Kinship Effects on Residential Mobility and Ethnic Segregation in Sweden

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Short Abstract

This paper examines the links between ethnic residential segregation and the spatial distribution of kin in Sweden. Residential segregation between native Swedes and new immigrants is established when immigrants first settle in Sweden. This creates disparities in the spatial distribution of kin for immigrant children compared to native Swedes. Kinship ties may contribute to the reproduction of segregation across generations if children attend to family proximity when making residential choices in adulthood. We investigate this segregation perpetuating mechanism using data from Swedish population registers. These data longitudinally track the whole population of Sweden from 1990-2012, including geocoded residential addresses and links between parents and children. Discrete choice models are used to estimate the effects of kin on residential mobility for a cohort of 1.5\textsuperscript{th} and 2\textsuperscript{nd} generation immigrants and native Swedes. The estimates are used to run counter-factual micro-simulations to understand how kinship affects levels of residential segregation.

Introduction and Motivation

In recent decades succeeding waves of immigrants have come to Europe seeking prosperity and safety. Sweden has been a destination for many immigrants, including many refugees from conflicts and political upheavals in the Middle East, Africa, and Eastern Europe. Sweden’s cities have grown more diverse as they have fitfully received and housed new immigrants. This diversity has not been spread evenly across Sweden’s receiving municipalities. Instead, residential segregation along ethnic and immigrant status lines has often accompanied the influx of immigrants. This segregation reverberates into the adulthoods of offspring born to or migrating along with their immigrant parents. These 1.5\textsuperscript{th} and 2\textsuperscript{nd} generation immigrants attend Swedish schools and learn to speak Swedish from young ages, but can face levels of residential segregation from the “native” Swedish majority similar to those experienced by their 1\textsuperscript{st} generation parents (Andersson and Kähik 2015).\textsuperscript{1}

What are the sources of segregation for 1.5\textsuperscript{th} and 2\textsuperscript{nd} generation immigrants? How is segregation in the first generation passed along to the next? Maintaining proximity to family is one under-explored mechanism that might transmit segregation between generations. Across

\textsuperscript{1} We define the 1.5\textsuperscript{th} generation as immigrants who arrive in Sweden in advance of primary schooling, which begins around age 7. The 2\textsuperscript{nd} generation are those who are born in Sweden to immigrant parents. “Native” Swedes are those born in Sweden to parents who were themselves born in Sweden.
countries, regions, cities, and neighborhoods, migration has a strong family component. Many international migrants follow in the footsteps of pioneer kin who have already made the journey abroad, seeking to replicate their labor market successes or to reunite with loved ones (Massey 1993). Within countries, immigrants and native-born alike are more likely to persist in and move to regions, cities, and neighborhoods near to family. These family-regarding residential behaviors can anchor people to residential areas that are occupied by their kin, and also disproportionately occupied by members of their own ethnic groups, thus maintaining residential segregation over generations.

This study will explore the role that the spatial distribution of kin plays in the segregation of 1.5th and 2nd generation immigrants in Sweden. Our study examines two overarching research questions:

1. How does spatial proximity to kin affect the residential mobility and neighborhood choices of young adults living in Sweden's largest cities?
2. To what degree do disparities in the spatial distribution of kin, in combination with the effects of kin on migration, account for the perpetuation of residential segregation among 1.5th and 2nd generation immigrants from the native Swedish majority?

We use whole population register data from Sweden to answer these questions, focusing on Sweden's three largest cities: Stockholm, Gothenburg, and Malmö. Our longitudinal data uniquely provide detailed geographic locations for the whole Swedish population, including young adults, their parents, and their siblings, during the 1990-2012 period. The data allow us to link individuals to their parents and their siblings, so that we can map where young adults' parents and siblings live during the full 1990-2012 periods. We use discrete choice conditional logistic regression models to determine the effects of spatial proximity to kin on residential mobility within cities, net of other relevant factors like ethnic and socioeconomic composition. We then use these empirical estimates in a series of counterfactual micro-simulation models to determine how kinship influences ethnic segregation at the city-level, and what segregation would be if kin did not influence residential mobility. Our results carry implications for contexts outside of Sweden, as kinship effects may be even stronger elsewhere. Our results may also suggest a need to pay closer attention to the structure of social ties that inform housing market decisions in other contexts, including the United States.

