

## Housing and Neighborhood Turnover among Immigrant and Native-Born Households in New York City, 1991 to 1996

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### Abstract

This article examines the pattern of housing choice among foreign- and native-born mover households in New York City, using two panels of individual-level data. We show that turnovers are most likely between households of similar race/ethnicity and that location in ethnically mixed and predominantly nonwhite subareas increases the odds of in-movement by foreign- and native-born black and Hispanic households rather than white household in-movement.

Our results suggest that housing market segmentation continues to influence where households live and that immigrant mobility patterns are unlikely to increase the integration of whites with blacks and Hispanics in New York's neighborhoods. However, modest support for the roles of distinct neighborhood preferences and search processes is provided by the significant likelihood of immigrant in-movement associated with location in areas with high concentrations of persons with low English language abilities and previous occupancy by another immigrant household.

**Keywords:** Housing turnover; Immigrants; Race; Ethnicity

### Introduction

Immigration is rapidly reconfiguring the racial and ethnic composition of the United States, especially in locations that are the primary destinations of new arrivals (Farley 1997; Frey and Farley 1996). New York City is one such location; indeed, immigration accounted for much of New York's population and household growth between 1980 and 1990 (James, Romine, and Zwanzig 1998; Kasarda et al. 1997), helping make New York a "majority minority" city during that decade (Salvo and Lobo 1997). Not only does New York receive a high number of immigrants but it receives a disproportionate number of immigrants from Latin America and such non-Hispanic Caribbean countries as Jamaica, Trinidad, Tobago, and Guyana (Salvo and Lobo 1997). The relative overrepresentation of foreign-born blacks makes New York unique among the nation's cities.

Upon arrival, immigrants tend to settle in specific neighborhoods rather than distributing themselves evenly across the city. Ecological models of residential succession predict that new arrivals eventually replace former residents in the course of residential turnover, inheriting aging and deteriorating housing units from out-movers. Former residents, in contrast, are predicted to *spatially assimilate* with majority group members by seeking residence in better neighborhoods that are commensurate with their improved socioeconomic

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status, dominated by members of the majority group, and characterized by amenities superior to those they left behind (Logan, Alba, and Leung 1996; Massey 1985). These models, however, are based on the experiences of European immigrants—who were largely white—and thus may not apply directly to the experiences of post-1965 immigrants, many of whom are nonwhite (see, for example, Portes and Zhou 1993). Indeed, a number of studies have shown that the spatial assimilation model is less effective in predicting the housing and locational outcomes of blacks, Puerto Ricans, and nonwhite Hispanics generally (e.g., Alba and Logan 1992). Such evidence points to the potential limitations of this model when applied to the locational experiences of recent immigrants.<sup>1</sup>

The fact that Latino, Asian, and black immigrants are arriving in a city where high levels of racial and ethnic segregation have been maintained by a number of factors, including persistent housing market barriers (Rosenbaum 1992, 1994, 1996a; Schill 1996), demands a study of the patterns and consequences of the housing choices made by immigrant and native-born households on a number of counts. First, given that the city's white population is projected to continue shrinking while the nonwhite population will continue to grow (New York City Department of City Planning 1995), it is clear that formerly white-occupied housing units will be available for minority in-movement, and over time we can expect to see the continued diversification of formerly white-dominant neighborhoods (see, for example, Alba et al. 1995). Complicating this scenario of *mathematically* increased minority access to formerly white-occupied housing, however, are the rising numbers of new white immigrants to New York City, especially since 1990 (New York Department of City Planning 1996). These new immigrants may be more likely than native- or foreign-born nonwhites to obtain this housing because they may be selectively drawn to traditionally white neighborhoods by their participation in social networks of friends/kin or by landlords and area residents who seek to recruit racially similar—although perhaps culturally distinct—potential neighbors (see, for example, Reider 1985). Indeed, an analysis of the settlement patterns of immigrants during the first half of the 1990s identifies the long-time Polish neighborhood of Greenpoint in Brooklyn as the most popular destination for new arrivals from Poland, while immigrants from the former Soviet Union are settling in the traditional white-ethnic neighborhoods that form the southern border of that same borough (New York City Department of City Planning 1996). Therefore, one issue we address in this study is whether or not white immigrant households are more likely than other immigrant and minority households to acquire housing units and neighborhoods vacated by white native-born households. Indeed, an analysis of the patterns of housing choice among immigrant and native-born households that controls for race/ethnicity will lend insight into the likely direction of neighborhood change.

Second, our analysis will provide insights into how housing turnover contributes to observed racial/ethnic and immigrant-status inequalities in housing and neighborhood conditions (Rosenbaum 1996a; Rosenbaum et al. 1999; Schill, Friedman, and Rosenbaum 1998). Thus, a second question we address is: To what extent do the two dimensions of race/ethnicity on the one hand, and immigrant status on the other, operate to make some groups better able than other groups to acquire well-maintained housing in desirable neighborhoods? Because residential location strongly influences the quality of life chances (Ellen and Turner 1998),

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<sup>1</sup> The fact that the spatial assimilation model is unable to fully describe the locational attainment process among blacks and nonwhite Hispanics has given rise to an alternative model, the *place stratification framework* (Alba and Logan 1992). This model does not deny the importance of socioeconomic attainments and life-cycle factors as predictors of locational attainment, but rather emphasizes the role that structural barriers play in effectively limiting minority housing choices (South and Crowder 1997).

differential access to high-quality housing and neighborhoods may help to perpetuate inequality along the dimensions of race/ethnicity (Massey and Denton 1993; Oliver and Shapiro 1995; Orfield and Ashkinaze 1991; Squires 1994) and immigrant status.

In this article we examine the patterns and consequences of housing choice among immigrant and native-born households in New York City within a multiethnic context. Specifically, the analysis uses individual-level panel data to focus on the types of housing units chosen by recently moved households who differ along the dimensions of race/ethnicity and immigrant status. By identifying the predictors of in-movement by seven types of households defined by race/ethnicity and immigrant status (native- and foreign-born white, native- and foreign-born black, native- and foreign-born Latino, and Asian<sup>2</sup>), we show that turnovers are most likely to occur between households of the same race/ethnicity and that the odds of in-movement of native- and foreign-born black and Hispanic households are significantly increased by location in mixed and predominantly nonwhite areas. Our research thus suggests that patterns of immigrant housing mobility in New York City are unlikely to promote the integration of whites with blacks and Hispanics in its neighborhoods. Our data do not permit us to distinguish whether these patterns reflect preferences for racial and ethnic homogeneity among movers, the amenities offered by certain neighborhoods to immigrants, group-specific housing search networks, or the persistent effects of ongoing racial and ethnic discrimination.

This article is organized into five parts. The first part describes the theoretical frameworks that guide the analysis and outline the hypotheses. In the second part we discuss the data source, and in the third part, we address the multivariate approach used in the analysis. Finally, in the fourth and fifth parts we discuss and summarize the results.

## Theoretical Frameworks

### *Housing Searches and the Choice of Where to Move*

As indicated, this analysis focuses on the choices made by households that have recently moved. Traditional conceptualizations of housing searches suggest that a household that is considering a move identifies available alternative housing units, evaluates their suitability relative to its needs and budget, and eventually selects that which is the “best fit” (Long 1987; Rossi 1955). The types of alternative housing units the household considers are largely determined by its needs for amenities such as size and location and by its purchasing power. The pool of units the household identifies, however, is shaped by its knowledge about available vacancies. This knowledge may depend on a number of factors, including the household’s own familiarity with different neighborhoods, leads on available vacancies provided by friends and family, and information available from newspaper advertisements and formal contacts such as real estate agents.

