

The Pennsylvania State University

The Graduate School

Department of Sociology

**IMPACTS OF LEGAL STATUS AND RESIDENTIAL CONTEXTS ON
MEXICAN IMMIGRANTS' POST-MIGRATION EXPERIENCES**

A Dissertation in

Sociology and Demography

by

Aggie J. Noah

© 2016 Aggie J. Noah

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

August 2016

The dissertation of Aggie J. Noah was reviewed and approved * by the following:

Nancy S. Landale
Liberal Arts Research Professor of Sociology and Demography
Dissertation Advisor
Chair of Committee

R. Salvador Oropesa
Professor of Sociology and Demography

Barrett A. Lee
Professor of Sociology and Demography

Mayra Bamaca
Assistant Professor of Human Development and Family Studies

Tse-Chuan Yang
Special Member
Assistant Professor of Sociology
University at Albany

John Iceland
Professor of Sociology and Demography
Chair of the Department of Sociology

* Signatures are on file in the Graduate School

ABSTRACT

The overarching objective of this dissertation is to advance scholarship on immigrant families by investigating whether and how post-migration residential contexts affect family formation among Mexican immigrants. I draw from multiple scholarly perspectives—urban sociology, the sociology of immigration, and family sociology—to incorporate neighborhood effects into the study of family formation in an immigrant population. Moving beyond the acculturation framework, which explains immigrants’ experiences in terms of individual-level changes, this dissertation emphasizes two major axes of stratification with profound implications for Mexicans: *legal status* and *post-migration neighborhood contexts* (Glick 2010b; Massey and Bartley 2005).

Across three studies, I first examine theories and innovative methods regarding neighborhood effects and apply them to the study of families. In the second chapter, I review neighborhood effects theories and empirical limitations to introduce the concept of activity spaces, which captures the actual spatial exposures of individuals rather than their residential contexts. In the third chapter, I examine Mexican-origin adults’ subjective assessments of neighborhood quality. Using the Los Angeles Family and Neighborhood Survey (L.A.FANS), I examine the types of neighborhoods in which Mexican adults reside and use a multilevel framework to analyze how neighborhood types are associated with neighborhood perceptions. Results demonstrate that there are five qualitatively distinct types of neighborhoods Mexican-origin adults reside in: Mexican immigrant enclaves, Mexican ethnic communities, ethnic ghettos, non-Hispanic white neighborhoods and Asian immigrant enclaves. Locational attainment models show

that Mexican immigrants' legal status is a critical factor in neighborhood type: undocumented Mexican immigrants are most likely to reside in Mexican immigrant enclaves and least likely to reside in non-Hispanic white neighborhoods. In terms of neighborhood perceptions, residing in immigrant enclaves is associated with a higher level of perceived neighborhood danger, while it is associated with a lower level of collective efficacy. In the fourth chapter, I examine how residing in a Mexican immigrant marriage market and legal status are associated with three family formation transitions: the transitions to marriage, cohabitation, and singlehood. Results show that residing in a Mexican immigrant marriage market is associated with higher odds of making all three types of family transitions. Such findings illustrate that it is indeed important to move beyond individual characteristics to consider the influence of neighborhood context to understand Mexican-origin adults' family formation transitions. In short, this dissertation demonstrates the importance of post-migration neighborhood contexts and legal status for understanding Mexican-origin adults' family formation transitions in the United States.

TABLE OF CONTENTS

LIST OF FIGURES	vii
LIST OF TABLES	viii
ACKNOWLEDGEMENTS	x
CHAPTER 1. INTRODUCTION	1
Roles of Family and Neighborhood Contexts in Individual Outcomes	2
Neighborhood Effects on Family Formation Behaviors	4
Incorporating Immigrant Populations in Neighborhood Effects Research	5
Overview of the Three Studies	10
CHAPTER 2. “PUTTING FAMILIES INTO PLACE”: USING NEIGHBORHOOD- EFFECTS RESEARCH AND ACTIVITY SPACES TO UNDERSTAND FAMILIES	14
Linking Neighborhood-Effects Research and Family Studies	15
Theoretical Development of Neighborhood-Effects Research	16
A Critical Missing Piece in Neighborhood-Effects Theories: The Role of Families .	19
Incorporating Neighborhoods into Family Studies	20
Empirical Limitations in Neighborhood-Effects Research	23
Definition of Neighborhoods	24
Scale of Neighborhood and Inferential Errors	26
Neighborhoods as Isolated Geographic Units	27
Assumption of Inevitability in Neighborhood-Effects Research	29
Methodological Innovation in Neighborhood-Effects Research	30
New Opportunities in Family Theory and Research	37
CHAPTER 3. LEGAL STATUS, NEIGHBORHOOD TYPES, AND NEIGHBORHOOD PERCEPTIONS AMONG MEXICAN-ORIGIN ADULTS	44
Background	47
Neighborhoods as Critical Contexts of Reception	47
Neighborhoods as Proxy of Immigrant Assimilation	50
Identifying Types of Mexican Neighborhoods	52
Statement of the Problem	55
Data and Methods	57
Data	57

