The Role of the Local Opportunity Structure on Intergenerational Neighborhood Attainment

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September 2013

Abstract:

This study examines the role of the local opportunity structure on the intergenerational process of neighborhood attainment. Of central interest are the direct and indirect effects of stemming from prior levels of residential segregation on the neighborhood attainments of future generations—the so called legacy effects. Additional opportunity structure characteristics involve contemporary macro-structural changes that have impacted the geography of rich and poor in every major American city—e.g., economic restructuring, labor market segmentation, immigration, suburban sprawl, and municipal fragmentation. Using data from the Panel Study of Income Dynamics merged with U.S. Census data, this study employs multilevel structural equations models to adjudicate the relative explanatory position of the most salient theories in the urban poverty literature.

Introduction

The persistence of urban poverty in America is a perennial issue that is sustained in large measure by the perpetual exposure of families, generation after generation, to impoverished neighborhoods (Sharkey 2008; Vartanian et al. 2007). The pernicious consequences of urban poverty are apparent when studying the effects of neighborhoods on children and adolescence. Neighborhood poverty is associated with higher dropout rates, lower levels of educational attainment, higher rates of teenage pregnancy, poorer health outcomes, an increase of youthful involvement in crime and delinquency, and stunted cognitive development (for reviews see: Diez-Roux 2001; Ellen and Turner 2003; Jencks and Mayer 1990; MacIntyre and Ellaway 2003; Pickett and Pearl 2001; Robert 1999; Sampson, Morenoff, and Gannon-Rowley 2002; Small and Newman 2001). Neighborhood quality is also highly correlated with parental socioeconomic resources, family (in)stability, and school quality which facilitate and compound the adverse effects of neighborhood poverty. Together, these factors impede the acquisition of the types of attitudes, skills, and attributes that determine how children will contribute to society as adults. Through these neighborhood effects, and their correlates, an environmentally induced behavioral trait can be passed to the next generation through micro-level cultural and social mechanisms just as a genetic trait is passed from generation to generation (e.g., Marmot 2004:232; Sharkey and Elwert 2011). Accordingly, the intergenerational transmission of neighborhood environment is capable of reproducing a particularly resilient and disparaging form of urban poverty.

Central to the persistence of urban poverty are the legacy effects stemming from residential segregation. Racial residential segregation (Massey and Denton 1993) and economic residential segregation (Jargowsky 1996) are important historical-structural antecedents to current poverty conditions in every major American city. However, the effects of residential segregation on the intergenerational transmission of neighborhood environment are complex because segregation is cable of inflicting, across generations, a legacy of neighborhood disadvantage in two major ways. The first way is indirect through the effects segregation had on their parent's residential opportunities. This indirect pathway enables the micro-level processes of social and cultural transmission by subjecting young children to areas of spatially concentrated disadvantage. The second pathway is direct. With the direct pathway it is understood that prior levels of residential segregation impose an ecological rigidity on the residential geography of U.S. cities. Here, past levels of segregation, being highly correlated with present levels of segregation, can directly impede an adult child's chances of upward spatial mobility in the same fashion it hindered the parent's residential opportunities. This study will provide the first empirical assessment of whether the levels of residential segregation are more likely to indirectly or directly affect neighborhood outcomes of future generations in the United States.

As with residential segregation, other macro-structural conditions are important to consider because the social and cultural mechanisms that facilitate the intergenerational transmission of poverty do not emerge, and are not sustained, in a neighborhood microcosm. Yet, structurally based theories that embed individual level traits, behaviors, and disadvantages within the broader opportunity structure have yet to fully demonstrate how macro-level dynamics affect the multigenerational process of socioeconomic attainment in general, and there is a substantial void with regard to the intergenerational process of neighborhood attainment (cf. Sharkey 2008; Sharkey and Elwert 2011; Vartanian et al. 2007). It is clear from historical and ethnographic accounts (e.g., Black 2009) that the intergenerational transmission process involves a complex interplay of micro-level mechanisms and structural conditions, but our understanding of the relative magnitude of these causes on the intergenerational attainment process is sparse.

The deindustrialization thesis—which ties urban poverty to the hollowing out of the manufacturing core in many U.S. cities (Wilson 1987)—is a prime example where little is

actually known about the socioeconomic attainments of the descendants of working class families that where raised in deindustrializing cities. Several other contemporary macro-level changes may also impinge on the ability of families to escape urban poverty. For instance, major occupational shifts throughout the urban hierarchy towards high finance and information technology, on the one end, and poor paying service jobs, on the other end, have helped to spatially bifurcated the rich and poor (Sassen 2006), and increasing levels of suburban sprawl and municipal fragmentation have also spatially and socially isolated poor minority neighborhoods (Galster et al. 2001). Although these factors are salient in the literature on urban poverty, researchers have yet to adjudicate the relative magnitude of these structural conditions on the intergenerational attainment process. The main objective of this research is to incorporate the macro conditions of the local opportunity structure into a model of intergenerational neighborhood attainment.