Race/ethnicity also can influence the amount and type of information available to different households. For example, social networks are often bounded by race/ethnicity, which may

<sup>2</sup> The terms “white” and “black” throughout this article refer to non-Hispanics of each group. Unfortunately, the small number of native-born Asian households that moved during the observation periods precludes including them in a separate category.

limit the transfer of information about housing opportunities between different groups. Equally significant, research examining newspaper advertisements demonstrates that the racial/ethnic composition of the neighborhood plays a role in determining if, and in which outlet, a unit is advertised (Turner and Wienk 1993); thus some vacancies are made known to certain audiences while others are not. Finally, the wealth of housing market audit research has documented that black and Hispanic home seekers are told about and shown fewer vacancies than comparable white home seekers (Yinger 1995). One consequence of such differences in the quantity and quality of information made available to different racial/ethnic groups is that the destinations chosen by relocating households also will differ by race and ethnicity, thereby perpetuating patterns of racial and ethnic segregation (Turner and Wienk 1993; also see South and Crowder [1997, 1998a, 1998b] for evidence on racial variation in destinations). Indeed, earlier research on the choices made by white, black, Puerto Rican, and other Hispanic mover households in New York City during the 1980s demonstrated that the persistence of such constraints on minority housing choices may have contributed to the isolation of whites from minorities and to racial/ethnic disparities in housing consumption (Rosenbaum 1994).

To what extent does immigrant status per se exacerbate or moderate the constraints on housing choice experienced by minority households? The *spatial assimilation model* suggests that, on the whole, immigrants should be disadvantaged in their housing searches relative to native-born households, although mainly by attributes—such as a lack of familiarity with the local housing market, low socioeconomic status, and limited English proficiency—whose adverse effects will dissipate over time (Alba and Nee 1997). By building on the theoretical framework previously outlined, we can see many reasons why, even after controlling for socioeconomic and household characteristics, we might expect foreign-born households to live in housing and neighborhoods that are inferior to those in which their native-born counterparts live. First, knowledge of high-quality housing opportunities may be limited by a lack of familiarity with better neighborhoods and the broader housing market. Second, preferences for living in close proximity to members of their own ethnic group (see, for example, Zubrinsky and Bobo 1996) may limit the housing searches of foreign-born households to inner-city ethnic neighborhoods, where the housing may be older and more deteriorated (see, for example, Krivo 1995). Third, foreign-born households with distinct immigrant characteristics—such as limited English language abilities—may encounter some form of discrimination by real estate agents and landlords (Yinger 1995) and thus not learn of available high quality housing opportunities.

There are, however, reasons to believe that immigrant households may not be disadvantaged, relative to otherwise similarly situated native-born households, in their housing searches. For example, immigrant households, as their native-born counterparts, may have access to foreign-language newspapers, ethnic-specific social networks, and ethnic housing entrepreneurs (see Zhou and Logan 1991), all of which may be reliable sources of information about high quality housing opportunities (Krivo 1995). However, because these sources are all defined by ethnic group membership, it may be that they provide co-ethnics with opportunities to acquire high-quality housing but not access to housing units and neighborhoods vacated by other groups, including native-born whites. Indeed, existing research suggests that the effect of nativity status on locational outcomes varies by race/ethnicity; while Hispanics who have trouble speaking English and those who are recent arrivals tend to live in less advantaged communities than their more-assimilated co-ethnics, very little, if any, pen-

alty is paid by newly arrived Asians or Asians who have limited English proficiency (Alba, Logan, and Leung 1994). Moreover, it is foreign-born blacks, rather than their native-born counterparts, who appear to be at a distinct competitive advantage in acquiring desirable locational outcomes (Logan, Alba, and Leung 1996; Logan et al. 1996). This evidence, however, derives from “two-group” models that estimate the influence of nativity status within racial/ethnic groups, and thus does not directly address the question of how immigrant status and race/ethnicity interact to affect residential outcomes.

### *Hypotheses*

From earlier research and our theoretical framework, we derive several hypotheses concerning how race/ethnicity and immigrant status interact to afford some groups better housing opportunities than others. For example, pronounced patterns of intragroup housing turnover—especially for blacks—during the 1980s (Rosenbaum 1992, 1994, 1996a)<sup>3</sup> together with evidence of persistent discrimination in the New York City housing market (Schill 1996) suggest that a combination of social preferences, intragroup housing search networks, and market barriers may effectively limit patterns of immigrant-native housing exchange to turnovers within specific racial/ethnic groups. Thus, after controlling for relevant factors, we expect that immigrant and native-born households will be more likely to move into units vacated by households in their same racial/ethnic group (compared with households from other racial/ethnic groups). Recent studies (Alba et al. 1995; Massey and Fong 1990) find that, regardless of their place of birth, blacks are less likely than Asians or Latinos to move to formerly white neighborhoods. This research suggests that minority access to units vacated by white households (regardless of their place of birth) and units in predominantly white neighborhoods will vary, with native- and foreign-born black households the least likely and Asian households the most likely to acquire such units. The relative likelihood of Hispanic households to move into white-vacated housing and predominantly white neighborhoods will rest between these two extremes.

With respect to the housing and neighborhood quality outcomes of immigrants and native-born households, a second set of questions concerns whether immigrant status influences access to high-quality housing and neighborhoods, and, if so, whether this influence differs across racial and ethnic groups. A number of alternative hypotheses exist. If racial and ethnic discrimination constrain the housing and neighborhood opportunities of nonwhite households, we would expect, after controlling for all relevant socioeconomic characteristics, that location in low quality housing and neighborhoods would increase the probability of in-movement by minority households, regardless of their immigrant status. If immigrant households experience specific housing market disadvantages as a result of their relatively recent arrival in a city with extremely low vacancy rates (Schill and Scafidi 1999), we would expect them to experience consistent patterns of relative disadvantage. Finally, if immigrant households enjoy specific benefits such as access to social networks or sources of government/charitable assistance earmarked for immigrants, we might expect their housing and neighborhood conditions to be better than that of their native-born counterparts.

<sup>3</sup> These earlier studies of turnover did not differentiate between native- and foreign-born households.

## Data

The analysis of housing turnover in New York City is based on merged data from the 1991, 1993, and 1996 panels of the New York City Housing and Vacancy Survey (HVS), a multi-stage probability sample of approximately 18,000 housing units located throughout the five boroughs that are surveyed every two or three years. The HVS is conducted by the U.S. Census Bureau under contract to New York City, in compliance with city and state laws regarding rent regulation. Although the main focus of the HVS is housing conditions, it also includes a variety of socioeconomic and demographic measures for household members, making it the most current source of information on the city's housing and population. The specific data set created for the analysis consists of two panels of renter-occupied housing units in which a move occurred.<sup>4</sup> The first panel consists of moves occurring between 1991 and 1993, and the second consists of moves between 1993 and 1996.<sup>5</sup>

While the HVS provides up-to-date data on New York's household population and housing stock, it does not collect the full battery of immigration-related variables that would be ideal for our analysis. In particular, while the HVS measures the place of birth for the householder and the householder's parents, it does not collect information on year of arrival in the United States or English language proficiency. Because these indicators identify variations in acculturation, which in turn are conceptually linked to households' abilities to acquire residence in various neighborhoods, our results may reveal more limited housing interaction between foreign- and native-born households than would be the case if we could control for the effects of these variables.

A major advantage of the HVS is that the sub-borough area, or subarea, in which the sampled unit is located is identified in the data file. This allows us to control for contextual indicators (e.g., racial/ethnic composition and immigration-related characteristics) that may reflect various dimensions of a household's neighborhood preferences (Farley 1993; Farley, Fielding, and Krysan 1998; Zubrinsky and Bobo 1996). There are 55 subareas in New York, each composed of census tracts with a minimum population of 100,000 persons. While a smaller geographic unit may have greater appeal as a proxy for a "neighborhood," the Census Bureau's confidentiality requirements prevent the release of microdata for areal units with populations of less than 100,000.