Measures	59
Analytic Approach	63
Results	72
Sensitivity Analyses	84
Discussion and Conclusion	86
CHAPTER 4. LEGAL STATUS, NEIGHBORHOODS, AND FAMILY FORMATION TRANSITIONS AMONG MEXICAN-ORIGIN ADULTS	98
Theoretical Background and Gaps in the Family Formation Literature	100
Individual-Level Explanations of Family Formation	100
Contextual-Level Explanation of Family Formation	103
Gaps in the Family Formation Literature	106
Data and Methods	110
Results	117
Descriptive Results	117
Understanding Neighborhood Marriage Markets	122
Neighborhood Types and Family Formation Transitions	129
Discussion and Conclusion	133
CHAPTER 5. CONCLUSION	142
REFERENCES	151

LIST OF FIGURES

Figure 1.1. Conceptual Framework	12
Figure 2.1. Moderating and Mediating Mechanisms in Neighborhood Effects Research	21
Figure 2.2. Various Measures of Activity Spaces	34
Figure 3.1. Racial and Ethnic Distribution in Los Angeles, 2000	58
Figure 3.2. Summary of the Analytic Strategy and Key Variables	66
Figure 3.3. Multiple Methods of Neighborhood Conceptualization	67
Figure 3.4. Examples of Activity Spaces of L.A.FANS Adults	71
Figure 3.5. Standardized Means of Latent Neighborhood Profile Indicators	77
Figure 4.1. Standardized Means of Latent Neighborhood Profile Indicators	126
Figure 4.2. Standardized Means of Latent Neighborhood Profile Indicators	127

LIST OF TABLES

Table 2.1. Inferential Errors Resulting From the Uncertain Geographic Context Problem	27
Table 3.1.a. Operationalization of Individual Variables	61
Table 3.1.b. Operationalization of Neighborhood Variables	62
Table 3.2. Descriptive Statistics of All Variables in the Model	73
Table 3.3. Model Fit Statistics of the Latent Profile Models	75
Table 3.4. Descriptive Statistics of Mexican Immigrant Neighborhood Profiles	77
Table 3.5. Descriptive Statistics for Mexican Immigrant Neighborhood Profiles	81
Table 3.6. Odds Ratios Predicting Residence in Different Types of Mexican Immigrant Neighborhoods	82
Table 3.7. Multilevel Models Predicting Neighborhood Danger and Collective Efficacy	83
Table 3.8. Descriptive Statistics of Neighborhood Characteristics by Neighborhood Definitions	85
Table 3.9. Immigrant Neighborhood Profiles by Neighborhood Definitions	86
Table 4.1. Operationalization of Eight Different Sex Ratio Measures Utilized in Analyses of Sexual and Familial Transitions among Hispanic, Anglo, and African American Respondents in the NLSY, 1967-1990	109
Table 4.2.a. Descriptive Statistics of All Individual Variables in the Model	119
Table 4.2.b. Descriptive Statistics of All Neighborhood Variables in the Model	121
Table 4.3. Model Fit Statistics of the Latent Profile Models	123
Table 4.4. Descriptive Statistics of Different Marriage Markets in Los Angeles County	124

Table 4.5. Summary of Key Characteristics of Different Marriage Markets	128
Table 4.6. Descriptive Statistics for Individual Variables by Immigrant Neighborhood Marriage Market Profiles	129
Table 4.7.a. Multilevel Models of Neighborhood Marriage Market Influences on Family Transitions (Census Tract)	130
Table 4.7.b. Multilevel Models of Neighborhood Marriage Market Influences on Family Transitions (Activity Spaces)	131

ACKNOWLEDGEMENTS

I am grateful for all the blessings in my life. Graduate school has been a difficult journey for me filled with life lessons and personal growth. There were countless times I wanted to give up on completing my Ph.D., but I was able to complete this journey because of many people who have believed in me and supported me throughout.

