Immigration, Spatial Assimilation, and Segmented Paths Within the Metropolis

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The settlement of recent immigrants in suburban locations at the time of their arrival challenges the assumptions of the spatial assimilation model. Using Public Use Microdata from the 1990 census and carefully defined immigrant cohorts, this paper investigates the settlement location of recent (1965–74 and 1975–84) immigrant cohorts through the lens of an extended segmented assimilation framework. Analysis is completed at two spatial scales, including central city versus outlying areas choice within the New York CMSA and at a broader, national scale where settlement outside of traditional immigrant gateways offers additional insight. Results suggest that the segmented assimilation framework better describes the emergent settlement pattern than the spatial assimilation theory, with the conclusion arguing that space must be better represented within the framework when accounting for observed differences in assimilation.

Keywords: Immigration, assimilation, United States, metropolitan, spatial scale, New York, arrival cohort.

The large number of immigrants arriving in the U.S. on a yearly basis continues to raise important questions regarding their settlement, distribution, and assimilation into American society, issues which have received considerable attention within the literature. Such studies demonstrate that economic factors as well as cultural-ethnic effects are important in explaining observed settlement patterns, with differing patterns observed by, for example, national origin (Dunlevy, 1980; Frey, 1996; Gorrie, 1991; Lieberson and Waters, 1987). Northern European immigrants, who dominated pre-1965 immigration flows, have established themselves within the social and economic fabric of American society, with the literature pointing to movement out of central city enclaves and relatively less reliance on immigrant networks (Lieberson and Waters, 1987; Newbold, 1999; Walker and Hannan, 1989).

More recent immigrant flows associated with changing immigrant origins, increasing numbers, and greater heterogeneity, have forced researchers to reexamine traditional models of immigrant assimilation, with one of the most debated and researched areas continuing to focus upon the settlement and assimilation of immigrants. While spatial assimilation of immigrants has long been considered a hallmark of overall

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assimilation, it has generally been argued that the process of spatial assimilation took a generation or more to achieve, reached only after acculturation (i.e., English language acquisition) (Gordon, 1964; Massey, 1985). Spatial assimilation also ensured further 'structural' assimilation, particularly amongst children by exposing them to the majority population (i.e., white) along with their values, norms and culture. To date, much of the existing evidence suggests that suburbanization has been linked with assimilation, both as a consequence and as a motivator (Frey and Speare, 1988; Lieberson, 1962; Massey and Denton, 1987; White et al., 1993).

While the pattern of early, twentieth century European immigrants settling first in inner city ethnic enclaves with subsequent migrations to the suburbs has reinforced prevailing views of assimilation theory, it contrasts markedly with the contemporary reality of settlement in suburban areas at or shortly after the time of arrival in the U.S. as large numbers of immigrants settle outside of traditional immigrant gateways and ethnic enclaves (Alba et al., 1999). This emerging pattern of suburban settlement among recent arrivals undoubtedly raises the question of whether suburbanization holds the same meaning or is achieved in the same way among these new arrivals as it did for earlier ones.

In fact, the emerging evidence suggests that the traditional model of spatial assimilation is no longer relevant, with weakened language effects associated with suburban settlement noted within the recent literature (see, for example, Alba et al., 1999; Alba et al., 2000). At a minimum, spatial assimilation may be less important now than it has been historically. *If* spatial assimilation is no longer capable of explaining the settlement and assimilation of new arrivals, what *is* capable of this task is less clear. While the traditional viewpoint of spatial assimilation cannot be dismissed completely (i.e., Brubaker, 2001), Portes' segmented assimilation framework offers one alternative (Portes and Borocz, 1989; Portes and Rumbaut, 1996; Portes and Zhou, 1993). The basic argument put forward within the segmented assimilation framework is that assimilation rests upon three factors that condition assimilation, including the nature of immigration (i.e., voluntary or forced), the resources that immigrants bring with them (i.e., savings, human capital), and host country reception. Consequently, assimilation could lead to middle class America, mirroring traditional, straight-line assimilation theory, or alternatively leading to assimilation within the urban underclass.

The purpose of the following paper is to evaluate the settlement patterns of selected immigrant groups through the lens of segmented assimilation. While not tested explicitly, the segmented assimilation framework, extended to include and highlight the importance of alternate spatial scales by referencing notions of spatial assimilation, provides a useful lens through which to view assimilation. Relying upon the 1990 Public Use Microdata Sample (PUMS) (U.S. Bureau of the Census, 1992), the paper investigates the settlement patterns and measures of assimilation of immigrant cohorts at two spatial scales. First, the paper draws distinctions in the settlement patterns of recent immigrants in 'primary' centers, representing the largest proportional concentration of an immigrant group relative to other metropolitan

areas, thus creating a national perspective. Second, the paper focuses upon the settlement of immigrants within the New York CMSA. At both spatial scales, increasing opportunities, decreasing reliance upon the ethnic core, and chain immigration may facilitate settlement outside of ethnic enclaves or gateway metropolitan areas.

SPACE AND SEGMENTED ASSIMILATION THEORY

The importance of suburbanization and movement out of ethnic enclaves as a key component of assimilation has been well established, dating to the Chicago School's ecological model (i.e., Burgess, 1925; Park, 1928). Formulated at a time when most immigrants were engaged in low-wage labor and manufacturing employment was centralized in inner-city areas, immigrants settled in inner-city enclaves proximate to their places of work. With socioeconomic advancement, knowledge of new opportunities, and increasing aspirations, they tended to move outward, settling into the new suburban locales that arose after the Second World War (Gans, 1967).

Based upon the relationships introduced by the Chicago School, Massey's (1985) spatial assimilation model formalized this process (see also Alba et al., 1999; Frey and Speare, 1988; Lieberson, 1962; Massey and Denton, 1987). As part of the overall assimilation process (Gordon, 1964), spatial assimilation refers to movement by immigrants from ethnic enclaves into communities dominated by the majority population. Initially concentrating in older central city locations, immigrants could minimize the risks associated with immigration by settling within a receptive and familiar environment. Movement from ethnic enclaves would be facilitated by chain migration, ethnic succession, and improvements to socioeconomic position, making relocation an individual level process rather than a group process that formed the basis of enclave formation.