## Analytical Methods

An important variable in our analysis is nativity status, which we determine by the householder's and his or her parents' place of birth. Specifically, "native-born" householders are defined as those born in the 50 states, and "foreign-born" are those born elsewhere (including Puerto Rico) whose parents also were born outside the 50 states. While persons born on the

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<sup>4</sup> The choice of limiting our analysis to renter-occupied units is not likely to bias the results because New York City's rental market constitutes more than two-thirds of its entire housing market. Furthermore, the results of an alternative model, including owned units as well as rental units, did not differ substantively from those presented in this article.

<sup>5</sup> Units in Staten Island are eliminated from the analysis because of the very small numbers of immigrants moving to this borough (New York City Department of City Planning 1996) and its limited racial diversity (New York City Department of City Planning 1992).

island of Puerto Rico are not immigrants but citizens of the United States by birth, we differentiate between island- and mainland-born Puerto Rican households because the island-born may have housing market experiences similar to those of immigrant households.

Race/ethnicity also is defined as that of the householder, and four mutually exclusive categories are used: white (non-Hispanic), black (non-Hispanic), Hispanic, and Asian. In 1990, Puerto Ricans constituted about half of all Hispanics in New York City; Dominicans made up about 19 percent, while a broad array of groups—largely from Central and South America—formed the remainder (New York City Department of City Planning 1992). The national origin composition of foreign-born and native-born Hispanics, however, differs greatly. In the analytical data set, Puerto Ricans make up almost 70 percent of all native-born Hispanic householders but only 27 percent of foreign-born Hispanic householders. Thus, the experiences of Puerto Ricans profoundly influence the results pertaining to all Hispanic households but especially to those headed by a native-born householder.

Our dependent variable, the race/ethnicity and nativity status of in-moving households, is created by combining information and consists of seven mutually exclusive categories: native-born, non-Hispanic whites; foreign-born, non-Hispanic whites; native-born, non-Hispanic blacks; foreign-born, non-Hispanic blacks; native-born Hispanics; foreign-born Hispanics; and Asians.<sup>6</sup>

Among our independent variables are indicators of location, attributes of the subarea, measures of housing and neighborhood quality, household socioeconomic status and composition/life cycle, and the prior household's race/ethnicity and immigrant status. We use dummy variables to indicate the borough in which the housing unit is located (the Bronx, Brooklyn, and Queens, with Manhattan serving as the reference category). Controlling for borough is essential because of the highly variable racial/ethnic and immigrant-status compositions of the four boroughs in our analysis.

The subarea attributes are indicators of the racial/ethnic composition of the subarea and its immigration-related characteristics. All subarea characteristics rely on 1990 census data for their creation. For the subarea's racial/ethnic composition, we use four dummy variables indicating group dominance. In *predominantly white* subareas, at least 75 percent of the 1990 population is white. In *mixed Hispanic/Asian* and *mixed black* subareas, 25 percent to 74 percent of the 1990 population is white, with Hispanics and Asians outnumbering blacks in the mixed Hispanic/Asian subarea and blacks outnumbering Hispanics and Asians in the mixed black subarea. Finally, in *predominantly nonwhite* subareas, less than 25 per-

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<sup>6</sup> Our choice of dependent variable extends naturally from traditional models of residential mobility. That is, these models argue that certain kinds of households prefer certain kinds of housing units; one can turn this around and argue that certain kinds of housing units attract certain kinds of households (Rosenbaum 1992). Thus, should a given housing characteristic, such as poor maintenance, predict the in-movement of a given type of household, the implication of such a result is that this type of household is more likely than others to end up in poorly maintained units.

In-moving households are defined as those at *time 2* who report having moved into the unit during or since the prior survey year (*time 1*). This strategy may appear to overstate the amount of change by misclassifying some households at *time 2* as in-movers. However, the magnitude of such error will be small because the survey is conducted early in the calendar year (February or March). In addition, because any number of moves may have occurred during the period separating paired surveys, some in-movers may not be compared with the households they replaced, but with households slightly earlier in the occupancy history of the housing unit.

cent of the 1990 population is white.<sup>7</sup> Insofar as housing market barriers or preferences for neighborhood diversity constrain or direct minority housing choices to areas that are already ethnically diverse, we expect that location in mixed or predominantly nonwhite subareas will increase the chance that the in-moving household is nonwhite.

We use two variables to measure immigration-related attributes of subareas. The first identifies subareas with high concentrations of recent arrivals (i.e., since 1980) among their foreign-born residents (in 1990), and the second identifies subareas with high concentrations of persons ages five and older who cannot speak English well.<sup>8</sup> Insofar as foreign-born households limit their housing searches to areas with high concentrations of these immigration-related characteristics, these variables should capture this effect.

Housing quality is operationalized by a set of dummy variables indicating the number of maintenance deficiencies present in the household's dwelling unit. This indicator is based on the householder's report of the presence of seven types of deficiencies: toilet breakdowns, heating breakdowns, need for additional heat, presence of rats/mice, presence of leaks from the outside, cracks/holes in the walls/floor/ceiling, and wide areas of broken plaster on the walls.<sup>9</sup> The dummy variables differentiate between households with none, one or two, and three or more of these deficiencies. Neighborhood quality is operationalized as a dummy variable, based on respondent reports, indicating whether there are boarded-up buildings in the neighborhood. Because housing unit characteristics and neighborhood quality theoretically influence who moves into the unit (see Rosenbaum 1992, 1994, 1996b), neighborhood and housing characteristics originating from the HVS are measured for *time 1* (i.e., 1991 or 1993).

Indicators of household socioeconomic status and composition/life cycle are used as controls for household preferences and purchasing power, as suggested by the household mobility and spatial assimilation theoretical models previously outlined. Household socioeconomic status is measured as household income (entered as three dummy variables: less than \$10,000, \$10,000 to \$24,999, and \$25,000 to \$49,000, with \$50,000 and above used as the reference group),<sup>10</sup> householder's educational attainment (entered as two dummy variables indicating whether the householder acquired less than a high school education or a high school diploma but no further education with the category "at least some college" used as the reference group), and a dummy variable indicating whether anyone in the household

<sup>7</sup> Using a separate category of predominantly Asian subareas was not feasible because only a very small percentage of households moved into a subarea in which Asians were the dominant minority group.

<sup>8</sup> "High concentrations" is defined among foreign-born residents as at least the median percentage of recent arrivals and among residents with nonproficient English as at least the median percentage of persons ages five and older who cannot speak English well.

<sup>9</sup> The questions on individual maintenance deficiencies use slightly different reference periods. The question on infestation by rats/mice, for example, refers to the past 90 days, while the question on toilet breakdowns (which are defined to have lasted for at least six consecutive hours) references the past three months. Similarly, the questions on heating breakdowns (again which must have lasted for six consecutive hours to qualify as a breakdown) and additional heat reference "this winter." Because the HVS is typically conducted in March of the survey year, the reference periods of the past 90 days, the past three months, and "this winter" largely overlap. For cracks, holes, and large areas of missing plaster, the questions reference the present. Finally, for leaks from the outside, the reference period is the past 12 months. Similar measures are used in the American Housing Survey.