First of all, I want to thank my advisor, Dr. Nancy Landale, who has been a wonderful role model. Even when I doubted myself, she believed in me and provided enormous guidance and support to challenge myself. The last year of graduate school has been especially tough, and I could not have completed this journey without her mentorship and support.

I also want to thank my committee members – Drs. Sal Oropesa, Barry Lee, Mayra Bamaca and Tse-Chuan Yang – for their support and encouragement. I am very blessed to have committee members who deeply care about my scholarship and academic growth. The Department of Sociology and the Population Research Institute have provided me such wonderful scholarly community and so many people have given me their time, support and encouragement throughout. I am especially grateful for Drs. Glenn Firebaugh, Stephen Matthews, Jenny Van Hook, John Iceland, Melissa Hardy, Valarie King and Corina Graif. I am also grateful for Yosef Bodovski and Lisa Broniszewski for all their help.

In addition, I am incredibly fortunate to have a community of mentors in my life. I am indebted to Drs. Gray Swicegood, Gillian Stevens, Tim Liao, and late Jorge Chapa for their continuing mentorship from the University of Illinois. They have not only

inspired me to become a demographer but also provided continuing support to achieve this dream. I also want to thank mentors from the Association of Korean Sociologists in America: Drs. Sooyong Byun, Hyunjoon Park, ChangHwan Kim and Hyeyoung Woo. Their commitment to mentorship and generosity have inspired me greatly, and provoked me to ponder upon how I can pay forward.

This journey would not have been possible without my amazing friends. I am thankful for friends who have shared many laughs and tears with me throughout the years, namely Seung-won Choi, Nyesha Black, Carla Shoff, Catherine Tucker, Francesco Acciai, Joanna Perez, Beatrice Abiero, Wei-Lin Wang, Li-Chen Lin, Hyun Woo Kim, Joeun Kim and Jae Kyun Kim. Lastly, I am thankful for my best friend, Ben Noah, who has given me love, support, and patience for past eleven years.

Above all, I want to thank my family for their love and support during this journey and always. Words simply cannot express my gratitude for my parents. They have always supported me for all the decisions I have made, both good and bad; and loved me for who I am, not who they want me to be. They have sacrificed much for me and my brother A.J. to pursue our dreams, and I am always humbled by their unconditional love.

CHAPTER 1

INTRODUCTION

The overarching goal of the dissertation is to advance scholarship on immigrant families by examining whether and how residential contexts affect family formation and structure among Mexican immigrants. Compared to empirical research investigating the effects of neighborhoods on health since the mid-1990s (Entwisle 2007), research on the effects of neighborhoods on patterns of family formation has been scant (South and Crowder 1999). However, understanding the role of neighborhoods in family formation is important, as patterns of family formation have significant consequences at both individual and societal levels. At the individual level, the process of family formation (e.g., entry into marriage, cohabitation, and non-marital births) is considered to be an important aspect of the transition to adulthood that can have lasting implications for multiple dimensions of individuals' lives (Hogan and Astone 1986). At the societal level, the characteristics of the family formation process – the occurrence, timing and sequence of key family formation events – can be an “important mechanism for maintaining inequality between groups” (Landale and Forste 1991).

Individuals are embedded in larger social contexts and those contexts can play an important role in multiple outcomes and behaviors, above and beyond individual-level characteristics (Dietz 2002; Ellen and Turner 1997). Although previous studies have found that neighborhood effects on individual outcomes may be relatively small (Ellen and Turner 1997), it is naive to disregard potential neighborhood effects on family

formation because neighborhoods constitute the place in which many social interactions among individuals occur. In addition, there is new emerging evidence that neighborhood characteristics may have considerable effects on certain individual outcomes, such as early sexual initiation (Browning, Leventhal and Brooks-Gunn 2004). Furthermore, understanding whether and how neighborhoods affect individuals' family formation behaviors can help with designing more effective public policy (e.g., place-based prevention and intervention programs) to promote family formation patterns that benefit individuals and their children.

