BARRIERS TO LEAVING THE BARRIO: PATTERNS AND DETERMINANTS OF INTER-NEIGHBORHOOD RESIDENTIAL MOBILITY AMONG U. S. LATINOS

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Abstract

Merged data from the Latino National Political Survey, the Panel Study of Income Dynamics, and the 1990 U.S. census are used to examine patterns and determinants of inter-neighborhood residential mobility between 1990 and 1995 for 2,074 U.S. residents of Mexican, Puerto Rican, and Cuban ethnicity. In several respects our findings confirm the central tenets of spatial assimilation theory: Latino residential mobility into neighborhoods inhabited by greater percentages of non-Hispanic whites (i.e., Anglos) tends to increase across successive generations, with increasing human and financial capital, and with English language proficiency. However, these results also point to substantial variations in the residential mobility process among Latinos that are broadly consistent with the segmented assimilation perspective on ethnic and immigrant incorporation. Net of controls, Puerto Ricans are less likely than Mexicans to move to neighborhoods with relatively large Anglo populations, and the generational and socioeconomic differences anticipated by the classical assimilation model emerge more strongly for Mexicans than for Puerto Ricans or Cubans. Among Puerto Ricans and Cubans, darker skin color inhibits mobility into Anglo neighborhoods. For member of all three Latino ethnic groups, residing in census tracts and metropolitan areas with large Latino populations diminishes the likelihood of moving to Anglo neighborhoods. The implications of these findings for theoretical development and future research are discussed.

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High levels of immigration to the United States from historically underrepresented sending nations has rekindled interest in assimilative prospects for ethnic minorities, particularly the "new immigrants" from Latin America (Portes and Rumbaut 1996). Of particular concern has been the spatial assimilation of these immigrants and their descendents (Alba et al. 1999; Massey 1985). Virtually all theoretical models of ethnic incorporation view the spatial proximity of minority groups to the Anglo majority as a key indicator, and in some cases a precursor, of more general processes of assimilation (Alba and Nee 1997). Yet, while recent research has examined aggregate levels of residential segregation of U. S. Latinos vis a vis non-Hispanic whites and African Americans (Frey and Farley 1996; Santiago 1992), as well as the cross-sectional residential locations of Hispanic-origin people at the individual level (Logan, Alba, and Leung 1996; White and Sassler 2000), we know little about the patterns and determinants of actual *residential mobility* of Latinos into neighborhoods characterized by varying proportions of the Anglo majority. We not only know little about how frequently Latinos move between neighborhoods with varying concentrations of non-Hispanic whites, but we also lack important information about how these residential mobility streams are differentiated by generation (e.g., immigrants versus second or later generation) and socioeconomic status, or how they vary across specific Latino ethnicities (e.g., Mexican, Puerto Rican, or Cuban).

In this paper we merge data from three sources—the Latino National Political Survey (LNPS), the Panel Study of Income Dynamics (PSID), and the decennial U. S. census—to trace prospectively, and for the first time, the patterns and determinants of Latino residential mobility between U. S. metropolitan neighborhoods with varying Anglo representation. Our ability to explore this issue is made possible by the "geocoding" of the residential addresses of LNPS/PSID respondents, which allows us to determine the ethnic composition of Latinos' neighborhoods at successive annual interviews and hence their geographic movement between neighborhoods of varying ethnic structure. These individual-level, longitudinal data provide for an examination of the key patterns and determinants of residential mobility among U. S. residents of Hispanic-origin as they move to neighborhoods that are inhabited by varying percentages of the white, non-Hispanic majority. Variation in these mobility streams, both at the individual and group level, sheds light on the degree to which Latino spatial incorporation follows the canonical account of classical assimilation theory (e.g., Gordon 1964) or, instead, follows a trajectory that is perhaps better described as "segmented assimilation" (e.g., Portes and Zhou 1993; Rumbaut 1999; Zhou 1997).

THEORETICAL FRAMEWORK AND HYPOTHESES

The classical sociological model of assimilation essentially describes a process through which members of an ethnic or racial minority group adopt the attitudes, cultural traits, and ways of life of a dominant, majority group. Park's (1950) well-known "race-relations cycle," involving the sequential stages of contact, competition, accommodation, and eventual assimilation, is perhaps the earliest abstract delineation of this process. Gordon (1964) further specifies the various forms of assimilation, distinguishing between (among other types) acculturation—the minority's adoption of the majority's cultural patterns—and structural assimilation—the development of primary-group affiliations between members of the minority and majority groups. Although in Gordon's framework acculturation can occur independently of structural assimilation, "once structural assimilation has occurred...all of the other types of assimilation will naturally follow (1964:80-81, emphasis in original). Generational change is often taken as a primary engine of assimilation, as each successive cohort of ethnic group members finds greater accommodation within the host society (Gans 1992; Lieberson 1973). Vestiges of a distinct minority group culture may exist in this classical formulation of assimilation, but these remnants are largely symbolic in nature (Alba 1990; Gans 1979; Waters 1990), and in general do not detract from the ethnic group's ability to socially penetrate the host society—through intermarriage, for example—or to achieve economic parity with members of the majority group.

Many versions of this classical model of ethnic assimilation view *spatial assimilation*, i.e., an ethnic group's geographic proximity to the majority group, as an especially salient dimension of this general process (Massey 1985). The residential integration of ethnic minorities within predominantly majority-group neighborhoods not only signals a decline in the strength and institutional completeness of heretofore insulated ethnic enclaves, but indicates as well an increased social acceptance of the minority group by the dominant group. Moreover, residential proximity between minority and majority groups is likely to enhance other forms of structural assimilation, such as cross-ethnic friendships (Huckveldt 1983) and, in the extreme, intermarriage (South and Messner 1986). Sharing neighborhoods often means sharing neighborhood-based associations, including schools, where primary-group contacts between minority and majority groups can develop, and the residential integration of ethnic groups largely ensures that minority group members have access to the same local amenities and resources as members of the majority group (Logan and Alba 1993; Massey and Denton 1993).

Like the broader assimilation framework from which it derives, spatial assimilation theory implies a number of influences on the inter-neighborhood residential mobility patterns of U.S. Latinos. First, the residential mobility of Latinos into neighborhoods characterized by greater representation of the Anglo (white, non-Hispanic) majority should vary by generation. Immigrant Latinos, like their counterparts who arrived from Europe during the latter part of the 19th century and the first three decades of the 20th, are assumed to settle primarily in ethnic residential enclaves, where co-ethnics can most easily help them find housing and jobs (Logan, Alba, and Zhang 2002). The children of these immigrants—the second generation—are presumably more acculturated to U. S. society than the first generation, and seek to convert their cultural capital and socioeconomic endowments into improved residential opportunities, which frequently involves residential movement out of the enclave and into neighborhoods that are ethnically mixed, if not predominantly Anglo. In turn, mobility out of predominantly Latino and ethnically-mixed neighborhoods and into predominantly Anglo communities is posited to be even greater for the third and later generations than for the first and second generations.

A second factor that, according to spatial assimilation theory, should play a key role in shaping patterns of Latino residential mobility is human and financial capital. The improved human capital endowments that result from social and economic mobility are thought to provide many ethnic group members with the incentive for structural assimilation; indeed, socioeconomic assimilation is often considered a dimension of overall social assimilation (Alba and Nee 1997). And, given the correlation between neighborhood ethnic and racial composition, on the one hand, and neighborhood housing values, on the other, advanced levels of human and financial capital are often prerequisites for purchasing residences in predominantly Anglo communities (Logan, Alba, McNulty, and Fisher 1996). Education and income are thus hypothesized to be positively associated with Latino mobility into neighborhoods containing greater representation of Anglos.

Third, spatial assimilation theory implies that English language use is a pivotal determinant of Latino mobility patterns. Proficiency with the English language is considered an important form of acculturation, one that is particularly apt to lead to structural and spatial assimilation (Alba, Logan, and Stults 2000; Alba and Nee 1997). Fluency in English ostensibly enables Latinos to take full advantage of the amenities and resources available in predominantly Anglo neighborhoods, and may as well reduce discriminatory barriers to their entry into such communities. Conversely, a limited ability to speak the language of the dominant group likely relegates members of an ethnic minority to the residential enclave comprised of co-ethnics, where everyday exchanges can be carried out in their native tongue. Accordingly, we hypothesize that English language proficiency is positively associated with the proportion of the population that is Anglo in Latino movers' neighborhood of destination.