<sup>10</sup> Household income is expressed in constant 1995 dollars using the Consumer Price Index–Urban (CPI-U) for the NY–NJ–CT–PA metropolitan area.

receives some form of public assistance. Household composition/life cycle is measured by five variables: householder's age, presence of children, presence of other adults (beyond those in the nuclear family), female headship, and an indicator differentiating between family and nonfamily households. As all the other independent variables, the indicators of household composition/life cycle are entered as dummy variables.<sup>11</sup> The prior household's race/ethnicity is defined as that of the householder and is classified in four mutually exclusive categories (non-Hispanic white, non-Hispanic black, Hispanic, and Asian). The prior household's immigrant status is measured as a dichotomous variable coded one if the prior household was foreign born and zero if born in the 50 states.<sup>12</sup>

Our final independent variable is a dichotomous variable to control for time period. Specifically, the dichotomy is coded one if the move occurred during the 1993 to 1996 period and zero if during the 1991 to 1993 period. In no instance did this variable attain statistical significance, indicating the turnovers neither accelerated nor decelerated during the course of the decade.

For a number of reasons, we chose not to add controls for rent-controlled units. First, rent-controlled units constitute a relatively small proportion of the rental market (rent-stabilized units make up the bulk). More important, however, our analysis is limited to moves. Once a rent-controlled unit is vacated, it either moves into the stabilized portion of the market or is decontrolled. If it becomes rent-stabilized, the move-in rent is essentially the market rent. Thus, rent-controlled units would become essentially indistinguishable from market-rate units in our analysis.

In a similar vein, we chose not to add a control for rent. Because we control for the in-mover's income, adding a control for rent would introduce multicollinearity. Also, the control for income is preferable from a theoretical perspective.

Multinomial logistic regression is used to assess the independent effects of each predictor on the likelihood of in-movement by a household belonging to one of the seven particular racial/ethnic groups with immigrant status. For the universe of housing units that experience a change in occupancy, the following logit model is estimated:

$$\ln(P_I/P_J) = B_I X, \quad (1)$$

where  $X$  is the vector of geographical, unit, and neighborhood quality and household characteristics for a given housing unit measured at *time 1*;  $P_I$  represents the probability that the in-moving household belongs to racial/ethnic-immigrant status group  $I$ ; and  $P_J$  is the probability that the in-moving household belongs to group  $J$  (the group used as a baseline for comparison). Sampling weights are scaled down to remove the design effects of stratification and clustering, while maintaining unweighted sample frequencies. Maximum likelihood techniques of the SAS Procedure, CATMOD (SAS Institute 1985), are used.

<sup>11</sup> For householder's age, the categories are: 18 to 34, 25 to 54, and 55 and older (reference). All independent variables are operationalized as dummy variables because of the computational requirements of multinomial logistic regression. That is, limiting the number of categories of interval-ratio variables to no more than four (as in the case of household income) reduces dramatically the amount of time and space required for successful estimation.

<sup>12</sup> The definitions of native-born and foreign-born householders used for classifying out-moving households are identical to those used to classify in-moving households.

## Results

### *Descriptive Results*

The analysis begins with an overview of the descriptive characteristics of in-moving households, which are presented in table 1. Many of these factors can influence the types of housing and neighborhoods a household may consider moving to and thus may directly contribute to varying patterns of consumption.

Looking first at measures of household socioeconomic status in table 1, most measures (household income, receipt of public assistance, and poverty status) indicate that native-born white and Asian households are the most well off, while native-born black households are the least advantaged. These differences in socioeconomic status are related to headship; not surprisingly, the groups that register the lowest socioeconomic status also tend to register the highest levels of female headship. Comparisons of foreign- and native-born households within racial/ethnic groups demonstrate that among whites and Hispanics the foreign born generally exhibit lower levels of socioeconomic status than the native born,<sup>13</sup> yet among blacks, the reverse is true. Thus, if only a household's ability to "purchase" housing is considered, Asians would be the most likely, among all minority groups, to acquire residence in (native-born) white-vacated and high-quality housing and neighborhoods, while native-born Hispanics and foreign-born blacks would appear to be better able than their same-race counterparts to purchase housing.

Turning to the spatial distributions of the seven groups in table 1, we find a high degree of variation by race/ethnicity. For example, in terms of borough location, whites are least likely to move to the Bronx, while relatively high proportions of Hispanics choose this borough. In contrast, Asians are most likely to select homes in Queens, while blacks overwhelmingly move to units located in Brooklyn. Within racial/ethnic groups there is some differentiation in destinations between immigrant and native-born black and white households, but less between immigrant and native-born Hispanic households.

Distinct patterns of mobility among different racial/ethnic groups are also evident from the results for subarea racial/ethnic composition. Whites are most likely to move to units located in predominantly white subareas, Asians tend to choose units in mixed Hispanic/Asian subareas, and the majority of blacks move to units in subareas with a nonwhite majority. While the largest proportions of Hispanics also tend to move to units located in predominantly nonwhite subareas, approximately one-third of immigrant and native-born Hispanic households move to housing units located in mixed Hispanic/Asian subareas. Of all groups, native-born whites, foreign-born whites, and Asians are least likely to move to predominantly nonwhite subareas. Finally, and consistent with hypotheses, of all minority groups, Asians are most likely to move to units in subareas with a white majority. While these distinct patterns may reflect the constraining influence of market barriers on minority housing choices (Rosenbaum 1994), differences by immigrant status within racial/ethnic groups suggest that preferences for certain neighborhoods or other factors linked to immigrant status also may influence housing choices. For example, the relative over-concentration of foreign-born (versus native-born) whites in Brooklyn probably reflects the operation of social networks in the

<sup>13</sup> Among Hispanics, differences in educational attainment are substantial, but differences in poverty status and household income are quite modest.

Table 1. Descriptive Characteristics of Mover Households in Rental Units, by Race/Ethnicity and Immigrant Status of Householder, New York City, 1991 to 1996

Characteristic	Race/Ethnicity and Immigrant Status of Householder								
	White Native Born	White Foreign Born	Black Native Born	Black Foreign Born	Hispanic Native Born	Hispanic Foreign Born	Hispanic Native Born	Hispanic Foreign Born	Asian
Household socioeconomic status and composition									
Household income <sup>a</sup> (median) (\$)	45,000	26,000	18,006	25,000	21,000	19,344	33,959		
Receives public assistance (%)	4.86	29.32	40.92	15.72	37.36	36.73	6.11		
In poverty (%)	9.41	27.93	40.41	21.15	32.41	36.82	18.43		
Householder's education (%)									
Less than high school	5.33	15.20	24.98	25.15	30.48	45.78	18.82		
High school diploma	13.08	24.53	31.05	31.56	28.51	29.97	20.68		
At least some college	81.59	60.28	43.96	43.29	41.01	24.25	60.50		
Householder's age (mean) (years)	34.92	41.32	35.50	37.68	30.26	36.97	37.64		
Family household (%)	30.40	51.46	57.53	59.50	62.90	67.87	50.36		
Children (ages 0-17) present (%)	15.61	33.05	52.20	50.97	55.82	59.30	35.99		
Other adults present (%)	26.06	28.51	25.37	38.14	26.61	41.59	41.03		
Female headed (%)	45.38	37.18	68.50	54.97	58.98	57.34	33.24		
Borough (%)									
Bronx	3.88	5.57	24.08	19.51	37.45	29.88	6.58		
Brooklyn	22.02	47.11	38.84	55.49	26.43	20.01	17.32		
Manhattan	56.63	23.23	18.00	6.27	17.87	21.59	30.53		
Queens	17.47	24.08	19.08	18.73	18.25	28.52	45.58		
Subarea racial/ethnic composition <sup>b</sup> (%)									
Predominantly white	47.51	47.96	2.58	2.85	11.26	7.78	25.35		
Mixed Hispanic/Asian	38.82	35.14	15.74	9.64	32.92	32.94	56.57		
Mixed black	8.82	12.61	14.60	24.13	8.94	3.17	6.40		
Predominantly nonwhite	4.85	4.28	67.08	63.38	46.88	56.12	11.68		
Subarea immigration characteristics (%)									
High concentration of recent arrivals among foreign born	28.57	34.37	71.47	68.18	65.56	79.29	55.15		
Low level of English proficiency	31.39	69.88	44.72	35.73	72.70	86.01	69.72		

