latino residential satisfaction is significantly

¹³It is likely that the effect of proximate-neighbour race and ethnicity as well as census-tract-level race and ethnicity will be underestimated here. One of the drawbacks of the data used here is that they include Whites who are likely to be more tolerant of minorities. Those who are less tolerant probably never chose to live in racially/ethnically mixed neighbourhoods in the first place.

lowered with positive changes in percentage Black at the census-tract level, although in the final model Latinos do not respond negatively to static percentage Black at the proximate-neighbour or census-tract levels (column 6, Table 3).

Taken together, the results in Tables 2 and 3 reveal a number of important findings. First, the effect of proximate-neighbour race and ethnicity is most salient for Whites and generally parallels the effects found at the census-tract level of analysis, although the latter coefficients are a bit stronger in magnitude than those at the proximate-neighbour level. Secondly, for Whites, the negative effects of out-group racial and ethnic groups on residential satisfaction persist after controls are included for all other variables, including the race-proxy variables. Thirdly, for Latinos, increases in the percentage Other at the census-tract level, which includes same-race neighbours, significantly reduce their residential satisfaction, controlling for all other relevant factors.

How do the proximate-neighbour and census-tract-level racial and ethnic variables affect the out-mobility of Whites, Blacks and Latinos? Tables 2 and 4 present the coefficients generated from stepwise hierarchical logistic regression models of White, Black and Latino out-mobility. The results reveal that, although the total effects of the proximate-neighbour racial and ethnic variables positively influence White out-mobility (column 4, panel A, Table 2), in the final model (column 2, Table 4), these coefficients are no longer significant. In particular, the coefficients for percentage Black and percentage Latino are no longer significant with the inclusion of the census-tract-level racial and ethnic variables (column 4, panel C, Table 2); the coefficient for the dummy variable indicating whether all three minority groups are present is no longer significant with the inclusion of the race-proxy variables (column 1, Table 4). At the census-tract level of analysis, percentage Black has no effect on White out-mobility and the coefficients for percentage Other and the dummy variable, both minority groups present, exhibit the same pattern as for the proximate-neighbour race and ethnicity variables. The only racial and ethnic variable that significantly affects White out-mobility is change in percentage Black at the census-tract level (column 2, Table 4). A one-unit increase in the change in percentage Black multiplies the odds of White out-mobility by 6.3 ($e^{1.84} = 6.3$).

The results in Tables 2 and 4 reveal that Black out-mobility is unaffected by proximate-neighbour and census-tract-level race and ethnicity. Total, negative effects on Black mobility are revealed for the percentage Black and non-Latino Other at the proximate-neighbour level and the percentage Black at the census-tract level (column 5, panels A and B, Table 2). However, the effects are eliminated either by the inclusion of the census-tract characteristics (as in the case of percentage Black at the proximate-neighbour level; column 5, panel C, Table 2) or by the inclusion of the race-proxy variables (column 3, Table 4).

For Latinos, the coefficients for the percentage Latino neighbours in the cluster and the percentage Other race population in the larger neighbourhood display no effect on Latino out-mobility (column 6, Table 4). However, the percentage Black in the neighbour cluster and neighbourhood are significantly associated with Latino out-mobility (column 6, Table 4). In the final model, the percentage Black within the neighbour cluster is positively related to the log odds of Latino out-mobility. At the same time, the percentage Black within the neighbourhood is negatively related to their mobility. Consistent with findings for Whites (Crowder and South, 2008), the results here suggest that Latinos are ultimately limited in their choices of where to move. While they tend to move away from Black neighbours, they are unable to move out of census tracts that have disproportionate shares of Black population. Another parallel aspect of the findings here as they relate to those of Crowder and South (2008) is that the effects of percentage Black at the neighbourcluster and census-

tract levels become stronger when controlling for both sets of variables simultaneously (column 9, compare panels A and B with C, Table 2).

In sum, the results in Tables 2 and 4 reveal that static race and ethnicity are unimportant to Whites in shaping their out-mobility behaviour, but what are important are the changes in Black racial composition. Black out-mobility is unaffected by proximate-neighbour and census-tract level race and ethnicity. Latino out-mobility, on the other hand, is affected by the racial and ethnic composition of the neighbour cluster and larger-level neighbourhood. However, it is influenced by the presence of Blacks rather than same-race neighbours and the effects of percentage Black at the proximate-neighbour and larger-neighbourhood levels are opposite in sign. These coefficients become larger in magnitude when simultaneously put in the model of Latino out-mobility, indicating the utility of bringing data at the proximate-neighbour level into this study.

Tables 2 and 5 present the coefficients generated from stepwise, hierarchical logistic regression models for White, Black and Latino entry into vacated units (versus that of non-Whites, non-Blacks and non-Latinos respectively). Contrary to the analysis of out-mobility, the race and ethnicity of proximate neighbours appear to play a significant role in predicting the race and ethnicity of in-movers. Column 2 of Table 5 reveals that, controlling for other factors, one-unit increases in the percentage of proximate neighbours that are Black and Latino are predicted to decrease the odds of White versus non-White entry into a vacated unit, by 96 per cent $[(e^{-3.24}-1)*100 = 96.08]$ and 97 per cent $[(e^{-3.51}-1)*100 = 97.01]$, respectively. The racial and ethnic composition of the population at the census-tract level also significantly influences whether the in-mover is White but to a slightly lesser magnitude than at the proximate-neighbour level (column 2, Table 5). Controlling for other factors, a one-unit increase in the percentage Black at the census-tract level is predicted to decrease the odds of White versus non-White entry into a vacated unit by 79 per cent $[(e^{-1.57}-1)*100 = 79.20]$. Percentage Other in the census tract has no effect on the odds of the in-mover being White. In census tracts where both minority groups are present, however, the odds of an in-mover being White are 0.57 times the odds of an in-mover being non-White. As was the case with out-mobility, change in percentage Black in the larger neighbourhood is significant in predicting White entry into a vacated unit. Controlling for other factors, a one-unit increase in the change in percentage Black is predicted to decrease the odds of White versus non-White entry into a vacated unit by 86 per cent $[(e^{-2.00}-1)*100 = 86.47]$.

Unlike the case in the analysis of White residential satisfaction, inclusion of the raceproxy variables has little impact on the racial and ethnic variable coefficients in the model predicting White entry into a vacated unit. For example, comparing column 7 of panel C in Table 2 with column 1 of Table 5 reveals only a slight decrease in the magnitude of the coefficient for percentage Black at the neighbour-cluster level, from -4.69 to -4.34 . Comparing the other significant racial and ethnic variables between these tables reveals the same small decrease in magnitude.

The results in column 8 of Table 2 and columns 3 and 4 of Table 5 show coefficients from stepwise hierarchical logistic regression models predicting Black versus non-Black entry into a vacated unit. Controlling for all other relevant factors, the percentage Black in the neighbour cluster and changes in the percentage Black in the census tract are positively associated with the log odds of Black entry versus non-Black entry into a vacated unit (column 4, Table 5). The effect of percentage Black at the neighbour-cluster level is strongest in magnitude, with a one-unit increase in the percentage of proximate neighbours that are Black multiplying the odds of Black versus non-Black entry into a vacated unit by 92 $(e^{4.52} = 91.84)$. Indeed, the coefficient for the percentage Black at the census-tract level displays no effect after controlling for all relevant factors (compare columns 3 and 4 of

Table 5). As was the case in predicting White in-movement into a vacated unit, here the race-proxy variables have little impact on the magnitude of the coefficients of race and ethnicity.