Roles of Family and Neighborhood Contexts in Individual Outcomes

Although there has been little scholarly attention to understanding the complex interplay between individuals' family contexts and their residential contexts (e.g., neighborhood) (South and Crowder 1999), previous studies have investigated their separate roles in individual outcomes. That is, individuals are embedded in both family and residential contexts, and these contexts have significant influences on individuals (Bronfenbrenner 1977). Families constitute individuals' earliest and most fundamental context; individual family members are interdependent, influencing one another within a complex and integrated system of family (Cox and Paley 2003). The family context has ubiquitous and multifaceted influences on various individual outcomes including individuals' development and health (Bronfenbrenner 1986). Individuals' residential areas (e.g., neighborhoods) also constitute an important context, since a great majority, if not all, of individuals' day-to-day experiences and social relationships occur within this

context. Similar to the family context, the residential context influences various aspects of individuals' lives (Diez Roux 2001; Wilson 1987).

Since the early 1990s, however, the interrelations between neighborhood and family contexts have received increased scholarly attention, most notably in psychological and sociological studies. Largely based on Bronfenbrenner's (1977) ecological theory, psychologists have attempted to investigate the specific ways that neighborhoods may influence the transactions between families and individuals (e.g., between a parent and child) and between a family and the neighborhood (Coulton et al. 2007). Psychologists have utilized three major theoretical models to investigate how individuals' neighborhood and family contexts are interrelated. The *mediation model* investigates how neighborhood factors are mediated through family factors (see Pachter et al. 2006). The *independent effects model* assumes that both neighborhood and family factors have independent influences on individual outcomes (see Coulton and Irwin 2009). Finally, the *moderation model* investigates how neighborhoods (or family) moderate the relationship between family (or neighborhoods) and individuals (Haskett et al. 2008).

Despite the sophisticated models they use, psychologists have focused predominantly on two aspects of the family context: (a) parenting behaviors within families and (b) links between family processes or structures and individual outcomes. Thus, previous studies have largely conceptualized family contexts as another dimension of the macro-level environment. To the best of my knowledge, no psychology study to date has investigated the effects of neighborhood characteristics on family formation

behaviors. On the other hand, the sociological literature has examined the impact of neighborhood contexts on multiple family-related activities. Previous studies have examined “the impact of neighborhood disadvantage on family-related activity including the timing of first sexual activity (Billy, Brewster and Grady 1994; Brewster 1994; Brewster and Grady 1993), first marriage (Hoffman, Duncan and Mincy 1991; Massey and Shibuya 1995), nonmarital and/or teenage childbearing (Billy and Moore 1992; Brooks-Gunn et al. 1993; Crane 1991)” (South and Crowder 1999), and marital dissolution (South 2001). Moving beyond psychological studies investigating the effects of neighborhood on limited family outcomes (e.g., parenting), these sociological studies have expanded the scope of research to investigate how neighborhoods affect other family outcomes.

Neighborhood Effects on Family Formation Behaviors

Previous studies have found that several characteristics of neighborhoods are associated with family formation behaviors for non-Hispanic whites and blacks (South 1996; South and Crowder 1999). Some neighborhood characteristics affect different racial and ethnic groups similarly. For example, the availability of potential partners (e.g., number of employed, eligible males in the local marriage pool) accelerates the rate of transition to marriage and elevates the risk of premarital childbearing for both non-Hispanic white and black women (South 1996). In contrast, some neighborhood characteristics affect different racial and ethnic groups dissimilarly. For example, neighborhood socioeconomic disadvantages increase the risk of marriage and premarital

childbearing for non-Hispanic white women; however, these same disadvantages have little effect on premarital childbearing and a nonlinear effect on the probability of marriage for non-Hispanic black women (South and Crowder 1999). These previous studies clearly demonstrate that incorporating neighborhood-level factors is critical for understanding racial differences in family formation behaviors above and beyond individual characteristics (i.e., individual and family characteristics only accounted for about 30% of sexual behaviors and neighborhood characteristics significantly added to the explanatory power) (Browning, Leventhal and Brooks-Gunn 2004).

Incorporating Immigrant Populations in Neighborhood Effects Research

One important limitation of previous studies investigating the effects of neighborhood on family formation processes and family structure is lack of attention to immigrant populations. Previous studies, with the notable exception of Lloyd's work (2000; 2006), have focused only on non-Hispanic white and non-Hispanic black populations, ignoring groups with high proportions of immigrants such as Asians and Hispanics. Inclusion of immigrant populations in efforts to understand the effects of neighborhood is important for several reasons. First, the foreign born constitute a significant proportion of the U.S. population, and immigrants' characteristics have important implications for the overall population in the United States. In 2010, about 13 percent of the total population in the United States—nearly 40 million—reported that they were foreign born (Grieco et al. 2012). Because immigrants comprise a large share of the total population in the United States, their family formation processes and

structures greatly influence the overall patterns in the United States' population. Hispanic immigrants are particularly important because over half (53 percent) of all foreign-born individuals in the United States are from Latin America (Grieco et al. 2012). Family formation processes and structures among immigrants thus have significant consequences for the future size and age structures of the total population (Landale and Oropesa 2007).