Table 1. Descriptive Characteristics of Mover Households in Rental Units, by Race/Ethnicity and Immigrant Status of Householder, New York City, 1991 to 1996 (continued)

Characteristic	Race/Ethnicity and Immigrant Status of Householder							
	White Native Born	White Foreign Born	Black Native Born	Black Foreign Born	Hispanic Native Born	Hispanic Foreign Born	Asian	Asian
Race/ethnicity/immigrant status of prior householder (%)								
White native born	69.84	34.63	7.86	8.11	20.96	11.63	25.86	
White foreign born	13.68	43.06	2.48	4.24	4.91	4.54	9.79	
Black native born	2.49	2.14	52.32	24.90	14.76	10.18	4.24	
Black foreign born	0.73	2.92	13.87	44.06	3.80	3.30	2.09	
Hispanic native born	3.50	3.44	6.81	3.33	17.12	10.32	4.88	
Hispanic foreign born	4.75	5.64	15.24	12.02	30.83	54.49	12.58	
Asian	5.01	8.16	1.43	3.34	7.62	5.53	40.56	
Neighborhood quality								
Boarded up buildings near unit	17.31	7.56	33.04	19.76	17.16	17.25	11.32	
Housing unit quality								
Number of maintenance deficiencies (%)								
None	49.56	51.88	30.61	31.64	36.37	31.50	48.98	
1 or 2	37.65	34.84	39.30	34.41	38.60	40.11	36.63	
3 or more	12.79	13.28	30.10	33.95	25.02	28.39	14.39	
Total cases ≥	1,011	575	515	409	341	915	500	

<sup>a</sup> Expressed in constant 1995 dollars using the CPI-U for NY-NJ-CT-PA.

<sup>b</sup> In predominantly white subareas, at least 75 percent of the 1990 population is white; in mixed Hispanic/Asian and mixed black subareas, 25 to 74 percent of the population is white. Hispanics and Asians outnumber blacks (in the former), and blacks outnumber Hispanics and Asians (in the latter). Finally, in predominantly nonwhite subareas, less than 25 percent of the population is white.

settlement patterns of new arrivals. The potential for such preferences is also suggested by the higher likelihood that foreign-born rather than native-born households move to units in subareas with low levels of English proficiency. The clear exception to this pattern is for blacks, since many foreign-born blacks in New York originate from Anglophone countries.

The strong influence of both race/ethnicity and immigrant status in determining where households move also is exhibited by the strong propensity for households to, first, replace out-moving households from their same immigrant-status group, and, second, to replace out-moving households of similar race/ethnicity (table 1, boldface values in the diagonal).<sup>14</sup> The finding that native-born Hispanic households are most likely to replace foreign-born Hispanic households (rather than other native-born Hispanic households) represents an exception to this pattern. This finding suggests that a common race/ethnicity may be more important than a common immigrant background for housing exchange. Yet what these turnover patterns also reveal is the different probabilities that various racial/ethnic and immigrant status groups have for acquiring housing vacated by native-born whites. Consistent with expectations, Asians are second only to foreign-born whites in their propensity to replace out-moving native-born whites. Native-born Hispanics are the next most likely group to move to native-born white-vacated housing, and black households—both native- and foreign-born—are least likely to replace out-moving native-born white households.

Turning to housing quality in table 1, differences by race/ethnicity and immigrant status reveal a general pattern of white and Asian mover households enjoying access to higher-quality housing than either blacks or Hispanics, regardless of immigrant status (see also Schill, Friedman, and Rosenbaum 1998). Asian and foreign-born white households, moreover, are also least likely to move to units near boarded-up buildings (neighborhood quality). While such patterns are consistent with Zubrinsky and Bobo's (1996) results suggesting a residential racial hierarchy, they tend to defy expectations based on group differences in socioeconomic status. For example, while foreign-born blacks tend to exhibit somewhat higher levels of socioeconomic status than foreign-born whites, they are much more likely to move to units located near boarded-up buildings and to those that are plagued by numerous maintenance and structural deficiencies. Indeed, the stark difference in the housing conditions of foreign-born blacks and foreign-born whites suggests that the latter group enjoys a powerful competitive edge in their search for desirable housing (Rosenbaum et al. 1999; Schill, Friedman, and Rosenbaum 1998). Moreover, despite the clear socioeconomic advantage that foreign-born black households maintain over their native-born counterparts, foreign-born black households do not appear to be able to acquire substantially better quality housing, although they are less likely to move to units near boarded-up buildings.

In summary, the descriptive analysis provides some initial support for several of the hypotheses previously outlined. Distinct differences among racial/ethnic groups and among native- and foreign-born households exist with respect to the probability of a household moving to predominantly white and nonwhite subareas or to housing units vacated by native-born white households. Of the seven groups of households we studied, black households, both those headed by native-born and foreign-born black persons, are the most likely to move to predominantly nonwhite subareas. Correspondingly, these households also are the least likely to move to predominantly white subareas. Black households also are the

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<sup>14</sup> It should be noted that these probabilities are affected by the relative sizes of the groups.

least likely to move into housing units vacated by native-born white households. Furthermore, according to the descriptive statistics, certain households, particularly those headed by black persons, have a higher probability of moving to lower quality neighborhoods and inferior quality housing units. This disadvantage exists for both native-born and immigrant black households, despite the relatively greater resources possessed by the latter group.

### *Multivariate Results*

The evidence provided by the descriptive results was obtained without benefit of controls for preferences and purchasing power. In this section we present results from multinomial logistic regression models predicting the race/ethnicity and immigrant status of in-moving households, with appropriate controls. The results are presented in three separate tables. In table 2 we show the results of the basic multinomial logistic regression model that identifies the odds of in-movement by foreign-born whites, native- and foreign-born blacks, native- and foreign-born Hispanics, and Asians, relative to the odds of in-movement by native-born whites. Because this model deals only with the contrast between native-born whites and each of the other six groups, it does not address if and how the odds of in-movement differ between immigrant and native-born households among blacks and Hispanics, or between immigrant households more generally. These issues are addressed by the data presented in tables 3 and 4.<sup>15</sup> All results are presented in the form of odds ratios; an odds ratio greater than one indicates a positive effect, while an odds ratio less than one indicates a negative effect. Because household characteristics are used mainly as control variables, they are neither presented nor discussed but are available upon request from the authors.

*Comparisons with Native-Born White Households.* Looking first at table 2, the results for the indicators of geographic location resemble those observed in the descriptive analysis and reveal the physical distance that separates native-born whites from blacks and Hispanics. For example, location outside Manhattan and outside predominantly white subareas significantly increases the odds of in-movement by native- and foreign-born blacks and native-born Hispanics, relative to the odds of in-movement by native-born whites (columns two, three, and four). Location in Queens, mixed Hispanic/Asian subareas, and predominantly nonwhite subareas significantly raises the odds that the in-moving household is foreign-born Hispanic rather than native-born white (column five). In contrast, there are far fewer geographic indicators that differentiate between the destinations of native-born whites on one hand (column one) and foreign-born whites and Asians on the other (column 6).