Tables 2 and 5 also present the results comparing Latino versus non-Latino entry into a vacated unit. Controlling for all relevant factors (see column 6, Table 5), Latinos are significantly more likely to move into a vacated unit, as compared with non-Latinos, when a greater share of Latinos are present within their neighbour clusters and when all minorities are present within the neighbour cluster and the census tract. Like the results for Blacks, the racial and ethnic variable with the largest effect is the one at the proximate-neighbour level. Controlling for other factors, a one-unit increase in the percentage of proximate neighbours that are Latino multiplies the odds of Latino versus non-Latino entry into a vacated unit by 128 ($e^{4.85} = 127.74$). Inclusion of the race-proxy variables does little to diminish the effects of the significant racial and ethnic variables predicting Latino entry into a vacated unit. For example, the coefficients for percentage Latino in the neighbour cluster remain about the same between column 9 (panel C) of Table 2 and column 5 of Table 5 (i.e. 6.74 and 6.75).

All told, the results in Table 5 reveal two important findings. First, White, Black and Latino entry into vacated units, versus non-White, non-Black and non-Latino entry respectively, is significantly increased by the presence of same-racial and ethnic proximate neighbours. Secondly, the effects of race and ethnicity at the proximate-neighbour level on in-mover race and ethnicity are more important (either larger in magnitude or are statistically significant) than the effects of race and ethnicity at the census-tract level, indicating that data at the proximate-neighbour level contribute significantly to the study of White, Black and Latino entry into vacated units.

With regard to the effect of background variables at the neighbour-cluster, census-tract, individual and metropolitan levels, I find support for the basic tenets of traditional mobility models. The coefficients of variables gauging household ties to the neighbourhood as well as their life-cycle stage are significant in influencing the mobility process, particularly in predicting the log odds of household out-mobility. For example, controlling for other relevant factors, Table 4 reveals that homeownership significantly decreases the log odds that a move out of the unit will take place for Whites, Blacks and Latinos, consistent with the tenets of classical mobility theory. Duration in the unit also significantly decreases the log odds that out-mobility will occur for all groups. For Whites and Blacks, age is significantly related to residential mobility. Those who are older and younger are more likely to move than those who are middle aged. Age is also significantly and positively related to White residential satisfaction (see Table 3).

The effects of the other life-cycle stage variables are significant with respect to household out-mobility but not for all groups. For example, Table 4 shows that Whites whose householder is married are significantly less likely to move than those whose householder is not married, controlling for other relevant variables. For Latinos but not the other groups, the number of children is negatively related to out-mobility. Among Blacks, those with female householders are significantly more likely to move than those with male householders. Interestingly, neither householder marital status nor number of children significantly affects household residential satisfaction, contrary to expectations under traditional mobility models (see Table 3).

The effects of variables gauging the social and economic situation of the neighbour cluster and the census tract are significant in predicting endpoints of the mobility process for Whites, Blacks and Latinos. For example, in neighbour clusters where there is a larger share of recent in-movers, signifying possible increases in social disorder, White and Latino

residential satisfaction is significantly lower (see Table 3). Regardless of race and ethnicity, all households are significantly more likely to move when larger shares of in-movers are present (see Table 4). In a similar vein, Table 3 reveals that the residential satisfaction of Whites and Blacks is significantly greater in neighbour clusters and neighbourhoods with higher levels of average family income.

Many of the variables gauging the effects of region and metropolitan context were also found to have no effect in the analyses in Tables 3-5, particularly in the case of Whites. Indeed, region appears to impact the residential satisfaction of Blacks and Latinos, but not that of Whites (see Table 3). More specifically, Blacks living in the Northeast have significantly lower residential satisfaction than those in the West. Blacks and Latinos living in the South have significantly greater levels of residential satisfaction than their counterparts in the West. Table 5 shows that vacated units in the North-east and Midwest, as compared with those in the West, are significantly less likely to attract Latinos as compared with non-Latinos. The only metropolitan variable that appears to be significant for Whites is in the analysis of out-mobility. Greater levels of vacancy concentration in largely White neighbourhoods significantly increase the log odds of White out-mobility (see Table 4).

Discussion and Conclusions

In recent years, a number of studies in the residential segregation literature have been focused at the micro level, examining the mobility of individuals underlying segregation (Charles, 2003). These studies have linked aggregate-level racial and ethnic composition data to individual-level data on mobility. However, this research has yielded mixed findings regarding the role of neighbourhood-level or census-tract-level racial and ethnic composition on individual-level mobility behaviour. Some studies find a significant effect of neighbourhood racial and ethnic composition on mobility, whereas others do not. Surprisingly absent from this literature is a focus on the impact of the proximate-neighbour-level race and ethnicity on individual mobility. Recent research finds that extra-local neighbourhood racial and ethnic composition have a different impact on mobility than census-tract-level or neighbourhood-level racial and ethnic composition (Crowder and South, 2008). Does going down a level in geographical scale influence the way that racial and ethnic composition affects mobility?

Using a specially created dataset from the 1985, 1989 and 1993 panels of the AHS not available to the public, I attempt to begin to fill this gap in the literature and examine the role that proximate-level neighbour race and ethnicity play in influencing endpoints of the mobility process—i.e. household residential satisfaction, out-mobility and in-mobility—as compared with census-tract-level racial and ethnic composition, controlling for other relevant characteristics. The main findings of this study are that proximate-neighbour or neighbour-cluster level race and ethnicity are significant in influencing endpoints of the mobility process, controlling for other relevant factors and, in general, their effect is different from that of census-tract-level racial and ethnic composition. White residential satisfaction is negatively impacted by the presence of Black and Latino proximate neighbours, but the magnitude of these racial and ethnic effects is slightly smaller than the negative effects of percentage Black and Other present at the census-tract level. While neither Black nor Latino residential satisfaction is significantly affected by proximate-level race and ethnicity, Latino residential satisfaction is negatively affected by the percentage Other and change in percentage Black in the census tract. Taken together, residential satisfaction is somewhat more influenced by census-tract-level racial and ethnic composition rather than proximate-neighbour race and ethnicity.

With respect to out-mobility, neither Whites nor Blacks respond to proximate-neighbour race and ethnicity. Whites are more likely to move, however, when there is more change in percentage Black at the census-tract level. On the other hand, Latinos do respond to proximate-neighbour race and ethnicity, but not that of their own ethnic group. Those that live in neighbour clusters with greater shares of Black proximate neighbours are more likely to move than those in clusters with less of a presence of Black proximate neighbours. Interestingly, this effect is in direct contrast to the effect of percentage Black at the census-tract level. Latinos in areas with a greater percentage of Blacks at the census-tract level are actually *less* likely to move than those with a lower share of Blacks in their census tracts.