Yet, the assumption of assimilation into a white, middle class society is misguided (see the discussion by Wright and Ellis (2000), for example). Instead, the reference group to which immigrants adapt significantly affects assimilation. If, for example, immigrants and their children settle in inner city areas where they are exposed to alternative behavior, emulation of this behavior may contribute to downward mobility as immigrants, such as Miami's Haitian community, are incorporated as racialized, disadvantaged minorities within the black community (Portes, 1994, 1996; Portes and Zhou, 1993). The Cuban community provides further evidence of the role of space at local scales, with race and skin color increasingly important in defining alternate social, economic, and spatial worlds for 'black' and 'white' Cubans in Miami, as Black Cubans are co-opted into the African American community and alienated from their co-nationals (Skop, 2001).

Moreover, to discard completely the notion that immigrants no longer settle in older urban areas misses reality. Park (1994, in Zelinsky and Lee, 1998), for instance, noticed the establishment of Korean neighborhoods in Chicago, with similar processes evident among recent Chinese immigrants throughout North America (see,

for example, Howenstine, 1996). Although occupying an identifiable geographical area, they do not qualify as 'enclaves' in the classic sense, having lower population densities than those found in traditional centers, suggesting that spatial propinquity remains important for these recent immigrants. Importantly, these ethnic communities are not necessarily restricted to older areas of cities (Alba and Logan, 1991; Allen and Turner, 1996), with their entry into suburban locales at the time of arrival suggesting that they are able to quickly achieve the benefits of suburban locations, including new housing, good schools, and a cleaner and safer environment, without moving through the traditional process of spatial assimilation.

This emerging and preferred settlement geography among recent immigrants also reflects the heterogeneity of immigration flows and the resources that immigrants bring with them or employ in their locational decisions, transforming the suburbs into an ethnically more diverse environment. Among Indian computer professionals, for example, high levels of human capital, personal linkages, and income potential facilitate the observed choices and dispersed settlement patterns (i.e., Portes and Rumbaut, 1996). Moreover, employers who are not located in traditional gateway centers directly encourage settlement outside of these entry points, therefore associating dispersion with metropolitan deconcentration, better transportation that facilitates suburbanization and interaction, and the changing distribution of employment opportunities within the metropolitan area (Greene, 1997). Mexicans and Salvadorans, for example, have been observed to employ niches in the new suburban economy for their own economic benefit. As suburban areas have become important locations for employment, these groups have established themselves for their economic benefit while seemingly creating a dispersed population (Mahler, 1995). As in the past, immigrants may locate close to employment opportunities, differenced this time by location in suburban areas and/or the separation of workplace and residence within the suburban context. Moreover, broader socioeconomic changes within society, including changing immigrant origins, racism and discrimination, the processes of de-industrialization and the rise of the post-industrial economy have contextualized the changing settlement patterns.

While spatial assimilation may not be able to adequately capture the nuances of immigrant settlement and assimilation, Portes' segmented assimilation framework provides fresh insights into the differential paths of settlement assimilation experienced by recent arrivals. One of a competing number of frameworks, Portes' framework has been used to highlight differences among immigrants, typically by contrasting the experiences of origin groups (i.e., Portes and Borocz, 1989; Portes and Rumbaut, 1996). While primarily used within the sociological literature to explore assimilation paths among the 1.5 and 2nd generation of immigrants at a local spatial scale (Portes and Zhou, 1993; Rumbaut, 1994; Portes, 1996), its treatment of space is problematic given its reliance on local processes and forces. Rather than just the local, neighborhood context as conveyed within the segmented framework, Wright and Ellis (2000) suggest that the geographical implications and application of segmented assimilation may be much more diverse than the local, arguing that

immigrant geography within the context of the assimilation debate is important at multiple spatial scales. In other words, processes and forces that influence assimilation, such as regional labor markets and racism, will vary across space and across spatial scales, ultimately impacting upon settlement location and the assimilation process.

It is reasonable to assume that the assimilation process will vary across spatial scales for reasons already found within the segmented assimilation framework. This means, for example, that a group arriving in the U.S. at a defined time but settling in two different locations (i.e., inner city/suburb or metropolitan area A and B) may experience two different processes of assimilation. Similarly, alternate spatial scales potentially reflect differential roles and impacts associated with broader issues such as racism or labor markets. At small spatial scales, for instance, local group differences may play an instrumental role in the assimilation process via day-to-day interaction, as in the case of Miami's Haitian population.

At the metropolitan, regional, or national scale, evidence of what might be defined as *spatially* segmented assimilation is also found. McHugh et al. (1997), for instance, highlighted the importance of the national scale in interpreting the assimilation of Cubans within America through the segmented assimilation framework. Likewise, immigration is transforming some regions of the U.S. (notably California and Florida) into places where non-whites are (or will soon be) the majority, redistributing political power from the white, European population and destabilizing existing (mainly white) cultural norms. Simultaneously, these processes create the potential for negative responses to immigration, evidenced by California's Proposition 187 (Clark, 1998) or the 'balkanization' debate (see, for example, Ellis and Wright, 1998a; Frey, 1996; Gimpel, 1999), both of which manifested themselves differentially across space, having implications vis-à-vis public and private reception and consequently for the assimilation of immigrants into American society.