<sup>15</sup> The comparisons among groups (in all columns in table 4, and columns three and four of table 3) are computed by subtracting the logistic coefficients of different pairs of results. Significance is assessed by the t-statistic:

$$\frac{b_I - b_J}{\sqrt{se_I^2 + se_J^2}}$$

where  $b_I$  and  $se_I$  are the logistic coefficient and the standard error, respectively, from the model predicting the in-movement of group  $I$ , while  $b_J$  and  $se_J$  are the logistic coefficient and the standard error from the model predicting the in-movement of group  $J$ . The comparison between all immigrant and all native-born households in column one of table 3 derives from a simple logistic model predicting the in-movement of foreign-born households, while the comparison in column two of table 3 derives from the basic multinomial logistic model and replicates the results in column one of table 2.

Table 2. Selected Odds Ratios from Multinomial Logistic Models Predicting Race/Ethnicity and Immigrant Status of In-Moving Households to Rental Units in New York City, 1991 to 1996

Independent Variable	Race/Ethnicity and Immigrant Status of Householder											
	(1)		(2)		(3)		(4)		(5)		(6)	
	White Born vs. Native Born	Foreign Born vs. Native Born	Black Born vs. Native Born	White Born vs. Native Born	Hispanic Born vs. Native Born	Foreign Born vs. Native Born	White Born vs. Native Born	Hispanic Born vs. Native Born	Foreign Born vs. Native Born	White Born vs. Native Born	Asian Born vs. Native Born	
Borough (vs. Manhattan)												
Bronx	0.80		2.49***		4.26***		4.51***		1.46		1.17	
Brooklyn	1.19		1.81**		4.56***		1.70**		0.91		0.89	
Queens	0.92		3.59***		5.46***		1.69*		2.18***		2.07***	
Subarea characteristics												
Racial/ethnic composition (vs. predominantly white)												
Mixed Hispanic or Asian	0.72*		4.62***		2.62**		1.60*		1.57**		1.21	
Mixed black	0.75		5.78***		6.57***		1.51		0.59*		0.73	
Predominantly nonwhite	0.47**		35.22***		31.60***		4.72***		8.38***		1.53	
Immigration attributes												
High concentrations of recently arrived foreign-born residents	0.87		1.10		1.11		1.18		0.99		1.16	
Low level of English proficiency	3.19***		0.50***		0.52***		1.11		2.25***		1.42	
Race/ethnicity and immigrant status of prior householder												
Race/ethnicity (vs. white)												
Black	1.77*		30.89***		22.29***		5.29***		5.42***		3.88***	
Hispanic	0.49***		5.80***		1.90**		5.19***		7.02***		2.18***	
Asian	0.62*		1.28		1.15		2.75***		1.84**		8.95***	
Foreign born	3.40***		1.16		3.86***		0.97		1.69***		1.57***	
Neighborhood quality												
Boarded-up buildings nearby	0.55***		1.87***		0.95		1.08		1.10		0.91	
Housing unit quality												
Number of maintenance deficiencies (vs. none)	0.96		1.18		1.17		0.94		1.12		0.87	
1 or 2	0.89		1.02		1.36		0.84		1.12		0.78	
3 or more												

Note: Also included in the model are indicators of household socioeconomic status and composition (household income, receipt of public assistance, householder's educational attainment, householder's age, and dummy variables indicating whether the household is a family household, headed by a female, or includes any children under age 18).

\* $p \leq .10$ . \*\* $p \leq .05$ . \*\*\* $p \leq .01$ . \*\*\*\* $p \leq .001$ . (two-tailed tests)

*Table 3. Selected Odds Ratios Comparing the Predictors of Foreign- and Native-Born In-Movement to Rental Units in New York City, 1991 to 1996*

Independent Variable	Race/Ethnicity and Immigrant Status of Householder			
	(1) All Foreign Born vs. All Native Born <sup>a</sup>	(2) White Foreign Born vs. White Native Born <sup>b</sup>	(3) Black Foreign Born vs. Black Native Born	(4) Hispanic Foreign Born vs. Hispanic Native Born
Borough (vs. Manhattan)				
Bronx	0.68***	0.80	1.71	0.32***
Brooklyn	1.23***	1.19	2.51**	0.53*
Queens	1.44***	0.92	1.52	1.29
Subarea characteristics				
Racial/ethnic composition (vs. predominantly white)				
Mixed Hispanic or Asian	1.00	0.72*	0.57	0.98
Mixed black	1.02	0.75	1.14	0.39**
Predominantly nonwhite	1.40**	0.47**	0.90	1.78
Immigration attributes				
High concentrations of recent arrivals among foreign born	0.86	0.87	1.01	0.84
Low level of English proficiency	2.62***	3.19***	1.05	2.02**
Race/ethnicity and immigrant status of prior householder				
Race/ethnicity (vs. white)				
Black		1.77*	0.72	1.02
Hispanic		0.49***	0.33***	1.35
Asian		0.62*	0.90	0.67
Foreign born		3.40***	3.33***	1.74**
Neighborhood quality				
Boarded-up buildings nearby		0.55***	0.51**	1.02
Housing unit quality				
Number of maintenance deficiencies (vs. none)				
1 or 2	1.02	0.96	1.00	1.18
3 or more	1.10	0.89	1.33	1.33

<sup>a</sup>The results in this column derive from a simple logistic model predicting the in-movement of foreign-born versus native-born households. This model did not include controls for the prior household's race/ethnicity and immigrant status.

<sup>b</sup>The results in this column are from column 1 in table 2.

\* $p \leq .10$ . \*\* $p \leq .05$ . \*\*\* $p \leq .01$ . \*\*\*\* $p \leq .001$ . (two-tailed tests)

Table 4. Selected Odds Ratios Comparing the Predictors of In-Movement by Foreign-Born Households of Different Race/Ethnicity, New York City, 1991 to 1996

Independent Variable	Race/Ethnicity and Immigrant Status of Householder		
	(1) Black Foreign Born vs. White Foreign Born	(2) Hispanic Foreign Born vs. White Foreign Born	(3) Hispanic Foreign Born vs. Black Foreign Born
Borough (vs. Manhattan)			
Bronx	5.30***	1.81	0.59**
Brooklyn	3.82***	0.76	0.50***
Queens	5.95***	2.37***	0.61**
Subarea characteristics			
Racial/ethnic composition (vs. predominantly white)			
Mixed Hispanic or Asian	3.62***	2.16***	0.34
Mixed black	8.79***	0.78	0.10***
Predominantly nonwhite	67.91***	18.02***	0.24**
Immigration attributes			
High concentrations of recent arrivals among foreign born	1.28	1.15	0.91
Low level of English proficiency	0.16***	0.71	4.52***
Race/ethnicity and immigrant status of prior householder			
Race/ethnicity (vs. white)			
Black	12.57***	3.06***	0.18***
Hispanic	3.90***	14.39***	1.21***
Asian	1.86	2.98***	1.44
Foreign born	1.14	0.50***	1.46***
Neighborhood quality			
Boarded-up buildings nearby	1.74*	2.01**	0.59
Housing unit quality			
Number of maintenance deficiencies (vs. none)			
1 or 2	1.22	1.16	0.95
3 or more	1.52	1.25	1.10

\*p ≤ .10. \*\*p ≤ .05. \*\*\*p ≤ .01. \*\*\*\*p ≤ .001. (two-tailed tests)

Turning to the effect of the immigration-related characteristics of subareas, location in subareas with high concentrations of recently arrived immigrants does not significantly predict the race/ethnicity and immigrant status of in-moving households. In contrast, location in subareas with low levels of English proficiency among their populations significantly increases the odds of in-movement by foreign-born white and Hispanic households (relative to the odds of in-movement by native-born white households) but significantly *reduces* the odds of in-movement by both foreign- and native-born black households. This finding lends some support to the notion that foreign-born households—particularly those originating in countries where English is not a primary language—may limit their housing searches to areas that offer amenities preferred by immigrant households. Such amenities may include the availability of ethnic goods or services provided in a foreign language, having many neighbors who belong to the same ethnic group, or living in an area where limited English will be less of a handicap. This interpretation is strengthened by the finding that the odds of a foreign-born (or Asian) household moving into a unit are significantly heightened when the prior household was also foreign- rather than native-born.

