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Nativity Differences in Neighborhood Quality
Among New York City Households, 1996

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Abstract

In this paper we add to the literature on locational attainment of immigrants by focusing on a broader range of neighborhood quality indicators than has been done before and by examining the foreign-born contingent of a given ethnic group separately from the native-born contingent of that group. Specifically, we evaluate in New York City how immigrant households compare to native-born households, overall and by race and ethnicity, with respect to neighborhood characteristics such as crime, health outcomes, poverty, and unsafe housing.

Overall, foreign-born households are more likely to live in neighborhoods with less access to medical care, higher rates of tuberculosis, and proportionately more persons on public assistance and more housing units receiving government subsidies, relative to native-born households. Multivariate analyses revealed that all of these disadvantages disappeared for foreign-born households as a group except in the case of access to medical care. When compared to native-born white households, however, immigrants – especially Puerto Ricans, Dominicans, Caribbeans and Africans, and Latin Americans – are more likely to reside in lower quality neighborhoods as measured by our variables. Equally important, native-born blacks and Hispanics are also disproportionately disadvantaged relative to native-born whites, suggesting that a "racial hierarchy" exists in the locational attainment of households in New York City.

Keywords: Immigration, Neighborhood Quality, New York City, Race

Introduction

Urban neighborhoods differ from one another on many dimensions. Some offer their residents broad access to such important resources as high-quality schools, medical care, and safety, while others are not as replete with these and other resources that can positively affect residents' quality of life and their life chances (see, for example, Ellen and Turner [1998] for a recent review on the importance of neighborhoods). If the opportunity to reside in neighborhoods possessing high-quality resources is differentially distributed across such characteristics as race and immigrant status, then the potential for upward mobility may be substantially diminished for the adversely affected group(s). Nowhere is this argument more clearly expressed than in Massey's research on the interconnection between racial residential segregation and geographically concentrated poverty (Massey 1990; Massey and Denton 1993), and Wilson's work on the limited opportunities for advancement available to the mostly minority residents of extremely poor and segregated inner-city neighborhoods (Wilson 1986, 1994). Indeed, that the "geography of opportunity" (Galster and Killen 1995) varies has been demonstrated in evaluations of the Gautreaux program (e.g., J. Rosenbaum 1995) and thus forms the basis for mobility programs such as Moving to Opportunity (U.S. Department of Housing and Urban Development 1996).

A large and growing literature focusing on the locational attainment process[1] among individuals and households has demonstrated that members of different racial/ethnic groups experience varying levels of access to high-quality neighborhoods (Alba and Logan 1991, 1993; Alba, Logan, and Bellair 1994; Alba, Logan, and Leung 1994; Logan, Alba, McNulty, and Fisher 1996; Logan, Alba, and Leung 1996; Rosenbaum 1996a; White, Biddlecom, and Guo, 1993). These studies have contributed greatly to our knowledge concerning the extent and nature of

[1] Alba and Logan (1992), among others, argue that the concept of "locational attainment" is related to the more traditional sociological concept of "status attainment." Within the tradition of status attainment research, individuals' background characteristics are predicted to explain their status-related outcome.

racial/ethnic inequality by consistently demonstrating a general pattern of access to advantaged areas whereby whites enjoy the highest levels of access, followed by Asians, Hispanics, and finally blacks. These studies, however, are limited in two important ways. First is their fairly narrow range of neighborhood quality indicators; the vast majority of studies focus on access to such census-derived tract characteristics as the proportion of whites and median household income, while far fewer consider other quality-of-life indicators such as the risk of crime (but see Alba, Logan, and Bellair [1994]). This limitation is likely related to the difficulty in amassing non-census derived indicators of neighborhood quality for areas larger than, for example, a single city (Massey, Condran, and Denton 1987).

The second limitation affecting the existing literature on locational attainment studies relates to the relative omission of immigrant groups as distinct entities. That is, while immigration-related variables are frequently utilized to help explain the locational attainment process of *ethnic* groups, it is rarely, if ever, the case that the foreign-born contingent of a given ethnic group is analyzed separately from the native-born contingent of that group. Immigration is increasing in importance as a component of population and household growth in the United States generally (Pitkin et al. 1997) and in specific urban areas, notably New York (Farley 1997; James, Romine, and Zwanzig 1998; Kasarda et al.1997). For example, between 1980 and 1995, the number of immigrant households in the United States grew by 3.1 million, accounting for 18 percent of the nation's total household growth (Pitkin et al. 1997), while in the five years preceding the 1990 Census, the 122,000 immigrant households that moved to New York City accounted for fully 44 percent of all in-migrant households during that period (Kasarda et al. 1997). Thus, there is an increasing need to learn how foreign-born members of different racial and ethnic groups fare relative to their native-born co-ethnics, since such information will help us to understand how immigrant status and race/ethnicity interact to determine access to key resources.

In this paper we add to the literature on locational attainment by addressing the above

limitations in a comparison of the quality of neighborhoods in which native- and foreign-born households live in New York City. By combining 1996 survey data for New York City with two unique databases consisting of a wide variety of administrative and other publicly available data for New York City, we evaluate whether immigrant households are more or less likely than native-born households to acquire residence in neighborhoods characterized by a broad range of (non-census-derived) high-quality resources, such as low crime rates, positive health outcomes, and physically safe housing. In addition, we evaluate whether the relationship between immigrant status and neighborhood quality varies by race/ethnicity and place of birth.

While focusing on a single city inevitably limits our ability to generalize our findings to other locations, there are many reasons why New York City is an ideal case study for this type of analysis. First and foremost is New York's high degree of racial and ethnicity diversity, as well as its historic role as one of the premiere destinations for immigrants arriving in the United States (Salvo and Lobo 1997). New York currently receives a disproportionate share of all immigrants arriving in the United States, and, when compared to the nation as a whole, New York receives far larger shares of immigrants from the Caribbean and Latin America, and lower shares -- but still sizable numbers -- of immigrants from Asia (Salvo and Lobo 1997). Recent data from the Immigration and Naturalization Service, moreover, show that Ghana and Nigeria have made it onto the list of the "top twenty" sending countries to New York City (Salvo 1998), joining such diverse countries as the Dominican Republic, China, the former Soviet Union, Poland, Jamaica, and Guyana. The large numbers of non-Hispanic white and black immigrants, along with immigrants of Hispanic and Asian origin, thus offer an unparalleled opportunity to evaluate the question of whether nativity differences in neighborhood quality are contingent on race.

While the racial/ethnic diversity of New York's native- and foreign-born households allows us to conduct a meaningful investigation into the extent and nature of nativity differences in neighborhood quality, there are features of New York's housing market that underscore the uniqueness of this case study. Specifically, immigrants to New York City move to one of the

tightest housing markets in the nation, characterized by consistently low rental vacancy rates and low rates of new housing construction (Schill and Scafidi, forthcoming 1999). In addition to these constraints, New York City is characterized by a high degree of residential segregation, particularly among blacks, and to a lesser extent, Hispanics (Rosenbaum 1994), which limits the housing choices of minority householders throughout the city (Rosenbaum 1994, 1996a, 1996b). Thus, as a group, immigrants in New York may face more serious obstacles to acquiring residence in high-quality neighborhoods than immigrants elsewhere, yet certain immigrants -- especially those of African ancestry -- may be disproportionately disadvantaged (when compared to native-born whites).

The organization of our paper is as follows. In Part 1, we describe the theoretical frameworks that guide our analysis of immigrant-status differences in neighborhood quality, and outline our hypotheses. Following that in Part 2, we discuss our sources of data, and in Part 3, we describe the descriptive and multivariate approaches we will utilize in our analysis. Finally, in Parts 4 and 5, we discuss and summarize our results, respectively.

Part 1: Theoretical Frameworks

Locational attainment in a multiethnic city

Two theoretical models provide insight into how specific immigrant groups may fare, relative to the native born, in their quest for residence in high-quality neighborhoods. The first is the *spatial assimilation model*, which identifies residential assimilation as one outcome of the social attainment process (Massey and Denton 1985). Formulations of this model suggest that as members of minority groups acquire higher levels of education, enter the mainstream economy, and earn higher incomes, they seek to move to neighborhoods that are more in line with their improved social and economic status (Massey 1985). Since this process may involve leaving the ethnic neighborhood for an area inhabited mainly by majority group members, one potential outcome is increasing similarity between the residential characteristics of minority and those of

majority group members (Alba and Logan 1991; Logan and Alba 1993). In short, the spatial assimilation model predicts that once individual-level characteristics -- such as human capital, life-cycle stage, and acculturation-related variables -- are controlled for, any observed racial/ethnic differences in residential characteristics should disappear (Alba and Nee 1997).