While generally acknowledging the relevance of the classical account of assimilation for explaining the experiences of older European-origin immigrant groups, critics of this framework nevertheless raise important questions about its applicability to the new immigrant groups, especially those from Latin America (Betancur 1996). Collectively, these critiques have led to a modification of the classical assimilation model, often termed *segmented assimilation*, "in which different groups experience

either traditional assimilation and upward mobility, downward mobility by unsuccessfully competing in the mainstream economy, or upward mobility by living and working in ethnically homogeneous immigrant communities" (Jensen and Chitose 1996:83). Among the critiques offered by the segmented assimilation perspective are that the continuing streams of new immigrants allows these ethnic communities to flourish and replenish themselves, that these new immigrant groups are more racially distinctive than the older immigrant groups, and that the restructuring of the U.S. economy has eliminated employment opportunities that in an earlier era greatly facilitated immigrant social mobility (Alba and Nee 1997; Tienda 1989). Each of these differences between the older and new immigrant groups suggests that the latter may be less likely to assimilate into American society to the same extent as the former. More importantly for our purposes, the segmented assimilation perspective also implies important individual and group level influences on the spatial assimilation of Latinos.

For example, the segmented assimilation perspective suggests that, for some of the newer immigrant groups, spatial assimilation with the dominant majority will decline, rather than increase, across successive generations (Zhou 1997). One of the possible trajectories identified by the segmented approach is downward social and economic mobility, in which over time an immigrant group becomes increasingly incorporated into an isolated, urban underclass (Portes and Zhou 1993). For members of these groups, we would anticipate a decline in residential mobility into Anglo neighborhoods across generations. An alternative trajectory for immigrant adaptation, but one that is also qualitatively distinct from the classical assimilation model, is the attainment of economic success within vibrant but relatively insulated immigrant communities. Under this scenario, we might expect little difference across Latino generations in the degree to which they move to neighborhoods containing a relatively large percentage of Anglos.

The segmented assimilation perspective also implies that, even net of differences in generational status, human capital, and English language proficiency, the various Hispanic-origin groups will experience different rates of residential mobility between neighborhoods of varying Anglo

representation. Researchers have long recognized considerable variation in the experiences of Latino subgroups (e.g., Bean and Tienda 1987; Portes and Truelove 1987), and this variation is likely to be reflected in their patterns of residential mobility. In particular, Puerto Ricans tend to be more segregated from whites and more heavily concentrated in poor, inner-city neighborhoods than Latinos of Mexican origin (Massey and Denton 1987; Santiago 1992). These cross-sectional differences imply that the probabilities of moving into predominantly Anglo communities are lower for Puerto Ricans than for Mexicans, and that Puerto Ricans experience higher rates of mobility into the former types of neighborhoods.

Differences between the residential mobility patterns of Mexicans and Cubans are somewhat more difficult to anticipate. Although Cubans generally exhibit higher socioeconomic status than Mexicans and Puerto Ricans, there is some evidence that they are more likely to congregate in metropolitan communities containing substantial concentrations of co-ethnics. For example, Alba and Logan (1993), in a study of suburban communities in the New York City region, find that net of other factors (including education, income, and race) Cubans are more distant geographically from non-Hispanic whites than are most other Latino subgroups. This cross-sectional difference suggests that, compared with other Latino sub-groups, Cubans may exhibit lower levels of residential mobility into neighborhood of greater Anglo representation. And, to the extent that intergenerational spatial assimilation occurs more slowly for this ethnic group than for other Latino origin populations, then we would expect to find more muted generational differences in these mobility streams for Cubans than for Mexicans or Puerto Ricans.

One clue to this apparently anomalous pattern may reside in the concept of *ethnic enclaves*, another distinguishing feature of Latino spatial structure (Portes and Rumbaut 1990).¹ More so than other Latino groups, Cubans—even affluent ones—may in effect voluntarily segregate themselves from the dominant majority (Logan, Alba, and Leung 1996; Portes and Zhou 1993), a situation perhaps made possible by their advanced levels of capital—human, financial, and social—and their high levels of

business ownership. The economic vitality of these communities may provide Cubans with comparatively little incentive to leave them for ethnically-mixed or predominantly Anglo communities. Thus, in contrast to conventional models of spatial assimilation, Cubans may be less likely than other Latino groups to convert their socioeconomic resources into spatial proximity with the non-Hispanic white majority. The operation of ethnic residential enclaves also suggests that, more so among Cubans than other Latino-origin groups, the percentage of the population in the neighborhood of origin that is comprised of Latinos is inversely associated with the probability of moving out of the neighborhood (Rodriguez 1993). In addition, high levels of co-ethnic contact are posited to reduce the likelihood of moving to neighborhoods with comparatively large Anglo populations.

Skin color is also likely to differentiate patterns of Latino residential mobility and locational attainment (Alba, Logan, and Stults 2000). Prior studies have documented substantial racial differences in residential mobility for the general population, with blacks less likely than whites to change residences (after controlling for income and home ownership), less likely to convert neighborhood dissatisfaction into a move, and more constrained than whites by the level of residential segregation in the metropolitan area (South and Deane 1993). The result is that, even when they express the intention to move, blacks are significantly less likely than whites to translate these intentions into an actual move (Crowder 2000). Blacks exhibit very low rates of moving into predominantly white neighborhoods, and very high rates of moving out of them, while whites dominate the reverse mobility streams (South and Crowder 1998). Similar dynamics appear to operate for black Hispanics (Rosenbaum 1996). Black Hispanics are more segregated from whites than are non-black Hispanics (Denton and Massey 1989), and the high levels of residential segregation from whites among Puerto Ricans relative to Mexicans is largely attributable to the former group's African racial origins (Massey and Bitterman 1985). Even within the Hispanic-origin population, racial residential segregation is quite high (White 1986). To many observers, racial differences in geographic distributions stem from the discriminatory practices of real estate agents (Yinger 1995), local governments (Shlay and Rossi 1981), mortgage lenders (Shlay 1988; Squires and

Kim 1995), and racial stereotypes held by white residents (Farley et al. 1994), which combine to create a racially segmented housing market that obstructs the mobility aspirations of African Americans, especially for those wishing to move to racially integrated and/or middle-class neighborhoods. Thus, we hypothesize that, relative to their lighter-skinned counterparts, darker-skinned Latinos will exhibit low rates of residential mobility into neighborhoods containing a greater representation of Anglos. For similar reasons, we anticipate that Latinos who report experiencing ethnic discrimination will move to neighborhoods containing proportionally few Anglo residents.

Finally, the segmented assimilation perspective's emphasis on variation in the assimilation process might be expanded to incorporate important geographic differences in Latino residential mobility. Specifically, it seems reasonable to suggest that patterns of Latino inter-neighborhood residential mobility will vary by features of the larger metropolitan area. In particular, the overall Hispanic representation in the metropolitan area is likely to shape patterns of Latino mobility. Where Hispanics constitute a large percentage of the overall metropolitan-areas population, they may pose a threat to the residential advantages of the dominant population, and hence stimulate discriminatory responses in the housing market (Lieberson 1980; Logan, Alba, and Leung 1996). Metropolitan areas with relatively large Hispanic populations are also apt to contain more and larger predominantly Latino neighborhoods that could serve as potential destinations for movers. And, such cities are probably more likely to generate and support the types of Latino-based institutions that encourage residents to remain in ethnic residential enclaves. Accordingly, we hypothesize that the percentage of the metropolitan area that is Latino will be inversely associated with the percentage of the population that is Anglo in the neighborhoods to which Latinos move.

