The Geographic Diffusion of the Foreign Born and the Shifting Scale of Spatial Assimilation

Matthew S. Hall
Department of Sociology and Population Research Institute
The Pennsylvania State University

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Abstract

The recent trend of immigrant geographic diffusion in the United States has increased the relevance of a detailed understanding of the determinants of secondary migration and a consideration of how these patterns can be observed in a spatial assimilation framework. In this paper, a regional variant of the spatial assimilation model is tested using confidential longitudinal data on immigrant domestic migration at the state and county levels. The results of this research indicate that unemployed and educated immigrants, as well as immigrants proficient in English and new arrivals, have higher odds of making secondary moves. Consistent with the spatial assimilation models, interstate and intercounty migrants with higher levels of human capital and who have been in the country longer are more likely to make moves to states and counties with smaller concentrations of immigrants and co-racials.

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The rapid growth of the immigrant population in non-traditional areas has generated a great deal of attention from demographers and migration scholars. While much of the increase is due to changing destination selection among new arrivals, a great deal can be attributed to the secondary migration patterns of settled immigrants. According to the most recent census (2000), approximately 30 percent of the in-migration of foreign-born persons to American states involved migration from another state, and over 40 percent of foreign-born in-migration to U.S. counties involved migration from another county (Perry and Schachter 2003). While many of these migrant streams are between the standard ports of entry, relocations to new immigrant gateways have gained momentum in the last two decades and have redefined the geographic landscape of contemporary immigration. This exodus from traditional to new destinations has important implications for immigrant adaptation in the U.S. These moves are often associated with a change in the social, economic, and political environments that play important roles in shaping immigrants' paths of incorporation. In this early 21st century context of major redistributions of immigrant workers and their families to new places, immigration research would benefit from a detailed understanding of the determinants of immigrants' domestic migration, and more broadly on the implications of these moves for immigrant adaptation. To provide evidence on these themes, I address four key research questions:

1. What are the individual and contextual characteristics of immigrants making secondary moves in the U.S.?

2. Do the determinants of migration vary by the geographic scale of moves?

3. What "types" of immigrants move away from immigrant and co-racial concentrations?

4. Are hypotheses derived from the spatial assimilation perspective relevant for explaining the determinants of immigrants' decision to migrate and subsequent destinations?

Immigration scholars have been thoroughly active in documenting the recent trends in immigrants' geographic dispersion across the United States. Singer (2005) demonstrates that immigrants are increasingly being attracted to job opportunities in areas with little history of immigration. While the major destination areas still contain a majority of the immigrant population, their relative share of the total foreign-born population has declined quite dramatically overtime. But, perhaps more importantly, relative growth (percent change) in the foreign-born population in new destinations during the 1990s vastly outpaced foreign-born growth rates in traditional areas. Among the "emerging" destinations that Singer examines, the average percent change in the immigrant population between 1990 and 2000 was equivalent to well over a doubling in the foreign-born population (mean percent change of 162.5). Kritz and Gurak (2006) similarly find that a large share of foreign-born internal migrants in the 15 largest foreign-born groups are moving to metropolitan areas that have historically been home to small immigrant populations, places such as Atlanta, Dallas, Orlando, and Sacramento. Importantly, the authors show that the destinations of 8 foreign-born groups (Mexicans, Salvadorans, Guatemalans, Dominicans, Filipinos, Koreans, Vietnamese and Jamaicans) are negatively related to the proportion of the population that shares the same country of origin. The upshot of this finding is that certain immigrants are being drawn away from large ethnic communities in large numbers in search of better opportunities in new places.

Domestic migration studies have traditionally relied on human capital and social network approaches to explaining patterns of geographic mobility. More recent considerations have attempted to import the spatial assimilation framework—a predominately "intrametropolitan"

perspective—to explain immigrant migration and dispersion (Ellis and Goodwin-White 2006; Frey and Liaw 2005; Wright and Ellis 2000). Assessing the relevance of an extended or "regional" spatial assimilation model is complicated by geographic "scale." Since domestic migration entails movement at several different spatial scales (e.g., an interstate move is also an intercounty and interneighborhood move), an interpretation of a regional spatial assimilation relies model partially on scale selection.

In this paper, I use restricted longitudinal data from the 2001-2003 Panel of the Survey of Income and Program Participation (SIPP) to follow immigrants over time. Employing multinomial departure and logit destination models, I am able to generate robust estimates of the determinants of migration at different geographic scales and the characteristics of migrants who make moves resulting in a reduction in either foreign-born or co-racial concentrations. To highlight the role of geographic scale, I examine two types of migration—interstate (movement across state lines) and intercounty (mobility between counties within the same state)—with attention paid to compositional characteristics of origins and destinations. The research presented here makes three main contributions to immigration scholarship. First, this paper adds to the current literature by better isolating the determinants of immigrant secondary migration. Second, I build on the exploratory theoretical perspectives seeking to broaden the spatial scale of spatial assimilation to better incorporate regional immigrant dispersion. Third, this research improves on past cross-sectional studies by using longitudinal data analysis techniques to provide a strong test of the characteristics that shape the probability of migration and the relevance of a regional spatial assimilation framework.