Second, immigrants may have different cultural norms and values about family and neighborhood, so neighborhoods may affect immigrants' family patterns differently compared to the native U.S. population. For example, Greif (2009) found that Hispanics and Asians diverge from non-Hispanic blacks and non-Hispanic whites in strength of neighborhood attachment, neighborhood satisfaction, and neighborhood sentiment. It is notable that Hispanics, in particular, had the lowest neighborhood attachment and local formal participation (e.g., neighborhood block meetings).

Two key variables that differentiate immigrants are their citizenship status and duration of residence in the United States. Although Greif's study found that individuals' citizenship status and length of residence had no statistically significant relationship with their neighborhood perceptions (Greif 2009), other studies suggest that more nuanced research is needed to understand these relationships. For example, studies have found that despite the greater likelihood of experiencing discrimination based on language, recent immigrants of color are the least likely to report any experience of racial discrimination (Krieger 2012; Viruell-Fuentes 2007). Scholars explain that such paradoxical findings are due to the fact that recent immigrants do not share the same meanings for the socially constructed term "race" or "racial discrimination." This explanation suggests that recent

immigrants may have different thresholds and meanings for neighborhood characteristics (e.g., neighborhood disadvantage), and they may be less knowledgeable of and less susceptible to some potential neighborhood effects.

Previous studies also suggest that certain immigrant groups may have different norms and values regarding family (Hartnett and Parrado 2012). For Hispanics, the concept of familism—norms and values that support family formation (i.e., marriage and fertility) and the maintenance of close family ties (Oropesa and Landale 2004)—has been prevalent in the sociological literature. It has been used to explain the positive health outcomes of Hispanics despite their generally lower socioeconomic position in the society (Hartnett and Parrado 2012). Despite having multiple risk factors from their lower socioeconomic status, Hispanics often have some positive outcomes (e.g., health outcomes) due to their strong cultural orientation toward family and family support. Although some scholars have criticized the overreliance on the concepts of familism and culture in understanding immigrants' outcomes in the United States (Viruell-Fuentes 2007; Viruell-Fuentes, Miranda and Abdulrahim 2012), immigrants are likely to have varying norms and values compared to the native-born population in the United States; and it is plausible that neighborhoods might have different effects and mechanisms for immigrants' family formation process and structure.

Third, neighborhoods may appear to affect immigrants' family formation process and structure differently due to the issue of selection bias. Immigrants are not a random sample of the population from the countries of origin, and they are selected on multiple dimensions, including education (e.g., English language proficiency), socioeconomic

status, health, and family structure, to name a few (Akresh and Frank 2008; Borjas 1987; Jasso et al. 2004; Lee and Zhou 2015). Although it has not yet been empirically tested, it is plausible that immigrants may also differ in terms of their neighborhood attachment or family norms and values when compared to those who did not migrate. That is, immigrants may be a selected group who are less attached to neighborhoods and family; and therefore, they may be less susceptible to any neighborhood influences on their family formation behaviors. In a benchmark bi-national study that utilizes data from both Puerto Rico (origin) and the United States (destination), Landale (1994) found that migrants are more likely than nonmigrants to form marital unions early and to enter informal unions; and selective migration plays a role in producing such patterns.

Fourth, the immigration process itself may have profound effects on individuals' family formation behaviors and their perceptions about neighborhood and family, since migration is a major disruption in the life course that requires a significant period of adaptation afterwards (Landale 1994). In fact, immigrants often marry and have children after they resettle in the area of destination (Landale 1994). It is also plausible that immigrants may alter their views and plans about marriage after migration as they enter a different local marriage market. Immigrants may postpone family formation as they adjust to new settings and establish themselves economically in the area of destination.

Fifth, with the growing heterogeneity of contexts of reception for immigrants, the effects of neighborhood on immigrants' family formation processes and structures are likely to vary across space. Earlier waves of immigrants tended to settle in "traditional" destinations where people of the same nationality had already settled—in "global cities"

that serve as centers of command and control for the world's markets (Sassen 1991). Since the 1990s, however, there has been a remarkable shift of immigrants away from these global cities toward new places of destination (Massey and Capoferro 2008). In addition, the majority of previous studies have conceptualized the "destination" as a relatively homogenous place with similar norms. However, residential contexts possess distinct industrial and political histories (Telles and Ortiz 2008), and there are significant spatial differences in residential characteristics. Thus, understanding how the context of reception may influence family formation processes and structures differently for immigrants is imperative (Kahn 1988).