Empirical Background

Although no study has yet directly explored the patterns and determinants of inter-neighborhood residential mobility among U.S. Latinos, two strands of research shed indirect light on this issue.² A substantial body of research examines differences between and among Hispanics, non-Hispanic blacks,

and non-Hispanic whites in their respective population distributions across metropolitan communities, usually census tracts or block groups (Santiago 1992). A consistent finding from these studies is that Hispanics as a whole are considerably less segregated from Anglos than are non-Hispanic blacks, even though Hispanic segregation apparently changed only slightly between 1970 and 1990, while black-white segregation declined (Farley and Frey 1994; Massey and Denton 1987; 1989). Consistent with expectations derived from spatial assimilation theory, the degree to which Hispanics are segregated from Anglos declines with Hispanic socioeconomic status and is lower among native-born than among immigrant Hispanics (Denton and Massey 1988). Levels of Latino versus non-Latino residential segregation vary systematically across metropolitan areas with varying Latino population sizes and ecological structure (Frey and Farley 1996).

However, while these studies of aggregate population distributions paint a vivid picture of Latino residential segregation, they reveal little about the actual levels or determinants of Latino residential mobility between neighborhoods of varying ethnic composition. Even stability over time in a given measure of segregation (e.g., the index of dissimilarity or the exposure indices) can mask considerable residential movement between types of ethnic neighborhoods. Too, aggregate studies of residential segregation are usually able to consider only a small number of possible determinants of residential location. Thus, these quite valuable studies are nonetheless unable to capture the full dynamics of the residential mobility process, or important ethnic variations therein.

In partial recognition of the inability of aggregate segregation studies to inform sufficiently our knowledge of the locational attainments of individual minority group members, a recent series of studies by Alba, Logan, and colleagues (Alba and Logan 1991; 1993; Alba, Logan, and Bellair 1994; Alba et al. 1999; Logan and Alba 1993; Logan, Alba, McNulty, and Fischer 1996; Logan, Alba, and Leung 1996) use individual-level cross-sectional census data to model the locational attainments of individuals, with particular emphasis on differences across racial and ethnic groups. In general, these studies find that (among other things) Hispanics (and Asians) live closer than blacks to non-Hispanic whites, even after

adjusting for group differences in socioeconomic and demographic characteristics. Moreover, Hispanics are better able than either blacks or whites to convert human capital characteristics (e.g., education) into residential proximity with non-Hispanic whites, as well as into residence in neighborhoods with other desirable characteristics (e.g., suburban location, higher incomes, and less crime). Among Latinos, proximity to non-Hispanic whites is greater for the native-born than for immigrants, increases with English language proficiency, and is higher among Mexicans than Puerto Ricans or Cubans (Alba and Logan 1993). The barriers to suburbanization among recent immigrant groups appear to have weakened slightly between 1980 and 1990, suggesting important changes in patterns of residential mobility over this time period (Alba et al. 1999).

Yet, while these studies contribute significantly to our knowledge of the locational attainments of Latinos and other racial and ethnic groups, because they rely exclusively on cross-sectional data, they fail to speak directly to the key issue of residential mobility. Thus, these studies are unable to identify unambiguously the individual characteristics that facilitate or impede Latino residential mobility into neighborhoods inhabited predominantly by the white, non-Hispanic majority. Indeed, it is possible that some individual-level characteristics used as predictors in these models (e.g., income, educational attainment, home ownership, English language use) are a *consequence*, rather than a determinant, of residence in particular types of neighborhoods (Santiago and Galster 1995; Tienda 1991). Nor can these types of studies isolate the behavioral foundations (as registered in changing patterns of residential mobility) that have contributed to changes in racial and ethnic segregation patterns.

In sum, the classical model of ethnic assimilation, when applied to the specific problem of Latino spatial assimilation, implies a number of hypotheses about the determinants of Latino residential mobility into metropolitan neighborhoods characterized by varying Anglo representation. The principal hypotheses derived from this framework is that Latino mobility into neighborhoods containing a greater proportion of Anglos should increase with successive generations, with enhanced human and financial capital, and with advanced English language proficiency. The segmented assimilation perspective

supplements and modifies the classical framework by identifying important variations in Latino spatial assimilation, both across and within specific Hispanic-origin groups. This approach suggests that, compared to Mexicans, Puerto Ricans and Cubans may experience lower rates of mobility into Anglo neighborhoods, and that the effects of generation, Latino numerical representation in the origin neighborhood, and the extent of contact with co-ethnics might differ among Latino ethnic subgroups. The segmented assimilation framework also implies that Latino inter-neighborhood migration streams will be differentiated by skin color, with darker-skinned Latinos less likely than their lighter-skinned counterparts to enter Anglo neighborhoods. Latinos who report experiencing discrimination are expected to avoid moving to neighborhoods with large Anglo populations. Finally, characteristics of the larger metropolitan areas in which origin and potential destination neighborhoods are embedded—specifically their overall Latino population size-might also be expected to influence patterns of Latino residential mobility. Existing studies of aggregate residential segregation between Latinos and Anglos, and individual-level models of the locational attainments of Latinos, provide for only indirect assessment of these hypotheses. A more precise evaluation of these hypotheses requires directly examining the determinants of Latino residential mobility between neighborhoods with varying Anglo representation, a task to which we now turn.

DATA AND METHODS

Data for this analysis come from three sources: the 1989 Latino National Political Survey (LNPS), the Panel Study of Income Dynamics (PSID), and the 1990 U.S. census. The PSID is a well-known nationally-representative, longitudinal survey of U.S. residents (Hill 1992). Beginning in 1968 with approximately 5,000 families, the sample has been interviewed annually, and new families have been added to the sample as children leave home to form new households. Because prior to 1990, the PSID had no mechanism for incorporating immigrants into the sampling frame, one key limitation of the original PSID sample is that it severely underrepresents Latino residents of the U.S. Thus, prior studies of inter-neighborhood residential mobility using the PSID have not been able to focus on Latinos (e.g.,

Massey, Gross, and Shibuya 1994; South and Crowder 1998). In 1990 the PSID remedied this limitation of its sampling frame by adding to the database a new sample of Latinos. This new sample of Latino families was originally drawn as part of the LNPS (de la Garza et al. 1998). The LNPS considers an individual to be Latino if at least one parent, or at least two grandparents, were solely of Cuban, Mexican, or Puerto Rican ancestry. Between 1990 and 1995, the PSID interviewed on an annual basis the members of these households and, as with the PSID Core Sample, has followed those members who left the original household.

Although not covering the entire U.S. Latino population, the PSID Latino sample (and the LNPS from which it builds) covers geographically at least 89 percent of the three major Latino subgroups— Mexican, Puerto Rican, and Cuban. The three Latino subgroups were differentially sampled to provide adequate numbers of each. There is a very slight tendency for Latinos residing in geographic areas containing few Latinos to be underrepresented in the survey. The LNPS contains rich data on the Latino respondents' nativity and ancestry, as well as other potentially critical determinants of their spatial assimilation with the Anglo majority.

The PSID is uniquely suited to the study of Latino residential mobility into Anglo neighborhoods because of the Geocode Match Files, which link census geographic codes to the addresses of the PSID respondents. We use these codes to append to the individual PSID Latino records 1990 census data describing these respondents' census tract of residence at each annual interview, as well as additional information on the larger metropolitan area. Because many of the residential moves identified in the PSID Latino sample are made by members of the same family, we include only respondents who were classified as a head of household either at the beginning *or* at the end of an annual mobility interval (i.e., the period between annual interviews). Many moves, of course, are undertaken by families, and thus a decision to move made by the household head (or made jointly by the family) perforce means a move by other family members. Imposing this selection criterion avoids counting as unique and distinct those moves made by members of the same family (e.g., children and spouses) since only moves by the head of

the household are included. But moves by family members who were not the household head at the beginning of the interval but become the head at the end of the interval—e.g., when a child leaves the parental home—are included in our sample. Given the conceptual difficulties of constructing and measuring "neighborhoods" in nonmetropolitan areas (many of which were not fully tracted in the 1990 census), we further restrict the sample to PSID respondents who began and ended a mobility interval in a census-defined metropolitan area. These restrictions result in a sample of 2,074 LNPS/PSID Latino sample respondents: 1,127 of Mexican origin, 413 of Puerto Rican origin, and 534 of Cuban origin. Dependent Variables: We follow much prior research on urban spatial differentiation by using census tracts to approximate the concept of "neighborhood." While census tracts are imperfect operationalizations of neighborhoods, they undoubtedly come the closest of any commonly available spatial entity in approximating the usual conception of a neighborhood, and their use in this capacity is widespread (White 1987; Jargowsky 1997). We also follow prior work by treating inter-neighborhood residential mobility as a two-stage process involving, first, the decision to move and, second, the choice of destination (Massey, Gross, and Shibuya 1994). Accordingly, the first dependent variable in our analysis is a dichotomous variable indicating whether the respondent moved out of the census tract of origin between successive PSID interviews. The second (and more theoretically important) dependent variable is the percentage of the population in the census tract of destination that is non-Hispanic white. Independent Variables: The key explanatory variables in the analysis, in addition to specific Latinoorigin group membership, are measures of generation, human and financial capital, English-language proficiency, skin color, in-group contacts, and the ethnic composition of both the tract of origin and the larger metropolitan area. Table 1 provides a brief description and the source of these measures.