Background

How can we make sense of the redistribution of immigrants away from traditional gateways?

Human capital and immigrant adaptation perspectives provide a theoretical grounding for understanding these patterns. Human capital models of migration argue that the decision of individuals and households to migrate is the result of a balancing between the perceived benefits from moving to a given destination less the perceived benefits from remaining in the origin (as well as the associated costs of the move). When benefits at destination exceed those at origin, a migration event is expected. While contemporary versions of the human capital approach to migration recognize the potential utility gained from non-economic factors (e.g., Graves and Linneman 1979), the traditional model focuses on the roles of employment, earnings, and education in guiding migration decisions. The relationship between socioeconomic characteristics and migration is complex, and a detailed articulation of the association is beyond the scope of this paper, but a few generalizations are possible. First, the unemployed and individuals and families with relative low earnings have higher rates of mobility. Since the economic benefits at the place of origin are inherently limited for the unemployed and for those with low earnings, the likelihood that the migration balancing equation of destinations and origin will be positive is higher than for their working or well-paid counterparts. However, since the costs of migration generally increase with distance, the differences between socioeconomic groupings in migration decrease as the geographic scale of moves increases. Indeed, domestic moves of 500 miles or more select positively on earnings, although the unemployed remain more likely to migrate (Schachter 2004). Second, despite the negative relationships between employment and earnings, and migration, better educated individuals are more likely to be geographically mobile, particularly in making longer distance moves that cross county or state lines (Schachter 2004). The general argument here is that the better educated compete in

regional or national labor markets, while less educated workers are employed in geographically circumscribed labor markets.

Theories of immigrant adaptation offer an alternative framework for understanding the secondary migration of foreign-born workers. The classical assimilation perspective refers to a process whereby immigrant groups grow to accept the attitudes, behaviors and beliefs of the dominant population group. This classic perspective dates back to Park's (1950) "race-relations cycle" and Gordon's (1964) synthesis of assimilation research. Gordon describes seven dimensions of assimilation—cultural, structural, marital, identity, prejudice, discrimination, and civic—that broadly define how immigrant incorporation occurs. Of these, Gordon places emphasis on structural assimilation —the formation of labor-based and friendship relationships with natives. A more contemporary version of the classical model that recognizes the importance of structural assimilation views immigrant incorporation as a function of acculturation, status attainment, and institutional mechanisms (Alba and Nee 2003).

The study of migration as an assimilation process is a natural outcome of the observation of stark differences in residential attainment between immigrants and ethnic minorities, and native whites. Placing migration in the immigrant experience is fairly straightforward: immigrants initially settle in dense ethnic communities ("enclaves") to join family, friends, and other co-ethnics where personal and cultural ties assist in the allocation of resources (e.g., finding a job or housing) and reduce exposure to out-groups (limiting opportunities but also limiting prejudicial and discriminatory contact). As immigrants gain human capital through work experience and education and become acculturated through contact with out-groups, they become both less reliant on the protection of the ethnic community and more responsive to employment opportunities outside the enclave. This "spatial assimilation" (Massey 1985)

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process should lead to an increased probability of out-migration from dense ethnic communities over time. Migration, then, is both a *reflection of* and a *mechanism for* improved economic well-being, and by courtesy, immigrant incorporation.

Scale and Spatial Assimilation

Geographic mobility in the spatial assimilation model is generally considered to be an intrametropolitan process. That is, the model posits that assimilation patterns of immigrant groups can be expressed through the observation of immigrants' mobility patterns out of and into neighborhoods within cities. The conventional approach for modeling this process is to examine city-suburb differentials between natives and immigrants, under the assumption that suburban living is superior to central city living. This assumption is based on the understanding that suburban housing is often of better quality and more affordable, suburban schools tend to receive better funding and their students have higher standardized test scores, and crime rates are generally lower than in central cities. Research in this tradition has generally found support for the intrametropolitan version of spatial assimilation (Alba and Logan 1991, 1993; Alba, et al. 1999; Logan and Alba 1993; South, et al. 2005a).

Yet recent urban research has indicated that the metropolitan landscape is vastly different now than what it once was. With industrial and commercial decentralization, central city gentrification, and sprawl, racial and class variation in residence has become less distinctive. In terms of racial, economic, and social diversity, parts of suburbia are looking more and more like the central city (Frey and Berube 2002; Hall and Lee 2007). The recent emergence of immigrant enclaves in suburban areas (Allen and Turner 2003; Li 1998) raises even more questions about the intrametropolitan model of spatial assimilation. Research has indicated that suburban residence is not necessarily determined by human and social capital characteristics or

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generational status of immigrants. For example, Logan et al. (2002) find that certain immigrant groups are more heavily concentrated in suburban areas of New York and Los Angeles than their native counterparts. In another study, Friedman and Rosenbaum (2007) find that suburban status does not mediate differences between immigrants and natives in neighborhood attainment; many immigrant families actually live in better neighborhoods than do similar natives.