Although the general assimilation framework has come under question of late (e.g., Rumbaut 1997), the findings from numerous studies of various residential outcomes among racial and ethnic groups have largely supported the main tenets of the spatial assimilation model (Alba and Nee 1997). For example, residential outcomes, such as suburban location and the tract-level median income and proportion of whites, are found to be positively related to socioeconomic status for all groups, and to acculturation-related variables such as years in the United States, generational status, and English-language proficiency for Hispanics and, to a lesser extent, Asians (Alba and Nee 1997).

There is, however, widespread agreement that the spatial assimilation model is less successful at describing the locational attainment process for certain groups, notably blacks, Puerto Ricans, and non-white Hispanics, suggesting that opportunities for converting social and economic achievement into improved residential outcomes are constrained by being black. The significance of structural constraints in maintaining racial/ethnic inequality in residential outcomes has given rise to the second theoretical model, the *place stratification model* (Alba and Logan 1992). This model derives from the hierarchical ordering of places and social groups, and the mechanisms that more advantaged groups use to maintain social and spatial distance from their less advantaged counterparts (Logan and Molotch 1987). Prominent among these mechanisms are both discriminatory acts[2] that create and maintain racially segregated neighborhoods (Massey

[2] Among the discriminatory acts referred to here are unequal treatment of minority homeseekers by landlords and realtors (Yinger 1995), as well as the actions of local governments (Schill and Wachter 1995; Shlay and Rossi 1981), mortgage lenders (Leahy 1985; Munnell et al. 1992), and neighbors (Massey and Denton 1993). Spatial stratification may also be caused by different preferences among whites and nonwhites for different neighborhood racial/ethnic compositions (Farley 1993; Farley, Fielding, and Krysan 1998).

and Denton 1993) and thus constrain minority residential choices to areas that are more ethnically diverse, less prosperous, and of lower quality than those available to whites (Turner 1993; Yinger 1995). In short, the place stratification model extends the individual-level explanation of racial/ethnic differences in locational outcomes proposed by the spatial assimilation model to emphasize the role played by structural constraints that limit the housing choices of blacks and other non-white minorities.

Studies on the locational attainment process among racial and ethnic groups demonstrate a general pattern of access to advantaged areas whereby whites experience the highest levels of access, followed by Asians, Hispanics, and finally blacks. Such patterns are also found to hold in the New York region, where Asians are relatively successful at acquiring residence in fairly advantaged suburbs (Alba, Logan, and Bellair 1994; Alba, Logan, and Leung 1994; Logan and Alba 1993), and where socioeconomic status is strongly and positively related to decentralization away from the enclave in lower Manhattan (Zhou and Logan 1991). Although controlling for individual-level characteristics increases Hispanic proximity to whites, Hispanics in the New York area do not fare as well as Asians but do not suffer the same degree of housing disadvantage as do blacks (Logan and Alba 1993). As noted above, however, such studies generally do not identify foreign-born members of racial/ethnic groups separately from their native-born counterparts, and thus cannot offer much insight into their relative status in the locational attainment process.

In a similar vein, previous work does not clearly indicate where foreign-born whites and blacks fit into this general pattern of housing opportunities. Recent evidence suggests that foreign-born blacks are better able than native-born blacks to live in suburban neighborhoods with higher proportions of whites (Logan, Alba, and Leung 1996), a result that is consistent with the former group's generally superior socioeconomic profile (Butcher 1994; Dodoo 1997; Kalmijn 1996). However, given the continuing significance of black race in influencing housing opportunities, when compared to native-born whites, foreign-born blacks will likely be at a competitive disadvantage in their quest for residence in high-quality neighborhoods. In contrast,

foreign-born whites should experience few, if any, barriers in the housing market, given the generally limited influence that immigration-related variables have on locational outcomes for this group (Logan, Alba, and Leung 1996).

Hypotheses

The preceding discussion suggests the following hypotheses. Consistent with the spatial assimilation model, we expect that education, income, age of the householder, extended household structure, and headship by married couples will be positively related to residence in high-quality neighborhoods. While we expect, at the bivariate level, to see immigrant households living in neighborhoods of lower quality than those in which native-born households live, the spatial assimilation model predicts that once individual-level factors are controlled, such differences should disappear or at least be moderated. The tenets of the place stratification model suggests, however, that group differences in neighborhood quality will remain even in the face of controls for individual-level factors. The pattern of residual group differences predicted by the place stratification model is one of "racial hierarchy," with foreign- and native-born blacks and Hispanics being more likely, than native-born whites, to live in low-quality neighborhoods, while foreign-born whites and Asians should exhibit few, if any, neighborhood quality disadvantages.

Part 2: Data

The analysis is based on three sources of data. The first is the 1996 panel of the New York City Housing and Vacancy Survey (HVS), which provides us with individual-level data on New York City households. The other two sources of data (*Infoshare*, and the Early Warning Information System [EWIS] database on buildings in New York City) provide us with aggregate-level data to operationalize our dependent variables.

The HVS is a multistage probability sample of approximately 18,000 housing units located throughout the five boroughs of New York City that is surveyed every two or three years. The

HVS is conducted by the 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, a variety of socioeconomic and demographic indicators are collected for household members, making the HVS the most current source of information on the City's population and its housing stock. Sampling weights (scaled down to maintain unweighted cell sizes) are used in all descriptive and multivariate analyses to correct for sampling design effects and potential undercoverage.

Although the HVS provides us with timely data on New York's population and housing stock, it does not collect the full complement of immigration-related variables that would be ideal for an analysis such as ours. For example, while the HVS ascertains the place of birth for the householder as well as his/her parents, it does not collect information on either year of arrival in the United States or English language proficiency. Because these indicators capture differences in acculturation, which in turn are conceptually linked to individuals' abilities to acquire residence in resource-rich neighborhoods (especially for Hispanics), our results will likely reveal larger intergroup differences than we might otherwise find if we were able to control for English language proficiency and time in the United States

An advantage of using the HVS is that the "sub-borough areas" or subareas in which the sampled units are located are identified in the data file. There are a total of 55 subareas in New York, each of which is composed of an aggregation of census tracts and has a minimum population of 100,000. Although a smaller geographic unit may be more appealing conceptually as a proxy for a "neighborhood," the Census Bureau's confidentiality requirements prohibit the release of microdata for geographic units consisting of fewer than 100,000 persons. Moreover, because the 55 subareas are based on the 59 community districts that serve as the main administrative units for services and other amenities, results based on this level of geography are more meaningful for policy makers than would be results based on smaller geographic units, such as census tracts.

Our dependent variables, measuring a wide range of neighborhood conditions, are derived from *Infoshare* and EWIS. *Infoshare* is a unique database for New York City that combines information from a variety of public and private sources, and enables the user to aggregate indicators to different geographic levels, including the HVS subarea. Indicators from *Infoshare* include the quality of local public schools, hospital admissions data, rates of disease prevalence and other health-related conditions, rates of vital events, crime rates, and other information relevant to the quality of life experienced by neighborhood residents. The EWIS is a database created by researchers at New York University and the University of Pennsylvania to assist officials in New York City in identifying buildings at risk of abandonment (Scafidi et al. 1998). The EWIS combines building-specific information on ownership and tax status of all buildings in New York, with data on the number and type of housing code violations for all buildings.

Part 3: Analytical Methods

The central variable in our analysis is nativity status, which is determined by the householder's place of birth and the place of birth of his/her parents. Householders born in the United States are considered native born, while those born outside of the 50 states to parents who were also born outside of the 50 states are considered foreign born. In addition to this dichotomous measure of nativity status, we also use several dummy variables indicating the place of birth of foreign-born householders[3] to examine whether an immigrant's place of birth has a unique effect on neighborhood conditions above and beyond the effect of nativity status. We also

[3]Ten dummy variables are created based upon the householder's place of birth: (1) Puerto Rico; (2) Dominican Republic; (3) Caribbean (other than Puerto Rico and Dominican Republic) and Africa; (4) Mexico, Central America, and South America; (5) Europe; (6) Russia and successor states to the Soviet Union; (7) China, Hong Kong, and Taiwan; (8) India, Pakistan, and Bangladesh; (9) Korea, Philippines, Burma, Cambodia, Laos, Malaysia, Singapore, Thailand, Vietnam, and Other Asia; and (10) all other countries. A value of 1 indicates the householder was born in the country (or one of the countries in the group). A value of 0 indicates they were born in the United States. Category (9) is referred to as "Other Asia" in all tables and throughout the text.

use place of birth as a proxy for the race and ethnicity of immigrant households.[4]

The remaining individual-level variables relevant to the spatial assimilation model include households' life cycle and socioeconomic characteristics, as well as their race and ethnicity. Life cycle factors are represented by the householder's age, a dichotomous variable indicating whether the household is headed by a married couple (versus a single individual), and a dichotomy indicating whether there are any children under 18 present in the household. We also use a dichotomous variable to indicate whether there are any adults present in the household beyond those in the nuclear family. Although we do not specify whether these other adults are related to the householder, this measure will allow us to control for the use of a multiple-earner strategy which could theoretically enable immigrant and native-born minorities to improve their living conditions (cf. Rosenbaum 1996a). Socioeconomic status is measured by the householder's educational attainment (entered as two dummy variables indicating whether the householder has less than a high school education and whether he or she has a high school degree, with the reference category being some college or more), household income (logged)[5] and a dummy variable indicating whether any members of the household receive public assistance.