Table 1 about here

We categorize the LNPS/PSID respondents into four generations based on questions asked in the LNPS about their and their parents' place of birth, and about their age at immigration to the U.S. *First generation* respondents are those born outside the U.S. (or in Puerto Rico) and who immigrated after the

age of 10. Foreign-born (or Puerto Rican born) respondents who immigrated before age 11 constitute the "*1.5 generation*" (Rumbaut 1999). *Second generation* respondents were born in the U.S. but have at least one foreign- or Puerto Rican-born parent. *Third and later generation* respondents were born in the U.S. of U.S.-born parents.

The primary indicators of human and financial capital are *education*, measured by years of school completed, and family (husband and wife) taxable *income*, measured in thousands of constant 1990 dollars. These variables are constructed from questions asked in the PSID. They are measured at each annual interview and treated as time-varying covariates in the regression models.

English language usage is measured by a question asked in the LNPS regarding the usual language spoken at home. The response categories, coded from 1 to 5, are: only Spanish; more Spanish than English; both languages equally; more English than Spanish; and only English.³

Respondent's *skin color* is measured by a question asking the LNPS interviewer to assess the respondent's skin color on a 5-point scale ranging from 1 (very light) to 5 (very dark). We also capture respondents' prior experiences of ethnic *discrimination* through an LNPS question asking: "Because you are a (Mexican, Puerto Rican, or Cuban), have you ever been turned down as renter or buyer of a house, or been treated rudely in a restaurant, or been denied a job, or experienced other important types of discrimination?" The two possible responses are no (scored 0) and yes (scored 1).

The degree to which the respondents are enmeshed in residential enclaves composed of coethnics is captured by both an objective and a behavioral indicator. The objective indicator, taken from the 1990 census, is the *percentage of the population in the respondent's tract of origin that is Latino*. This variable is measured at each annual PSID interview and treated as a time-varying covariate. By including the percentage of the origin-tract population that is Latino as an independent variable, the models that examine the effects of the independent variables on the percentage of the destination tract population that is non-Latino white are essentially analyzing the residualized difference in the ethnic composition of the origin and destination tracts. The behavioral indicator is constructed from questions asked in the LNPS regarding the respondents' extent of *in-group contact* with members of their specific Latino-origin category. Specifically, respondents' were queried: "Other than your family, about how much contact do you have with people of (Mexican, Puerto Rican, or Cuban) origin?" The response categories, scored from 1 to 4, are: no contact; a little contact; some contact; and a lot of contact.⁴ Although, unlike the census-based measure, this variable does not specifically refer to actual or potential in-group contacts with residents of the respondent's neighborhood, it has the advantage of referring to the respondent's specific Latino group. Moreover, unlike the objective, census-based indicator, the question allows us to tap actual in-group contacts, rather than merely the potential for such contacts.⁵

Finally, the ethnic composition of the metropolitan area is tapped by census variables indicating the percentage of the *population in the officially-designated Metropolitan Statistical Areas (MSA) of origin and destination that is Latino*. As with the other census-based measures (the percentage of the population in the destination tract that is non-Latino white and the percentage of the population in the origin tract that is Latino), this variable can only be measured with 1990 census data. Thus, we assume that the 1990 values of these variables can serve as reasonable proxies for the unobserved values in the noncensal years (1991 to 1995).⁶

Although our primary focus lies in the effects of variables relevant to theories of spatial and segmented assimilation, prior research indicates clearly that conventional life-cycle factors cannot be ignored in studies of inter-neighborhood residential mobility (Lee, Oropesa, and Kanan 1992; South and Crowder 1998). Like other forms of residential mobility (Long 1988), the likelihood of moving from one neighborhood to another tends to decline with age, albeit at a decreasing rate. In this analysis *age* is measured in years, and its squared value is included to capture nonlinear effects. The *sex* of the household head is captured by a dummy variable scored 0 for males and 1 for females. *Marital status* is a dummy variable distinguishing respondents who are married at the beginning of the migration interval (scored 1) from the unmarried (scored 0). The presence of *children* is measured by the total number of

children in the household at the beginning of the migration interval. *Home ownership* is a dummy variable scored 0 for renters and 1 for owners. Household *crowding* is measured by the number of persons per room. All of these variables are taken from the PSID, and all but respondent's sex are measured on an annual basis and treated as time-varying covariates.

Analytical Strategy: We use logistic regression to examine the effects of the explanatory variables on the likelihood that respondents will move out of their origin tract between successive interviews. Then, we estimate a linear regression model in which the dependent variable is the percentage of the population in the tract of destination that is non-Hispanic white. Because this variable is unobserved for non-movers, we estimate these models using a maximum-likelihood Heckman procedure (Heckman 1979). The "selection" equation includes all of the regressors described above, while the "substantive" equation (percentage Anglo in the destination tract) omits the sociodemographic predictors (age, sex, marital status, children, home ownership, and household crowding) because their influence is restricted largely to the likelihood of moving out of the origin tract.⁷

Because we have information on the ethnic composition of the respondents' census tract at each annual interview, it is possible to infer more than one residential move for each respondent between 1990 and 1995. Accordingly, we structure the data file in "person-year" format, each observation pertaining to the period between annual interviews. Because the same LNPS/PSID respondent can contribute more than one person-year to the analysis, and because inter-neighborhood mobility is a repeatable event (i.e., respondents can move between time t and t+1, and then again between t+1 and t+2), the usual assumption of the stochastic independence of error terms underlying tests of statistical significance is violated (Bye and Riley 1989). We correct for this non-independence of observations using the cluster procedure available in Stata to compute robust standard errors (StataCorp 2001).

RESULTS

Table 2 presents descriptive statistics for all variables used in the analysis, separately for the three Latino-origin groups. Looking first at the dependent variables, Mexicans are slightly more likely

than either Puerto Ricans or Cubans to move out of their census tract of origin: 15% of Mexican householders move to a different tract during a year's time, compared with 11% of Puerto Ricans and 12% of Cubans. Conditional upon moving to a different tract, Mexicans and Puerto Ricans select new neighborhoods that are roughly similar in terms of their Anglo representation: among movers, 45% of the population in the tracts that Mexicans move to, and 47% of the population in the tracts that Puerto Ricans move to, is non-Hispanic white. In contrast, Cubans move to tracts that are considerably less Anglo: only 33% of the population in the tracts that Cubans move to is non-Hispanic white.⁸

Table 2 about here

With respect to generational differences, Cubans stand out for their large immigrant composition: 75% of the Cubans in our sample immigrated to the U.S. after age 10 (i.e., are first generation), compared to 41% and 55% of the Mexicans and Puerto Ricans, respectively. Very few Puerto Ricans or Cubans are U.S. (or mainland) born of U.S.- (or mainland-) born parents (i.e., third or later generation). On the indicators of human and financial capital, Cubans stand out for their comparatively high levels of education, while Puerto Ricans stand out for their extremely low levels of family income.