This is not to suggest that the intrametropolitan version of the spatial assimilation model is no longer relevant. Indeed, the neighborhood racial composition of immigrants remains contingent on human capital and acculturation characteristics (South, et al. 2005b). Rather, my purpose is to bring attention to the fact that the conventional lens through which spatial assimilation is observed has become distorted. The rapid geographic diffusion of the foreign-born away from traditional ports of entry is also of significance, as many of these "new" destinations are smaller metropolitan areas with only recent histories of immigration. The objective, then, is to offer a model of spatial assimilation that acknowledges both the challenges of the intrametropolitan model and the shifting regional distribution of the immigrant population.

To broaden the conceptualization of spatial assimilation, it is crucial to recognize that immigrants' paths of adaptation and ultimately their socioeconomic outcomes depend both on *local* and *supralocal* contexts. The intrametropolitan model views spatial assimilation as occurring predominately at the local level. As discussed above, this perspective argues that immigrants' moves from ethnic neighborhoods to non-ethnic neighborhoods reflect their reduced reliance on co-ethnic family and friends in an enclave. Higher quality housing, the transition to homeownership, better schools and public services, and the improved employment prospects are (presumed) direct consequences of this movement. Yet, social and economic conditions beyond the immediate environment may be influential in shaping adaptation trajectories. These

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supralocal contexts include the regional condition of labor and housing markets, political orientations and contexts of reception, and accessibility to ethnic goods and services.

Several features of traditional immigrant-receiving areas are important to consider when "jumping scale" in the study of spatial assimilation. First, new arrivals pay an "ethnic" premium for residing in states and metropolitan areas with high concentrations of immigrants. The high price of residing in immigrant gateways is due to industrial restructuring that has taken place in large cities (Sassen 1995), the occupational segmentation of immigrants (Hum 2000), and the wage decrement associated with cheaper ethnic goods (Chiswick and Miller 2002). Second, the cost of housing in gateway cities is steep. Saiz (2007) shows that housing values and rent are more expensive in metropolitan areas with large immigrant populations. Ley (2007) contends that patterns of native out-migration in these cities can be explained by costly housing. The high cost of housing in immigrant gateways translates into a large rent burden (the ratio of income to rent price) for immigrants. Third, political and social contexts are generally more receptive towards immigrants in traditional destinations (De Jong and Steinmetz 2004; Graefe, et al. 2008).

The extension of spatial assimilation to a higher geographic scale acknowledges that both local and supralocal contexts shape assimilation trajectories. In this framework, spatial assimilation occurs not only when ethnic or immigrant households move from central city enclaves to middle-class suburbs, but also when households move from regions of immigrant concentration to areas with smaller immigrant populations. This latter type of migration may or may not be associated with changes in the local environment, but it will result in a new supralocal environment. A different industrial structure, a distinct set of occupational opportunities, a lower rent (or mortgage) burden; changes in the accessibility of ethnic goods,

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and a new political context are reflected in immigrant migrations from states, counties, or metropolitan areas of dense immigration to regions of lower concentration.

An important element of a regional spatial assimilation framework is the geographic scale of contexts. The scale of local environments is generally easier to conceptualize than is the appropriate scale of supralocal environments, although the former are not without for their conceptual and empirical challenges (see White 1987). The problem with supralocal environments is that regional processes operate at different geographic "levels." Contrast labor and housing markets with political climates and public assistance policies. The former represent social structures that generally operate within counties or metropolitan areas, while latter typically have a state level component to them.

What does current research on the secondary migration patterns of immigrants tell us about the relevance of a regional model of spatial assimilation? First, as noted previously, foreign-born domestic migration is increasingly characterized by a process of dispersion (Newbold 1999a; Singer 2005). While the foreign-born population has steadily increased over the last two decades, the most significant relative growth (percent change) has occurred in the rural South and Midwest (Perry and Schachter 2003). Though immigrants still tend to cluster in traditional gateway states (e.g., California, Florida, Illinois, New Jersey, New York, and Texas), rates of out-migration among the foreign-born are highest in these states. This pattern of exodus from large immigrant concentrations, and entry into regions with relatively smaller foreign-born populations is consistent with a regional approach to spatial assimilation.

Second, the migration rates among the foreign-born tend to be highest for immigrants who are at the early stages of assimilation. In other words, interstate migration is more likely among recent and non-citizen immigrants (Foulkes and Newbold 2000; Newbold 1999b; Perry

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and Schachter 2003). While this trend appears to be more consistent with a human capital approach to migration than with the expectations of spatial assimilation theory, Stamps and Bohon (2006) find that the educational levels of foreign-born Latino migrants to 'emerging gateways' are higher than are comparable levels in the traditional ports of entry, suggesting that it is immigrants who have invested in human capital that are embarking on moves to the new destinations. Third, among intermetropolitan migrants, immigrants with higher levels of human capital and better English language proficiency are more likely to make moves that result in locational improvements (i.e., lower levels of metropolitan poverty) than their less-skilled counterparts (Zhang 2006). Hall (2007) finds that naturalized immigrants have positive gains to earnings as a result of moving to states with lower proportions foreign-born. These studies are significant because they suggest not only that more-incorporated migrants participating in the diffusion to new destinations are better able to cope with the loss of the ethnic community, but also that these regional moves result in better labor market opportunities.