There are six categories of race and ethnicity, based upon the reported race and ethnicity of the householder: (1) white, non-Hispanic; (2) black, non-Hispanic; (3) Puerto Rican; (4) non-Puerto Rican Hispanic (which includes individuals who identify themselves as Dominican, Cuban, South/Central American, Mexican, Mexican-American, Chicano or other Hispanic); (5) Asian or Pacific Islander; and (6) Other (which includes American Indian, Aleut, Eskimo, and other races). Although Puerto Rico is part of the United States, we examine the differences in housing conditions between native- and "foreign-" or island-born households within this group because

[4] Of course, place of birth is not a perfect proxy for race. For example, many immigrants from Guyana -- who are counted as foreign-born Caribbeans and Africans -- are of Asian Indian descent.

[5]Household income includes all income received by any household member including cash assistance from the government. The distribution of income was badly skewed to the right; taking its log helped to make the distribution more normal.

individuals who migrate from Puerto Rico to the United States may have similar experiences to other immigrants.

We utilize six dependent variables to tap into four basic dimensions of neighborhood quality. The first dimension is the risk of violent crime, which we operationalize as the rate, per 1,000 population, of violent crimes against persons (i.e., murder, rape, robbery, assault). While the risk of victimization has undeniable merit, on its own, as a quality-of-life indicator, the violent crime rate is also inversely related to the degree of social organization in the area, and thus can have direct and indirect effects on family functioning (Elliott et al. 1996; Furstenberg 1993; Leventhal and Brooks-Gunn 1997).

The second dimension, health-related outcomes, is measured in two ways. The first, access to medical care, is operationalized by the number of full-time equivalent patient-care physicians per 10,000 population in the subarea. The second is the overall level of health in the area, which we measure as the rate (per 100,000 population) of reported tuberculosis cases. Although households may not be fully cognizant of these neighborhood features when they search for housing, most would agree that a low risk of contracting a communicable disease and easy access to medical help can only enhance one's quality of life.

The third dimension of neighborhood quality is the concentration of poverty, which we operationalize with two separate measures: the percent of the population receiving public assistance, and the percent of housing units that are public housing or that are subsidized through the Section 8 program. While the geography of poverty is typically operationalized with a population-related indicator (similar to our first indicator), a number of studies have demonstrated the significant role that public housing plays in "anchoring" poverty in place (e.g., Rosenbaum 1995; Schill 1993; Schill and Wachter 1995). Moreover, as a population-based indicator of the area's economic status, the proportion of the population that receives public assistance is the most similar (of all our dependent variables) to the typical census-based indicators of neighborhood resources, and thus offers us a chance to observe how our results compare to those reported by

other researchers.

The final dependent variable is the percent of all residential buildings (with at least two units) that were issued an "unsafe building" code violation between 1992 and 1996.[6] This variable, by measuring the physical quality of housing in an area as well as the level of (dis)investment in the area's infrastructure, taps into the extent of physical and social disorder in city neighborhoods (Skogan 1991). While the first five of our dependent variables all derive from *Infoshare*, the sixth dependent variable derives from EWIS.[7]

A descriptive analysis is employed to compare the life cycle, socioeconomic, and neighborhood characteristics of foreign- and native-born households, and significance tests are performed as appropriate. To examine the relationship between nativity status and neighborhood quality more fully, that is, while controlling for the range of theoretically relevant independent variables, we specify two types of descriptive multivariate models. The first uses the simple dichotomous measure of nativity status, and thus evaluates the relative ability of all immigrant households (versus all native-born households) to gain residence in high-quality neighborhoods. Included in this model are dichotomous variables measuring the race/ethnicity of householders, regardless of nativity status. The second model utilizes the place of birth categories, along with dichotomies representing the race/ethnicity of *native-born* householders, and thus evaluates the relative abilities of immigrant households and native-born minority households, relative to native-

[6] Buildings that were issued a "B" or "C" code violation by inspectors from the New York City Department of Buildings are classified as being unsafe for human habitation.

[7] The tuberculosis data derive originally from the New York City Department of Health, and refer to cases reported for 1996. The data on full-time equivalent patient-care physicians 1995, and originate from the New York State Department of Education. The data on violent crime (originating from the New York City Police Department) refer to cases reported for 1995, while the building code violation data cover the 1992-1996 period, and originate from the NYC Department of Buildings. The public assistance caseload data originate from the New York City Department of Human Resources, and refer to the 1996 caseload. The data on public housing and Section 8 housing originate from HUD's *Picture of Subsidized Housing* and also refer to 1996. The population estimates for the denominators of measures operationalized as rates are areal projections for 1994, originating from National Planning Data Corporation, Inc. The denominator for the percent of subsidized housing units consists of the sum of subsidized and nonsubsidized housing units (1996), also from HUD's *Picture of Subsidized Housing*.

born white households, to gain access to high-quality neighborhood resources.

One problem inherent to models that predict an aggregate-level outcome as a function of individual-level characteristics is spatial autocorrelation, since multiple cases share the same value on the dependent variable. This problem has the potential of producing correlated error terms, and thus of underestimating the standard errors of regression coefficients. To address this problem, we use feasible generalized least squares to estimate our multiple regression models. This technique produces regression coefficients and standard errors that take into account the fact that the error variance across subareas are different.[8] A second problem common to this type of analysis is that although we are seeking to explain why some households are located in neighborhoods exhibiting certain characteristics, these characteristics, themselves, are influenced by the characteristics of neighborhood residents (and thus by our independent variables) (cf. Tienda 1991).

Part 4: Results

Descriptive results

Our analysis begins with an overview of differences in the neighborhood conditions of native- and foreign-born households. Do immigrant households live in inferior neighborhoods relative to those in which native-born households live? And, to what degree does the quality of immigrants' neighborhoods depend on their place of birth? Tables 1 and 2 provide initial descriptive statistics to answer these questions, with comparisons that parallel those in the multivariate models to come (i.e., in Table 1 we compare all foreign- and native-born households,

[8] To correct for spatial autocorrelation, we need to superimpose a structure on the covariance matrix. Traditionally this is done using "time" in time series analysis data and "distance" in geographic data. In our case, although we can identify the subarea in which respondents live, we cannot identify how respondents within subareas are geographically related to one another. Therefore we cannot use this traditional technique.

An alternative could be to specify a random effects model with an individual-specific error and a subarea-specific error. However, in our case, since individuals within the same subarea have identical values for each dependent variable, we cannot specify a within-subarea individual-specific error.

while in Table 2 foreign-born households are stratified by place of birth and compared to native-born white households). It should be noted that while higher scores on the physicians-per-population ratio indicate *higher* levels of neighborhood quality (i.e., greater access to medical services), for the remaining outcomes, higher scores indicate *lower* levels of neighborhood quality.