Although all three Latino ethnic groups tend on average to speak more Spanish than English at home (i.e., have means less than 3 on the English usage scale), Cubans tend to use Spanish at home more frequently than do either Mexicans or Puerto Ricans. Cubans are rated lighter in skin color than the either two groups, and are less likely to report having experienced discrimination in housing or other arenas because of their ethnicity.

Reflecting their comparatively high levels of residential segregation from non-Hispanic whites, Cubans originate in census tracts that have substantially larger Latino populations than do either Mexicans or Puerto Ricans: about 71% of the population in the typical Cuban respondent's tract of origin is Latino, compared to 54% of the origin-tract population for Mexicans and 49% of the origin-tract population for Puerto Ricans. Cubans are also more concentrated in metropolitan areas (particularly Miami) with larger Latino populations than are either Puerto Ricans, who are concentrated in the

Northeast, or Mexicans, who are concentrated (though somewhat less so than the respective regional concentrations of the other groups) in the Southwest. Perhaps as a consequence of residing near a larger number of co-ethnics, Cubans report having somewhat more frequent contact with their fellow Cubans than Mexicans or Puerto Ricans report having with members of their ethnic group.

Table 2 also reveals some sharp differences across the three Latino ethnic groups in the standard socioedemographic predictors of residential mobility. Compared to their Mexican or Puerto Rican counterparts, Cuban householders are older, have fewer children living in the household, and reside in less crowded dwellings. Compared to Mexicans and Cubans, Puerto Rican householders are substantially more likely to be female, and are less likely to be married and to own their homes.

Table 3 presents the results of a series of logistic regression equations designed to explore the impact of these variables on the likelihood that the LNPS/PSID respondents will move out of their census tract of origin between successive annual interviews. The first column shows the bivariate associations between each of the predictor variables and the odds of moving out of the origin tract.⁹ Echoing the results in Table 2, both Puerto Ricans and Cubans are significantly less likely than Mexicans to move out of their tract of origin. The odds that Puerto Ricans will move out of their origin tract are 31% lower than the corresponding odds for Mexicans (.31 = $(1 - e^{-.367})$, and the odds for Cubans are 22% lower than the odds for Mexicans (.22 = $1 - e^{-.253}$).

Table 3 about here

The likelihood of moving out of the tract of origin also increases monotonically across generations, with members of the second generation and third generations exhibiting significantly higher rates of out-mobility than immigrants (the reference category). At the bivariate level, the log-odds that Latino householders will move out of their tract of residence also increases significantly with education and English-language use, and decreases significantly with the percentage of the origin tract population and the percentage of the origin metropolitan area population that is Latino. Respondents who report experiencing ethnic discrimination are significantly more likely than those who do not report experiencing discrimination to move out of their tract of origin (odds ratio = 1.24).¹⁰

The conventional sociodemographic determinants of residential mobility are also significantly associated with the likelihood that Latino householders will move out of their census tract of origin. The log-odds of moving declines significantly with householder's age, but at a decreasing rate. Female householders are significantly more likely than male householders to move from their origin tract. Married respondents and homeowners are significantly less likely than unmarried respondents and renters to move. The number of children in the household and household crowding are both positively associated with the likelihood of moving from the tract of origin.

Column 2 of Table 3 presents the coefficients from a multivariate model that assesses the effect of each independent variable net of the others. One important change from the bivariate associations is the difference between Cubans and Mexicans in the likelihood of moving out of their census tract of residence. Although Cubans are less likely than Mexicans to make such a move (column 1), once other variables are controlled Cubans are actually more likely than Mexicans to move. Supplementary analyses (not shown here) indicate that the explanatory variable most responsible for this reversal is age: the Cuban respondents are older than the Mexican respondents (Table 1), and over most of its distribution age is inversely related to inter-tract residential mobility.

The effect of generation, education, English language usage, and the percentage of Latinos in the metropolitan area also fail to attain significance in the multivariate model. Supplemental analyses explored the reasons for the diminution in these relationships. All of these associations are also accounted for largely by age: older respondents, who exhibit low rates of out-mobility, have comparatively low levels of education, are less likely to use English, and tend to be concentrated in metropolitan areas with relatively large Latino populations. In contrast, with the exception of the sex difference in mobility, in the multivariate model the socioedemographic predictors continue to exert a significant influence on the log-odds of moving from the origin tract.¹¹ Interestingly, the coefficient for

number of children in the household becomes negative and significant once other variables are held constant, a finding arguably more consistent than the positive bivariate association with theoretical models of migration.

The remaining models in Table 3 re-estimate the multivariate model separately for the three Latino ethnic groups.¹² One difference worth noting is that the generational differences anticipated by classical assimilation theory tend to emerge most clearly among Mexicans. Although among Mexicans the first and 1.5 generations differ little in their propensities to move out of their census tract, members of the third generation are significantly more likely than the first generation to move out. In contrast, among Puerto Ricans none of the coefficients for the generation categories is significant (although neither are they significantly different than the corresponding coefficients for Mexicans). Among Cubans, members of the 1.5 generation are significantly *less* likely than the first generation to leave their census tract of origin. The coefficient for the third generation is sizeable and positive, as classical assimilation theory would predict, but it is very imprecisely estimated owing primarily to the few U.S.-born Cubans of U.S.-born parentage in our sample. Thus, on the basis of generational differences in the propensities to leave their origin neighborhoods, the classical model of ethnic spatial assimilation would seem to apply somewhat better to Mexicans than to either Puerto Ricans or Cubans.

Another potentially important difference across the Latino ethnic groups is the (net) effect of skin color. Among Puerto Ricans, the coefficient for skin color is positive and marginally significant, indicating that, net of the effects of the other explanatory variables, darker-skinned Puerto Ricans are more likely than their lighter-skinned brethren to move from their census tract. In contrast, darker-skinned Cubans are significantly (also at a borderline level) *less* likely than their lighter-skinned co-ethnics to move out of their tract of origin.

Of course, by itself residential mobility out of the census tract of origin may have little impact on spatial assimilation with the majority group unless it is accompanied by relocation into tracts composed of a substantial number of Anglos. Accordingly, Table 4 presents the results of a series of (Heckman-

corrected) linear regression models designed to examine the impact of the explanatory variables on the second stage of the residential mobility process—the percentage of the population in the destination census tract that is Anglo. In these models we regress the percentage of the destination tract population that is non-Hispanic white on the theoretically-relevant independent variables while adjusting for the selection of observations into the mover category.

Table 4 about here

Column 1 of Table 4 presents the bivariate associations. Cubans move to tracts that are significantly less Anglo than do Mexicans—a difference of about 11 percentage points. Puerto Rican movers, in contrast, do not differ significantly from Mexicans in the ethnic composition of their destination tracts. The coefficients for generation reveal a monotonic and significant increase over successive generations in the percentage of the population in the destination tract this is non-Hispanic white, and these differences are pronounced. Third generation movers select tracts whose relative Anglo population is almost 23 percentage points higher than the tracts selected by members of the first generation.

As predicted by classical assimilation theory, both indicators of human/financial capital education and family income—are significantly and positively associated with percent Anglo in the destination tract. Also as predicted by this theory, English language use is positively associated with moving into "more Anglo" neighborhoods.

At the bivariate level, some of the hypotheses derived from the segmented assimilation approach also receive support. For example, the percentage of the population that is Anglo in the tracts Latinos move to declines significantly with the percentage Latino in the origin tract and the larger metropolitan area, as well as the extent of contact with co-ethnics at the beginning of the mobility interval. At a marginally significant level, dark skin color is inversely associated with the percentage Anglo in the destination tract. However, we find no evidence that perceived experiences of discrimination influence the ethnic composition of Latino movers' destination tracts. Thus, although experiences of

discrimination appear to encourage slightly Latinos' migration out of their neighborhoods (Table 3), it does not appear to influence their choice of destination tracts.