Finally, through its influence on family formation, the residential context may shape the assimilation process and various outcomes of immigrants and their descendants (Alba and Nee 2003; Parrado and Morgan 2008; Portes and Zhou 1993). Values and beliefs regarding family formation are important aspects of cultural assimilation (Parrado and Morgan 2008), and family formation behaviors can have important implications for the possibilities of socioeconomic assimilation and mobility (e.g., structural assimilation) (Alba, Kasinitz and Waters 2011; Oropesa and Landale 2004; Portes and Zhou 1993; Telles and Ortiz 2008). In other words, family formation behaviors are proximate causes of assimilation that may be influenced by the contextual environment in which immigrants are embedded (distal causes of assimilation) (Alba and Nee 2003). Furthermore, understanding contextual influences on immigrants' family formation behaviors beyond individual factors can have important implications for public policies that presumably "strengthen the family" (Lichter et al. 1992).

Overview of the Three Studies

This dissertation project focuses on Mexican immigrants and investigates whether and how residential contexts influence their family formation behaviors and family structure. Mexican immigrants have a long history of immigration to the United States, and Mexico sends more immigrants to the United States (approximately 12 million currently reside in the United States) than any other country. In fact, more than 30% of all current U.S. immigrants were born in Mexico. Furthermore, Mexican immigrants are distinctive in that a large proportion of those who arrived recently are unauthorized. Passel and Cohn (2011) estimate that about 51% of all current Mexican immigrants are unauthorized, and about 58% of the estimated 11.2 million unauthorized immigrants in the United States are Mexican. Given the large number of Mexican immigrants in the United States, the process of family formation and family structure of Mexican immigrants can have important implications for the total population in the United States. Also, given the high percentage of unauthorized Mexican immigrants, it is important to understand whether and how residential contexts may influence Mexican immigrants differently by their legal status.

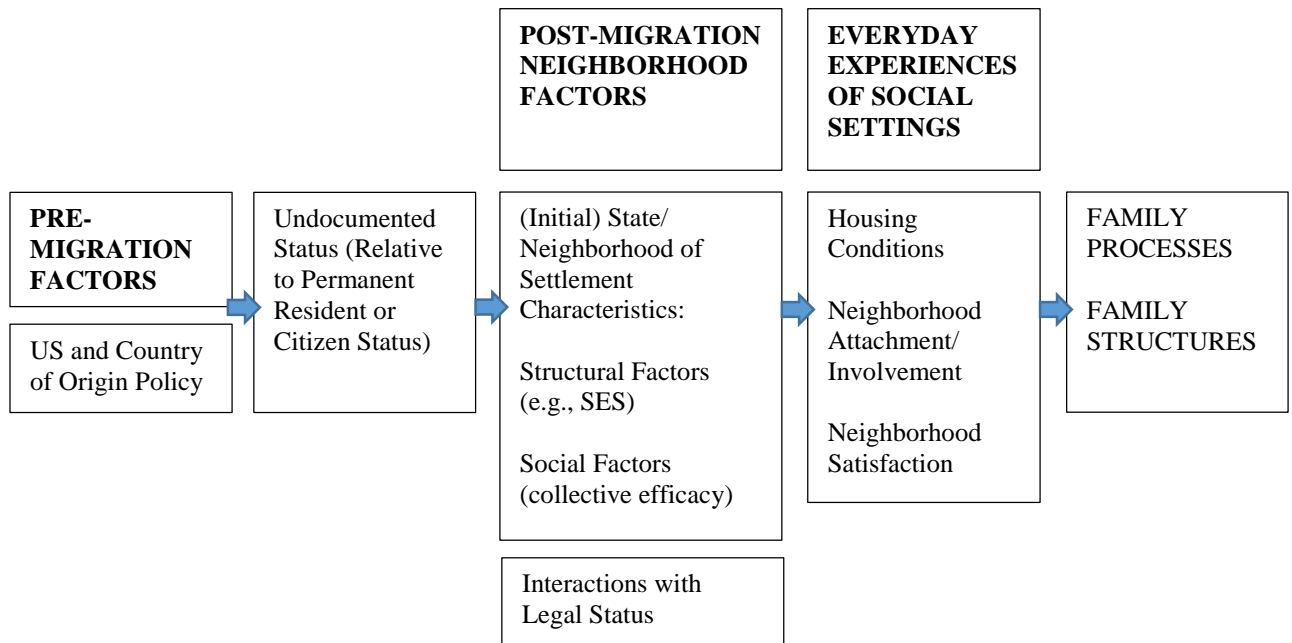
This dissertation project departs from many previous studies that are based on comparisons across various race-ethnic groups by taking a more in-depth approach to understanding heterogeneity *within* one sub-population: Mexican immigrants. Within-group studies of the variation within a group are important as they provide an essential route to understanding outcomes in that group. By focusing on Mexican immigrants, this