The Present Study

This research examines the determinants of immigrant secondary migration patterns. More specifically, it identifies characteristics that affect both the decision to migrate (departure model) and the population composition of the settling area (destination model). My intention is for these findings to inform the relevance of a broader geographic scale to spatial assimilation. I am not the first to advance a regional model of the spatial assimilation theory. Richard Wright and Mark Ellis (and colleagues) have repeatedly argued that regional economies and territorial politics have become increasingly influential in shaping immigrant incorporation (Ellis 2006; Ellis and Goodwin-White 2006; Wright and Ellis 2000). The distinctiveness of this study lies in the empirical testing of this regional framework. The focus of the analysis is on the

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characteristics that influence two types of regional migrations: interstate and intercounty (within state) moves. In addition to indentifying important individual characteristics that influence the decision to migrate and the destinations of migrants, this research estimates the impact of immigrant and co-racial concentrations at both the state and county levels on migration departure decisions, and conditions the outcomes in the destination models on these contextual factors.

Data

To examine the effect of interstate migration on economic well-being, I make use of restricted longitudinal data from the 2001-2003 panel of the Survey of Income and Program Participation (SIPP). SIPP is preferred for this analysis for two reasons: 1) migration, demographic, and economic characteristics are observed monthly; and 2) the sample includes a large number of foreign-born respondents. The SIPP design draws a nationally representative sample of U.S. households and interviews each member of selected households every four months. At each interview, respondents are asked wave-specific topical questions and a set of core questions that cover the reference month and the preceding three months. It is from this retrospective four-month window that monthly observations are collected. Interviews are additionally conducted with all people who enter a household and with members who become part of a newly formed household with an original sample member in subsequent interviews.

For the purposes of this study, I restrict the data in a number of ways. First, I select foreign-born individuals who participated in the wave 2 (month 8) migration history module, which includes questions on nativity, date of entry to the U.S, English language proficiency, and citizenship. Second, I limit the analysis to unit heads, which include both family heads and single individuals. The decision to migrate is made at both the individual and household levels (Cooke 2003, Mulder 2007). By restricting the sample to household heads, bias associated with

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counting multiple migrations within a household is eliminated. Although the unit head of single-person families can be either male or female, for married-couple families males are far more often reported as the unit head. Third, I exclude individuals who suffer from a work-inhibiting disability and those attending school, for the months in which they are enrolled. Fourth, to ensure roughly equivalent labor market potential, I set a lower age bound of 18 and an upper bound of 60 years of age.

Following these restrictions, my final working sample includes 4,118 immigrant unit heads. From this data file, I construct a person-month database where each respondent contributes four person-months for every wave in which they participate. One of the many advantages of using such a procedure is that it allows individuals who exit the survey early to contribute person-months until their exit.

For each person-month, I record several time-varying characteristics, including migration status, employment, age, and marital status. I measure two primary indicators of migration: 1) interstate migration—moves that cross state boundaries; and 2) intercounty migration—moves that cross county lines within the same state. In the departure models, intracounty migration—moves that takes places within a county, and is usually referred to as residential mobility—is also modeled. Sample attrition—exiting the survey due to death or non-follow up—and emigration are also controlled in departure models, based on information about why respondents left the survey. The departure model thus distinguishes between no migration, interstate migration, intercounty migration, intracounty migration, attrition, and emigration.

Employment status indicates whether the unit head was working or not. Since past migration research has indicated that the probability of migration is strongly related to individuals' demographic characteristics, I include respondents' age in years, race, marital status

(married=1; 0=not married), and whether young (five years of age or less) or older (six to eighteen years of age) children are present. To tap skill acquisition and human capital, I measure educational attainment (in years of schooling completed) as a time-varying covariate.

An immigrant assimilation perspective emphasizes the importance of characteristics specific to the foreign-born. I include a dichotomous variable for recent arrivals (immigrants who arrived after 1996); more settled immigrated (arrived in 1996 or before) are the reference group. I also include an indicator of whether the heads' date of arrival is unknown. Citizenship status and English language proficiency (1=speaks English well or very well, 0=does not speak English, or speaks English poorly)—both measured in the wave 2 Migration History topical module—are additionally included.

I include several time-varying measures of immigrant concentration at their appropriate geographic levels. These measures include the percent of the total population that is foreign-born and the percent of the total population that is co-racial (shares the same race/ethnicity as the respondent). Each of these are measured at the state and county levels, and for migrants, the respective values are recorded for origins and destinations. These measures are based on data from 2000 decennial censuses and the 2003 American Community Survey (ACS). Data for years between survey points are interpolated. For the destination model, I use this information to create a dichotomous variable indicating whether a migration event resulted in a reduction in the percent of the state (for interstate movers) or county (for interstate and intercounty movers) population foreign-born or co-racial.

Analytic Strategy

The data are organized as longitudinal event history files. Specifically, each panel wave in which respondents participate is recorded as four separate records (one for each month of data

responded to at each wave) such that observations refer to person-months and where the total

number of observations is equal to the sum (multiplied by four) of the total number of

respondents at every panel wave. Structuring the data in this way allows me to account for the

dynamic nature of covariates that change over time. In total 102,101 person-months are

analyzed.