The effects of subarea racial/ethnic composition tend to accentuate the differences between the destinations of native-born whites on one hand and blacks and Hispanics on the other, while stressing the similarities in the destinations of native- and foreign-born whites and Asians. The results pertaining to the prior household's race/ethnicity tell a story that is similar on some levels but different on others.<sup>16</sup> Illustrating similarities, the results reveal distinct patterns of intragroup turnover for all nonwhite groups as well as a heightened likelihood of intergroup turnover among blacks and Hispanics. Such patterns underscore the isolation of native-born whites from blacks and Hispanics, in particular, but also the more general pattern of segmentation along the lines of race/ethnicity.

Illustrating dissimilarities, the results reveal significantly higher odds of Asian (rather than native-born white) in-movement when the prior household was black or Hispanic and significantly lower odds of foreign-born white in-movement when the prior household was Hispanic or Asian. In addition, when the prior household was black, the odds of foreign-born white in-movement are significantly higher. Thus, while the results pertaining to borough location and subarea racial/ethnic composition suggest that whites and Asians tend to move to similar types of *areas* overall, at the level of individual housing exchange, we see a far higher degree of interaction between Asians, Hispanics, and blacks than we see between native-born whites, Hispanics, and blacks.<sup>17</sup> This difference again emphasizes the isolation of whites from nonwhites but also suggests that foreign-born whites have even less housing market interaction with Hispanics and Asians than do their native-born counterparts.

Turning to the indicators of housing and neighborhood quality, the relatively few statistically significant effects suggest little support for the proposition that the housing searches of minority households—whether native- or foreign-born—are differentially limited to poor-

<sup>16</sup> The prior household's race/ethnicity and immigrant status were entered into the model in this form, rather than the seven-category form of the dependent variable (omitting native-born whites as the reference category), because of inadequate cell sizes.

<sup>17</sup> However, it should be noted that the housing exchange between Asians and blacks is not reciprocal. That is, while previous occupancy by a black household increases the odds that the in-moving household is Asian rather than native-born white, previous occupancy by an Asian household does not increase the odds of black in-movement, regardless of immigrant status.

quality housing and neighborhoods.<sup>18</sup> The significant results that do emerge suggest that location near boarded-up buildings reduces the odds of in-movement by foreign-born whites (versus native-born whites) but increases the odds of in-movement by native-born blacks.<sup>19</sup>

*Comparisons between Immigrant and Native-Born Households.* In table 2, comparing the probabilities of in-movement of several types of households differentiated by race/ethnicity and nativity status, we found that among the strongest predictors were the racial/ethnic composition of the subarea and the race/ethnicity of the prior household. In table 3, we shift our attention to differences *among* households, based upon whether their heads were born in the United States or in a foreign country. When the destinations of all immigrants are compared with those of all native-born households (column one), we find that the odds of in-movement by foreign-born households are raised by location in Brooklyn, Queens, predominantly nonwhite subareas, and subareas with relatively high proportions of people who do not speak English well. In contrast, location in the Bronx or near boarded-up buildings lowers the odds of foreign-born in-movement.

In columns two through four, we consider differences between immigrants and native-born households separately for each racial/ethnic group. Compared with white native-born households, white immigrant households are more likely to move to areas with low levels of English proficiency and into housing units where previous occupants were foreign born. White immigrant households, however, are less likely to move to units in mixed Hispanic/Asian subareas, near boarded-up buildings, and whose previous occupants were Hispanic or Asian (column two). Among black households, immigrants are more likely than native born to move into housing units in Brooklyn and units where previous occupants were foreign born; they are less likely to move into units previously occupied by Hispanic households (column three). In addition, the negative effect of location near boarded-up buildings suggests that foreign-born blacks may be better able than native-born blacks to relocate to areas relatively free of physical decay. Finally, Hispanic immigrants are less likely than native-born Hispanics to move to Brooklyn, the Bronx, and into housing units in mixed black subareas. Hispanic immigrant households, however, are more likely to move into units previously occupied by foreign-born households and into subareas with low levels of English proficiency.

Thus, the results in table 3 add to our findings in several significant ways. First, we find virtually no significant effects of subarea racial/ethnic composition or the prior household's race/ethnicity on the in-movement of foreign- versus native-born households among blacks and Hispanics. While the significant effect of these variables in table 2 suggested that structural barriers channel blacks and Hispanics to ethnically diverse areas and whites to predominantly white areas, when we limit our attention to in-movers of similar race/ethnicity,

<sup>18</sup> These findings stand in opposition to those of prior research (e.g., Rosenbaum 1992, 1994, 1996b). However, in the earlier studies, the indicator of housing and neighborhood quality that emerged as the most potent predictor of minority versus white in-movement was a subjective evaluation of the neighborhood as "a place to live" provided by the out-moving householder at *time 1* (Rosenbaum 1992, 1994, 1996b). This variable was dropped from the HVS starting in 1991.

<sup>19</sup> In our earlier work (Rosenbaum et al. 1999; Schill, Friedman, and Rosenbaum 1998) we found highly significant differences in housing and neighborhood conditions between groups defined by place of birth. These earlier findings revealed significant disadvantages for native- and foreign-born blacks and Hispanics, significant advantages for native- and foreign-born whites, and a general pattern of advantage (with some exceptions) for Asian groups. This earlier work, however, was based on all households (rather than movers only) and used a different set of housing and neighborhood quality indicators; the only indicator that is used across the three studies is the number of maintenance deficiencies.

these processes are not apparent. Instead, the main predictors are those more directly linked to immigrant status than to race/ethnicity, namely, a low level of English ability in the subarea and the foreign-born status of the prior household. These results, in addition to those pertaining to borough location, suggest that immigrant households may have preferences for areas where having limited English language abilities does not constitute a handicap, areas offering ethnic goods and services, and areas offering cultural activities. These findings also may reflect the participation of immigrants in social networks composed of other immigrants, which may provide them with information about available housing and perhaps other opportunities.

*Comparisons among Immigrant Groups.* Table 4 compares the probability of in-movement by immigrant households of varying race/ethnicities. Among these immigrant households, blacks are more likely than whites to move into units outside Manhattan, those in ethnically mixed and predominantly nonwhite subareas, and those located near boarded-up buildings but less likely to move to areas with relatively large numbers of people who do not speak English well (column one). Blacks are also much more likely than whites to move into units where prior occupants were black or Hispanic (relative to white). Similar to black immigrants, Hispanic immigrants are more likely than white immigrants to move to Queens; mixed Hispanic/Asian and predominantly nonwhite subareas; housing units vacated by black, Hispanic, or Asian households; and to those near boarded-up buildings (column two). However, Hispanic immigrant households are significantly less likely than their white counterparts to replace other immigrant households. Finally, when compared with black immigrant households (column three), Hispanic immigrant households are less likely to move to units outside Manhattan and those located in mixed black and predominantly nonwhite subareas but much more likely to move to areas where relatively few people are proficient in English. Hispanic immigrant households also are significantly less likely than immigrant black households to move into black-vacated housing units but much more likely to move into units formerly occupied by Hispanic and foreign-born households.