With regard to movement into a vacated unit, the effects of the proximate-neighbour race and ethnicity variables are stronger predictors of in-mobility than census-tract racial and ethnic composition for all groups. That is, in-movement of a White, Black and Latino household, compared with a non-White, non-Black and non-Latino household respectively, is more likely to occur in neighbour clusters with greater shares of Whites, Blacks and Latinos respectively. The effects of census-tract-level racial and ethnic composition variables are not always significant; if they are, their effects are not as large in magnitude.

The main results found here have a number of implications for the study of residential segregation. First, it is clear from this study and Crowder and South (2008) that studying the impact of aggregate-level racial and ethnic composition on individual mobility behaviour cannot be achieved by only using data at the census-tract level of analysis. Proximate-Neighbour race and ethnicity are important to the study of individual mobility in their own right, particularly in the case of predicting in-mover race and ethnicity. Individual residential satisfaction and out-mobility are also influenced by proximate-neighbour race and ethnicity, but are somewhat more impacted by census-tract-level racial and ethnic composition, which is consistent with Hipp (2007) who uses a similar version of these data to examine social disorganisation outcomes.

It is likely that proximate-neighbour race and ethnicity may be more important in influencing the race and ethnicity of individuals moving into recently vacated units than out-mobility because the maintenance of modern-day segregation is more related to destination choices rather than White flight (Massey and Denton, 1993). Moreover, the inertia of staying in a given place (i.e. related to housing tenure and duration) may make individual- and family-related factors more important than extra-individual/familial factors such as proximate-neighbour race and ethnicity. Because these data are two decades old, future research should use more recent data to examine the impact of racial and ethnic composition of geographical layers that are both smaller and larger than the census-tract level on endpoints of the individual-level mobility process to validate the results here and seek to improve our understanding of the way in which context affects individual mobility.

Secondly, the results here make it clear that more research needs to be done focusing on the mobility process of Latinos. With respect to their out-mobility, Latinos respond differently to the percentage Black at the neighbour-cluster level than at the census-tract level. Similar to the finding for Whites by Crowder and South (2008), Latinos are significantly more likely to move when the percentage Black is greater in the neighbour cluster, but they are significantly less likely to move in situations where the percentage Black is greater in the census tract. Given that the shares of multi-ethnic and mixed Black-and-Other neighbourhoods have increased over the past two decades and that a large share of multi-ethnic neighbourhoods transition to mixed Black-and-Other neighbourhoods (Friedman, 2008), understanding how racial and ethnic composition at various aggregate levels shape micro-level patterns of Latino mobility is important and could have implications for the paths in which Latinos integrate into American society.

Finally, this study shows that racial and ethnic composition at the aggregate level shapes the micro-level dynamics underlying residential segregation. White residential satisfaction, out-mobility and in-mobility are all negatively impacted by out-group race and ethnicity or changes in out-group racial and ethnic composition. At the same time, Latino residential satisfaction is negatively affected by the percentage Other in the census tract, but the in-mobility of Latinos is positively related to the percentage Latino in the neighbour cluster. Black residential satisfaction is not significantly related to the percentage Black in the neighbour cluster or the census tract. However, the in-mobility of Blacks is positively related to the percentage Black in the neighbour cluster. The significant coefficients for these racial and ethnic variables remain even after the race-proxy variables are included in the models, diminishing support for the raceproxy hypothesis.

Taken together, these results suggest support for the notion that Blacks and Latinos are constrained in their mobility behaviour and that White out-group avoidance and structural barriers built upon such avoidance are operating to limit minority residential options. However, due to data limitations, the analyses here cannot fully adjudicate which hypothesis or hypotheses derived from the theories on residential segregation are most supported. White out-group avoidance is only indirectly inferred from the behaviour of Whites and minorities. In addition, the link between discrimination within the housing market and the mobility process of minorities is not explicit in this study. Nevertheless, the results here are consistent with other research that finds support for the negative out-group preferences and discrimination arguments in explaining why residential segregation persists between Whites and minorities (Farley *et al.*, 1994; Farley and Krysan, 2002; Krysan, 2002; Ross and Turner, 2005; Turner *et al.*, 2002). While it is clear that bringing proximate neighbours back into the study of residential segregation is important, certainly more work needs to be done to understand the nuances of exactly how and why such neighbours matter.

Acknowledgments

The author wishes to thank Scott Susin, Emily Rosenbaum and Scott South for their valuable feedback on previous drafts of this paper and Catherine Saidat for her research assistance. This research was supported by an ASA/NSF/Census Bureau Fellowship.

Appendix

Table A1

Means of explanatory variables used in models of residential satisfaction, out-mobility and in-mobility

Variable	Residential satisfaction/out-mobility			
	Whites (n = 4020)	Blacks (n = 735)	Latinos (n = 463)	In-mobility (n = 2817)
<i>Proximate-neighbour level</i>				
Percentage non-Latino Black	0.09	0.41	0.13	0.13
Percentage Latino	0.08	0.09	0.20	0.08
Percentage non-Latino Other	0.04	0.03	0.06	0.03
All three minority groups present (1 = yes)	0.13	0.27	0.22	0.10
Percentage recent movers	0.25	0.30	0.29	0.25
Average household income (in \$1000s)	38.18	27.77	33.52	31.28
<i>Census-tract level</i>				

Variable	Residential satisfaction/out-mobility			
	Whites (n = 4020)	Blacks (n = 735)	Latinos (n = 463)	In-mobility (n = 2817)
Percentage Black	0.10	0.39	0.13	0.13
Percentage Other	0.10	0.10	0.19	0.08
Both minority groups present (1 = yes)	0.94	0.94	0.97	0.87
Change in percentage Black	0.03	0.05	0.03	0.03
Change in percentage Other	0.04	0.03	0.19	0.05
Average family income (in \$1000s)	28.99	21.43	25.38	25.41
Percentage change in average family income	0.12	0.04	0.11	0.05
Percentage living in the same	0.52	0.51	0.50	0.51
Change in percentage living in same house 5 years ago	0.01	0.00	0.01	0.01
<i>Individual/householder level</i>				
Age	49.98	47.36	40.65	37.84
Age ²	2799.56	2513.99	1858.97	NA
Marital status (1 = married)	0.54	0.35	0.56	0.45
Number of children <18	0.55	0.90	1.32	0.91
Sex (1 = female)	0.67	0.47	0.65	0.60
Duration in the unit	11.60	10.55	6.18	1.22
Housing tenure (1 = own)	0.66	0.47	0.38	0.32
Residential satisfaction (1 = low, 10 = high)	8.06	7.13	7.40	7.5
Education (ref. < h.s. degree)				
High school degree	0.34	0.39	0.27	0.33
Some college	0.20	0.17	0.15	0.21
College and beyond	0.31	0.13	0.13	0.29
Household income	40.61	25.38	28.51	34.03
Location in the central city	0.50	0.76	0.64	0.55
Region of residence (ref. West)				
North-east	0.29	0.25	0.28	0.28
Midwest	0.20	0.22	0.10	0.20
South	0.24	0.36	0.22	0.26
Crime bothersome (1 = yes)	0.08	0.20	0.12	0.10
<i>Race/ethnicity of previous householder (ref. White)</i>				
Black	NA	NA	NA	0.11
Hispanic	NA	NA	NA	0.10
Other	NA	NA	NA	0.04
<i>Metropolitan level</i>				
Percentage housing units built in past 10 years	0.19	0.19	0.20	0.23
Vacancy concentration in largely White neighbourhoods	-0.21	-0.19	-0.16	-0.12