dissertation will provide an in-depth understanding of whether and how residential contexts influence their family formation behaviors and family structure.

While a complex set of interrelated social, economic, and cultural changes influence the family formation behaviors of an individual (Oropesa and Landale 2004), there has been a long-standing debate between cultural and structural explanations of Hispanic family patterns. That is, previous studies tended to pit these explanations against one another without considering the complex interrelation between culture and structure (Landale and Oropesa 2007). However, scholars have started to call for an integrative model that considers both cultural and structural perspectives on how Hispanic families are shaped. The integrative model includes multiple spheres of influence by considering individual, family and community contexts (Glick 2010). Within the integrative framework, contexts of reception are particularly important because structural conditions can affect opportunities for family formation and other aspects of host communities may shape changes in the values and expectations immigrants bring with them from their origin communities (Glick 2010).

The importance of contextual influences on individuals' family processes and structures is highlighted in Figure 1.1. This mediation model is adapted from Yoshikawa and Kalil's work (2011) investigating the effects of parental undocumented status on the developmental contexts of young children in immigrant families. As depicted in the conceptual model, individuals' neighborhood contexts are important distal causes that shape their everyday experiences of social settings (e.g., neighborhood satisfaction and neighborhood attachment), which in turn affect family processes and structures.

Figure 1.1. Conceptual Framework



Note: Figure is adapted from Yoshikawa and Kali (2011)

The dissertation consists of three main chapters (Chapters 2-4), each of which will reflect a segment of the overarching framework shown in Figure 1.1. The second chapter reviews the theories, applications, and limitations of research on neighborhood effects and discusses how family studies can benefit from incorporating a spatial perspective from neighborhood-effects research. I then present an innovative methodology—referred to as *activity spaces* (capturing the actual spatial exposures rather than individuals’ neighborhood of residence)—emerging in neighborhood-effects research, and discuss how this approach can be used to better understand the complexity and heterogeneity of families. Lastly, I highlight ways to incorporate space into family studies, “putting families into place.”

The third chapter explores the characteristics of local contexts of reception for Mexican immigrants, and whether they differ by Mexican immigrants' individual characteristics (e.g., legal status, age and life course stage, marital status, education, etc.). The foci of the third chapter are: (a) to create a typology of Mexican immigrants' neighborhoods of residence using the latent class modeling approach, and (b) to determine whether individuals' neighborhood characteristics differ by their individual characteristics.

The fourth chapter focuses on investigating the relationships between neighborhood socioeconomic and cultural characteristics and Mexican immigrants' family formation transitions. Using the multilevel competing risks event history modeling approach, I aim to understand which local characteristics, and changes in such characteristics, influence individuals' family formation behaviors above and beyond individual characteristics. Furthermore, I investigate whether and how individuals' neighborhood attachment and mobility intentions moderate the relationships between local characteristics and immigrants' family formation behaviors.

CHAPTER 2

“PUTTING FAMILIES INTO PLACE”: USING NEIGHBORHOOD-EFFECTS RESEARCH AND ACTIVITY SPACES TO UNDERSTAND FAMILIES

The increasing complexity and heterogeneity of families requires research to move beyond studying the average response or outcomes of individuals and families to studying the variations, outliers, and contradictions in family studies (Coontz 2013). It is thus imperative to study families across *time* and *space*. Because families differ along these two dimensions (Voss 2007), incorporating them into family studies can elucidate some of the specific mechanisms by which variations and contradictions are generated. Family science has been at the forefront of attending to the temporal dimension by cultivating a longitudinal perspective in studying families. Time-use surveys and the development of various longitudinal methodologies are also examples of how family studies have successfully incorporated time as an important dimension of research. However, the incorporation of *space* (i.e., abstract geometries without material form or cultural interpretation) and *place* (i.e., geographic locations invested with social meanings and values) (Gieryn 2000; Hillier and Hanson 1984) into family studies has been slower than in other disciplines.