DATA AND METHODS

Irrespective of spatial scale, questions including which group(s) follows which path of assimilation, along with how and why assimilation is achieved, are central. The settlement patterns of immigrant groups can be analyzed at a variety of spatial scales, including their distribution across major metropolitan areas and immigrant gateways as well as within metropolitan areas. The analysis in the following paper is therefore divided into two sections. In both sections, immigrant cohorts were defined by period of arrival and age (30–64) in 1990, thus capturing labor force participants while avoiding location decisions that are potentially based upon young and elderly dependents. Using the 1990 PUMS, two cohorts are defined, comprising (i) those that arrived between 1975 and 1984, and (ii) those that arrived between 1965 and 1974. All immigrants needed to be resident in the U.S. in both 1985 and 1990, minimizing problems with the 'come to stay question' (Ellis and Wright,

1998b). Controlling for both period of arrival and age also helps to remove 'compositional effects', which capture a diverse set of issues but cloud conclusions if not adequately controlled for (Myers and Lee, 1996; Newbold, 2001). For the purposes of this paper, the analysis was restricted to six of the largest immigrant groups in 1990, including Chinese[1], Filipino, Mexican, Indian, Dominican, and Salvadoran immigrants. Selection of these groups was predicated upon their population size, their history of immigration (i.e., contrasting recency of major flows), and existing literature that describes spatially dispersed populations (i.e., among recent Indian immigrants) or more concentrated populations (i.e., Dominicans).

In the first section, the focus is upon these national groups across metropolitan areas, echoing Funkhouser's (2000) metropolitan hierarchy. The metropolitan center having the single largest proportional share of a group's population was defined as the 'primary' center for each of the six groups. This 'primary' center could be loosely equated with the geographical notion of a 'primate city'. 'Secondary' and 'tertiary' centers are also defined, where secondary centers are those metropolitan areas with an immigrant population greater than 10,000 for that same group, and tertiary centers are all remaining centers.[2] New York, for example, would represent the primary concentration of Dominicans (nearly 80 percent), and Boston and Miami are secondary centers (with Dominican populations of 4.5 (11,285) and 5.4 percent (13,486) in 1990, respectively).[3] In effect, a simple settlement hierarchy is created, with the metropolitan area having the largest concentration reflecting the 'core' center. On average, immigrants with lower levels of human capital and less acculturation (relative to other immigrant groups) may cluster where their group is most dense. In contrast, those with the opposite qualities are more likely to be found in smaller, secondary or tertiary centers with lower group densities. Tertiary centers are likely to reflect relatively small or dispersed settlement areas, while the core and secondary areas will dominate the settlement system, attracting internal migrants (co-nationals who arrived in the country at an earlier date) and new immigrants alike with their large immigrant communities. Although such trends would reflect averages or generalities, with a need to mediate the conclusions owing to different economic conditions in different centers, along with the presence and role of multiple labor markets within each center, deviations from the expected pattern would suggest problems with the spatial assimilation model as different origin groups arriving in the country at similar times experience different trajectories of adjustment.

In the second section, the geographic scope shifts to focus upon the experience of immigrants within the New York metropolitan area, with the analysis restricted to those groups for which New York was the primary metropolitan area. With a 1990 population of 17.9 million spanning three states, the New York CMSA was the second largest immigrant magnet (after Los Angeles) between 1985 and 1990, receiving over 714,000 immigrants (Frey, 1996), clearly reflecting its historically important role as an immigrant gateway. In addition to a descriptive analysis of the spatial distribution and associated measures of assimilation of those groups for which it was the primary center, logistic regression is used to examine the determinants of

central city versus outlying residence for these immigrant groups. The dependent variable is central city residence versus residence location outside the central city, a distinction that provides an indicator of residential location, particularly given historical role of the central city as an immigrant magnet, the heterogeneity of urban and suburban areas outside the city, and the inclusion of rural spaces within the CMSA. While crude, it has been widely used by other researchers (e.g., Alba et al., 1999; Frey and Speare, 1988; Massey and Denton, 1987). This central city/outlying area dichotomy was defined in terms of Public Use Microdata Areas (PUMAs).

Differences in the geographic distribution, both across the settlement hierarchy as well as within the New York CMSA, are evaluated through a series of variables relevant to assimilation issues and residential location choices, and which have been commonly employed in previous analyses (e.g., Allen and Turner, 1996; Alba et al., 1999; Newbold and Spindler, 2001). Variables measuring cultural assimilation include self-rated English abilities (speaks English only or 'good' English abilities versus speaks English poorly)[4]. Given expectations derived from spatial assimilation theory, those having better English abilities would be more likely to locate outside of New York City or in secondary or tertiary centers. In addition, citizenship (naturalized citizen versus non-citizen) is included within the models. Although not a requisite for assimilation, citizenship may be viewed as an indicator of commitment and permanency within the U.S., with no prior expectations associated with it. Assimilation is also measured by a set of economic indicators, including occupation (managerial and professional, laborer, and 'all other' occupations), education (less than high school, high school graduate, and post-secondary education), class of worker (employed, self-employed, not in the labor force), and poverty status (above or below), with poorer status among these variables associated with residency in the primary or central city. Age (30–39, 40–49, 50–64), sex, marital status (married, not married), and period of arrival (1965–74 and 1975–84) are included as additional controls relevant to location choice. While there are no a priori expectations assigned to age, gender, and marital status effects, period of arrival may capture short-term changes in locational choice, with earlier arrivals potentially more likely to reside outside the central city and primary center.

RESULTS

Inter-Urban Variations in Assimilation

Table 1 identifies the primary metropolitan areas for the selected immigrant groups in 1990, with Table 2 identifying secondary centers and the percent population in tertiary areas. Primary centers are easily identifiable for both Salvadorans (Los Angeles, 50.2 percent) and Dominicans (New York, 80.4 percent). Comparable concentrations of 1965–74 and 1975–84 arrival cohorts were also found in these two metropolitan areas. Among the remaining groups, the dominance of a single

Table 1: Primary centers for selected immigrant groups, 1990.

	All immigrants[1]		*1965–74*	*1975–84*
Origin	*Primary center*	*% in Primary*	*Arrivals*[*] *(%)*	*Arrivals*[**] *(%)*
Dominicans	New York	80.4	79.7	81.7
Salvadorans	Los Angeles	50.2	48.1	54.0
Chinese	New York	23.6	25.3	23.4
Mexicans	Los Angeles	36.6	39.7	36.9
Indians	New York	23.8	20.7	24.7
Filipinos	Los Angeles	21.5	19.2	25.5

[*]Includes all immigrants resident in the U.S. in 1990 and aged 5+. Primary, secondary, and tertiary center definitions are based upon this population.
[**]Aged 30–64 in 1990.