**Background: Connecting Distance to Kin and Residential Segregation**

Our research links together two largely separate literatures in demography and sociology: distance to kin and residential segregation by race and ethnicity. There is consistent indication across places and times that people often migrate to maintain proximity to family (Mulder and Cooke 2009). There are signs that this occurs even within cities (Hedman 2013). Intra-city moves toward family may be due to awareness of neighborhoods driven by past experiences and kin contacts, informational advantages for particular housing units near to kin, needs for mutual care that span generations, or simple preferences for kin contact.

The strength of the family's geographic pull varies across people and across places. The pull of family appears to be weaker in Scandinavian countries than in other countries in Europe (Hank 2004, Bardone 2009). However, even in countries with generous social welfare states, like Sweden and Denmark, where both retirement care and childcare are provided partly or wholly by the state, the influence of kin on migration is quite strong relative to other factors (e.g., Dahl and Sorenson 2010). In a related way, those with different racial, ethnic and national origin

Research on racial and ethnic segregation has often ignored the role of kinship, and the ties to place that kinship often entails. Instead, explanations of racial and ethnic segregation have emphasised a three factor approach based on racial and ethnic preferences, socio-economic differences between groups, and racial and ethnic discrimination. These three factor explanations may be apt for understanding the initial development of racial and ethnic segregation and perhaps some of its resilience. However, this three factor approach remains largely asocial in the sense that there are few or no explicit relationships built into the model. But social relationships, including kinship, friendship, and acquaintanceship, are themselves segregated along racial and ethnic lines, and also partly constitute racial and ethnic categories, identifications, and ascriptions. Understanding the durability (or frailty) of racial and ethnic segregation across contexts requires peeling back the layers of social closure that divide putative racial and ethnic groups. And one key layer of social relationships is that of the family.

Some oblique connections have been made between proximity to kin and residential segregation. Research into the intergenerational reproduction of neighborhood (dis)advantage has found that neighborhood conditions are remarkably consistent across generations in the United States, with blacks particularly likely to "inherit" the high poverty, racially homogeneous neighborhood circumstances of their parents (Sampson and Sharkey 2004, Sharkey 2008). Social reproduction of neighborhood (dis)advantage is partly accounted for by distinguishing between intercity "movers", intra-city "movers", and neighborhood "stayers". Those who leave the metropolitan areas of their birth move into neighborhoods with higher median incomes than those who persist in the same metropolitan areas, and higher still than those who remain in the same neighborhoods. This suggests that a willingness or ability to break geographically with family can also lead to improvements in neighborhood circumstances. Conversely, attending to family can lead to the reproduction of neighborhood disadvantages.

Theory: How kinship can affect residential segregation

We propose directly examining the role of kin in motivating migration and perpetuating residential circumstances across time. The theoretical recipe for the intergenerational reproduction of ethnic residential segregation through spatially delimited kinship ties has three main ingredients: 1) residential segregation of parents'; 2) sharing of ethnic identifications and/or ascriptions between parents and children; and 3) migration behaviors that improve proximity to kin. These factors are present across a wide variety of contexts.

The mixture of these ingredients can lead to the social reproduction of segregation even absent preferences for neighborhood ethnic composition or socio-economic characteristics. When people move closer to kin in an already segregated landscape, they increase local concentrations of people sharing the same national origins and ethnic identifications. This is not only because movers share these categorical (self-)assignments with their now more spatially proximate kin, but also because existing segregation, by definition, means that the target kin also disproportionately share these categorical (self-)assignments with their neighbors.

Our argument is not that the kinship mechanism alone perpetuates segregation. There remains ample evidence that preferences, economic differences, and discrimination are still active drivers of segregation. Instead we argue that kinship is yet another mechanism in a potentially over-determined system that renders regimes of residential segregation surprisingly
durable. Our analysis will attempt to account for the other three segregating factors, including socio-economic differences between groups, in-group preferences, and out-group aversion. We will also explore the possibility of interactions between these factors. All factors together may do more to promote a segregated whole than a simple sum of their main effects would suggest.