References

- Adams, TK. Census of population and housing, 1980 (United States): extract data. Inter-university Consortium for Social and Political Research; Ann Arbor, MI: 1992.
- Alba RD, Logan JR, Stults BJ. How segregated are middle-class African Americans? *Social Problems*. 2000; 47(4):543–558.
- Bobo L, Zubrinsky C. Attitudes on residential integration: perceived status differences, mere in-group preference, or racial prejudice? *Social Forces*. 1996; 74:883–909.
- Charles CZ. Neighborhood racial-composition preferences: evidence from a multiethnic metropolis. *Social Problems*. 2000; 47:379–407.
- Charles CZ. The dynamics of racial residential segregation. *Annual Review of Sociology*. 2003; 29:167–207.
- Clark WAV. Residential preferences and neighborhood racial segregation: a test of the Schelling model. *Demography*. 1991; 28:1–19. [PubMed: 2015937]
- Crowder KD. The racial context of white mobility: an individual-level assessment of the white flight hypothesis. *Social Science Research*. 2000; 29:223–257.
- Crowder KD. Racial stratification in the actuation of mobility expectations: micro-level impacts of racially restrictive housing markets. *Social Forces*. 2001; 79:1377–1396.
- Crowder KD, South SJ. Spatial dynamics of white flight: the effects of local and extralocal racial conditions on neighborhood out-migration. *American Sociological Review*. 2008; 73:792–812. [PubMed: 20221414]
- Denton NA, Massey DS. Patterns of neighborhood transition in a multiethnic world: US metropolitan areas, 1970–1980. *Demography*. 1991; 28:41–63. [PubMed: 2015944]
- Duncan, OD.; Duncan, B. *The Negro Population of Chicago: A Study of Residential Succession*. University of Chicago Press; Chicago, IL: 1957.
- Ellen, IG. *Sharing America's Neighborhoods: The Prospects for Stable Racial Integration*. Harvard University Press; Cambridge, MA: 2000.
- Emerson MO, Yancey G, Chai KJ. Does race matter in residential segregation? Exploring the preferences of white Americans. *American Sociological Review*. 2001; 66:922–935.
- Farley R, Frey WH. Changes in segregation of Whites from Blacks during the 1980s: small steps toward a more integrated society. *American Sociological Review*. 1994; 59(1):23–45.
- Farley R, Kryson M. The residential preferences of Blacks: do they explain persistent segregation? *Social Forces*. 2002; 80:937–980.
- Farley R, Jackson T, Reeves K, et al. Stereotypes and segregation: neighborhoods in the Detroit area. *American Journal of Sociology*. 1994; 100:750–780.
- Farley R, Schuman H, Bianchi S, et al. 'Chocolate city, vanilla suburbs': will the trend toward racially separate communities continue? *Social Science Research*. 1978; 7:319–344.
- Fotheringham AS, Wong DWS. The modifiable areal unit problem in multivariate statistical analysis. *Environment and Planning A*. 1991; 23:1025–1044.
- Friedman S. Do declines in residential segregation mean stable racial integration in metropolitan America? A research note. *Social Science Research*. 2008; 37:920–933.
- Galster GC. White flight from racially integrated neighbourhoods in the 1970s: the Cleveland experience. *Urban Studies*. 1990; 27:385–399.
- Harris DR. Why are whites and blacks averse to black neighbors? *Social Science Research*. 2001; 30:100–116.
- Hipp JR. Block, tract, and levels of aggregation: neighborhood structure and crime and disorder as a case in point. *American Sociological Review*. 2007; 72:659–680.
- Iceland J, Sharpe C, Steinmetz EM. Class differences in African American residential patterns in U.S. metropolitan areas, 1990–2000. *Social Science Research*. 2005; 34:252–266.
- Krysan M. Privacy and the expression of white racial attitudes: a comparison across three contexts. *Public Opinion Quarterly*. 1998; 62:506–544.
- Krysan M. Whites who say they'd flee: who are they, and why would they leave? *Demography*. 2002; 39(4):675–696. [PubMed: 12471849]

- Krysan M, Farley R. The residential preferences of blacks: do they explain persistent segregation? *Social Forces*. 2002; 80:937–980.
- Logan JR, Alba RD, McNulty T, Fisher B. Making a place in the metropolis: locational attainment in cities and suburbs. *Demography*. 1996; 33:443–453. [PubMed: 8939417]
- Logan JR, Stults B, Farley R. Segregation of minorities in the metropolis: two decades of change. *Demography*. 2004; 41:1–22. [PubMed: 15074122]
- Long, LH. *Migration and Residential Mobility in the United States*. Russell Sage Foundation; New York: 1988.
- Long LH. Changing residence: comparative perspectives on its relationship to age, sex and marital status. *Population Studies*. 1992; 46:141–158.
- Massey, DS.; Denton, NA. *American Apartheid: Segregation and the Making of the Underclass*. Harvard University Press; Cambridge, MA: 1993.
- Massey DS, Fischer MJ. Does rising income bring integration? New results for blacks, Hispanics, and Asians in 1990. *Social Science Research*. 1999; 28:316–326.
- Massey DS, Mullan BP. Processes of Hispanic and black spatial assimilation. *American Journal of Sociology*. 1984; 89(4):836–873.
- Park, RE.; Burgess, EW.; McKenzie, RD. *The City*. University of Chicago Press; Chicago, IL: 1925.
- Parkes A, Kearns A, Atkinson R. What makes people dissatisfied with their neighbourhoods? *Urban Studies*. 2002; 39(13):2413–2438.
- Quillian L. Why is black–white residential segregation so persistent? Evidence on three theories from migration data. *Social Science Research*. 2002; 31:197–229.
- Raudenbush, S.; Bryk, A.; Cheong, YF.; Congdon, R. *HLM5: Hierarchical Linear and Nonlinear Modeling*. Scientific Software International, Inc.; Lincolnwood, IL: 2000.
- Rosenbaum E. Race and ethnicity in housing: turnover in New York City, 1978–1987. *Demography*. 1992; 29:467–486. [PubMed: 1492879]
- Ross SL, Turner MA. Housing discrimination in metropolitan America: explaining changes between 1989 and 2000. *Social Problems*. 2005; 52(2):152–180.
- Rossi, P. *Why Families Move: A Study in the Social Psychology of Urban Residential Mobility*. Free Press; Gencoe, IL: 1955.
- Schelling T. Dynamic models of segregation. *Journal of Mathematical Sociology*. 1971; 1:143–186.
- South SJ, Crowder K. Leaving the 'hood: residential mobility between black, white, and integrated neighborhoods. *American Sociological Review*. 1998; 63:17–26.
- Speare, A., Jr; Goldstein, S.; Frey, WH. *Residential Mobility, Migration, and Metropolitan Change*. Ballinger; Cambridge, MA: 1975.
- Taeuber, K.; Taeuber, A. *Negroes in Cities: Residential Segregation and Neighborhood Change*. Aldine; Chicago, IL: 1965.
- Taub, RD.; Taylor, G.; Dunham, J. *Paths of Neighborhood Change*. University of Chicago Press; Chicago, IL: 1984.
- Thernstrom, S.; Thernstrom, A. *America in Black and White: One Nation, Indivisible*. Simon and Schuster; New York: 1997.
- Tobin, M. *User's Guide for the Urban Institute's Under Class Data Base (UDB)*. The Urban Institute; Washington, DC: 1993.
- Turner, MA.; Ross, SA.; Galster, GC.; Yinger, J. *Discrimination in Metropolitan Housing Markets: National Results from Phase I HDS 2000*. The Urban Institute; Washington, DC: 2002.
- Wilkes R, Iceland J. Hypersegregation in the 21st century. *Demography*. 2004; 41:23–36. [PubMed: 15074123]
- Xie M, McDowall D. Escaping crime: the effects of direct and indirect victimization on moving. *Criminology*. 2008; 46(4):809–840.
- Yinger, J. *Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination*. Russell Sage Foundation; New York: 1995.