Table 2: Secondary and tertiary centers for selected immigrant groups, 1990.

Origin	*Secondary centers*	*% in tertiary*
Dominicans	Boston, Miami	9.9
Salvadorans	New York, San Francisco, Washington, Houston	14.1
Chinese	Los Angeles, San Francisco, Chicago, Philadelphia, Washington, Boston, Houston, Seattle, Honolulu	22.6
Mexicans	New York, Chicago, San Francisco, Dallas, Houston, San Diego, Phoenix, Denver, Sacramento, Stockton, Fresno	32.9
Indians	Los Angeles, San Francisco, Chicago, Philadelphia, Washington, Houston	40.2
Filipinos	New York, Chicago, San Francisco, Washington, Seattle, San Diego, Sacramento, Honolulu	28.4

metropolitan center is weaker. Unlike Dominicans who predominately cluster in the New York CMSA, the primary centers for Chinese, Filipinos, Mexicans, and Indians (New York or Los Angeles) each have less than 40 percent of the total population for each group, reflecting either their long settlement histories within the U.S. (i.e., Chinese and Mexicans), or the apparent ability of a group to disperse upon arrival, characterized by recent immigrants from India. Still, the primary centers contain a

significantly larger population than the next largest center. With 18.5 percent, San Francisco is, for example, the second largest center for Filipinos. In addition, it is the second largest metropolitan center for Chinese (20.0 percent), while only 9.4 percent of Indians reside in Los Angeles, making it the second largest metropolitan area for this group.

Significant differences in the spatial distribution of immigrant and individual attributes were also noted (Figure 1). Immigrants who are located in primary centers, relative to those in tertiary centers, were more likely to rate their English abilities as 'poor', more likely to have less than a high school education, and less likely to own their own home, which may reflect the housing mix and choices within major metropolitan areas. In addition, immigrants in primary centers were less likely to be engaged in managerial and professional occupations, more likely to be below the poverty line, less likely to be naturalized citizens, and less likely to be engaged in self-employment. Even among immigrant groups that have a longer history of residency within the U.S., such as the Chinese, the results are surprisingly similar across space.[5]

Two further generalizations may be made from these figures. First, although increasing duration of residence within the U.S. appears to result in increased levels of human capital, time does not appear to remove the observed spatial gradients, with the observed spatial relationships holding for both cohorts. For example, among 1965–74 Chinese arrivals residing in primary centers in 1990, only 36.6 percent ranked their English abilities as poor compared to 48.7 percent among 1975–84 arrivals. At the same time, English abilities improved in secondary or tertiary areas for both groups, with only 14.4 percent of 1965–74 arrivals residing in tertiary centers ranking their English abilities as poor compared to 26.4 percent of 1975–84 arrivals in the same location. Likewise, earlier (1965–74) arrivals record higher levels of home ownership or naturalization than 1975–84 arrivals. From a spatial perspective, both home ownership and naturalization rates are lowest in the primary center, but improve in secondary and tertiary centers. Second, if we distinguish between 'primary centers' and 'all others', many of these relationships remain, with individuals located in the primary centers characterized by lower levels of human (i.e., education, language ability), social (i.e., naturalization), and economic capital (i.e., home ownership, occupation, poverty status).

Overall, the results are generally consistent with the spatial assimilation hypothesis, characterized by an emerging pattern of immigrants with lower human capital and acculturation clustering in primary metropolitan areas. Conversely, those with the opposite qualities are found in metropolitan areas with lower group densities. Despite these general findings, spatial gradients are not always evident, or are misleading. For example, while lower rates of poverty may be expected in tertiary centers relative to primary centers, Mexican immigrants (both cohorts) illustrate *higher* poverty rates in these locations. Likewise, spatial assimilation theory would argue that English language abilities would be greater in tertiary centers, yet this is not the case among Mexicans and Indians. Among Mexicans in tertiary centers, greater than 45 percent

ranked their English ability as 'poor', with relative consistency across space in English language abilities among Mexicans regardless of arrival cohort. Similarly, there is relatively little (but significant) spatial variation in English language abilities among Indians, with less than 10 percent rating their abilities as poor.

These differences are significant since settlement outside of primary destinations has typically selected those who spoke English well, a barrier that no longer seems to exist, or (at a minimum) has been weakened (Alba et al., 1999, 2000). Keeping in mind that the results reflect a single period only, they suggest that the spatial assimilation model may be problematic, at least for Mexicans and Indians, a question that is explored further in the following section.

Intra-Urban Variations in Assimilation: The New York CMSA as an Example

Focusing upon Indians, Chinese, and Dominicans, Table 3 reports the division of groups between New York City (composed of its five boroughs) and outlying areas, which make up the bulk of the New York CMSA, along with location quotients.

Table 3: Population distribution and Location Quotients of the foreign- and native-born in New York City and its outlying areas: Selected immigrant groups.

	New York City		*Suburban areas*	
Origin and arrival cohort	*%*	*LQ*	*%*	*LQ*
Chinese (%)				
1975–84 arrivals	76.0	2.7	24.0	0.3
1965–74 arrivals	70.9	2.5	29.1	0.4
Indians (%)				
1975–84 arrivals	37.3	1.3	62.7	0.9
1965–74 arrivals	28.4	1.0	71.6	1.0
Dominicans (%)				
1975–84 arrivals	80.9	2.8	19.2	0.3
1965–74 arrivals	83.1	3.0	16.9	0.2
Other foreign-born (%)				
1975–84 arrivals	51.4	1.8	48.6	0.7
1965–74 arrivals	50.5	1.8	49.5	0.7
Total foreign-born (N)				
1975–84 arrivals	382,566		240,750	
%	61.3		38.7	
1965–74 arrivals	336,411		257,796	
%	56.6		43.4	
Total native-born				
N	1,901,516		4,510,699	
%	29.7		70.4	
Native-born Blacks				
N	566,660		435,427	

Figure 1: Personal attributes (%) by arrival cohort and selected origins for primary, secondary, and tertiary centers, 1990 (Shaded bars indicate a lack of statistical significance at $p < 0.05$ between the primary and other center).