These findings once again evoke the importance of race/ethnicity as a determinant of housing choices. That is, the significant and positive effects of subarea racial/ethnic composition and the prior household's race/ethnicity again suggest that external forces operate to separate whites from blacks and Hispanics. Yet, here we see that the factors leading to racially and ethnically different destinations operate both among native-born and immigrant households. Furthermore, that location in mixed black and predominantly nonwhite subareas and previous occupancy by black households reduces the odds of in-movement by foreign-born Hispanic households (relative to foreign-born black households) points to factors that help to create and/or maintain distance between black and Hispanic immigrants as well.

The finding that location near boarded-up buildings increases the odds that the in-moving household is foreign-born black or Hispanic, rather than white, suggests that white immigrant households do indeed have a competitive advantage in acquiring residence in higher-quality neighborhoods. Such a finding, by being parallel to the findings regarding native-born black and white households, again points to the negative consequences that housing market segmentation has on the locational outcomes of minority households. Indeed, this evidence suggests support for the notion that market barriers, such as steering or discriminatory treatment by housing market actors, may contribute to observed racial/ethnic disparities in housing conditions among immigrant and foreign-born households (Schill, Friedman, and Rosenbaum 1998).

## Discussion

In this study, we have sought to examine the patterns and consequences of the housing choices made by immigrant and native-born households in one large, multiethnic city. Our empirical findings, for the most part, support the hypothesis that New York City's housing market is segmented along lines of race and ethnicity. Despite rather substantial differences in average income, black immigrant and native-born households demonstrate a similarly strong tendency to move into neighborhoods that are predominantly nonwhite and to units vacated by black and Hispanic households; Hispanics exhibit similar mobility patterns. For the most part, with respect to the types of neighborhoods chosen by mover households, the mobility patterns of Asian households are not different from those of whites. In contrast, the mobility patterns of white immigrants do not diverge greatly from those of native-born whites, apart from a significantly lower degree of in-movement to units formerly occupied by Hispanic and Asian households.

Given the potential increase in opportunities to move into white-vacated housing that is implied by the decline in the city's white population, our findings indicate that such opportunities are not distributed evenly across race/ethnicity and immigrant status. Indeed, our findings point to a "racial hierarchy" (Zubrinisky and Bobo 1996) of access to native-born white-vacated housing and predominantly white neighborhoods that makes clear the positions of the native born and foreign born within each group. In general, as was the case in Zubrinisky and Bobo's (1996) study of Los Angeles, whites experience the highest degree of access, followed by Asians, Hispanics, and finally blacks. Our findings for New York City reveal that foreign-born whites—despite lacking greater economic resources than other immigrant groups—share a level of access that is similar to that enjoyed by native-born whites.

Why should foreign-born whites be in such a position vis á vis other immigrant groups and native-born minorities? One explanation focuses on the relative advantage associated with white race. That is, foreign-born whites may be able to avoid—by virtue of their race—the same kinds of social and market barriers that effectively constrain the housing choices of minorities. However, another explanation focuses on the circumstances of their immigration experience, especially the receptivity of the host country (Portes and Rumbaut 1997). Many new white immigrants to New York City, particularly those from the former Soviet Union, are refugees and thus entitled to a number of government benefits—unavailable to other immigrants—that may cushion their arrival to this country. Their refugee status may also entitle many new arrivals to the services of organizations whose mission is to facilitate their settlement. These organizations may have more resources and thus be more effective than the less formal social and kin networks that often help new arrivals find housing and work. These kinds of benefits and services may enable white immigrants to elude many of the barriers to immigrant locational attainment that are endured by other groups.

However, it would be too easy to completely dismiss the role of race, given that our findings for immigrant households (table 4) parallel those for native-born households (table 2) on many dimensions. Specifically, subarea racial/ethnic composition and the prior household's race/ethnicity operate in almost identical ways to spatially separate the destinations of white households from those of black and Hispanic households, among immigrant and native-born households alike. These findings suggest that the market barriers that constrain minority household choices do not differentiate households born in the United States from those born elsewhere.

With respect to the path of neighborhood change implied by our results, it seems that although immigration is changing the face of New York City (see, for example, Frey 1996), it is unlikely to have a major impact in promoting integration among white and nonwhite households. Our data do not allow us to distinguish among several alternative explanations for why these segmented housing mobility patterns exist. Racial/ethnic discrimination in the New York City housing market may limit the opportunities of black and Hispanic households to obtain white-vacated housing units in predominantly white areas of the city. However, preferences among nonwhite households for communities composed of predominantly nonwhite households may also explain our results (Farley 1993; Farley, Fielding, and Krysan 1998). Furthermore, racially and ethnically distinct modes of housing search may contribute to the patterns of housing market segmentation that are demonstrated by our results. Indeed, at least with respect to immigrants, these last two explanations derive some modest support from our finding that the presence of high concentrations of persons with difficulty speaking English in a subarea significantly increases the probability that an immigrant household would move into that community.

However, the combination of two other findings pertaining to subarea racial/ethnic composition and the race/ethnicity of the previous household suggest an intriguing scenario of multiethnic change. That is, while subarea racial/ethnic composition did not differentially predict the in-movement of Asian versus native-born white households, the prior household's race/ethnicity did, suggesting that Asians and whites tend to move to similar kinds of neighborhoods but have very different degrees of housing exchange with blacks and Hispanics. This combination suggests the possibility that the relative balance of blacks and Hispanics on the one hand, and Asians on the other, may be shifting in favor of Asians in some mixed areas. Such a shift may lead to greater degrees of diversity in some areas (see, for example, Alba et al. 1995), the emergence of more mixed neighborhoods in which Asians are the dominant groups, or even more areas inhabited mainly by whites and Asians. Clearly, the validation of these possible scenarios awaits the release of data from Census 2000.

Our study is affected by limitations. Most significant is our focus on a single city. While its racial/ethnic diversity and historical role as a port-of-entry for immigrants makes New York an ideal candidate for a case study of immigrant and native-born housing choices, there are many aspects of New York's housing market that highlight its uniqueness. In particular, consistently low rental vacancy rates and low rates of housing construction (Schill and Scafidi 1999) mean that immigrants to New York City arrive in one of the tightest housing markets in the nation. Further, the high degree of racial/ethnic segregation in New York City—a level surpassing that in other major immigrant-receiving cities (Massey and Denton 1993)—means that immigrants to New York City may face more serious obstacles to their housing choices than immigrants elsewhere. Finally, the HVS data set does not include housing units in the suburban areas of New York City, which have been diversifying in recent years partly as a function of immigrant in-movement (Alba et al. 1995). All these factors suggest that our results may indicate a lower degree of intergroup turnover than might be observed if we had data for the nation or the metropolitan area. However, while the locational attainments of minorities tend to be better in suburban areas than in central cities (Logan et al. 1996), racial/ethnic disparities tend to be of a similar pattern; thus, we believe that the substance of our findings would remain unchanged.

In summary, our findings indicate that a high degree of racial/ethnic segmentation continues to describe the New York City housing market and to strongly influence where native- and

foreign-born households alike will live. These findings have important consequences. For example, on the individual level, our results indicate that members of different groups appear to have very limited opportunities for contact with each other in residential environments, with the greatest distance separating whites and blacks, regardless of immigrant status. In addition, evidence demonstrates that neighborhood resources are not evenly distributed over space but tend to be of higher quality in predominantly white (versus mixed or predominantly nonwhite) neighborhoods (Massey, Condran, and Denton 1986; Massey and Denton 1993). Thus, the relatively limited access to predominantly white neighborhoods experienced by native- and foreign-born black and Hispanic households may translate into limited access to many of the neighborhood resources that can positively influence a household's current quality of life as well as the future life chances of its members (Ellen and Turner 1998).

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