

**Understanding the Effects of Neighborhoods on Children: Cross-Sectional and
Longitudinal Measures of the Neighborhood Experience**
(Abstract)

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Introduction

Recent sociological research has documented the relationship between neighborhoods and life chances for children. However, studies of the effects of neighborhoods on children often occur within a cross-sectional framework, making them unable to account for the dynamic nature of social life among individuals and environments. The use of a cross-sectional framework therefore potentially obscures important aspects of neighborhood processes and outcomes. This paper will use data from the Los Angeles Family and Neighborhood Survey, employing two approaches to understanding how neighborhood disadvantage affects the development of children. First, we provide a “snapshot” of children’s neighborhoods at one point in time. Secondly, we account for the possibility that children are exposed to neighborhoods of differing levels of disadvantage during their development and are thus affected by a cumulative neighborhood experience rather than a cross-sectional experience. We examine the effects of neighborhoods on children using both approaches. In the end, we have two goals: to better understand the role of residential mobility and neighborhood change in determining children’s exposure to particular neighborhood types, as well as the extent to which the measurement of the “neighborhood” matters for the outcomes that are observed among children.

Background

Social science research has moved away from the local setting of the neighborhood in recent years, toward examination on a more global scale. In the process, as Sampson (2002) describes, many researchers have neglected “...the persistence of local variation, concentration, and place stratification” (pg. 4). Researchers over the past few decades have thoroughly documented the existence of residential segregation of the United States population by racial and income groups; these phenomena have persisted in the face of national political and economic change (Massey and Denton, 1993). Attention to the consequences of the spatial distribution of the population is vital, given the demonstrated significance of neighborhoods for the life chances and outcomes of the groups within them. Children are especially influenced by their immediate context, as they are likely to spend the majority of their time in their local surroundings. Living in poverty, for example, is believed to negatively affect several aspects of children’s well being, including cognitive development, health status, educational opportunity, employment and propensity for risk-taking behaviors (Brooks-Gunn et al, 1997). Research also points to the importance of a child's age of exposure to a particular neighborhood, since the age at which a child is exposed to a neighborhood is likely to determine the type and strength of its effects (Brooks-Gunn et al, 1993).

Most research on the importance of the neighborhood for life chances has been conducted with the use of data that provides only a cross-sectional “snapshot” of neighborhoods and individuals. As Sampson et al. (2002) state, “. . .there is a clear need for rigorous longitudinal studies of neighborhood temporal dynamics. Just as individuals change, develop, and are sometimes transformed, so too neighborhoods are dynamic entities” (pg. 472). Cross-sectional depictions of individuals’ neighborhood experiences and outcomes, while useful, may not provide an accurate representation of the experiences that people and neighborhoods endure over time. Researchers who have examined individuals’ movement within and across neighborhoods over time suggest that a child’s duration of exposure to a certain type of neighborhood likely mediates the influence of particular neighborhood characteristics on well being (Timberlake, 2003). A child who spends only one year in a high-poverty neighborhood, for example, will likely be less negatively affected by that environment than a child who has spent ten years surrounded by poverty. Quillian (2003), in the first study to examine longitudinal patterns of residence in neighborhood types, found that movement in and out of poor neighborhoods is actually quite frequent. But what is perhaps most striking about his findings is the racial inequality that exists in neighborhood exposure: blacks are much less likely than whites to move out of poor neighborhoods into a more affluent one, and to stay in a nonpoor neighborhood if they do move.

This paper follows in the vein of previous research in that it considers the role of residential mobility and neighborhood change in shaping a child’s neighborhood experience. Like Timberlake and Quillian, we examine the ways in which children’s movement between neighborhoods and changes in the characteristics of neighborhoods interact to determine a particular length of exposure to each neighborhood type. But we extend this work in at least two ways. First, while great racial inequality in neighborhood exposure has been demonstrated for blacks and whites, the experiences of Latinos and Asians are less clear. We examine the neighborhood experiences of Latinos and Asians, which may be quite distinct from those of blacks and whites. Secondly, we investigate what bearing a temporal consideration of neighborhood experience has on assessments of child well being. We seek to clarify two questions: 1) Do residential mobility and neighborhood change perpetuate inequality in exposure to disadvantage, or do they attenuate such inequality by reducing a child’s cumulative exposure to poverty? 2) How do static vs. dynamic conceptions of neighborhood experience matter for children’s outcomes? By combining two often separate areas of inquiry, we hope to inform the debate about neighborhood effects by better specifying how a child’s lifelong context works to influence his or her outcomes.