Despite the critical importance of all three explanatory factors—micro-level mechanisms, historical-structural antecedents, and contemporary macro-structural changes—in explaining persistent urban poverty, social scientists have struggled to integrate these three key areas of research into a comprehensive model. Too often in this area of research there are ideological and theoretical orientations that force researchers to place greater emphasis on one domain over and above another important aspect (e.g., Massey and Eggers 1991; Eggers and Massey 1991; 1992; Small and Newman 2001; Wilson 1987, 1996, 2009). William J. Wilson—a significant figure in the longstanding debate concerning the relative influence of culture and structure on urban poverty—has recently been critical of his, and others, failure to fully recognize the interplay of culture and structure in explaining the resiliency of concentrated urban poverty (Wilson 2009). This lack of explanatory integration is problematic because it hinders our ability to address urban poverty in a comprehensive and rigorous manner: piece-meal theories conflicting with other piece-meal theories only serve to reify ideological and political differences which tend to produce disjointed piece-meal remedies. This project will make major strides toward developing an empirically supported theoretical synthesis that is able to explain in a comprehensive manner the persistence of urban poverty.

Research Plan

Data and Sample: The scarcity of appropriate data is an important reason for the absence of intergenerational research examining the structural determinants of neighborhood attainment. Research efforts in this area are hindered by a lack of national-level, longitudinal data that follow individuals, and their neighborhood locations, over multiple generations. Only with a combination of family, neighborhood, and metropolitan level data observed over time is it possible to assess the causal impact of these broader structural conditions on the intergenerational neighborhood attainment process.

The Panel Study of Income Dynamics (PSID)-Geocode Match Files is one of the few data sources that are capable of filling this void. The PSID is a longitudinal survey of U.S. residents and their families. Starting in 1968, members of the initial panel of approximately 5,000 families were interviewed annually until 1995 and biennially thereafter. New families have been added to the panel as children and other members of original panel families "split-off" to form their own households. By 2009, a cumulative total of over 9,000 families had been included in the survey panel, providing information on more than 67,000 individuals over the course of the study. With the Geocoded version of the PSID, it will be possible to study the macro-level determinants of the intergenerational transmission process. By merging neighborhood- and metropolitan-level census data to the individual records of the PSID, researchers can model and assess how structural conditions affect a family's chances for spatial mobility. Moreover, the abundance of individual- and family-level economic, social, and demographic information provided by the PSID allows researchers to move beyond simplistic macro-level aggregate

analyses that are unable to account for individual-level selection into and out of neighborhoods of varying quality.

The PSID Geocode Files record each household's census tract and metropolitan area of residence at each survey wave. Using this information, I will append to each household's data record information describing the neighborhood characteristic of the census tract, as well as information describing the socioeconomic, demographic, and ecological structure of the larger metropolitan area. As in most prior work in this area, I use census tracts as our approximation of neighborhoods. Census tracts contain on average roughly 4000 inhabitants. Tract-level census data from the Neighborhood Change Data Base (NCDB), in which data from the 1980 and 1990 censuses have been normalized to 2000 tract boundaries (GeoLytics 2008; however, if available this project will capitalize on the new version of the NCDB due for release in the fall of 2013), allow me to produce consistent measures of census tract quality over the study period. Because the PSID geocodes characterize households' location at each interview using the consistent set of tract codes defined by the 2000 census, I am able to distinguish actual changes in neighborhood conditions from differences produced by shifting geographic definitions. Linear interpolation and extrapolation is used to estimate the values of tract quality for non-census years (1981-1989, 1991-1999, 2001-2009).

Dependent Variables: Following Sharkey (2008), parent's neighborhood environment will be measured by averaging over all years the child was under 18 living with parents. Averaging over all years the child was older than 26 and either (a) a head of household or (b) the spouse/ partner of a head of household will represent the adult child's neighborhood environment. This project will employ several neighborhood characteristics as dependent variables—e.g., the poverty rate, the median family income, and the rate of male joblessness—in order explore the robustness (or potential nuance) of the structural model.