The data in Table 1 indicate that on four of our six measures, immigrants' neighborhoods tend to be of lower quality, although the magnitude of the disparity tends to be relatively modest. Specifically, immigrants are significantly more likely than the native-born to live in areas with less access to medical care (i.e., fewer physicians per 10,000 population) and higher rates of tuberculosis, and in poorer areas, that is, in areas containing relatively more persons receiving public assistance and more subsidized housing units. However, the crime rates to which foreign- and native-born households are exposed in their neighborhoods are statistically indistinguishable, and, contrary to our expectations, immigrants tend to live in areas with proportionately fewer residential buildings with unsafe building code violations (.44% versus .55%).[9]

When we turn to the data in Table 2, we see that the neighborhood conditions of foreign-born households vary greatly depending on place of birth, with some immigrant groups -- notably island-born Puerto Ricans, and foreign-born Dominicans, Caribbeans and Africans, and Latin Americans -- among those with the worst conditions on the majority of measures. For example, while all foreign-born households (except for Russians) live in areas with significantly higher rates of tuberculosis than do native-born white households, island-born Puerto Ricans and foreign-born Dominicans and Latin Americans live in the least healthy areas, with close to 32, 35, and 30 cases, respectively, of tuberculosis per 100,000 population (compared to just over 18 per 100,000 in native-born whites' neighborhoods). Similarly, relative to native-born white households, all foreign-born households live in areas with significantly higher crime rates (except for those from Europe, Russia, and China, Hong Kong and Taiwan), higher concentrations of persons receiving

[9] The low average prevalence of unsafe building code violations at the subarea level (less than 1%) suggests that analyses of this outcome should be treated with caution.

public assistance (except for Other Asians, and Indians, Bangladeshis, and Pakistanis), and more subsidized housing (except for Other Asians). Among the foreign-born, island-born Puerto Ricans, and foreign-born Dominicans, Caribbeans and Africans, and Latin Americans tend to have particularly high rates of living in the lowest-quality neighborhoods on these measures. Furthermore, it is these same four foreign-born groups (plus the Chinese) who live in areas with proportionately more residential buildings with unsafe building code violations. The sole indicator on which the Hispanic-origin foreign-born households are not the most disadvantaged is the physician-per-population ratio; on this indicator, foreign-born households from the Caribbean and Africa, Russia, and India, Bangladesh, and Pakistan live in areas with the least access to medical care, with slightly fewer than 21 physicians available per 10,000 population (compared to just under 38 per 10,000 population among native-born whites). These initial patterns, therefore, lend some preliminary support to expectations that foreign-born blacks and Hispanics would experience the least desirable neighborhood conditions, but this finding is not uniform across all neighborhood conditions.

As discussed above, nativity status differences in locational attainments may stem from group differences in key individual-level predictors. Insofar as these micro-level differences work to the disadvantage of immigrant households, then, once they are controlled for, we should observe few, if any, remaining nativity status differences in neighborhood conditions. Table 3 presents descriptive statistics on the household characteristics of native- and foreign-born households, while Table 4 replicates the analysis stratifying foreign-born households according to their place of birth and comparing them to native-born white households.

The data in Table 3 indicate some initial support for these expectations. Indeed, foreign-born householders are significantly more likely to receive public assistance and to have lower stocks of education than their native-born counterparts. However, foreign-born households are more likely to be headed by a married couple, to have children under age 18 present, and to have other adults present beyond those in the nuclear family, factors which should theoretically help to

alleviate locational disadvantages.

When foreign-born households are stratified by place of birth, we see that their characteristics vary greatly. The most notable differences involve the measures of household socioeconomic status. Compared to native-born white householders, all foreign-born householders (except for those from Other Asia and India, Bangladesh, and Pakistan) are significantly less likely to have completed at least some college, and significantly more likely to receive some form of public assistance. Some of these differences, moreover, are quite large. For example, while slightly more than 60% of native-white householders have completed some college or more, less than 20% each of island-born Puerto Rican and foreign-born Dominican householders report this level of educational attainment. Similarly, while approximately 5% of native-born white households receive some form of public assistance, the respective percentages among island-born Puerto Rican and foreign-born Dominican households are about nine times higher (45% and 48%).

Multivariate analyses

The results of the descriptive analyses demonstrate that, on most dimensions, immigrants as a group tend to live in areas that are lower in quality than those in which the native-born live. The results further revealed that among immigrant households, those of Hispanic, and African and Caribbean ancestry tend to live in areas exhibiting the worst scores on the majority of indicators, lending initial support to the "racial hierarchy" of access to spatially determined resources predicted by the place stratification framework. It seems likely that a portion of these group disparities in locational attainments may be due to corresponding group differences in socioeconomic status as hypothesized, since it is island-born Puerto Ricans and foreign-born Dominicans who consistently exhibit the lowest levels of socioeconomic status. However, because foreign-born Caribbean and African, and Latin American households are not as

disadvantaged on these key predictors as are island-born Puerto Ricans and foreign-born Dominicans, it remains to be seen if the differences in neighborhood attributes we see at the bivariate level can be explained by controlling for these predictors.

Tables 5 through 10 present the results of our multivariate regression models, predicting, respectively, location in areas with higher violent crime rates, lower physicians-per-population ratios, higher tuberculosis rates, and higher proportions of the population on public assistance, of subsidized housing units, and of residential buildings with unsafe building code violations. All tables follow the same format. The first two columns show the regression coefficients[10] (and standard errors) of hierarchical models whose focus is on the basic nativity status differences, and thus parallel the descriptive analyses in Table 1. The first model (shown in column 1) contains the dummy variable for nativity status, along with the measures of household life cycle and socioeconomic status. The second model (the fully specified model, column 2) adds the dummy variables for race/ethnicity of all households (regardless of nativity status). In column 3 we present the regression coefficients for the fully specified model using the place-of-birth dummy variables in place of the nativity-status dichotomy. In addition, in this model we control for the race/ethnicity of *native-born* households; thus, the reference group for all immigrant groups and native-born minority groups is native-born whites. Again it should be noted that higher scores on the physicians-per-population ratio are interpreted as indicating higher levels of neighborhood quality, yet higher scores on the other variables indicate *lower* levels of neighborhood quality.

In our analysis of the multivariate results, our main focus will be on variables concerning nativity status and race/ethnicity, so we briefly summarize the other results. In general, the indicators of socioeconomic status have the results that one would predict: lower income, less education, and public assistance receipt are negatively associated with high-quality neighborhood characteristics. The effects of the indicators of household life cycle are a bit more mixed in terms

[10] In all tables we present only unstandardized coefficients. Standardized coefficients are available, upon request, from the authors.

of direction and significance, but generally conform to expectations.

Crime Rate

In our bivariate analysis we found that the crime rates prevailing in immigrant and native-born households' neighborhoods were statistically indistinguishable. We find the same results in the two multivariate models utilizing the dummy variable for nativity status (columns 1 and 2 of Table 5). With respect to the effects of race/ethnicity, blacks, Hispanics, and Asians live in areas with significantly higher crime rates than do whites, regardless of nativity status (column 2).

In the model utilizing the place-of-birth indicators (column 3), we find that, after controlling for life cycle and socioeconomic characteristics, all immigrant groups (except for Russians and Other Asians) live in significantly more dangerous areas than do native-born whites. Similarly, all native-born minorities tend to live in areas with significantly higher risks of violent crime. A review of the standardized coefficients, moreover, reveals that the variables with the strongest impact on the propensity to live in areas with higher crime rates are all indicators of race/ethnicity and place of birth. Specifically, of all variables in the model, the predictor with the strongest effect is native-born blacks ($\beta = .2968$), followed by foreign-born Caribbeans and Africans ($\beta = .1947$), island-born Puerto Ricans ($\beta = .1596$) and mainland-born Puerto Ricans ($\beta = .1008$). The beta coefficients for foreign-born Dominicans and Latin Americans ($\beta = .0777$ and .0763, respectively) also are of greater magnitude than all other variables in the model.

Physicians-Per-Population Ratio

In our bivariate analysis of geographic access to physicians, we found that immigrants, as a group, live in neighborhoods with lower physicians-per-population ratios than do native-born households. This apparent disadvantage disappears when household life cycle and socioeconomic status are controlled (column 1 of Table 6) but *reappears* when controls for race/ethnicity are added to the model (column 2). With respect to the effect of race/ethnicity, we find that all nonwhite groups, relative to whites (and regardless of nativity status), live in areas with lower levels of access to physicians.

Turning to the results for place of birth (column 3), while all immigrant groups in the bivariate analysis lived in areas with lower physician-per-population ratios compared with native-born whites, we find that this disadvantage disappears in the multivariate models for foreign-born households from Russia, China, Hong Kong, and Taiwan, and all other places. Among the native-born minorities, blacks, Puerto Ricans, and those of other race tend to live in areas with lower access to physicians. Once again, a review of the standardized coefficients reveals that being a native-born black, a foreign-born Caribbean or African, or an island-born Puerto Rican has the greatest effect on the propensity to live in areas with fewer physicians per 100,000 population (β = -.0763, -.0531, and -.0467, respectively). However, the effect of being a mainland-born Puerto Rican or a foreign-born Latin American is similar in magnitude to the effect of education.