With these data, I apply a discrete-time event history modeling strategy using a

multinomial logit model to predict the determinants of out-migration (the departure model), and

then apply a standard logit model to estimate, among migrants, the likelihood that a migration

results in a reduction in foreign-born or co-racial concentration. The clustering of unit

observations requires a Huber-White adjustment of the standard errors. In addition, since rates

of nonresponse in SIPP panels are moderately high (Jabine, King and Petroni 1990), I weight

observations using wave 2 (since immigrants are identified at this point) person-weights

provided by SIPP.

Departure Model

The departure model uses a multinomial logistic regression model to predict migration events.

This model is a discrete-time event history models in which "spells" begin at the start of the

SIPP observation period (2001), or in the month following a migration event. Right censoring

occurs with a migration event, a death, attrition from the survey, or the last survey interview.

Formally, this model is expressed as:

$$\prod_{i=1}^{n} \Pr\left(T_i = t_i\right) \tag{1}$$

$$\Pr(T_i = x) = P_{ix}\left(1 - P_{i(x-1)}\right)\left(1 - P_{i(x-2)}\right)\cdots\left(1 - P_{i1}\right) \tag{2}$$

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where T_i is the event variable of interest and t_i is the value observed for individual i. The

likelihood function (1), is factored such that P_{it} is the conditional probability of the event at time

t, given that the event did not occur at previous times observed in the data (2).

The coefficients in a multinomial logit model give the partial effects of covariates at time

t-1 on the log-odds of having a migration event (interstate, intercounty, intracounty, or

emigration) or attrition from the sample relative to no migration.   Calculating the log-odds

relative to another outcome is achieved by subtracting the log-odds of some event (relative to no

migration) from the log-odds of another event (relative to no migration). For sake of simplicity,

I report coefficients only for three migration events (interstate, intercounty, intracounty

migration)

Destination Model

The destination-choice analysis restricts the sample to those whose who made interstate or

intercounty moves. The interest here is on characteristics of the immigrant and co-racial

populations in the destination area. For each set of migrants, a binary logit model is estimated

that predicts the probability that a migration will result in a reduction in the percent of the

appropriate geographic level (state, county) that is foreign-born or in the percent that is co-racial.

Because state movers are also county movers, the probability of making such a move is modeled

for interstate migrants at both the state and county levels.

Results

Descriptive Statistics:

Weighted means or percentages of variables used in the analysis are shown in Table 1, for the

full sample (migrants and non-migrants), and separately by migration status. Several important

pieces of information are worth noting. First, consistent with research on the clustering of

immigrants in certain parts of the country, immigrant household heads in SIPP live in states and counties where the percent foreign-born exceeds their national representation (9.3 percent in 1996 [Hansen and Faber 1997]). Specifically, immigrants reside in states that are, on average, 18 percent foreign born and 37 percent co-racial, and in counties that are 23 percent foreign-born and 39 percent co-racial. The differences in the current states and counties of residence are smaller for secondary migrants, and there appears to be a negative relationship between state and county percent foreign-born and the geographic scale of a migration event. Second, as expected by the human capital approach to migration, secondary migrants have lower rates of employment, but higher levels of education. Secondary migrants are also, in line with previous migration studies, more likely to be recent immigrants; but, consistent with assimilation arguments, more likely to speak English well. Third, non-Hispanic black immigrants have higher rate of secondary migration, while Hispanic immigrants seem to be less likely to make secondary moves at the state or county levels. Lastly, among interstate migrants, more than half (54 percent) move to states with a smaller proportion foreign-born, but only about one-fifth (22 percent) make moves that result in a smaller percent foreign-born at the county level. A similar, though less noticeable, pattern is observed for state migrants in relation to the co-racial population.

These findings provide initial evidence of the importance of human capital (employment and education) and immigrant characteristics (date of arrival and language ability) in shaping decisions to migrate. The data also suggest that secondary migrants reside in states and counties with smaller proportions foreign-born and co-racial, and that while many migrants are making moves that result in a reduction of the state population foreign-born, fewer are making moves such moves at the county level.

Table 2 presents multinomial logistic regression coefficients (β) and odds-ratios (exp(β)) for models predicting the likelihood of an interstate, intercounty, or intracounty move occurring in a given person-month, relative to no-migration. All covariates are appropriately lagged such coefficients represent the partial effects of pre-migration characteristics on the probability of a migration event.

As was suggested in the descriptive findings and by the human capital model of migration, the likelihood of both interstate and intercounty moves are lower for the employed than for those not working. While the size of the coefficients should be interpreted cautiously in these models, due to the relative few number of people making interstate (n=129) or intercounty (n=264) moves, the findings suggest that employed immigrants are 55 and 34 percent less likely to make interstate and intercounty moves, respectively. Presumably due to the high migration costs of long distance moves, better educated immigrants are more likely to make interstate moves (but no more or less likely to make intercounty moves). While not a specific focus of this paper, the results also emphasize the importance of life cycle characteristics in shaping migration decisions. Specifically, immigrants with older children (ages 6 to 18) present are less likely to make state moves than are those without children. While the coefficients for younger children for state migration, and younger and older children for county migration are non-significant, the direction of the estimates are negative; generally implying then that children "ground" immigrants.