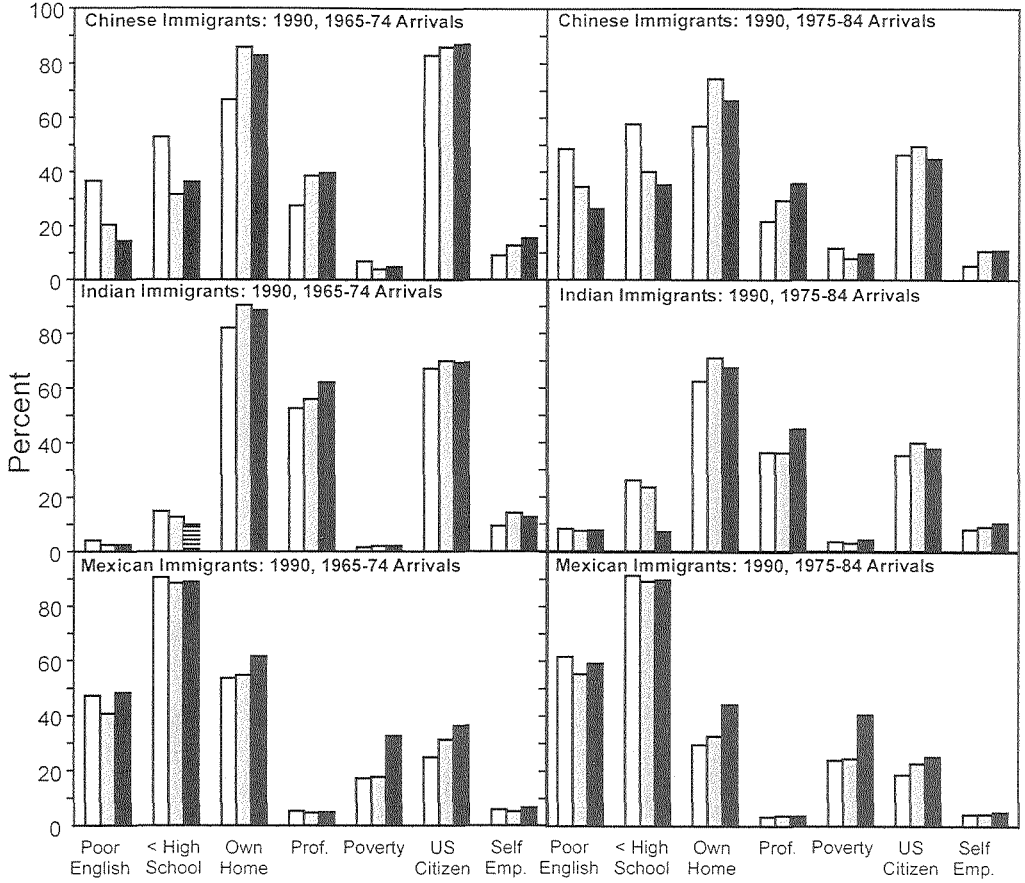
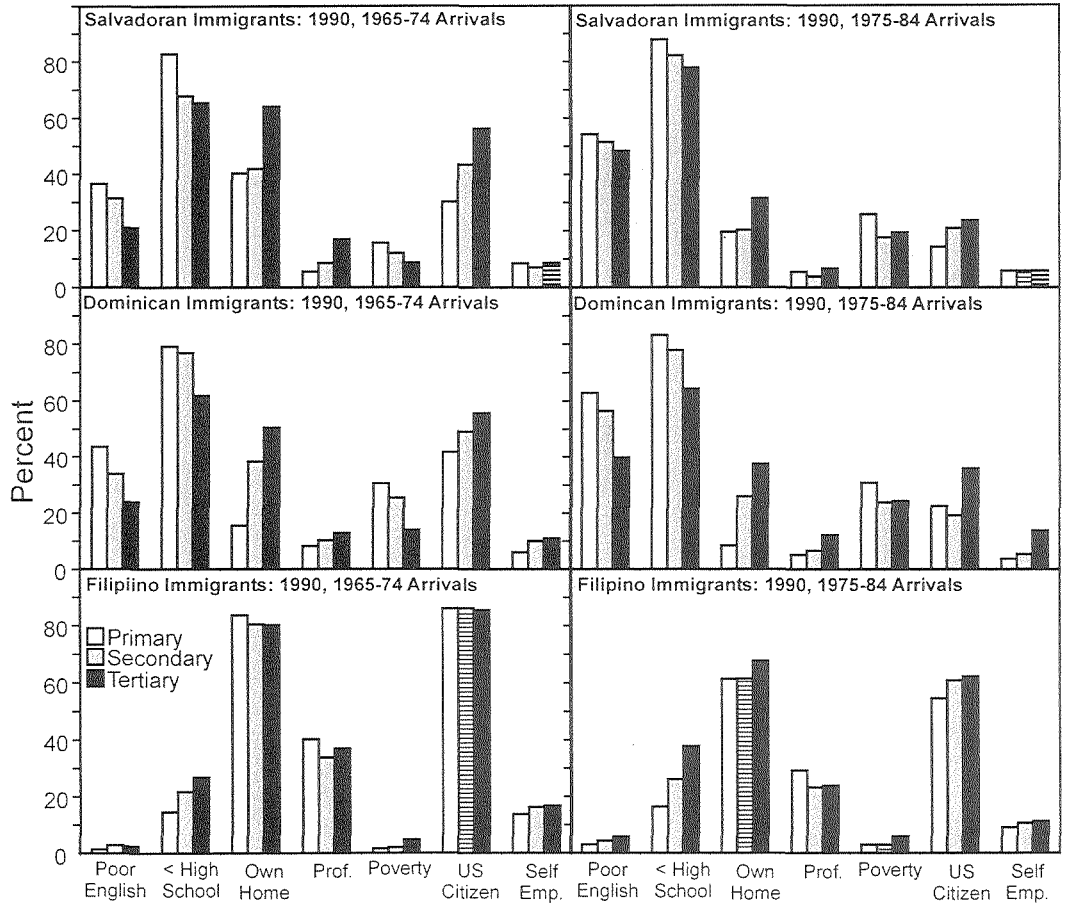


Figure 1: con't.