Column 2 presents the parameter estimates for the multivariate model. Once other variables are controlled, Puerto Ricans are observed to move to tracts that are significantly less Anglo than the tracts that Mexicans move to, while the bivariate difference between Cubans and Mexicans disappears. Supplementary analyses (not shown here) indicated that the variable most responsible for the change between the bivariate and mutivariate results is the percentage of the metropolitan area population that is Latino. Compared to Mexicans, Puerto Ricans reside in (or move to) metropolitan areas that have relatively small Latino populations, while Cubans reside in (or move to) metropolitan areas with relatively large Latino populations (Table 2). And, for all three Latino groups, the percentage of the MSA population that is Latino is strongly and negatively related to the percentage of the population in the destination tract that is Anglo. Thus, controlling for the percentage of the MSA population that is Latino enhances the difference between Puerto Ricans and Mexicans (in fact, the small positive bivariate difference turns negative) and sharply diminishes the difference between Cubans and Mexicans.

The multivariate model also shows that the substantial generational differences in the ethnic composition of the destination tract (column 1) are completely eliminated when the other explanatory variables are held constant. Supplementary analyses revealed that this change is brought about primarily by the control for English language use: members of later generations tend to move to more Anglo tracts because they are more likely to speak English at home. Although classical assimilation theory appears to view generation and English language use as independent and separable causes of minority spatial incorporation, with respect to the specific issue of Latino spatial assimilation, these findings suggest that generational differences are, to a substantial degree, mediated by English language use. Somewhat similarly, the negative bivariate association between in-group co-ethnic contact and the percentage of the population in the destination tract that is non-Hispanic white also largely disappears in the multivariate

model. This diminution is mainly a function of the controls for English language use and the percentage of the origin tract population that is Latino.

Although their effects are somewhat attenuated in the multivariate model, most of the other key predictors continue to exhibit statistically significant associations with the ethnic composition of the destination tract in the multivariate model. The effects of education, family income, and English language use on the percentage of the population in the destination tract that is Anglo all remain positive and statistically significant, while the coefficients for the percentages of both the origin tract population and the destination metropolitan area population remain negative and statistically significant. The positive and statistically significant coefficient for the sample selection parameter (λ) indicates that respondents who are more likely to move out of their census tract are more likely to select destination tracts with relatively large Anglo populations.

The remaining models in Table 4 are estimated separately for the three Latino ethnic groups. Three differences are worth highlighting. First, only among Mexicans do we observe significant positive generational differences in the percentage of the destination-tract population that is non-Hispanic white; compared to first-generation respondents, second and third generation Mexicans move to tracts with a significantly larger representation of Anglos (though the latter comparison is only significant at a borderline level). By contrast, among Puerto Rican movers, the 1.5 and later generations relocate to tracts that have proportionally *fewer* Anglos than the tracts to which members of the first generation move, although none of these differences are significant. Among Cubans, this ostensibly anomalous pattern—at least from the standpoint of classical assimilation theory—holds for the 1.5 and second generations.

Second, while among Mexicans and Puerto Ricans the net effect of family income on the ethnic composition of the destination tracts is positive and significant, among Cubans the effect of family income is essentially zero. That greater financial resources are less of an impetus for spatial assimilation with Anglos among Cubans than among either Mexicans or Puerto Ricans may suggest that Cubans have

less of a preference for residence in Anglo neighborhoods. Moreover, given their generally higher socioeconomic status, Cubans may be better able than the other groups to acquire desired locational advantages and amenities (e.g., better housing and schools) in predominantly ethnic (i.e., Cuban) neighborhoods. More so than the other Latino ethnic groups, Cubans may be following the path, described by the segmented assimilation perspective, in which economic and social mobility is attained through voluntary residence in geographically-isolated ethnic enclaves. Conceivably, this different pattern of SES-selective geographic mobility reflects the fact that Cubans are more likely than either Mexicans or Puerto Ricans to establish successful local enclave economies (Logan and Alba 1999).

Third, the effect of skin color on the ethnic composition of destination tracts varies across the three ethnic groups. Compared to their lighter-skinned counterparts, darker-skinned Puerto Ricans and Cubans move to tracts that have comparatively fewer Anglo residents, but this effect is much weaker (and statistically non-significant) among Mexicans. Thus, among Puerto Ricans and Cubans, patterns of spatial assimilation with the Anglo majority are segmented by skin color.

DISCUSSION AND CONCLUSION

At their core, ecological theories of ethnic spatial assimilation invoke processes of residential mobility and migration, as members of minority groups move, with varying propensities, into neighborhoods inhabited by the white majority. Very little research, however, has directly examined these patterns and determinants of inter-neighborhood geographic mobility; instead, most studies focus on aggregate spatial distributions of racial and ethnic groups or on the sociodemographic characteristics of ethnic minorities' neighborhoods at a single point in time. We begin to address this gap by merging data from the Latino National Political Survey, the Panel Study of Income Dynamics, and the 1990 census to explore the patterns and determinants of residential mobility among U.S. Latinos between 1990 and 1995. Our analysis of this unique multi-source dataset allows us to trace prospectively the interneighborhood mobility patterns of U.S. residents of Mexican, Puerto Rican, and Cuban origin as they

move—or fail to move—to neighborhoods composed of varying percentages of non-Hispanic whites, and to examine the sociodemographic, economic, and behavioral predictors of these migration streams.

In several respects our findings reaffirm some of the central tenets of classical assimilation theory as applied to the spatial mobility of ethnic minorities. For example, among Mexicans residential mobility out of origin neighborhoods and into neighborhoods occupied by larger percentages of Anglos increases across successive generations. The classic model's emphasis on generation as a driving force behind ethnic assimilation appears well-placed in this context. Also as anticipated by the classical approach, Latino mobility into "more Anglo" neighborhoods tends to increase with human and financial capital and with English language use. Thus, consistent with the canonical account, socioeconomic and cultural assimilation appear to be salient precursors of spatial assimilation.

At the same time, however, our findings also reveal patterns that are either inconsistent with, or unanticipated by, classical assimilation theory, and that correspond at least roughly to the empirical scenarios envisioned by the emerging segmented assimilation perspective. For example, net of controls for other predictors of inter-neighborhood mobility, Puerto Ricans stand out as having both low rates of inter-tract mobility overall and, conditional upon moving, low rates of mobility into "more Anglo" neighborhoods, when compared to Mexicans. The situation for Cubans is more complex, but absent controls they, too, are less likely than Mexicans to move into neighborhoods with relatively sizable Anglo populations. Moreover, generational differences among Puerto Ricans and Cubans are less consistent than those among Mexicans with the classic assimilation model. Among Puerto Ricans and Cubans, residential mobility into Anglo neighborhoods inhabited by the white, non-Hispanic majority. Together these differences suggest that the different Latino ethnic groups may be characterized by different trajectories of spatial incorporation. Mexicans appear to follow most closely the path described by the canonical account of assimilation. Puerto Ricans, in contrast, are stymied by their dark skin color and may well be experiencing "second generation decline" (and beyond) in their mobility patterns (Gans

1992), perhaps reflecting their greater absorption into an urban underclass. The comparatively weaker effect of income on Cubans' mobility patterns may suggest that their low levels of migration into Anglo neighborhoods reflects voluntary selection into ethnic enclaves as a route to social and economic mobility.

Our results also demonstrate that an additional key predictor of inter-neighborhood residential mobility—and one that is underemphasized by both the classical and the segmented perspectives on spatial assimilation—is the ethnic composition of the metropolitan area in which these Latino households and their neighborhoods are embedded. For all three Latino ethnic groups, residential mobility into "more Anglo" neighborhoods decreases sharply as the percentage of the metropolitan area population that is Latino increases. Whether this effect occurs because Anglos react to the perceived threat posed by large Latino populations by shutting them out of Anglo neighborhoods, or because large Latino populations provide for an "ethnogenesis" of vibrant Latino neighborhoods (e.g., Price-Spratlen 1999), or, perhaps most simply, because metropolitan areas with small Latino (and large Anglo) populations contain more neighborhoods with large Anglo populations that can serve as potential destinations for Latino movers (e.g., South and Crowder 1998), cannot be determined with these data. But our findings on this score indicate that the mobility experiences of all three Latino ethnic groups are segmented by the ethnic composition of the larger metropolitan area, and they suggest that future theoretical developments and empirical models attend more seriously to the effect of this and other metropolitan-area characteristics in shaping patterns of Latino spatial assimilation. That some of the differences in geographical mobility patterns across the three Latino ethnic groups are explained, or suppressed, by differences in the ethnic composition of their metropolitan areas of residence also recommends that greater attention be given to this issue.