Tuberculosis Rate

The results in Table 7 pertain to our third dependent variable, the rate of tuberculosis cases per 100,000 population. While the bivariate analysis revealed that immigrants, as a group, live in areas with significantly higher rates of tuberculosis than those in which the native-born live, the results in column 1 suggest that this locational disadvantage remains in the presence of controls for household life cycle and socioeconomic status, but disappears when we add controls for race/ethnicity (column 2). With respect to the effects of race/ethnicity, all nonwhites live in areas with significantly higher tuberculosis rates than prevail in the neighborhoods of whites.

Turning to the model using the place-of-birth dichotomies (column 3), we see that all immigrant groups (except for foreign-born Europeans and Russians) live in areas with significantly higher neighborhood-level rates of tuberculosis (relative to native-born whites), even after all individual-level controls are added to the model. Indeed, Russian immigrant are significantly *less* likely than white native-born households to live in neighborhoods with higher rates of tuberculosis. Among the native-born minorities, blacks, Puerto Ricans, non-Puerto Rican Hispanics, and those of other race also tend to live in areas with higher levels of exposure to tuberculosis. Finally, the variables with the greatest impact on the risk of living in areas with high

rates of tuberculosis are all indicators of race/ethnicity and place of birth, specifically those for native-born blacks, island-born Puerto Ricans, foreign-born Dominicans, Caribbeans and Africans, and Latin Americans, and native-born Puerto Ricans (β = .2025, .1441, .1355, .1233, .0884, and .0753, respectively).

Percent of the Population Receiving Public Assistance/Percent of Subsidized Housing Units

Shifting our attention to the first of our two indicators of concentrated poverty, the percent of the population receiving public assistance, we see that the bivariate finding of a significantly higher risk of living in poorer neighborhoods among immigrants disappears in the presence of controls for household life cycle and socioeconomic status (column 1), and the sign becomes negative (although the effect remains nonsignificant) when the indicators of race/ethnicity are entered into the model (column 2). The effects of race/ethnicity, however, show that blacks, Hispanics, and those of "other" race tend to live in poorer areas than do whites (regardless of nativity status). Moreover, in the place-of-birth model (column 3) all foreign-born households (except those from China, Taiwan, and Hong Kong, and Other Asia) tend to live in areas with relatively more persons receiving public assistance, and this neighborhood disadvantage extends to native-born black, Puerto Rican, non-Puerto Rican Hispanic, and "other" race households as well. Once again the variables with the greatest impact on the propensity to live in poorer neighborhoods are native-born black, island-born Puerto Rican, foreign-born Dominican and Caribbean and African, and mainland-born Puerto Rican. However, the standardized coefficients for having less than a high school education and receiving public assistance are larger than that for foreign-born Latin Americans (β = .0679 and .0624, versus β = .563).

While our descriptive analysis revealed that foreign-born households, as a group, lived in neighborhoods with significantly greater concentrations of subsidized housing relative to native-born households, our multivariate analysis (Table 9) reveals that this result disappears when household life cycle and socioeconomic status are controlled (column 1). Indeed, when race/ethnicity is controlled (column 2), the regression indicates that foreign-born households live

in neighborhoods with significantly lower concentrations of subsidized housing. As was seen for our other indicator of concentrated poverty, in the place-of-birth model (column 3), all foreign-born groups (except for Chinese and Other Asians) tend to live in areas with more subsidized housing than native-born whites, and this finding extends to all native-born minorities, apart from Asians.

Percent of (Residential) Buildings with Unsafe Building Code Violations Issued 1992-1996

We now turn our attention to our final dependent variable, the percent of all buildings (with at least two residential units) that were issued unsafe building code violations between 1992 and 1996. In our descriptive analyses, foreign-born households lived in areas with significantly lower concentrations of unsafe building code violations. The results in Table 10 indicate that this advantage remains in the presence of controls (columns 1 and 2). Compared to whites, however, all blacks, Hispanics, and Asians live in areas with more unsafe building violations.

With respect to the effect of place of birth, our bivariate analyses revealed that, when compared to native-born whites, five foreign-born groups (island-born Puerto Ricans, and foreign-born Dominicans, Caribbeans and Africans, Latin Americans, and Chinese) lived in areas with proportionately more unsafe building violations, while the remaining groups did not. Our multivariate models reveal that this relative disadvantage remains for island-born Puerto Ricans, and foreign-born Dominicans, Caribbeans and Africans, and Latin Americans, but disappears for the Chinese when household life cycle and socioeconomic status are controlled.

Part 5: Discussion

The objective of this paper was to add to the literature on locational attainment by evaluating whether immigrant households are more or less likely than native-born households to live in neighborhoods characterized by a broad range of (non-census-derived) indicators of neighborhood quality, and to evaluate whether the relationship between immigrant status and neighborhood quality varies by race/ethnicity and place of birth. Drawing on the two main

theoretical frameworks used thus far in studies of locational attainment, we expected that group differences in socioeconomic status and life cycle would at least moderate differences in neighborhood quality between foreign- and native-born households, but also that race/ethnicity would be a potent predictor of a group's ability to acquire residence in high-quality neighborhoods. That is, we expected that, regardless of nativity status, blacks and Hispanics would be exposed to the least desirable neighborhoods, while Asians and (foreign-born) whites would experience few if any neighborhood disadvantages. Our findings strongly support both of these expectations.

Specifically, despite finding at the descriptive level that foreign-born households, as a group, lived in areas with less access to physicians, higher rates of tuberculosis, and proportionately more persons on public assistance and more housing units receiving government subsidies, relative to native-born households, our multivariate models revealed that, when life cycle, socioeconomic, and racial/ethnic characteristics are controlled for, these disadvantages disappeared, except in the case of the physicians-per-population ratio.

The greater exposure of foreign-born households -- again, as a group -- to higher areal rates of tuberculosis and concentrated poverty that we observe becomes statistically insignificant when we enter controls for race/ethnicity. This finding suggests that differential location in areas with lower levels of health (and higher levels of exposure to this communicable disease) as well as higher concentrations of poverty is less a function of group differences in socioeconomic status than it is a function of the greater representation of nonwhites among foreign-born than native-born households (Table 2). This finding lends support to the tenets of the spatial stratification model which emphasizes the role of race in sorting households among areas of varying quality.

Indeed, the importance of race/ethnicity in influencing households' ability to acquire residence in areas replete with high-quality resources is clearly demonstrated in both the effects of the race/ethnicity variables and in the effects of the indicators of place of birth. Specifically, in the nativity status model, while we find very little evidence that immigrant households are

disproportionately disadvantaged, relative to native-born households, in terms of neighborhood quality, the same cannot be said for nonwhites (relative to whites). In five of the six models, all nonwhites (regardless of nativity status) exhibit greater tendencies to live in lower-quality areas than do whites, while greater exposure (relative to whites) to higher proportions of persons receiving public assistance describes the situation of blacks, Puerto Ricans, non-Puerto Rican Hispanics, and those of "other" race, but not of Asians.

The juxtaposition of the minimal effect of immigrant status versus the profound effect of minority status, however, is not the entire story. The place of birth model clearly reveals that the dominant role of race/ethnicity in determining access to spatially determined resources means that certain immigrant groups -- notably island-born Puerto Ricans, and foreign-born Dominicans, Caribbeans and Africans, and Latin Americans -- are largely relegated to areas with far fewer of the neighborhood amenities that influence one's current standard of living but, perhaps more significantly, one's future life chances. Indeed, while these four groups consistently exhibit neighborhood-quality disadvantages relative to native-born whites, foreign-born households from Russia and Europe tend to live in areas of *at least equal* quality to those of native-born whites on four of the six outcomes. Equally important, native-born blacks and Hispanics are also disproportionately disadvantaged (relative to native-born whites) on all six indicators of neighborhood quality (the only exception being the physicians-per-population ratio for non-Puerto Rican Hispanics). In fact, the dummy variables for blacks and Hispanics of both nativity status groups invariably have the greatest impact of all variables in our models.

Thus far our predictions concerning the "racial hierarchy" of access to spatially determined resources have been strongly supported by our empirical results for blacks and Hispanics, regardless of nativity status. Our results pertaining to the experiences of Asians, however, are more mixed. While the model predicts that Asians should experience few, if any, neighborhood-quality disadvantages, we find in the nativity status model that relative to all whites, Asians (regardless of nativity status) tend to live in worse areas on five of the six outcomes (the

exception being the proportion of the population receiving public assistance). In the place-of-birth model we find that, relative to native-born whites, foreign-born households from India, Pakistan, and Bangladesh tend to live in lower-quality areas on five of the six outcomes, foreign-born households from China, Hong Kong, and Taiwan, and from Other Asia tend to live in relatively disadvantaged areas on two of the six outcomes, but that native-born Asians exhibit only one neighborhood-quality disadvantage, namely, higher rates of violent crime. Thus, while our findings for native-born Asians largely conform to our expectations, our findings of serious neighborhood-quality disadvantages for specific groups of foreign-born Asians stand in contrast to findings in the larger literature on locational attainment.