Although nearly 57 percent of native-born Blacks reside in New York City, approximately 70 percent of the native-born population reside outside its boundaries, making it highly suburbanized. Relative to the native-born, Indian immigrants show the greatest similarity, with nearly 72 percent of 1965–74 arrivals residing outside the central city in 1990 and near unity location quotients, suggesting a narrow gap between them and the native-born population. The majority of immigrant groups are, however, predominantly concentrated in New York City proper. Among Dominicans, for example, nearly 80 percent live in the five boroughs that compose New York City. Chinese immigrants are nearly as concentrated, with greater than 70 percent residing in the city. Representation outside New York City also generally increases with increasing duration of residence. Among Chinese immigrants arriving between 1975–84, only 24.0 percent resided outside the city in 1990, compared with 29.1 percent of 1965–74 arrivals. Although these differences are not large, the findings are consistent with the restructuring of settlement patterns and spatial assimilation. Dominican immigrants were the exception, with earlier arrivals (1965–74 entrants) having a lower representation outside New York City relative to more recent arrivals.

Similar to that observed at the national scale, there is also a strong spatial component to these differences as revealed by Figure 2. Consistent with the spatial assimilation model, those residing within New York City typically have poorer English abilities, lower educational attainment, are less likely to own their own home, and are less likely to be engaged in professional occupations. In addition, they are more likely to be below the poverty line and less likely to be naturalized citizens. Most groups show little spatial differentiation with respect to self-employment, while keeping period of arrival constant.

As was noted earlier, the 1965–74 arrival cohort tended to have higher levels of human capital than more recent arrivals, suggesting differences with respect to the indicators of assimilation and potentially reflecting their adaptation to the host country. Nevertheless, distinctions between the two locations remain and are consistent with the spatial assimilation model. Both poverty and educational attainment, for example, are closely allied with location, with those having less than a high school education or being below the poverty line more likely to be found in New York City. In other words, generally lower levels of immigrant or individual capital are found in central city locations, even for those who have been in the host country for a longer period. Although duration of residence results in the upward shifting of socioeconomic status and/or human capital, these shifts may not be equated with spatial relocation.

Figure 2 also reveals potentially important differences in the levels of individual and immigrant capital between the groups. With greater than 80 percent in both cohorts having less than a high school education, Dominicans, for example, have some of the poorest levels of individual and immigrant capital relative to other groups. Likewise, poverty rates, which approach or exceed 20 percent for each arrival cohort, tend to be higher among Dominicans. Unquestionably, poverty is

important in explaining the low suburbanization rates among Dominicans, but race is also likely to be important (Alba and Logan, 1991; Massey and Denton, 1993). Home ownership rates, English ability, and engagement in professional occupations also tended to be worse among Dominicans relative to other groups.

Logistic Analysis: Suburban versus New York City Residential Choice

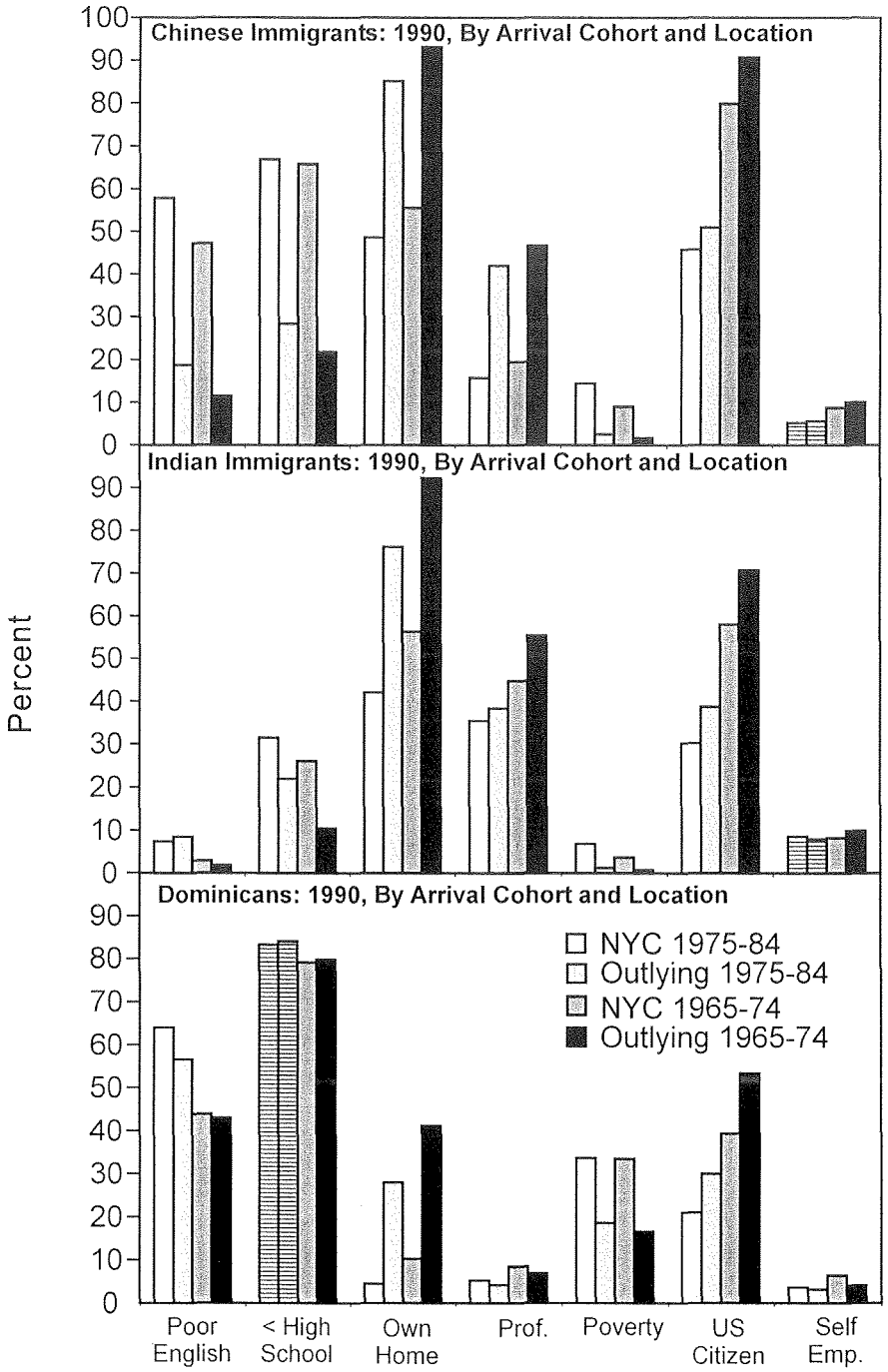
Table 4 presents the coefficients from the logistic regression analysis predicting whether an individual resides in New York City or its outlying areas (outcome = 1).[6] While the significance of the estimated coefficients varies across the three origin groups, the evidence again provides general but limited support for the spatial assimilation model. For instance, immigrants with a high school education or less, and those who were below the poverty line were less likely to reside outside New York City. In fact, poverty status and education level tend to reinforce one another, with central city residents more likely to be poorly educated and below the poverty line. Similarly, the distinction between professional and managerial relative to laborer occupations tended to reinforce each other, although this relationship was statistically significant for the Chinese only.