Table 1

Explanatory variables used in models of residential satisfaction, out-mobility and in-mobility

Variable	Residential satisfaction	Out-mobility	In-mobility
<i>Proximate-neighbour level</i>			
Percentage non-Latino Black	X	X	X
Percentage Latino	X	X	X
Percentage non-Latino Other	X	X	X
All three minority groups present (1 = yes)	X	X	X
Percentage recent movers	X	X	X
Average household income (in \$1000s)	X	X	X
<i>Census-tract level</i>			
Percentage Black	X	X	X
Percentage Other	X	X	X
Both minority groups present (1 = yes)	X	X	X
Change in percentage Black	X	X	X
Change in percentage Other	X	X	X
Average family income (in \$1000s)	X	X	X
Percentage change in average family income	X	X	X
Percentage living in the same house 5 years ago	X	X	X
Change in percentage living in same house 5 years ago	X	X	X
<i>Individual/householder level</i>			
Age	X	X	X
Age ²		X	
Marital status (1 = married)	X	X	X
Number of children <18	X	X	X
Sex (1 = female)	X	X	X
Duration in the unit	X	X	X
Housing tenure (1 = own)	X	X	X
Residential satisfaction (1 = low, 10 = high)		X	X
Education (ref. < h.s. degree)		X	

Variable	Residential satisfaction	Out-mobility	In-mobility
High school degree	X	X	X
Some college	X	X	X
College and beyond	X	X	X
Household income	X	X	X
Location in the central city	X	X	X
Region of residence (ref. West)			
Northeast	X	X	X
Midwest	X	X	X
South	X	X	X
Crime bothersome (1 = yes)	X	X	X
<i>Race/ethnicity of previous householder (ref. White)</i>			
Black			X
Hispanic			X
Other			X
<i>Metropolitan Level</i>			
Percentage housing units built in past 10 years	X	X	X
Vacancy concentration in largely White neighbourhoods	X	X	X

Table 2
Hierarchical linear/logistic regression coefficients from stepwise, racial/ethnic-specific models of mobility outcomes

Variable	Residential satisfaction			Out-mobility			In-mobility		
	Whites (1)	Blacks (2)	Latinos (3)	Whites (4)	Blacks (5)	Latinos (6)	Whites (7)	Blacks (8)	Latinos (9)
<i>Panel A Models of neighbour-cluster race/ethnicity</i>									
Percentage non-Latino Black	-2.40*** (0.35)	-1.35*** (0.42)	-1.95*** (0.67)	0.80** (0.41)	-1.11*** (0.40)	0.54 (0.62)	-6.29*** (0.45)	9.12*** (0.78)	-0.92 (0.75)
Percentage Latino	-2.67*** (0.40)	-2.17* (1.17)	-2.05*** (0.37)	0.78* (0.42)	-0.48 (1.15)	0.15 (0.39)	-6.36*** (0.51)	-0.81 (0.90)	7.74*** (0.61)
Percentage non-Latino Other	-2.43*** (0.52)	-0.91 (1.93)	-0.20 (0.96)	0.52 (0.59)	-3.84* (2.11)	0.69 (0.98)	-5.58*** (0.71)	-0.37 (1.78)	2.02* (1.04)
All three minority groups present (1 = yes)	-0.40** (0.19)	0.23 (0.40)	-0.07 (0.30)	0.42** (0.19)	0.45 (0.39)	0.37 (0.26)	-0.05 (0.28)	0.05 (0.52)	1.07*** (0.37)
Intercept	8.35*** (0.06)	8.08*** (0.31)	8.52*** (0.22)	-0.96*** (0.07)	-0.14 (0.31)	-0.72*** (0.24)	2.47*** (0.13)	-4.61*** (0.33)	-3.88*** (0.22)
N	4020	735	463	4020	735	463	2817	2817	2817
<i>Panel B Models of tract-level race</i>									
Percentage Black	-2.71*** (0.41)	-1.67*** (0.48)	-1.89*** (0.67)	0.63 (0.52)	-1.50*** (0.44)	-0.57 (0.70)	-6.18*** (0.54)	5.99*** (0.46)	-1.04 (1.03)
Change in percentage Black	-1.74* (0.98)	0.57 (1.29)	-2.79 (1.82)	0.72 (1.28)	0.63 (1.23)	0.84 (1.89)	-4.80*** (1.06)	4.60*** (1.10)	0.32 (2.61)
Percentage Other	-5.36*** (0.71)	-2.38 (1.52)	-4.10*** (0.72)	1.59** (0.70)	0.14 (1.59)	-0.23 (0.73)	-10.36*** (1.85)	-2.51 (2.34)	9.05*** (2.21)
Change in percentage Other	1.5 (1.34)	3.32 (2.76)	1.82 (1.19)	-0.74 (1.44)	-1.27 (3.23)	1.75 (1.48)	-0.18 (1.95)	1.90 (2.70)	6.83*** (2.48)
Both minority groups present (1 = yes)	0.04 (0.23)	-0.93 (0.59)	-1.04 (0.81)	0.46* (0.27)	0.20 (0.67)	0.34 (0.90)	-0.78** (0.37)	0.48 (0.39)	1.63 (0.78)
Intercept	8.53*** (0.23)	9.00*** (0.69)	9.74*** (0.81)	-1.41*** (0.26)	-0.18 (0.73)	-0.79 (0.89)	3.48*** (0.37)	-3.59*** (0.37)	-6.64*** (0.80)
N	4020	735	463	4020	735	463	2817	2817	2817
<i>Panel C Models of neighbour-cluster and tract-level race/ethnicity</i>									
Percentage non-Latino Black	-1.06** (0.48)	-0.53 (0.73)	-0.73 (0.95)	0.78 (0.53)	-0.45 (0.58)	2.74*** (1.03)	-4.69*** (0.64)	6.33*** (0.91)	-0.43 (1.12)
Percentage Latino	-1.41*** (0.46)	-1.53 (1.36)	-0.98** (0.48)	0.50 (0.49)	-0.59 (1.34)	0.45 (0.60)	-5.03*** (0.59)	-1.21 (1.38)	6.74*** (0.73)