Future research might also profit by pursuing three other lines of inquiry. First, there is the need to more fully integrate conventional sociodemographic and life-cycle determinants of intra-urban residential mobility into models of ethnic spatial assimilation. For the most part, models of ethnic spatial

assimilation have tended to ignore standard predictors of geographic mobility, such as age, marital status, homeownership, and household crowding. Yet, by influencing the overall likelihood that households and families—minority as well as majority—will leave their neighborhoods of origin, these factors also create (or, in some cases, constrain) the opportunity for Latinos to move to neighborhoods with a different ethnic composition, including neighborhoods inhabited by the white, non-Hispanic majority.

Second, future tests of theoretical models of ethnic spatial assimilation and residential mobility should attend to the experiences of other racial and ethnic groups, including other Latino groups as well as newer immigrants groups from Asia. Multi-group comparisons are needed to establish the scope conditions for both classical and segmented models of ethnic spatial assimilation (Alba and Nee 1997). Further, research designs that trace the internal residential mobility experiences of immigrants upon their entry to the U.S.—and the mobility experiences of their children as they leave the parental home—hold promise for providing a more complete description of intergenerational patterns of spatial assimilation. Research in this area should also consider inter-urban and long-distance migration, along with intra-urban mobility, because the former types of move, while less frequent than the latter, can also alter minorities' exposure to majority-group neighbors.

Finally, future research on ethnic residential mobility and assimilation will need to deal with the growing complexity and temporal dynamics of U.S. neighborhoods. Increasing numbers of multi-ethnic neighborhoods requires that researchers go beyond simple "minority versus majority" categorizations of neighborhoods; residential moves into neighborhoods inhabited by a heterogeneous mix of racial and ethnic groups will also need to be considered (Denton and Massey 1991). Moreover, for Latinos as well as other racial and ethnic groups, residential movement into predominantly Anglo neighborhoods may precipitate the out-movement of non-Hispanic whites, as described by ecological models of neighborhood succession (Morenoff and Tienda 1997). A complete accounting of the impact of residential mobility on ethnic spatial assimilation must therefore give adequate consideration to the

dynamic interplay of mobility decisions among both minority and majority groups, and the ways in which intra-urban ethnic mobility patterns shape long-term trajectories of neighborhood population change.

ENDNOTES

¹ Our use of the term enclave in this context is meant to refer more to ethnic residential concentrations rather than to either ethnic entrepreneurial niches or enclave economies, which may or may not have a spatial dimension (e.g., Logan and Alba 1999; Logan, Alba, and Zhang 2002; Portes and Zhou 1999; Waldinger 1996).

² Research has examined patterns and determinants of long-distance (e.g., interstate) migration among U.S. immigrants (Gurak and Kritz 2000; Kritz and Nogle 1994), but the relevance of these studies for testing models of immigrant spatial assimilation is questionable.

³ Although we treat this as a continuous variable in the models presented below, in supplementary analyses we used dummy variables to represent the different categories of English language use. In general, we observed a monotonic pattern of differences in the outcome variables across these categories, with the largest difference being between those who speak only Spanish and those who speak at least some English.

⁴ The LNPS interviewed a randomly-selected adult in each sampled household, while the PSID collects data (usually from the household head) on all family members. Thus, the LNPS variables do not always refer to the PSID observation in our sample. We assume that the LNPS variables are reasonable proxies for all LNPS/PSID household members who are subsequently followed in the PSID. Supplementary analyses using only the LNPS respondents indicated that the effects of the LNPS variables are not appreciably biased by assigning the values of these variables to other household members.

⁵ The correlation between the percentage of the origin tract population that is Latino and the behavioral measure of in-group contact is, as expected, positive (r = .27), but not so high as to impair the ability to examine the net effects of each.

⁶ In our analyses of mobility out of the census tract of origin, we use the percentage of the population that is Latino in the metropolitan area of origin. In our analyses of the percentage Anglo in the tract of destination, we use the percentage of the population that is Latino in the metropolitan area of destination.

⁷ We acknowledge the considerable debate over the utility of the standard Heckman correction for sample selection bias and the varying conditions under which its application increases the accuracy of regression coefficient estimates (Stolzenberg and Relles 1997; Winship and Mare 1992). Accordingly, we experimented with alternative procedures, including simple OLS models based on the selected observations (i.e., inter-tract movers). The results from these experiments suggested strongly that our substantive findings are not appreciably affected by the Heckman estimation.

⁸ When they move, members of all three Latino ethnic groups tend to move to tracts that are more Anglo than their tracts of origin. Among movers, the percentages of the population in their tracts of origin that are non-Hispanic white are 37.8%, 32.5%, and 26.6% for Mexicans, Puerto Ricans, and Cubans, respectively.

⁹ In the bivariate models, the dummy variables for ethnicity are entered together, the dummy variables for generation are entered together, and age and its squared value are entered together.

¹⁰ In supplementary analyses we examined whether the differences in out-mobility between those who reported experiencing discrimination and those who did not varies by the percentage of the origin tract population that is Latino. However, the coefficient for the interaction term capturing this difference was not statistically significant.

¹¹ The gross sex difference in out-mobility is due entirely to sex differences in marital status: female householders are more likely than male householders to be unmarried, and unmarried householders are substantially more likely than married householders to move out of their census tract.

¹² The results of group-specific bivariate analyses are available from the authors upon request.

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Dependent Variables	Description	Source
Changed tract	Whether R moved out of origin tract between t and t+1	PSID and Census
Pct anglo in destination tract	Percent of population in destination tract that is non-Hispanic white	Census
Independent Variables		
Mexican	R reports being of Mexican origin (1=yes)	LNPS
Puerto Rican	R reports being Puerto Rican or Puertoriqueno (1=yes)	LNPS
Cuban	R reports being Cuban or Cubano (1=yes)	S AND
First generation	R is foreign-born or Puerto-Rican born and immigrated > age 10 (1=yes)	LNPS
1.5 generation	R is foreign-born or Puerto-Rican born and immigrated \leq age 10 (1=yes)	S UPS
Second generation	R is U.S. born with at least one foreign-born parent (1=yes)	S AND
Third + generation	R is U.S. born of U.S. born parents (1=yes)	S AND
Education	R's years of completed schooling, time t	PSID
Family income	Taxable income of R and spouse in 1000's of 1990 \$'s, time t	PSID
English usage	R's usual language spoken at home (1=only Spanish; 2=more Spanish than English; 3=both languages equally; 4=more English than Spanish; 5=only English)	SdNJ
Skin color	Interviewer's scaled rating of R's skin color (1=very light; 5=very dark)	S UPS

Table 1. Description and Source of Variables Used in Analyses of U.S. Latino Inter-tract Residential Mobility, 1990-1995

Perceived discrimination	R reports being discriminated against in housing, service, or employment (1=yes)	SdNJ
Pct Latino in origin tract	Percent of population in origin tract that is Latino, time t	Census
In-group contact	R's report of frequency of non-family contact with own ethnic group (1=no contact; 2=a little contact; 3=some contact; 4=a lot of contact)	SdNJ
Pct Latino in MSA of origin	Percent of population in metropolitan statistical area (MSA) of origin that is Latino	Census
Pct Latino in MSA of destination	Percent of population in metropolitan statistical area (MSA) of destination that is Latino	Census
Age	R's age, in years, at time t	PSID
Female	R is female (1=yes)	PSID
Married	R is married at time t (1=yes)	PSID
Children	Number of children in R's household, time t	PSID
Homeowner	R owns home at time t (1=yes)	PSID
Crowding	Persons per room in R's dwelling, time t	PSID

Table 1. Description of Variables Used in Analyses of U.S. Latino Inter-tract Residential Mobility, 1990-1995 (continued)

Notes: PSID = Panel Study of Income Dynamics; LNPS = Latino National Political Survey; Census = 1990 U.S. Census Summary Tape Files