The spatial assimilation framework argues that better acculturated immigrants are more likely to make regional moves, reflecting their decreased reliance on the support of ethnic communities. The results in Table 2 provide mixed support for this logic. On the one hand,

immigrants proficient in English are more likely to make both interstate and intercounty moves. On the other, recent arrivals (immigrants who arrived after 1996) are also more likely to make such moves. The findings indicate that English speakers are 73 and 83 percent more likely to make state and county moves, but that recent arrivals are 13 and 40 percent more likely to make the same moves.

Consistent with previous studies on the secondary migration patterns of immigrants, I find strong evidence that the composition of states and counties have important effects on the likelihood of migration. The results suggest that large immigrant populations and large co-racial populations may inhibit the probability of state and county migration. Where this research departs from previous studies is by modeling these characteristics at different geographic scales. These findings indicate that the percent foreign born at the state level has a strong negative effect on both the likelihood of interstate and intercounty migration, but that the percent foreign born at the county level is not relevant for determining migration. By contrast, the percent co-racial is influential at shaping interstate and intercounty migration decisions at the county, but not the state level.

Destination Models:

The destination estimator is restricted to immigrant household heads that made an interstate or intercounty move during the survey period.   The interest here is in the likelihood that a secondary migration will result in a reduction in the relative proportion foreign-born or co-racial. Each of these scenarios—the probability of a "foreign-born move down" and of a "co-racial move down"—are modeled separately. In addition, since move across state lines are also moves across county lines, the likelihood of these events occurring for interstate migrants is modeled separately at the county and state level. Table 3 presents the logistic coefficients (β) and

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exponentiated coefficients ($\exp(\beta)$) for the destination models. Interstate migrants are shown in the left panel of the table; intercounty migrants in the right. As with the departure models, the estimates shown in Table 3 are all lagged appropriately to reflect pre-migration characteristics.

Several important findings are noteworthy. The departure models indicated that the unemployed and educated are more likely to make secondary moves. However, based on the findings in Table 3, it appears that at nearly all geographic levels, and for both interstate and intercounty migrants, employed immigrants are more likely to make moves that result in a reduction in the foreign born or co-racial population. Education (except in the case of determining reductions in the co-racial population for county movers) does not seem to be a powerful factor in shaping the concentration of secondary migrants' destinations. Since I do not have information here on characteristics of the labor or housing markets of these areas, or better yet, on the perceived benefits of migration to these areas, these findings should not be interpreted as running contrary to a human capital approach to migration. Rather, the finding that migrants with a greater stock of human capital embark on moves to areas with less dense immigrant and co-racial populations is preliminary support for an assimilation perspective.

Further evidence supportive of the spatial assimilation framework is also apparent in Table 3. Specifically, immigrants moving to state with less dense foreign-born and co-racial populations are more likely to have acquired citizenship and be able to speak English well. In fact, the largest effect observed in the model is for English language proficiency on the likelihood that state movers will move to counties with a smaller proportion co-racial. The odds-ratios indicate—though, should be considered cautiously—that English speakers are five time more likely than non-English speakers to make such moves. While the direction of the same effects for intercounty migrants are similarly positive, the coefficients are not significant,

possibly reflecting the greater financial and psychic costs of making longer distance (state) moves.

Greater indication of a process of regional spatial assimilation is shown by the consistent negative effect of a recent date of immigration on the likelihood that an interstate or intercounty migration will result in concentration reduction. The odds-ratio for recent immigrant indicates that secondary migrants who are new arrivals to the U.S. are about 25 percent less likely to move to states with smaller foreign-born or co-racial populations; and between 45 and 15 percent less likely to make similar moves at the county level.

Finally, while I am not able to provide detailed information on differences in the determinants of migration by race/ethnicity (e.g., interactions between race and individual characteristics of migrants), Table 3 suggest that net of demographic, socioeconomic, and immigrant characteristics, foreign-born Hispanics are more likely to make interstate moves that lead to a reduction in the state percent foreign-born and in the county percent co-racial. Considering the important research documenting the rise of Hispanics in rural America (Kandel and Cromartie 2004), this is an important finding that deserves further attention.

Conclusions and Discussion

As the geography of the immigrant population in the U.S. increasingly becomes characterized by a process of spatial dispersion, important questions are being raised regarding who's going where and their success in new destinations. The purpose of this research has been to inform this discussion by examining the individual and contextual characteristics that influence secondary migration patterns of the foreign-born. Using restricted data from SIPP 2001-2003, this research tracks two regional migration events—interstate and intercounty moves—for immigrant

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household heads, and employs discrete-time event history modeling strategies to model the determinants of migration departure and destination decisions.

The findings from the departure models indicate that unemployed immigrants are more likely to migrate across both state and county lines. Reflecting both the high costs of migration and broader scale of skilled workers' labor markets, educated immigrants have a greater likelihood of making interstate moves. The results provide mixed evidence for an assimilation perspective on the general secondary migration patterns of the foreign born. On the one hand, English-speaking immigrants are more likely to make both interstate and intercounty moves; on the other, recent arrivals are also more likely to make the same moves. This finding could reflect unique migration flows (acculturated immigrants and new arrivals being attracted to different places), dual migration streams (new destinations are attracting various types of immigrants), or greater specificity of individual immigrants (recent immigrants who speak English are moving). In interaction models not shown, I find initial evidence of this latter interpretation. Future research needs to further examine these seemingly conflicting findings.