Variable	Residential satisfaction			Out-mobility			In-mobility		
	Whites (1)	Blacks (2)	Latinos (3)	Whites (4)	Blacks (5)	Latinos (6)	Whites (7)	Blacks (8)	Latinos (9)
Percentage non-Latino Other	-0.94 (0.58)	-0.69 (2.12)	1.33 (1.09)	0.20 (0.65)	-4.31* (2.20)	0.67 (1.15)	-4.27*** (0.78)	-0.81 (1.79)	1.29 (1.13)
All three minority groups present (1 = yes)	-0.48** (0.19)	0.29 (0.41)	-0.01 (0.30)	0.39** (0.20)	0.35 (0.40)	0.24 (0.27)	-0.03 (0.28)	0.09 (0.47)	0.93** (0.37)
Percentage Black	-1.65*** (0.55)	-1.28 (0.80)	-1.28 (0.99)	-0.13 (0.55)	-1.99*** (0.64)	-3.05*** (1.16)	-1.64** (0.66)	2.08** (1.04)	-0.82 (1.26)
Change in percentage Black	-1.81* (0.96)	0.48 (1.31)	-3.38* (1.81)	0.78 (1.24)	0.63 (1.27)	1.79 (1.82)	-2.82*** (0.82)	4.40*** (1.11)	0.02 (1.96)
Percentage Other	-3.49*** (0.84)	-1.58 (1.96)	-3.23*** (1.00)	0.83 (0.83)	0.96 (1.98)	-0.56 (1.11)	-2.72 (2.05)	-2.85 (4.15)	1.51 (2.49)
Change in percentage Other	0.74 (1.32)	2.73 (2.84)	0.98 (1.19)	-0.62 (1.44)	-0.74 (3.57)	1.66 (1.34)	-0.68 (2.23)	4.21 (4.36)	0.44 (2.61)
Both minority groups present (1 = yes)	0.07 (0.23)	-0.96 (0.60)	-0.91 (0.80)	0.45* (0.26)	0.10 (0.68)	0.38 (0.82)	-0.64** (0.30)	0.55 (0.50)	1.34** (0.66)
Intercept	8.52*** (0.22)	9.11*** (0.70)	9.75*** (0.81)	-1.41*** (0.26)	-0.15 (0.76)	-1.01 (0.82)	3.20*** (0.28)	-4.77*** (0.47)	-5.05*** (0.65)
N	4020	735	463	4020	735	463	2817	2817	2817

Notes:

p ≤ 0.01**
p ≤ 0.05*
p ≤ 0.10. Data shown are regression/logistic regression coefficients with standard errors in parentheses.

Table 3

Hierarchical linear regression coefficients from racial/ethnic-specific stepwise models of residential satisfaction, 1989

Variable	Whites		Blacks		Latinos	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Neighbour-cluster level</i>						
Percentage non-Latino Black	-0.59 (0.42)	-0.69* (0.41)	0.23 (0.64)	-0.28 (0.61)	-0.89 (0.93)	-0.74 (0.96)
Percentage Latino	-0.74* (0.40)	-0.85** (0.40)	-1.17 (1.20)	-0.99 (1.16)	-0.63 (0.50)	-0.45 (0.53)
Percentage non-Latino Other	-0.65 (0.50)	-0.49 (0.49)	-1.62 (1.82)	-2.23 (1.77)	0.77 (1.07)	0.96 (1.08)
All three minority groups present (1 = yes)	-0.29* (0.16)	-0.23 (0.16)	0.07 (0.35)	0.25 (0.34)	0.07 (0.29)	-0.02 (0.30)
Percentage recent movers	-1.40*** (0.22)	-1.18*** (0.23)	-0.96 (0.61)	-0.64 (0.59)	-1.04* (0.58)	1.22** (0.61)
Average household income (in \$1000s)	0.01*** (0.003)	0.02*** (0.003)	0.03** (0.01)	0.03** (0.01)	0.006 (0.009)	0.009 (0.01)
<i>Tract-level</i>						
Percentage Black	-0.88* (0.48)	-0.80* (0.47)	-1.08 (0.74)	-0.74 (0.70)	-0.50 (1.01)	-0.84 (1.05)
Percentage Other	-2.68*** (0.74)	-2.66*** (0.76)	-0.12 (1.72)	-0.77 (1.79)	-2.06* (1.05)	-1.96* (1.15)
Both minority groups present (1 = yes)	0.19 (0.19)	0.17 (0.18)	-0.97** (0.49)	-0.70 (0.45)	0.04 (0.83)	-0.24 (0.88)
Change in percentage Black	-1.92** (0.84)	2.39*** (0.84)	0.09 (1.12)	-0.22 (1.08)	-3.94*** (1.78)	-3.53* (1.85)
Change in percentage Other	0.63 (1.14)	0.56 (1.13)	1.96 (2.51)	0.26 (2.39)	0.67 (1.22)	1.23 (1.23)
Average family income (in \$1000s)	0.01** (0.004)	0.01** (0.004)	0.04* (0.02)	0.04* (0.02)	0.02 (0.02)	0.02 (0.02)
Percentage change in average family income	-0.16 (0.21)	-0.01 (0.22)	-0.13 (0.65)	0.89 (0.67)	-0.54 (0.67)	0.19 (0.76)
Percentage living in the same house 5 years ago	-0.35 (0.39)	0.02 (0.44)	0.50 (1.27)	0.97 (1.27)	1.48 (1.19)	2.24 (1.37)
Change in percentage living in same house 5 years ago	0.79* (0.48)	0.64 (0.48)	1.48 (1.40)	1.85 (1.31)	-1.31 (1.29)	-0.56 (1.37)

Variable	Whites		Blacks		Latinos	
	(1)	(2)	(3)	(4)	(5)	(6)
Location in the central city		-0.04 (0.09)		0.16 (0.34)		0.32 (0.29)
<i>Metropolitan-level</i>						
Percentage housing units built in past 10 years		0.44 (0.67)		-1.62 (2.18)		-1.49 (1.85)
Vacancy concentration in largely White neighbourhoods		0.26 (0.26)		0.24 (0.84)		-0.93 (0.81)
Region (ref. West)						
Northeast		-0.12 (0.16)		-1.03* (0.54)		-0.60 (0.48)
Midwest		-0.11 (0.15)		-0.26 (0.53)		0.31 (0.52)
South		0.15 (0.13)		0.90* (0.48)		0.66* (0.38)
<i>Individual- and household-level</i>						
Age		0.01*** (0.002)		0.01 (0.01)		0.01 (0.009)
Marital status (1 = married)		0.06 (0.07)		0.19 (0.21)		0.06 (0.24)
Number of children < 18		0.002 (0.03)		-0.06 (0.08)		-0.10 (0.07)
Sex (1 = female)		-0.14* (0.07)		-0.14 (0.20)		0.09 (0.24)
Duration in the unit		-0.007** (0.003)		-0.007 (0.01)		-0.01 (0.02)
Housing tenure (1 = own)		0.05 (0.08)		0.36 (0.25)		-0.06 (0.29)
Education (ref. < h.s. degree)						
High school degree		-0.31*** (0.08)		0.33 (0.22)		0.02 (0.25)
Some college		-0.36*** (0.10)		-0.03 (0.28)		0.23 (0.32)
College and beyond		-0.37*** (0.10)		0.12 (0.32)		0.18 (0.37)
Household income		-0.0006 (0.001)		-0.003 (0.005)		-0.004 (0.005)