The results provide less empirical support for some of the variables that are central to the spatial assimilation model, including period of arrival and English ability. For instance, the results suggest that period of arrival has a mixed effect, being statistically significant for Indians and Dominicans only. Earlier arrivals (1965–74) from India were, for example, more likely to settle outside New York City than those who arrived later, consistent with expectations associated with duration of residence effects. Conversely, Dominicans who arrived between 1965–74 were less likely to reside outside New York City than counterparts who arrived later, suggesting that duration of residence had little influence on location choice for the latter group, although the bivariate distinction for location used within this model limits conclusions.

The outcome associated with English language abilities also challenges the spatial assimilation model, having mixed effects on location choice. While it might be expected that those with better English abilities would be more likely to reside outside the city, the variable is statistically significant in a meaningful way (i.e., immigrants with poor English ability more likely to reside in New York City) only amongst the Chinese who rank their English abilities as poor. For the remaining groups, English language abilities either did not significantly determine residential location (i.e., Dominicans), or had a sign that was counter to expectations (i.e., Indians), such that those who ranked their English abilities as poor were more likely to reside outside New York City. While English language proficiency is widespread among the latter group, making it less of an issue in settlement choice, English language proficiency is less widespread for Dominican immigrants. Yet, it does not appear to influence settlement choice within this group.

Focusing upon Dominicans, Table 4 also reveals a weak set of linkages between location choice and the variables that are central to the spatial assimilation model,

Figure 2. Personal attributes (%) by arrival cohort and selected origins for New York City and suburban areas, 1990 (Shaded bars indicate a lack of statistical significance at $p < 0.05$ between New York City and its suburban areas for a specific cohort of arrivals).



particularly when compared to Asian arrivals. Key indicators of spatial assimilation, such as English ability and education are insignificant, having little bearing upon locational choice. While this could, in part, represent the organization of the New York CMSA, it also likely reflects a series of other issues. Dominicans, for example, are highly concentrated, more so than any other group considered in this paper (refer to Table 3), meaning that neither the suburban or central city choice is strongly determined by the set of factors within the model. Instead, co-national location and chain immigration are likely key factors explaining location choice within this group. While the concentration of Chinese immigrants approaches that of Dominicans, the Chinese tend to have higher levels of individual and immigrant capital than their Dominican counterparts, as well as a long-established Chinese community within New York City.

Finally, the results provide additional insights into locational choice. Younger immigrants, aged 49 or less, for instance, were generally more likely to be located in the suburbs than their older counterparts (aged 50–64), suggesting the greater importance placed upon co-ethnic communities within the older immigrant population. In addition, self-employment had no effect on residential location choice, while naturalized Indians and Dominicans were less likely to reside outside New York City. Married individuals were also less likely to reside outside New York City, suggesting their location was not based upon need for space or the 'suburban dream', but rather the consideration of co-ethnic communities, income, or the availability of housing.

CONCLUSION: SPATIALLY SEGMENTED ASSIMILATION?

Based upon the experience of European immigrants early in the twentieth century, the spatial assimilation model argued that settlement location was expected to progress from immigrant gateways and central city enclaves, ultimately leading toward dispersion into suburban locations. Yet, the near immediate settlement of recent immigrants within suburban or non-gateway locations clearly differs from the settlement patterns set out within the spatial assimilation model. Rather than taking a generation or more to achieve, recent immigrants have rapidly achieved a suburban geography, raising important questions regarding the viability and relevancy of the spatial assimilation model and the meaning of suburbanization within the context of new and increasing immigrant flows.

The preceding analysis, which considered settlement choice at two spatial scales, provides general, but also limited support for the spatial assimilation model, with suburbanization and settlement outside of major immigrant gateways and enclaves strongly related to socioeconomic status, a finding that has been consistently reported within the literature (Alba et al., 2000). Nevertheless, the spatial assimilation model is problematic, with the spatial patterning of immigrant settlement across and within metropolitan areas providing important clues to the context of the spatial assimila-

Table 4: Logistic results of residential choice, Central New York City versus outlying areas: Selected Immigrant Groups Aged 30–64, 1990.