The fact that our findings for specific foreign-born Asian groups stand in contrast to those of studies of the locational attainment process among racial/ethnic groups may be related to our focus on a single city. Specifically, the foreign-born Asians who live in New York City may disproportionately represent the newest arrivals relative to all foreign-born Asians in the metropolitan area (cf. Zhou and Logan 1991) or the nation. The case of Bangladeshis is particularly salient in this regard, since the volume of Bangladeshi immigration to New York City has risen greatly since the 1970s (Lobo 1998). Specifically, data from the Immigration and Naturalization Service indicate that the average number arriving per year in the 1970s was 123, which rose to an annual average of 416 in the 1980s and 1,911 in the first four years of this decade (Lobo 1998). Moreover, the most recent data (for 1995-1996) show an average of 3,700 Bangladeshis arriving in New York City per year, making this group the sixth largest of all immigrant groups to arrive in the City during this period (Lobo 1998). It seems likely that if we had access to measures of years since arrival and English language fluency, some if not all of the disadvantages we find for foreign-born Asian households would be eliminated.

Thus, our findings of racial/ethnic stratification in the process of locational attainment largely support those reported by other researchers. The significance of this similarity lies in the fact that our measures of neighborhood quality, despite being limited to a single city, go beyond

the neighborhood characteristics available in census data, and therefore significantly add to our cumulative knowledge concerning the types of neighborhood resources that are apparently out of reach of both native- and foreign-born blacks and Hispanics. Insofar as our indicators of neighborhood quality are important inputs in the process of social and economic mobility, our findings cast a pessimistic shadow on the potential for reductions in racial/ethnic inequality. Equally significant, however, our results here complement those from an earlier work (Schill, Friedman, and Rosenbaum 1998) that demonstrates almost identical patterns of inequality in housing conditions. Thus, it is clear that certain groups in New York experience multiple layers of disadvantageous living conditions, while others are barely affected by any, and that the risk of being in these groups is determined largely by race/ethnicity.

Although our analysis consistently points to the higher probability of black and Hispanic households in New York City, immigrant and non-immigrant alike, to live in lower quality neighborhoods than white households, the data that we utilize do not permit us to isolate the precise causal mechanism that generates these patterns. It is very possible that racial discrimination in New York City's housing market constrains the locational choices of racial/ethnic minorities to less desirable neighborhoods (Schill and Scafidi 1999) and/or that neighborhoods with high proportions of these households receive proportionately fewer of the resources and investment, both public and private, that fosters neighborhood amenities and safety.

It is also possible that historical discrimination and the segregation that it fostered interact with current preferences for neighborhood racial/ethnic composition to generate the patterns we uncover. Patterns of racial/ethnic segregation in New York today are the legacy of years of illegal discrimination by actors in the housing market and government, as well as the flight of white households to the suburbs (Massey and Denton 1993). To the extent that racial/ethnic minority immigrants to New York prefer to live in neighborhoods composed of people from similar backgrounds and/or of similar race/ethnicity, they may seek housing in these neighborhoods, despite the fact that they show up as less "desirable" on the range of indicators we employ.

In terms of public policy, our findings suggest that policies that are targeted to racial/ethnic minorities will be of use in improving the neighborhoods conditions of immigrants who are most in need of assistance. Among these initiatives are increased efforts by the government to enforce federal, state, and local laws that make discrimination in the housing market on the basis of race or national origin illegal. Furthermore, government efforts to promote positive investment in minority communities, whether through community-based redevelopment initiatives or the Community Reinvestment Act would likely have a positive impact.

In addition, it should be also be noted that our analysis, by necessity, is static, measuring the neighborhood characteristics of immigrants at one point in time. Immigrants do not merely experience neighborhood quality; they may also affect the conditions of neighborhoods in which they live. As black and Hispanic immigrants move into neighborhoods that are relatively disadvantaged in terms of the types of resources and amenities we measure in this paper, they may bring with them the seeds of renewal. Throughout New York City, anecdotal accounts abound of neighborhoods that have been positively affected by both the financial and institutional contributions of households born in foreign countries (Salvo and Lobo 1997; Winnick 1990). Clearly, more work needs to be done, utilizing a longitudinal framework, to evaluate whether these effects are widespread, and if so, to quantify their impact.

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Table 1. Neighborhood Characteristics of Foreign- and Native-Born Households in NYC (Weighted)

	Foreign born	Native born
1995 Crime Rate[a] (per 1,000 residents)	12.99	12.80
1995 Physician Availability Rate[b] (per 10,000 residents)	24.32**	31.61
1996 Tuberculosis Rate (per 100,000 residents)	26.33**	23.88
Mean Percentage:		
Receiving Public Assistance[c] (1996)	13.23**	11.39
Subsidized Housing units (1996)	7.77**	7.31
Neighborhood Buildings with Unsafe Building Violations (1996)	.44**	.55
N	5835	7155

**p<0.01; *p<0.05; †p<0.10 -- indicates difference between foreign and native born is significant.
[a]Crime refers specifically to crimes against persons (i.e. murder, rape, robbery, assault).
[b]Availability of full-time equivalent patient-care physicians.
[c]Public assistance receipt includes individuals on AFDC, Aid to Dependent Children, ADC unemployed fathers, and individuals receiving Home Relief.

Table 2. Neighborhood Characteristics of Foreign- and Native-Born Households in NYC by Place of Birth (Weighted)

Characteristic	U.S. born white non-Hispanic	Foreign Born								
		Puerto Rico	Dominican Republic	Caribbean[1] & Africa	Latin America[2]	Europe	Russia[3]	China, Hong Kong & Taiwan	India, Pakistan & Bangladesh	Other Asia[4]
1995 Crime Rate[a] (per 1,000 residents)	9.39	17.58**	13.99**	15.57**	13.02**	9.55	8.69**	9.72	10.03†	10.32*
1995 Physician Availability Rate[b] (per 10,000 residents)	37.61	23.90**	23.87**	20.80**	21.45**	29.02**	20.79**	26.21**	20.64**	32.99*
1996 Tuberculosis Rate (per 100,000 residents)	18.31	31.66**	34.99**	26.29**	29.48**	19.95**	17.52†	26.81**	21.65**	23.33**
Mean Percentage: Receiving Public Assistance[c] (1996)	7.02	20.91**	18.92**	13.88**	13.11**	8.40**	9.62**	7.77**	9.33	7.03
Subsidized Housing units (1996)	4.18	13.60**	8.84**	7.67**	7.51**	5.26**	5.06**	6.12**	6.11**	4.39
Neighborhood Buildings with Unsafe Building Violations (1996)	.24	.78**	.71**	.45**	.45**	.24	.14**	.36**	.23	.24
N	4200	909	615	1139	776	891	418	301	206	327

**p<0.01; *p<0.05; †p<.10 -- indicates significant difference between the group marked and native born non-Hispanic whites.

[a]Crime refers specifically to crimes against persons (i.e. murder, rape, robbery, assault).

[b]Availability of full-time equivalent patient-care physicians.

[c]Public assistance receipt includes individuals on AFDC, Aid to Dependent Children, ADC unemployed fathers, and individuals receiving Home Relief.

[1]Caribbean (other than Puerto Rico and Dominican Republic).

[2]Mexico, Central America, and South America.

[3]Russia and Successor States to Soviet Union.

[4]Korea, Philippines, Southeast Asia (Burma, Cambodia, Laos, Malaysia, Singapore, Thailand, Vietnam), and Other Asia.

Table 3. Household and Neighborhood Characteristics of Foreign- and Native-Born Households in NYC (Weighted)

	Percent	
Characteristic	Foreign born	Native born
Race/Ethnicity		
White, non-Hispanic	26.28**	59.34
Black, non-Hispanic	19.43**	29.29
Puerto Rican	15.66**	7.62
Non-Puerto Rican Hispanic	23.73**	2.42
Asian	14.47**	0.88
Other	0.42	0.45
Household Characteristics		
Age (Mean)	47.61**	48.72
Couple headed household	45.80**	35.39
Presence of:		
Children under 18	25.79**	21.01
Others in the household beyond the nuclear family	17.29**	8.65
Education		
Less than high school	35.33**	17.90
High school degree	27.01**	29.47
College and more	37.66**	52.62
Total household income (median)[a]	25,300	31,500
Receiving public assistance	22.96**	15.67
N	5835	7155

**p<0.01; *p<0.05; †p<0.10 -- indicates difference between foreign and native born is significant.
[a]Significance test not conducted for this variable.