Variable	Whites		Blacks		Latinos	
	(1)	(2)	(3)	(4)	(5)	(6)
Crime bothersome (1 = yes)	-1.67*** (0.10)	-1.60*** (0.10)	-2.05*** (0.22)	-1.96*** (0.22)	-2.21*** (0.30)	-2.25*** (0.31)
Intercept	8.03*** (0.34)	7.61*** (0.44)	7.41*** (0.97)	6.40*** (1.25)	7.52*** (1.30)	7.25*** (1.55)
Deviance statistic	15741.16	15729.97	3231.18	3226.73	1962.51	1977.77
Comparison model chi-squared (for difference with reduced model)	NA	11.19	NA	4.45	NA	15.26
N	4020	4020	735	735	463	463

Notes:

p ≤ 0.01

**
p ≤ 0.05

* p ≤ 0.10. Data shown are regression coefficients with standard errors in parentheses.

Table 4

Hierarchical logistic regression coefficients from stepwise, racial/ethnic-specific models of out-mobility, 1989 to 1993 panel

Variable	Whites		Blacks		Latinos	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Neighbour-cluster level</i>						
Percentage non-Latino Black	-0.07 (0.49)	0.17 (0.52)	-0.36 (0.55)	-0.16 (0.66)	2.43** (1.11)	2.85** (1.28)
Percentage Latino	-0.36 (0.45)	-0.35 (0.52)	-1.12 (1.12)	-0.70 (1.21)	0.25 (0.50)	0.28 (0.71)
Percentage non-Latino Other	-0.26 (0.55)	-0.13 (0.66)	-2.33 (1.83)	-3.30 (2.47)	0.63 (1.11)	0.53 (1.27)
All three minority groups present (1 = yes)	0.15 (0.18)	0.08 (0.20)	0.29 (0.30)	0.20 (0.34)	0.13 (0.28)	0.19 (0.34)
Percentage recent movers	2.89*** (0.23)	1.08*** (0.28)	3.08*** (0.52)	1.67*** (0.56)	2.57*** (0.60)	1.42* (0.84)
Average household income (in \$1000s)	-0.01*** (0.003)	0.004 (0.004)	-0.03*** (0.01)	-0.01 (0.01)	-0.02 (0.01)	0.003 (0.01)
<i>Tract-level</i>						
Percentage Black	0.06 (0.42)	-0.56 (0.48)	-0.09 (0.54)	0.14 (0.71)	-2.39** (1.17)	-3.20** (1.47)
Percentage Other	-0.18 (0.64)	-0.84 (0.76)	1.14 (1.64)	0.46 (2.21)	-0.64 (1.11)	-1.10 (1.58)
Both minority groups present (1 = yes)	0.08 (0.24)	-0.10 (0.23)	0.10 (0.49)	-0.03 (0.72)	-0.24 (0.83)	-1.28 (1.40)
Change in percentage Black	0.69 (1.05)	1.84* (1.08)	0.95 (1.24)	1.34 (1.23)	2.35 (2.06)	3.18 (2.43)
Change in percentage Other	-0.03 (0.90)	0.81 (0.92)	-2.01 (3.07)	1.39 (3.47)	1.77 (1.32)	1.63 (2.00)
Average family income (in \$1000s)	0.01** (0.004)	0.001 (0.004)	-0.003 (0.02)	-0.001 (0.02)	0.01 (0.02)	0.01 (0.03)
Percentage change in average family income	0.01 (0.27)	-0.30 (0.32)	0.80** (0.39)	0.41 (0.49)	0.67 (0.88)	-0.04 (1.27)
Percentage living in the same house 5 years ago	-1.83*** (0.45)	-0.88 (0.55)	-2.67** (1.18)	-0.96 (1.29)	-0.91 (1.35)	-0.48 (1.95)
Change in percentage living in same house 5 years ago	0.01 (0.50)	-0.75 (0.55)	0.27 (1.20)	-0.21 (1.64)	0.10 (1.42)	-1.58 (2.03)

Variable	Whites		Blacks		Latinos	
	(1)	(2)	(3)	(4)	(5)	(6)
Location in the central city		0.04 (0.11)		-0.11 (0.36)		0.20 (0.35)
<i>Metropolitan-level</i>						
Percentage housing units built in past 10 years		0.66 (0.76)		3.11 (2.14)		-4.26* (2.47)
Vacancy concentration in largely White neighbourhoods		0.91*** (0.32)		-1.01 (0.93)		0.83 (0.99)
Region (ref. West)						
Northeast		-0.11 (0.17)		-0.08 (0.55)		-0.26 (0.66)
Midwest		0.07 (0.18)		-0.11 (0.53)		-0.71 (0.76)
South		0.04 (0.15)		-0.27 (0.51)		0.25 (0.51)
<i>Individual- and household-level</i>						
Age		-0.16*** (0.02)		-0.17*** (0.04)		-0.04 (0.06)
Age ²		0.001*** (0.0002)		0.002*** (0.0004)		0.0001 (0.001)
Marital status (1 = married)		-0.28** (0.11)		0.02 (0.35)		-0.42 (0.33)
Number of children < 18		-0.004 (0.05)		0.04 (0.09)		-0.22** (0.11)
Sex (1 = female)		-0.07 (0.10)		0.58** (0.29)		0.27 (0.33)
Duration in the unit		-0.02*** (0.005)		-0.03* (0.02)		-0.08*** (0.03)
Housing tenure (1 = own)		-1.36*** (0.11)		-1.64*** (0.34)		-1.30*** (0.36)
Education (ref. < h.s. degree)						
High school degree		-0.05 (0.13)		-0.15 (0.35)		-0.20 (0.38)
Some college		0.08 (0.15)		-0.02 (0.47)		-0.59 (0.52)
College and beyond		0.23 (0.15)		-0.11 (0.50)		-0.36 (0.59)

Friedman

Page 29

Variable	Whites		Blacks		Latinos	
	(1)	(2)	(3)	(4)	(5)	(6)
Household income		0.003 (0.002)		-0.002 (0.01)		0.01 (0.01)
Residential satisfaction (1 = low, 10 = high)		-0.03 (0.02)		-0.03 (0.05)		0.07 (0.07)
Crime bothersome (1 = yes)						
	0.25* (0.14)	-0.01 (0.16)	0.04 (0.22)	-0.14 (0.30)	0.22 (0.36)	0.05 (0.40)
Intercept	-0.48 (0.42)	4.99*** (0.69)	0.89 (0.89)	4.05** (1.67)	-0.52 (1.41)	3.26 (2.43)
Deviance statistic	11982.42	11398.46	2109.73	2001.99	1409.27	1317.76
Comparison model chi-squared	NA	583.96***	NA	107.74***	NA	91.51***
N	4020	4020	735	735	463	463

Notes:

p ≤ 0.01

**
p ≤ 0.05

*
p ≤ 0.10. Data shown are logistic regression coefficients with standard errors in parentheses.