Variable	*Chinese*		*Indians*		*Dominicans*	
	Coeff.	*t*	*Coeff.*	*t*	*Coeff.*	*t*
Constant	0.357	1.9	1.308	5.6	-0.752	-3.4
Gender:						
Female	0.364	4.3	0.193	1.9	-0.013	-0.2
Citizenship: (Non citizen)						
Naturalized	0.122	1.3	-0.246	-2.5	-0.418	-4.6
Education: (College)						
< High school	-1.428	-10.9	-0.877	-4.9	0.067	0.6
High school	-0.736	-6.2	-0.613	-4.1	0.122	0.9
English ability: (Good/Only)						
Poor English	-0.752	-6.4	0.439	2.0	-0.106	-1.2
Age: (50–64)						
Aged 30–39	0.145	1.2	0.375	2.7	0.006	0.5
Aged 40–49	0.376	3.2	0.245	1.9	-0.039	-0.3
Arrival period: (1975–84)						
Arrived 1965–74	0.179	1.9	0.357	3.2	-0.235	-2.7
Occupation: (Other)						
Managerial & Professional	0.513	5.4	0.093	0.9	-0.146	-0.8
Laborer	-0.761	-4.8	-0.004	-0.0	0.614	6.5
Class of worker: (Not employed)						
Employed	-0.280	-2.4	-0.045	-0.3	0.231	1.9
Self-employed	-0.420	-2.3	-0.020	-1.0	-0.088	-0.4
Marital status: (Not married)						
Married	-0.518	-6.6	-0.596	-5.6	-0.273	-4.3
Poverty status: (Above)						
Below poverty	-1.362	-5.6	-1.445	-4.2	-0.646	-5.9
N (unweighted)	3,602		2,284		3,933	
Rho-squared	0.206		0.056		0.052	
% Correct	79.8		65.4		65.5	

Reference groups identified in brackets. Shaded cells are significant at $p < 0.05$.

tion process. First, recent arrivals are not confined to or concentrated within older, urban areas. Instead, many newly arrived immigrants locate outside traditional areas of concentration (Newbold and Spindler, 2001) and in locations with a greater range of options and opportunities reflecting changing employment patterns within metropolitan areas and across the U.S. (Greene, 1997; Pandit and Davies-Withers, 1999).

Second, the finding that language ability had little impact upon location choice suggests a potential weakening of a historically strong and theoretically key component of the spatial assimilation model, a phenomena also noted by Alba et al. (2000). Clearly, the current analysis is based upon a single period only, meaning that longitudinal analysis is needed to further test and verify trends, but the results are intriguing. For instance, rather than settling in locations where a native language could be relied upon, recent arrivals are either already adept at the English language, or recreate ethnic neighborhoods in suburban locations, evidenced by the creation of Asian communities in suburban locations across the country. This process is abetted by chain migration, such that as the suburbanization process continues, the concentration of immigrants in suburban locations increases. Alternatively, language ability is not a barrier to suburban settlement, with immigrants having equally poor (good) English language abilities in both suburban and central city locations.

Consequently, spatial assimilation may not be a necessary or pre-requisite step in the overall assimilation process as it has been in the past. If, as the findings suggest (given the caveat of a single period analysis as noted above), the spatial assimilation model is flawed, then relative location (i.e., central city or suburban) in space may be less of an indicator of the assimilation process in general than it has in the past for some groups, a finding which is consistent with conclusions found within the recent literature (Alba et al., 1999; Alba et al., 2000; Zelinsky and Lee, 1998). Consequently, the spatial assimilation model must be revised or refuted. Alternatively, echoing Wright and Ellis (2000), place should be revealed as a poor indicator of assimilation, and one that is frequently 'loaded' with notions of assimilation into a white, middle-class society. Collectively, the observed differences in personal attributes and spatial distribution imply that spatial assimilation and its associated hallmarks of improved language acquisition and socioeconomic status may not be occurring equally or at the same rate across groups, echoing the segmented assimilation framework. In this case, some groups are allowed to acculturate quickly to American society while others are assimilated into an underclass or other reference group. Differences in the initial quality of arrivals, self-selectivity, cultural and social needs, and/or larger societal pressures such as racism and discrimination—central concepts defining segmented paths of assimilation—are likely to account for these differences. The relatively lower rates of adjustment among Latin American origins, for example, are likely to represent the generally less favorable reception and the more limited economic success experienced by this group within the U.S. (Bean and Tienda, 1987; Moore and Pinderhughes, 1993), and/or assimilation into the urban underclass.

Yet, the weakness of the segmented framework is its treatment of space, leading to a need for a *spatially* segmented framework. Although space does influence assimilation at the local scale within the framework, it does not easily allow alternate spatial scales to influence the process. At the very least, the theory must recognize the role of broader spatial scales, where Federal policies, race, and labor markets affect assimilation in differential, but no less important ways. In other words, the attributes that define segmented assimilation are equally (if not more so) applicable at alternate spatial scales, relationships that must be explored in future research.

NOTES

1. Chinese origins include Hong Kong and Taiwan.
2. Since there is no accepted threshold for what constitutes an ethnic concentration or community, the thresholds are arbitrary and meant to capture sufficient populations at the secondary or tertiary scales. Primary versus 'all other' locations were tested to verify spatial differences.
3. Primary, secondary and tertiary centers are defined based upon the total immigrant population (aged 5 and over) in 1990, based upon estimates drawn from the 1990 PUMS.
4. 'Good' English reflects those who speak English only, or self-rate their abilities as 'well' or 'very well'. 'Poor' English abilities include those who self-rate as 'not well' or 'not at all'.
5. The same conclusions apply to Jamaicans, Cubans, and Germans, three other groups that were examined but not included within this paper.
6. Note that Rho-squared is a measure of model fit that varies between 0 and 1, but does not indicate the percent variation explained by the model and cannot be evaluated across models to compare their fit.

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