A primary component of this research has been to test the relevance of a broader conceptualization of spatial assimilation theory. I argue that both local (e.g., neighborhood) and supralocal (e.g., regions) contexts shape the incorporation trajectories of immigrants. Regional economics, housing markets, contexts of reception, and the political climate are some of the important supralocal processes that influence immigrant adaptation. Jumping scales from the local to the supralocal is a central element of a regional model of spatial assimilation. More specifically, a regional spatial assimilation framework maintains that higher-skilled, better-incorporated immigrants—those who are less reliant on the protection of local and extralocal immigrant communities—will move to areas with a smaller concentration of immigrants to take

advantage of beneficial labor and housing opportunities in these areas. This research offers initial support for this process. The findings show that among immigrants making moves to other states, those who were previously employed (at origin), speak English well, and gained citizenship are more likely to move to states and counties with less dense immigrant and co-racial populations. Further evidence of this model is suggested by the strong negative relationship between these types of moves and having recently arrived to the U.S. Support for this regional spatial assimilation model is less evident for county movers, but new arrivals are less likely to make county moves resulting in a reduction in the county percent foreign-born or co-racial.

An important aspect of the current study has been to evaluate the role of geographic scale in departure and destination decisions. The analysis examined the impact of immigrant and co-racial concentrations at both the state and county levels in the decision to make domestic moves, as well as the characteristics of secondary migrants that determine levels of concentration in destination states and counties. The results indicate that these concentration processes operate differently according to geographic scale. In the departure decision, the findings show that immigrant concentrations (percent of total population foreign born) at the state level reduce the likelihood of secondary migration. Conversely, at the county level, co-racial concentrations (percent of the total population of the same race or ethnicity) lessen the odds of domestic migration. The different scales at which these population characteristics operate reflect the nature of unique contextual processes. While not directly tested here, these include political climates, contexts of reception, and policies regarding immigrants—processes that are more likely to operate at the state level and impact the total immigrant population rather than specific immigrant ethnic groups. The social benefits of immigrant communities and ethnic enclaves on

the other hand are smaller in geographic scale—typically operating at either the local or metropolitan/county levels. Expressing the results from the destination models in this context is more complicated, but it is worth noting that the magnitude of the effects of arrival recency and language ability for immigrant making the most "spatially assimilating" moves—migration to counties with a smaller percent co-racial—are larger than are the effects on migration at other scales. The implication is that immigrants most likely to relocate away from ethnic communities are those who have been in the country longer and who speak English well; a finding well-consistent with spatial assimilation theory.

Certainly, this paper raises as many questions as it seeks to answer. The roles of housing and labor markets are not examined here, nor are specific measures of immigrant social networks analyzed. Moreover, due to constraints in sample size, this study is unable to differentiate between country-of-origin groups. Since immigrants enter the U.S. with diverse sets of skills and settlement intentions, and are treated differently by the host population, immigration studies would benefit from further examining group differences in patterns of regional spatial assimilation. Similarly, in any discussion of contemporary immigrant incorporation in the U.S., race and ethnicity deserve close attention. Considering that a majority of immigrants to the U.S. are non-white, future work should examine if spatial assimilation processes operate in a similar fashion for immigrants of different racial or ethnic background.

In close, the findings presented in this research are generally supportive of a regional model of spatial assimilation. While recent arrivals and unemployed immigrants have comparably high probabilities of making secondary moves, their more established counterparts, as well as immigrants who have made gains in terms of English language ability and citizenship, are more likely to move to areas with smaller foreign-born and co-racial concentrations. This

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study has also focused attention on the importance of geographic context and spatial scale, documenting the importance of state-level immigrant concentrations and county-level co-racial concentrations in reducing the likelihood of domestic migration. In this 21st century context of immigrant redistribution, these serve as important considerations for better understanding both the "who" and "how" of secondary migration streams.

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Table 1: Descriptive statistics for variables used in analysis

	Full Sample	Interstate migrants	Intercounty migrants	Intracounty migrants
Non-Hispanic White	.23	.25	.32	.21
Non-Hispanic Black	.07	.13	.13	.07
Non-Hispanic Asian	.23	.26	.23	.20
Hispanic	.47	.36	.32	.52
Female	.25	.18	.27	.29
Age	38.36	36.69	33.83	34.78
Married	.50	.59	.45	.45
Has young children (0-5)	.22	.24	.26	.27
Has older children (6-18)	.42	.35	.39	.40
Homeowner	.53	.37	.34	.40
Employed	.55	.53	.51	.58
Educational attainment	11.94	13.97	12.22	11.87
Recent immigrant	.21	.29	.32	.35
Arrival time unknown	.18	.10	.16	.18
Naturalized	.37	.42	.31	.27
Speaks English well	.73	.87	.83	.67
State percent foreign born	18.23	12.65	16.08	17.15
State percent co-racial	36.93	30.44	29.89	38.64
County percent foreign born	23.49	14.54	19.42	21.32
County percent co-racial	38.78	30.32	31.87	40.37
State"foreign-born down" move	--	0.54	--	--
State "co-racial down" move	--	0.46	--	--
County "foreign-born down" move	--	0.22	0.44	--
County "co-racial down" move	--	0.36	0.38	--
N of persons	4,118	129	264	965