Table 4. Household and Neighborhood Characteristics of Foreign- and Native-Born Households in NYC by Place of Birth (Weighted)

Characteristic	U.S. born white non-Hispanic	Foreign Born								
		Puerto Rico	Dominican Republic	Caribbean[1] & Africa	Latin America[2]	Europe	Russia[3]	China, Hong Kong & Taiwan	India, Pakistan & Banglades h	Other Asia[4]
Household Characteristics										
Age (Mean)	51.44	50.63	42.42**	44.54**	42.55**	57.67**	51.40	48.29**	40.11**	42.44**
Couple headed household	41.89	28.75**	32.04**	42.72	49.34**	50.02**	58.22**	67.39**	69.47**	56.94**
Presence of:										
Children under 18	15.12	24.15**	35.18**	28.64**	27.14**	16.47	26.60**	20.58*	36.99**	25.83**
Others in the household beyond the nuclear family	4.58	15.90**	28.10**	19.28**	24.55**	6.82*	11.92**	17.00**	21.24**	13.37**
Education										
Less than high school	11.54	57.34**	56.67**	26.28**	37.33**	31.84**	22.97**	32.08**	13.58	12.54
High school degree	28.08	25.43†	23.44*	30.40	31.61†	29.56	21.77**	25.27	25.34	16.63**
College and more	60.38	17.24**	19.89**	43.31**	31.06**	38.60**	55.26*	42.65**	61.08	70.84**
Total household income (median)[a]	40,500	13,200	15,450	29,978	29,600	30,000	15,480	35,000	37,000	42,000
Receiving Public assistance	5.16	45.43**	48.11**	13.99**	17.30**	7.71**	41.58**	8.31†	4.87	7.26
N	4200	909	615	1139	776	891	418	301	206	327

**p<0.01; *p<0.05; †p<.10 -- indicates significant difference between the group marked and native born non-Hispanic whites.

[a]Significance tests between groups not conducted for this variable.

[1]Caribbean (other than Puerto Rico and Dominican Republic).

[2]Mexico, Central America, and South America.

[3]Russia and Successor States to Soviet Union.

[4]Korea, Philippines, Southeast Asia (Burma, Cambodia, Laos, Malaysia, Singapore, Thailand, Vietnam), and Other Asia.

Table 5: Results of feasible generalized least squares models predicting the violent crime rate in New York City subareas, 1996 (unstandardized coefficients; standard errors in parentheses)

Independent Variables	Model I	Model II	Model III
Foreign born	.0500	.0311	
	(.0767)	(.0892)	
Household characteristics			
Age of householder	-.0168***	-.0028	-.0036
	(.0024)	(.0026)	(.0027)
Couple-headed household	-.7835***	-.4596***	-.5340***
	(.0825)	(.0872)	(.0698)
Children <18 in household	.3320**	.0450	.0862
	(.1025)	(.1083)	(.1119)
Other adults in household	.5182***	.2381†	.3105*
	(.1218)	(.1233)	(.1287)
Less than high school diploma	1.0618***	.8181***	.6883***
	(.1016)	(.1088)	(.1130)
High school diploma	.3602***	.2598**	.2205*
	(.0915)	(.0954)	(.0983)
Logged household income	-.1263***	-.0967***	-.0982***
	(.0211)	(.0220)	(.0227)
Receives public assistance	1.2309***	.8164***	.9572***
	(.1057)	(.1108)	(.1175)
Race/ethnicity (vs. white)[a]			
Black		6.6163***	6.3403***
		(.1003)	(.1294)
Puerto Rican		4.6926***	4.0218***
		(.1459)	(.2186)
Non-Puerto Rican Hispanic		2.6566***	2.3064***
		(.1421)	(.3577)
Asian		.9278***	1.2063*
		(.1685)	(.5616)
Other race		6.4433***	6.1770***
		(.5436)	(.7850)
Place of birth (vs. native-born white)			
Puerto Rico			5.0116***
			(.1829)
Dominican Republic			2.9023***
			(.2104)
Caribbean and Africa			5.5483***
			(.1476)
Latin America			2.6043***
			(.1729)
Europe			.2798†
			(.1680)
Russia			-.8879***
			(.2312)
China, Taiwan, Hong Kong			.6460*
			(.2753)
India, Bangladesh, Pakistan			1.2948***
			(.3065)
Other Asia			.2033
			(.2588)
All other places			1.6947***
			(.2935)
Intercept	13.7875	10.3595	10.4623
Adjusted R^2	.1060	.2615	.2623

a In Models I and II, these categories refer to the race/ethnicity of all households, regardless of nativity status. In Model III, however, this variable refers to the race/ethnicity of native-born households, and the reference category is native-born white households.

Table 6: Results of feasible generalized least squares models predicting the number of physicians per 100,000 population (the "physician-per-population ratio) in New York City subareas, 1996 (unstandardized coefficients; standard errors in parentheses)

Independent Variables	Model I	Model II	Model III
Foreign born	-.2703	-.06430*	
	(.2345)	(.2614)	
Household characteristics			
Age of householder	-.0067	-.0225**	-.0232**
	(.0075)	(.0076)	(.0078)
Couple-headed household	-.6711**	-1.1362***	-1.1196***
	(.2530)	(.2533)	(.2597)
Children <18 in household	-1.9169***	-1.5005***	-1.4974***
	(.3126)	(.3054)	(.3120)
Other adults in household	-2.0640***	-1.6556***	-1.6431***
	(.3632)	(.3518)	(.3587)
Less than high school diploma	-2.8521***	-2.2699***	-2.2154***
	(.3087)	(.3060)	(.3128)
High school diploma	-2.7384***	-2.4765***	-2.5115***
	(.2786)	(.2771)	(.2844)
Logged household income	.2346***	.2028***	.2072***
	(.0622)	(.0599)	(.0610)
Receives public assistance	-1.0906***	-.4808	-.5606†
	(.3083)	(.2958)	(.3058)
Race/ethnicity (vs. white)[a]			
Black		-6.3178***	-6.1158***
		(.2884)	(.3462)
Puerto Rican		-4.9509***	-4.5910***
		(.3995)	(.5939)
Non-Puerto Rican Hispanic		-2.5128***	-1.7829†
		(.4152)	(.9996)
Asian		-1.1757*	.1282
		(.4956)	(1.7099)
Other race		-5.9291***	-5.5533**
		(1.5156)	(1.7493)
Place of birth (vs. native-born white)			
Puerto Rico			-5.5098***
			(.4779)
Dominican Republic			-1.9695***
			(.5763)
Caribbean and Africa			-5.6812***
			(.4490)
Latin America			-4.7088***
			(.5218)
Europe			-1.6573**
			(.5384)
Russia			-.8393
			(.7065)
China, Taiwan, Hong Kong			.0040
			(.7490)
India, Bangladesh, Pakistan			-4.0496***
			(.9677)
Other Asia			-2.6364**
			(.8269)
All other places			-1.2892
			(.8896)
Intercept	23.6931	27.0731	26.8295
Adjusted R^2	.0746	.0839	.0854

a In Models I and II, these categories refer to the race/ethnicity of all households, regardless of nativity status. In Model III, however, this variable refers to the race/ethnicity of native-born households, and the reference category is native-born white households

Table 7: Results of feasible generalized least squares models predicting the number of tuberculosis cases per 100,000 population ("rate of tuberculosis") in New York City subareas, 1996 (unstandardized coefficients; standard errors in parentheses)

Independent Variables	Model I	Model II	Model III
Foreign born	.8089***	.2891	
	(.1529)	(.1769)	
Household characteristics			
Age of householder	-.0456***	-.0176***	-.0223***
	(.0048)	(.0052)	(.0054)
Couple-headed household	-1.7910***	-1.5068***	-1.4779***
	(.1651)	(.1751)	(.1816)
Children <18 in household	.0790	-.1718	-.3200
	(.2058)	(.2116)	(.2213)
Other adults in household	.2902	-.4676†	-.5960*
	(.2382)	(.2464)	(.2605)
Less than high school diploma	1.7812***	.8592***	.6580**
	(.2066)	(.2156)	(.2255)
High school diploma	.1187	-.3784*	-.5668**
	(.1798)	(.1903)	(.1971)
Logged household income	-.1284**	-.1188**	-.1285**
	(.0425)	(.0438)	(.0454)
Receives public assistance	2.5744***	2.1475***	2.2500***
	(.2121)	(.2107)	(.2277)
Race/ethnicity (vs. white)[a]			
Black		9.3187***	8.9962***
		(.2017)	(.2649)
Puerto Rican		8.4720***	6.2490****
		(.2766)	(.4274)
Non-Puerto Rican Hispanic		8.1371***	4.3573****
		(.2871)	(.7472)
Asian		1.6737***	.6899
		(.3334)	(1.2420)
Other race		8.9270***	8.0738***
		(1.0816)	(1.7573)
Place of birth (vs. native-born white)			
Puerto Rico			9.4085***
			(.3443)
Dominican Republic			10.5271***
			(.4112)
Caribbean and Africa			7.3047***
			(.3053)
Latin America			6.2733***
			(.3714)
Europe			.4199
			(.3326)
Russia			-2.2873***
			(.4364)
China, Taiwan, Hong Kong			1.7347***
			(.5116)
India, Bangladesh, Pakistan			1.9977***
			(.5996)
Other Asia			1.3362**
			(.4876)
All other places			1.9449**
			(.5947)
Intercept	26.4986	21.8700	22.3836
Adjusted R^2	.0886	.1712	.1835

a In Models I and II, these categories refer to the race/ethnicity of all households, regardless of nativity status. In Model III, however, this variable refers to the race/ethnicity of native-born households, and the reference category is native-born white households.