Table 5

Hierarchical logistic regression coefficients from stepwise models predicting the race/ethnicity of the in-mover, 1989, 1993 pooled (N = 2817)

Variable	White vs. Non-White	Black vs. Non-Black	Latino vs. Non-Latino			
(1)	(2)	(3)	(4)	(5)	(6)	
<i>Neighbour-cluster level</i>						
Percentage non-Latino Black	-4.34*** (0.65)	-3.24** (0.65)	5.72*** (0.89)	4.52*** (0.92)	-0.49 (1.18)	-0.92 (1.13)
Percentage Latino	-4.85*** (0.60)	-3.51*** (0.70)	-1.34 (1.40)	-1.32 (1.50)	6.75*** (0.76)	4.85*** (0.82)
Percentage non-Latino Other	-4.13*** (0.78)	-3.39*** (0.96)	-1.03 (1.81)	-0.63 (1.94)	1.24 (1.12)	0.08 (1.41)
All three minority groups present (1 = yes)	-0.02 (0.28)	-0.02 (0.29)	0.12 (0.45)	0.12 (0.48)	0.87** (0.37)	0.83** (0.34)
Percentage recent movers	-0.20 (0.33)	-0.22 (0.35)	0.27 (0.55)	0.14 (0.58)	0.43 (0.51)	0.40 (0.52)
Average household income (in \$1000s)	0.02*** (0.01)	0.02** (0.01)	-0.03** (0.01)	-0.03* (0.01)	0.001 (0.01)	0.01 (0.01)
<i>Tract-level</i>						
Percentage Black	-1.69** (0.66)	-1.57** (0.70)	2.31** (1.05)	1.74 (1.06)	-1.07 (1.33)	-0.73 (1.21)
Percentage Other	-3.58* (2.14)	-3.15 (2.50)	-2.29 (3.96)	-1.69 (3.91)	1.62 (2.58)	1.56 (2.77)
Both minority groups present (1 = yes)	-0.62* (0.32)	-0.57* (0.34)	0.37 (0.58)	0.29 (0.65)	1.28* (0.68)	1.28* (0.70)
Change in percentage Black	-2.56*** (0.87)	-2.00** (0.93)	4.09*** (1.21)	3.47*** (1.24)	-0.38 (2.07)	-1.06 (1.99)
Change in percentage Other	0.36 (2.41)	0.19 (2.70)	2.81 (4.28)	2.40 (4.12)	-0.64 (2.83)	-1.27 (3.00)
Average family income (in \$1000s)	-0.01 (0.01)	-0.01 (0.01)	0.01 (0.03)	0.003 (0.03)	-0.02 (0.02)	-0.004 (0.02)
Percentage change in average family income	0.22 (0.54)	0.21 (0.58)	-0.06 (0.92)	0.20 (0.96)	-0.20 (0.89)	-0.52 (0.87)
Percentage living in the same house 5 years ago	-0.21 (0.71)	-0.18 (0.81)	-1.44 (1.23)	-1.76 (1.47)	-0.35 (1.14)	-0.15 (1.20)
Change in percentage living in same house 5 years ago	0.45 (0.87)	0.18 (0.94)	-0.30 (1.21)	0.10 (1.33)	0.16 (1.33)	0.06 (1.34)

Variable	White vs. Non-White		Black vs. Non-Black		Latino vs. Non-Latino	
	(1)	(2)	(3)	(4)	(5)	(6)
Location in the central city		-0.22 (0.18)		0.29 (0.36)		0.30 (0.29)
<i>Metropolitan-level</i>						
Percentage housing units built in past 10 years		0.31 (1.05)		0.10 (2.04)		-1.42 (1.42)
Vacancy concentration in largely White neighbourhoods		-0.93 (0.60)		1.11 (1.10)		0.36 (0.85)
<i>Region (ref. West)</i>						
Northeast		0.17 (0.32)		0.67 (0.62)		-0.83* (0.48)
Midwest		0.34 (0.29)		0.45 (0.57)		-0.98** (0.43)
South		0.04 (0.25)		0.71 (0.50)		-0.26 (0.35)
<i>Race of previous householdholder (ref. White)</i>						
Black		-0.95*** (0.26)		1.18*** (0.31)		-0.15 (0.38)
Latino		-0.68*** (0.26)		-0.19 (0.46)		1.05*** (0.34)
Other		-0.60** (0.29)		-0.003 (0.53)		-0.15 (0.44)
<i>Individual- and household-level</i>						
Age		0.01** (0.01)		-0.01 (0.01)		-0.03*** (0.01)
Marital status (1 = married)		-0.46*** (0.15)		-0.50** (0.23)		0.88*** (0.22)
Number of children < 18		-0.20*** (0.06)		0.12 (0.09)		0.08 (0.08)
Sex (1 = female)		0.12 (0.14)		-0.37* (0.22)		0.10 (0.20)
Duration in the unit		-0.03 (0.06)		0.06 (0.08)		-0.03 (0.08)
Housing tenure (1 = own)		-0.01 (0.18)		-0.02 (0.31)		-0.09 (0.26)
Education (ref. < h.s. degree)						

Variable	White vs. Non-White		Black vs. Non-Black		Latino vs. Non-Latino	
	(1)	(2)	(3)	(4)	(5)	(6)
High school degree		0.56*** (0.20)		0.30 (0.29)		-1.11*** (0.25)
Some college		0.69*** (0.23)		0.40 (0.34)		-1.34*** (0.29)
College and beyond		0.45* (0.23)		0.44 (0.36)		-1.65*** (0.33)
Household income		0.005 (0.003)		0.01 (0.01)		-0.003 (0.01)
Residential satisfaction (1 = low, 10 = high)		0.04 (0.03)		-0.05 (0.05)		-0.02 (0.04)
Crime bothersome (1 = yes)	-0.31* (0.19)	-0.36* (0.21)	0.17 (0.21)	0.09 (0.26)	0.21 (0.23)	0.34 (0.27)
Year of data (1993 is ref.)		-0.35*** (0.12)		0.28 (0.19)		0.25 (0.19)
Intercept	3.03*** (0.60)	4.99*** (0.69)	-3.25*** (1.07)	-3.11* (1.69)	-4.32*** (1.03)	-2.09 (1.27)
Deviance statistic	7520.68	7412.92	6487.06	6425.27	6641.27	6497.45
Comparison model chi-squared	NA	107.76	NA	61.79***	NA	143.82***

Notes:

p ≤ 0.01

**
p ≤ 0.05

*
p ≤ 0.10. Data shown are logistic regression coefficients with standard errors in parentheses.