Independent Variables: The focal independent variables for this project will capture the change in the economic, demographic, and ecological structure of U.S. metropolitan areas. These metropolitan variables will include: population size; poverty rate; percentage foreign born; the percentage employed in manufacturing; the percentage employed in finance, insurance and real estate; percentage living in suburban areas; the level of municipal fragmentation; and both economic and racial residential segregation. With the exception of suburbanization, municipal fragmentation, and residential segregation, these variables will be computed from the 1980, 1990, 2000, and 2010 U.S. Census of Population and Housing Summary Files.

The percentage of the metropolitan-area population residing in the suburban ring of the metropolitan area is taken from the U.S. Department of Housing and Urban Development's (2009) State of the Cities Data Systems. The measure of municipal fragmentation, adapted from Bischoff (2008), uses data on the number and size of municipal governments in each metropolitan area as given in the U.S. Census of Governments. Racial residential segregation is measured by the well-known black-white Index of Dissimilarity, which is computed from tract-level racial distributions provided by the NCDB. Economic segregation is measured using the Neighborhood Sorting Index (Jargowsky 1996) and is also computed from the NCDB.

Although our analysis focuses primarily on the possible effects of metropolitan-area characteristics on the intergenerational transmission of neighborhood poverty, this project will also control for several basic individual-level characteristics. These individual level characteristics include age, gender, and duration of residence. Several parental level socioeconomic characteristics will also be included in the full model: parental education, median household income, and net wealth assets during the period when the respondent was living with parents. The analysis will be disaggregated by race for multi-group comparisons.

Analytic Approach: This research will use multilevel structural equation models (Hox 2010) in conjunction with latent change models (Bollen and Curran 2006) to assess the macro-level structural effects on the intergenerational attainment of neighborhood characteristics. Figure 1 illustrates the full model. In step one the bivariate association between the parent's

neighborhood environment when the child was growing up and the adult child's neighborhood environment is estimated. The expectation is for a modest to large correlation between the parent's neighborhood environment and the adult child's neighborhood environment. This stage will simply replicate a previous analysis by Sharkey (2008). The strength of this association represents all the micro-level mechanisms and processes that facilitate the intergenerational transmission of neighborhood attainment (i.e., attributed to ascription). The weakness in this correlation reflects the amount of spatial mobility that exists apart from the adult child's social origin (i.e., attributed to achievement), independent of the all the structural factors included in step four.

[Figure 1 about here]

The second step decomposes the variance of this intergenerational correlation into the respective within and between metropolitan area components. This project is primarily interested in explaining the between metropolitan area variation in the intergenerational transmission of neighborhood attainment. That is, the amount of variation in the adult child's neighborhood outcome that can be attributed to structural factors operating on a local level. The expectation is for significant variation to exist across metropolitan areas. Also, in step two of the analysis, I will assess the indirect and direct effects of residential segregation on the adult child's neighborhood attainment. These are the unconditional legacy effects of residential segregation. The expectation is that by including the measures for residential segregation the between metropolitan variance will attenuate significantly—providing a global assessment of the explanatory power of the legacy effects. It is an open question, however, as to whether the indirect or the direct effect of residential segregation will matter more. This stage of the analysis will examine that question.

Step three of the analysis removes the legacy effects and includes the latent change models that capture the effects of structural change on neighborhood attainment. The slope from each of the metropolitan-level growth models (i.e., the rate of change from 1980 to 2010 in population size; poverty rate; percentage foreign born; the percentage employed in manufacturing; the percentage employed in finance, insurance and real estate; percentage living in suburban areas; and the level of municipal fragmentation) are expected to have significant distal effects on the adult child's neighborhood attainment. The intercepts from the metropolitan-level growth models (i.e., the level of the metropolitan characteristic in 1980) are specified to affect the parent's level of neighborhood attainment. These distal intercept effects serve as a set of structural controls.

In step four, the legacy effects are reintroduced into the model together with all the contemporary structural change parameters. At this stage, I will be able to assess the explanatory power of the entire model, as well as, each major component. The proportional reduction of variance attributed to the legacy effects of residential segregation is expected to be greater than that attributed to the structural change characteristics. The indirect effect of residential segregation should be similar in step four as they were in step 2, but if a primary avenue through with contemporary macro-structural changes affect one's neighborhood attainment is through changes to the spatial distribution of neighborhood opportunities then we should expect the effects of structural change to attenuate the direct effect of residential segregation. Taken together, this analysis will provide new knowledge of how the conditions of the local opportunity structure affects the intergenerational persistence of urban poverty.

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Figure 1: Path Diagram for a Multilevel Structural Equation Model of the Intergenerational Transmission of Neighborhood Poverty