Table 8: Results of feasible generalized least squares models predicting the percent of the population receiving public assistance in New York City subareas, 1996 (unstandardized coefficients; standard errors in parentheses)

Independent Variables	Model I	Model II	Model III
Foreign born	.2046†	-.0836	
	(.1063)	(.1180)	
Household characteristics			
Age of householder	-.0118***	.0038	.0030
	(.0034)	(.0034)	(.0034)
Couple-headed household	-.7496***	-.2820*	-.2923*
	(.1131)	(.1154)	(.1131)
Children <18 in household	.9209***	.6534***	.5983***
	(.1436)	(.1454)	(.1492)
Other adults in household	.9906***	.5710***	.5702***
	(.1645)	(.1725)	(.1690)
Less than high school diploma	1.8919***	1.7042***	1.4970***
	(.1413)	(.1445)	(.1427)
High school diploma	.9376***	.7266***	.7094***
	(.1239)	(.1251)	(.1226)
Logged household income	-.1914***	-.2334***	-.2134***
	(.0288)	(.0284)	(.0278)
Receives public assistance	2.0087***	1.8518***	1.5205***
	(.1481)	(.1522)	(.1543)
Race/ethnicity (vs. white)[a]			
Black		5.8549***	6.6538***
		(.1406)	(.1742)
Puerto Rican		5.3481***	4.4754***
		(.2052)	(.2958)
Non-Puerto Rican Hispanic		3.3832***	2.2236***
		(.1939)	(.4624)
Asian		.2540	.9518
		(.2087)	(.6657)
Other race		6.1448***	7.9753***
		(.8351)	(1.1641)
Place of birth (vs. native-born white)			
Puerto Rico			6.3971***
			(.2643)
Dominican Republic			6.2350***
			(.3007)
Caribbean and Africa			4.0329****
			(.2012)
Latin America			2.3268***
			(.2367)
Europe			.4213*
			(.1916)
Russia			.6507**
			(.2294)
China, Taiwan, Hong Kong			.0865
			(.3105)
India, Bangladesh, Pakistan			1.1085**
			(.3837)
Other Asia			-.3628
			(.3144)
All other places			.9033*
			(.3590)
Intercept	11.7921	9.1932	8.9806
Adjusted R^2	.1996	.3441	.3597

a In Models I and II, these categories refer to the race/ethnicity of all households, regardless of nativity status. In Model III, however, this variable refers to the race/ethnicity of native-born households, and the reference category is native-born white households.

Table 9: Results of feasible generalized least squares models predicting the percent of the housing units that are subsidized[a] in New York City subareas, 1996 (unstandardized coefficients; standard errors in parentheses)

Independent Variables	Model I	Model II	Model III
Foreign born	-.0573	-.3598***	
	(.0787)	(.0919)	
Household characteristics			
Age of householder	-.0041	.0096***	.0080**
	(.0025)	(.0026)	(.0026)
Couple-headed household	-.3547***	-.1059	-.1388
	(.0839)	(.0888)	(.0887)
Children <18 in household	.5601***	.3785***	.3569**
	(.1052)	(.1106)	(.1107)
Other adults in household	.4623***	.2840*	.2909*
	(.1223)	(.1318)	(.1316)
Less than high school diploma	1.2689***	1.0779***	.9984***
	(.1043)	(.1110)	(.1112)
High school diploma	.7786***	.6229***	.5994***
	(.0916)	(.0969)	(.0966)
Logged household income	-.1428***	-.1836***	-.1722***
	(.0208)	(.0213)	(.0212)
Receives public assistance	1.2657***	1.2516***	1.0765***
	(.1066)	(.1136)	(.1164)
Race/ethnicity (vs. white)[b]			
Black		3.7594***	4.6247***
		(.1057)	(.1269)
Puerto Rican		4.1716***	3.8434***
		(.1470)	(.2151)
Non-Puerto Rican Hispanic		2.0841***	1.8863***
		(.1489)	(.3456)
Asian		.5642**	.9559†
		(.1721)	(.5517)
Other race		4.3869***	5.7380***
		(.5734)	(.7181)
Place of birth (vs. native-born white)			
Puerto Rico			4.4861***
			(.1865)
Dominican Republic			2.6061***
			(.2045)
Caribbean and Africa			2.1011***
			(.1627)
Latin America			1.3513***
			(.1978)
Europe			.2585†
			(.1567)
Russia			.5209**
			(.2015)
China, Taiwan, Hong Kong			.1758
			(.2681)
India, Bangladesh, Pakistan			1.3948***
			(.3195)
Other Asia			-.3572
			(.2598)
All other places			.7498**
			(.2807)
Intercept	7.2474	5.1650	5.0200
Adjusted R^2	.0962	.1773	.1837

a "Subsidized" units are those that belong to public housing, or whose rents are subsidized by the Section 8 program.

b In Models I and II, these categories refer to the race/ethnicity of all households, regardless of nativity status. In Model III, however, this variable refers to the race/ethnicity of native-born households, and the reference category is native-born white households.

Table 10: Results of feasible generalized least squares models predicting the percent of residential buildings, in New York City surbares, with unsafe building code violations issued between 1992 and 1996 (unstandardized coefficients; standard errors in parentheses)

Independent Variables	Model I	Model II	Model III
Foreign born	-.0151*	-.0398***	
	(.0070)	(.0079)	
Household characteristics			
Age of householder	-.0012***	-.0003	-.0004†
	(.0002)	(.0002)	(.0002)
Couple-headed household	-.0524***	-.0267***	-.0224**
	(.0075)	(.0073)	(.0072)
Children <18 in household	.0434***	.0200*	.0175†
	(.0094)	(.0091)	(.0090)
Other adults in household	.0465***	.0147	.0129
	(.0110)	(.0111)	(.0111)
Less than high school diploma	.1220***	.0746***	.0571***
	(.0095)	(.0095)	(.0095)
High school diploma	.0431***	.0198*	.0127
	(.0082)	(.0079)	(.0077)
Logged household income	-.0117***	-.0097***	-.0079***
	(.0019)	(.0019)	(.0018)
Receives public assistance	.1432***	.1158***	.1037***
	(.0099)	(.0100)	(.0104)
Race/ethnicity (vs. white)[a]			
Black		.3806***	.3664***
		(.0096)	(.0122)
Puerto Rican		.3262***	.2029***
		(.0128)	(.0193)
Non-Puerto Rican Hispanic		.2145***	.0873**
		(.0122)	(.0281)
Asian		.0410**	.0148
		(.0135)	(.0436)
Other race		.2321***	.2233**
		(.0550)	(.0739)
Place of birth (vs. native-born white)			
Puerto Rico			.3379***
			(.0158)
Dominican Republic			.2861***
			(.0175)
Caribbean and Africa			.1546***
			(.0151)
Latin America			.1059***
			(.0150)
Europe			-.0137
			(.0119)
Russia			-.1141***
			(.0183)
China, Taiwan, Hong Kong			.0073
			(.0194)
India, Bangladesh, Pakistan			.0049
			(.0252)
Other Asia			-.0037
			(.0176)
All other places			.0016
			(.0236)
Intercept	.4806	.3036	.2844
Adjusted R^2	.0535	.1094	.1220

a In Models I and II, these categories refer to the race/ethnicity of all households, regardless of nativity status. In Model III, however, this variable refers to the race/ethnicity of native-born households, and the reference category is native-born white households.