Notes: All individual level variables are lagged to reflect pre-migration traits; contextual measures represent current characteristics

Table 2: Multinomial logit models predicting migration status (vs. no migration) 2001-2003

	Interstate Move		Intercounty Move		Intracounty Move	
	β	$\exp(\beta)$	β	$\exp(\beta)$	β	$\exp(\beta)$
Non-Hispanic Black	-.043	.958	.296	1.344	-.142	.868
Non-Hispanic Asian	.031	1.032	-.110	.896	-.074	.929
Hispanic	.278	1.320	-.209	.812	-.184	.832
Female	-.694	.500	-.120	.887	-.085	.918
Age	.124	1.132	.085	1.088	-.010	.990
Age-squared	-.002	.998 *	-.001	.999 *	.000	1.000
Married	-.055	.946	-.002	.998	.064	1.066
Has young children (0-5)	-.184	.832	-.013	.988	.021	1.022
Has older children (6-18)	-.681	.506 **	-.331	.718	-.031	.970
Homeowner	-.551	.576 **	-1.582	.206 ***	-1.163	.313 ***
Employed	-.792	.453 ***	-.412	.662 *	.101	1.107
Educational attainment	.112	1.118 ***	-.031	.970	.015	1.015
Recent Immigrant	.060	1.062 *	.124	1.132 *	.338	1.402 **
Arrival time unknown	-.309	.734	-.027	.974	.283	1.327 *
Naturalized	.122	1.129	.369	1.447	.045	1.046
Speaks English well	.548	1.729 *	.604	1.830 *	-.137	.872
State percent foreign-born (origin)	-.038	.963 *	-.030	.971 *	.007	1.007
County percent foreign-born (origin)	-.009	.991	-.002	.998	-.025	.976 ***
State percent co-racial (origin)	.008	1.008	.008	1.008	.005	1.005
County percent co-racial (origin)	-.019	.981 **	-.017	.983 *	.003	1.003

Notes: N=102,101; (*) $p<.05$; (**) $p<.01$; (***) $p< .001$; Number of migration events are controlled; variables are lagged to reflect pre-move characteristics

Table 3: Logit models predicting the likelihood of a foreign-born or co-racial move down, by geographic level and migration type, 2001-2003

	Interstate Migrants								Intercounty Migrants			
	Foreign born down move				Co-racial down move				Foreign born down move		Co-racial down move	
	State		County		State		County		State		County	
	β	exp(β)	β	exp(β)	β	exp(β)	β	exp(β)	β	exp(β)	β	exp(β)
Non-Hispanic Black	-.035	.965	.496	1.642	.284	1.328	.078	1.081	.243	1.276	-.328	.721
Non-Hispanic Asian	.633	1.884	.504	1.655	-.234	.792	.857	2.356	.570	1.768	-.152	.859
Hispanic	.733	2.082 **	.683	1.979	.651	1.917	.955	2.599 *	.257	1.293	-1.021	.360 *
Female	-.342	.710	-.351	.704	-.235	.791	-.597	.550 *	-.797	.451 **	.034	1.034
Age	.016	1.016	.334	1.397 ***	.051	1.052	.266	1.305 **	-.012	.988	.106	1.111
Age-squared	-.001	.999	-.005	.995 ***	-.001	.999	-.004	.996 ***	.000	1.000	-.002	.998
Married	-1.673	.188 ***	-.192	.825	.024	1.024	.705	2.025 *	-.011	.989	.513	1.670
Has young children (0-5)	-1.038	.354 **	-.213	.808	-1.215	.297 **	-1.055	.348 *	-.289	.749	-.833	.435 *
Has older children (6-18)	-.280	.756	-.894	.409 *	-.450	.638	-.930	.394 *	.607	1.835 *	.452	1.571
Homeowner	1.397	4.041 ***	.812	2.252 *	-.342	.710	.710	2.035 *	-.537	.584	.876	2.401 *
Employed	.486	1.626 *	.738	2.092 *	.564	1.758 *	.550	1.733 *	.278	1.320	.395	1.485 *
Educational attainment	-.022	.978	-.045	.956	.031	1.031	.018	1.018	-.001	.999	.108	1.114 **
Recent immigrant	-.304	.738 *	-.385	.681 *	-.289	.749 *	-.432	.649 *	-.643	.526 *	-.167	.846 *
Arrival time unknown	.091	1.095	.050	1.051	-.057	.945	.090	1.094	.215	1.240	.063	1.065
Naturalized	.887	2.428 **	-.050	.951	.212	1.236	.540	1.715	.326	1.385	.602	1.825
Speaks English well	.863	2.369 **	-.062	.940	.470	1.600 *	1.671	5.319 ***	.047	1.048	.144	1.155

Notes: (*) p<.05; (**) p<.01; (***) p< .001; Number of migration events are controlled; variables are lagged to reflect pre-move characteristics