Table 2. Descriptive Statistics for Variables Used in Models of Latino Inter-tract Residential Mobility, by Ethnicity: U.S. Latinos, 1990-1995

	Me	<u>xican</u>	Puer	to Rican	<u>C</u>	<u>uban</u>
Danan dant Variahlar	x	S	x	s	X	s
Changed tract	.15	.36	.11	.31	.12	.32
Percent anglo in destination tract ^a	44.54	29.70	47.12	31.96	33.10	27.53
Independent Variables First generation	.41	.49	.55	.48	.75	.43
1.5 generation	.08	.25	.18	.39	.11	.32
Second generation	.25	.43	.25	.43	.13	.33
Third generation	.26	.44	.02	.12	.01	.09
Education	9.51	4.08	9.72	3.92	10.91	3.80
Family income	19.70	22.18	13.23	18.26	20.75	23.89
English usage	2.76	1.47	2.59	1.22	1.81	1.10
Skin color	2.71	.96	2.67	.96	2.10	.86
Perceived discrimination	.33	.47	.30	.46	.14	.35
Percent Latino in origin tract	54.09	29.74	49.30	23.52	71.29	24.89
In-group contact	3.47	.79	3.49	.85	3.75	.63
Percent Latino in MSA of origin	30.02	20.67	19.97	13.01	41.11	15.64
Percent Latino in MSA of destination	29.91	20.72	19.90	13.06	41.09	15.67
Age	42.43	15.53	44.68	16.19	52.71	16.65
Female	.27	.44	.49	.50	.30	.46
Married	.63	.48	.40	.49	.59	.49
Children	1.48	1.47	1.18	1.36	.61	.93
Homeowner	.48	.50	.18	.39	.51	.50
Crowding	.87	.59	.74	.43	.66	.38
N of person-years N of persons	3958 1	127	1451	413	1979	534

^aComputed for movers only.

	Biva	riate				Mul	tivariate						
			(1) Tota		(2) Mexic	an		(3) Puerto R	ican		(4) Cubar		
<u>Independent Variables</u>	٩	<u>se</u>	٩	<u>se</u>	<u>ק</u>	se		٩	Se		q	se	
Mexican	referen	Ice	referen	ce									
Puerto Rican	367**	.116	459**	.127									
Cuban	253*	.101	.446**	.123									
First generation	referen	Ice	referen	lce	referen	ce		referenc	e		referenc	o	
1.5 generation	.192	.142	198	.149	.047	.215	[c]	.025	.330	[c]	714*	.284	[m,p]
Second generation	.272*	.112	.043	.139	.264	.194	[c]	039	.284		433	.308	[m]
Third generation	.531**	.112	.245	.164	.415*	.204		.286	.706		.549	.748	
Education	.065**	.010	001	.014	002	.019		046	.037		.005	.029	
Family income	000	.002	.003	.002	.004	.003		.003	900.		.002	.004	
English usage	.116**	.029	.019	.049	013	.065		025	.109		.084	.112	
Skin color	070.	.045	.013	.044	.016	.055		.189†	.105	[c]	173†	.103	[d]
Perceived discrimination	.218*	.091	.178†	.093	.124	.116		.177	.218		.360	.233	
Percent Latino in origin tract	008**	.001	004	.002	002	.002		010*	.005		002	.005	

Table 3. Logistic Coefficients for Regression Analyses of Residential Mobility Out of Census Tract of Origin: U.S. Latinos, 1990-1995

Table 3 (continued)			(1)		(2)			(3)			(4)		
	<u>q</u>	<u>se</u>	q	<u>se</u>	<u>q</u>	se		<u>م</u>	se		q	Se	
In-group contact	034	.054	.037	.056	.121†	.068		061	.131		143	.160	
Percent Latino in MSA of origin	006**	.002	.002	.003	000	.003		.007	600 [.]		000 [.]	.008	
Age	175**	.014	149**	.014	159**	.020		192**	.034		118**	.032	
Age ²	.001**	000 [.]	.001**	000 [.]	.001**	000 ⁻		.001**	000 ⁻	[c]	.001**	000 [.]	[d]
Female	.244**	.088	.058	.119	.077	.156		047	.278		.221	.248	
Married	505**	.081	308*	.123	434**	.155	[d]	.174	.316	[m]	257	.250	
Children	.057*	.027	072*	.036	.021	.044	[c,p]	281**	.094	[m]	273**	.110	[m]
Homeowner	-1.106**	.085	855**	860 [.]	790**	.120		706†	.366		-1.057**	.188	
Crowding	.278**	.064	.272**	.085	.148	660.	[c]	.493*	.250		.688**	.242	[m]
Constant Wald chi-square N of person years N of persons	7388 2074	~ -	2.26 639.5 7388 2074	9	2.12 419.5 3958 1123			3.35 139.6 145 413	2		2.97 160.5 197: 534	5 G - i	
$^{\dagger}p<.10 *p<.05 **p<.01$ Notes: c = coefficient sign	nificantly dif	ferent from Cub	ans.										

43

m = coefficient significantly different from Mexicans.p = coefficient significantly different from Puerto Ricans.

	Biva	iate				Multivar	iate					
			(1) Tot) al	(2) Mexic	an	(3) Puerto	Rican		(4) Cuba	, ц	
Independent Variables	q	<u>se</u>	<u>p</u>	<u>se</u>	q	Se	q	se		q	Se	
Mexican	refere	nce	Refer	ence								
Puerto Rican	3.653	3.477	-5.835*	2.639								
Cuban	-10.738**	2.710	092	1.843								
First generation	refere	nce	refere	nce	referei	nce	refere	nce		referei	JCe	
1.5 generation	11.111^{*}	3.470	1.096	2.890	6.560	4.318 [p]	-11.150	7.273	[m]	-1.349	8.864	
Second generation	15.268**	2.880	2.035	2.554	8.036**	3.086 [c,p]	-10.649	6.599	[m]	-8.108†	4.140	[m]
Third generation	22.833**	3.178	2.443	3.385	6.644†	3.759	-8.998	10.492		5.348	4.577	
Education	1.865**	.332	.939**	.255	.734*	.326	1.725*	.839		1.214**	.397	
Family income	.297**	.052	**790.	.036	.155**	.054 [c]	.248**	.095	[c]	036	.044	[m,p]
English usage	8.778**	.730	2.560**	.896	2.002	1.108	2.232	2.497		4.662**	1.643	
Skin color	-1.924†	1.112	-1.652*	.794	471	1.003 [p]	-5.296*	2.349	[c,m]	-2.336*	1.046	[d]
Perceived discrimination	1.180	2.389	261	1.786	-1.568	2.138	-3.145	5.491		4.102	3.195	
Percent Latino in origin tract	540**	.030	256**	.035	245**	.046	335**	.093		164**	.051	

Table 4. Coefficients for Linear Regression Analyses of the Percentage of Population Non-Latino White in Census Tract of Destination: U.S. Latinos, 1990-1995

Table 4 (continued)			(1)		(2)		(3)			(4)		
			q	Se	q	Se	q	se		<u>q</u>	se	
In-group contact	-8.369**	1.410	612	1.013	.095	1.320	886	2.498		.110	1.584	
Percent Latino in MSA of destination	871**	.044	641**	.050	593**	.060 [c,p]	888**	.152	[m]	934**	.095	[11]
Lambda			10.600^{**}	2.093	10.018**	2.647	19.831**	5.502		2.850	3.203	
Constant			46.	78	40.	07	45.2	5		58.98		
Wald chi-square			1060	.73	591	.61	103.()4		822.4	6	
N of uncensored	984		98	4	59	0	157	7		237		
observations												
N of censored observations	640	4	640)4	336	8	129	4		1742		
N of person years	738	8	738	88	395	88	145	1		1979		
N of persons	270	4	270)4	112		413	~		534		

^b<.10 *p<.05 **p<.01

Notes: Models estimated with maximum-likelihood Heckman selection using regressors shown in Table 3 in selection equation.

c = coefficient significantly different from Cubans.

m = coefficient significantly different from Mexicans.

p = coefficient significantly different from Puerto Ricans.