Data and Methods

We compare cross-sectional and longitudinal approaches to understanding the effects of neighborhoods on children by examining data from the Los Angeles Family and Neighborhood Survey (LA FANS). LA FANS is a panel study of families in Los Angeles County that was launched in 2000. The first wave of data was collected from a representative sample of 3090 households in 65 neighborhoods, and provides two-year residential mobility histories (Sastry et al, 2003). These residential histories are linked to data that provide information on specific characteristics and services of the neighborhoods. The LA FANS data therefore permit analysis of children’s movement

between neighborhoods over time, as well as of the changing nature of the neighborhoods themselves.

The first step of the project is to look at a cross section of individuals and neighborhoods. Neighborhoods are differentiated by census tracts, and are classified by poverty rate; neighborhood “types” are therefore differentiated by the percentage of the population living in poverty in each neighborhood. Children in the L.A. FANS are defined as individuals aged 3-17 years. Using this definition of a neighborhood, we describe the types of neighborhoods in which children are distributed. We also report the number of neighborhoods of each type. After the cross-sectional examination of population distribution and neighborhood type, we describe the type and volume of child mobility that is occurring among neighborhood types. Children’s averages on our definition of neighborhood type will be calculated to depict a cumulative neighborhood “experience” for each individual, as opposed to the isolated “snapshot” (meant to represent an individual’s overall neighborhood experience) of where someone is living at one moment in time. We then compare cross-sectional and longitudinal measures of neighborhood experience, examining the following questions. Do individuals move primarily between neighborhoods of the same type, for example? If so, then cross-sectional snapshots and longitudinal averages of neighborhood experience may be similar. Or do people move between neighborhoods of different types? If so (if individuals are moving in and out of high-poverty neighborhoods) then longitudinal estimates will provide a significantly different picture of children’s cumulative neighborhood experience than cross-sectional estimates, which measure children living in a high-poverty neighborhood as if they have lived there for their entire lives. Since we know that children consistently exposed to poverty are more negatively affected than those that experience poverty for only a short time, the consequences of these different methods of measuring neighborhoods would be significant. Finally, by using longitudinal data on neighborhoods, we are also able to consider children who do not move. If children do not move but their neighborhoods change in type (i.e. poverty rate) around them, then longitudinal estimates may depict a different experience for them than would cross-sectional estimates.

The last step of the project involves using these two approaches to measuring neighborhood experience—cross sectional observation of where children are living at one point in time, and longitudinal estimates that account for individual mobility and neighborhood change—to examine neighborhood effects on children. The particular outcome of interest is children’s scores on the Woodcock-Johnson scholastic achievement test, in which letter-word identification and applied problems skills are assessed. Achievement test scores are known to be a useful proxy for education. In addition, the design of this particular assessment allows for direct comparison between age groups. The outcome is examined for children of different racial and ethnic groups within the neighborhoods of study. Multilevel regression models of neighborhoods and families will be used to conduct the analyses. In addition to including neighborhood characteristics, we control for family factors (family poverty, educational attainment of the primary caregiver) and individual characteristics (race/ethnicity, nativity status). By examining neighborhood effects from two perspectives, we hope to determine the difference between the predictive power of cross-sectional and longitudinal measures of neighborhood experience.

Implications

The goal of this project is to understand the role of residential mobility and neighborhood change in creating, maintaining, or reducing the level of inequality in children's neighborhood experiences. In addition, we seek to clarify the relative utility of cross-sectional and longitudinal measurements of neighborhood experience in predicting child well being. Beyond the family unit, the neighborhood is for many people the most fundamental unit of sociality. By studying social processes and outcomes at this basic level, researchers and policymakers will be in a position to accurately assess the factors that promote or jeopardize a healthy childhood. In doing so, programs that aim to move low-income families out of poverty can be designed and implemented with participants' mobility patterns in mind. Similarly, a better understanding of the effects of neighborhoods on child school achievement will allow for interventions that take a child's cumulative neighborhood experience into consideration.

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