**Swedish Registers: Full Population Panel Data**

Our data come from the population registers in Sweden, maintained and provided by Statistics Sweden (SCB). These are full population, longitudinal data covering all persons who have lived in Sweden in the 1990-2012 period. The register data contain remarkable socio-economic, demographic, and geographic detail, with individuals tracked year-by-year according to consistent and unique person identifiers. We use the GeoSweden database to trace the residential histories of "native" Swedes, 1.5th and 2nd generation immigrants, and 1st generation immigrant parents in each year from 1990-2012. Our data are geo-coded at the level of detailed 100x100 meter square spatial units, but we aggregate across several of these units to generate neighborhood boundaries. We use the Labor Market and Income Registers (LISA) to attach relevant socioeconomic and demographic characteristics to individuals in each year, and to calculate the compositions of neighborhoods. We use background registers to identify each person's year and place of birth and use multi-generational databases to link children to their parents and siblings.

For the sake of simplicity, we focus our analysis on moves that take place within Sweden's three largest cities: Stockholm, Gothenburg, and Malmö. These cities have also been the destinations of many newly arriving immigrants, and thus also feature large numbers of 1.5th and 2nd generation immigrants. Our analysis considers cohorts born in the early to mid-1980s making their first independent residential decisions in the late-2000s. These cohorts are born after the initial rise in immigration to Sweden and are also most likely to have complete information about the geographic locations of parents and siblings.

**Methods: Micro-Macro Links Using Discrete Choice Models and Simulation**

Our analysis has two components: an empirical component to examine micro-behaviors and a simulation component to understand the macro-level consequences of these behaviors. First, we estimate discrete choice, conditional logistic regression models (Bruch and Mare 2012) to evaluate the role that proximity to kin plays in influencing mobility for young adults in 1.5th and 2nd generation as well as among native Swedes. These models are multiple categorical outcomes models that treat each neighborhood as a separate possible outcome. We model an individual’s migration to a particular neighborhood among a “choice set” of many possible neighborhood destinations as a function of neighborhood covariates in interaction with individual level covariates. The key neighborhood level covariates we investigate are indicators of the presence of kin, and the distance of each potential destination neighborhood to relevant kin, particularly parents and siblings. In addition to these distance-to-kin variables, we also consider the sorting of individuals into neighborhoods according to socio-economic status, the proximity to each person's residential address in the preceding year, and the effect of immigrant composition. We estimate separate models for immigrants and native Swedes, testing whether the effects of kin differ across groups. We also test models that account for unobserved associations in neighborhood effects within families.

The second phase of our analysis uses these empirical estimates in a series of counterfactual micro-simulations of segregation processes in Swedish cities. Our simulations
answer one main counterfactual question: What level of segregation would we have observed if kin had no effect on the migration process within cities? We simulate the residential choices of the relevant cohorts in Stockholm, Gothenburg, and Malmö. We calculate segregation statistics, including pairwise indices of dissimilarity and the multi-group entropy index, based on observed data, based on our full model of residential choice, and based on our counterfactual scenarios. We attribute differences in segregation statistics across observed data and simulations to differences in the kin-regarding behavioral assumptions we input into the models. We expect to observe lower levels of segregation when kin effects are excluded compared to when kin effects are included.

Broader Intellectual and Policy Implications
Our results should provide new insights for segregation scholars as well as housing policy makers. For segregation scholars, if we find that controlling for the spatial distribution of kin significantly reduces the apparent effects of neighborhood ethnic composition on residential choice, this should caution future scholars against applying ethnic preference or discrimination interpretations to observed effects of race and ethnicity on housing market behaviors. Some of the observed effects of racial and ethnic neighborhood composition on migration may stem from kin, whose geographic distributions are unobserved in many datasets. Such a finding might also push scholars to redirect some research efforts away from characterizing racial and ethnic preferences and towards a better understanding of how racial and ethnic effects come about through social ties that are segregated by race and ethnicity. Assuming that policymakers are concerned about spatial isolation, economic adaptation, and cultural assimilation among immigrants, our results may also suggest new approaches to placement strategies for newly arriving immigrants. New placement strategies may improve integration chances for the children of immigrants.

References