Health researchers have led major initiatives to develop spatial approaches (de Castro 2007), with “explosions” of research interest in applications of spatial approaches in health research in the past few decades (Macintyre, Ellaway and Cummins 2002; Voss 2007). At the forefront of this scholarly momentum to incorporate space and place is

neighborhood-effects research which moves beyond the typical approach of focusing only on individual-level and family-level factors to consider contextual-level factors that are typically measured at the neighborhood level in order to understand individual outcomes. However, one of the most critical limitations of current neighborhood-effects research is its lack of attention to families. Families have been represented in neighborhood-effects research, but they remain at the margin because of limited theoretical and methodological attention devoted to family variables in neighborhood-effects research (Burton and Jarrett 2000). Relatively few studies have considered families and neighborhoods concurrently to investigate how they may interact and conjointly affect individuals. As this review shows, however, family studies have the potential to advance neighborhood-effects research, and incorporating neighborhood into family studies can advance scholarship by “putting family into place” (Entwisle 2007).

Linking Neighborhood-Effects Research and Family Studies

In this chapter, I provide a review of neighborhood-effects research literature in Sociology and urge family studies researchers to incorporate neighborhood factors in studying families. First, I review the theoretical development of neighborhood-effects research, and I discuss theoretically driven approaches to incorporating neighborhoods into family studies by highlighting the empirical studies that have successfully done so when investigating individual and family outcomes. Second, I discuss the empirical limitations of current neighborhood-effects research, reviewing the current state of the field as well as the existing research gaps. Third, I introduce an emerging and innovative

methodology in neighborhood-effects research: the activity spaces approach. Finally, I discuss how incorporating activity spaces can advance scholarship in family science, and I provide suggestions for future research by rejecting the simplistic approach of traditional neighborhood-effects research.

Theoretical Development of Neighborhood-Effects Research

Although increased scholarly interest in neighborhood-effects research is recent, related interest in neighborhoods and their relationships with individual outcomes are deeply rooted in sociological theory. For example, classic sociological research reaching back to 1897 investigated the relationship between the characteristics of urban areas and negative outcomes for individuals, such as alienation, isolation, and increased rates of suicide (Durkheim 1897). During the early twentieth century, urban sociologists—especially those from the Chicago School—led the initial theoretical development of neighborhood-effects studies. Part of this theoretical development relates to the conceptualization of neighborhood. Robert Park from the Chicago School defined (urban) neighborhoods as discrete local entities where social processes and interactions occur (Park 1915), a conceptualization that draws on the distinction between place and space: Places are geographic locations invested with social meanings and values, whereas spaces are merely abstract geometries without material form or cultural interpretation (Gieryn 2000; Hillier and Hanson 1984). In other words, neighborhoods are places that cannot be defined exclusively in spatial terms (Gieryn 2000). Building on this conceptualization of neighborhoods and classic sociological theories, divergent theories on the relationship between urbanism (on a demographic scale) and individuals' well-being have assumed

that neighborhoods—conceptualized as city or metropolitan contexts—have *negative* (Simmel 1903; Tönnies 1955; Wirth 1938), *neutral* (Fischer 1975; Gans 1962), or *positive* (Hawley 1986; Jacobs 1961) effects on individuals.

Moving beyond the initial theoretical explorations of the relationship between neighborhood scale and individuals' well-being, scholars expanded the scope of their research by investigating the effects of other neighborhood characteristics. In a highly influential investigation that shifted the paradigm of neighborhood studies, Shaw and McKay (1942) examined the role of neighborhood social disorganization—that is, the inability of a community to realize common values of its residents and to maintain social control (Sampson and Groves 1989)—emphasizing the roles of neighborhood poverty, residential instability (high turnover), and racial/ethnic heterogeneity. Shaw and McKay (1942) found that high levels of social disorganization, as measured by abandoned or dilapidated housing and criminal activities, are associated with adolescents' criminal behaviors. A few decades later, Kasarda and Janowitz (1974) expanded this research when they investigated the mechanisms linking neighborhood structural characteristics and individual outcomes by looking at informal social networks and community attachment. In particular, they found that social disorganization, along with length of residence in a neighborhood, negatively influences individual outcomes. Sampson and colleagues further extended the theory of neighborhood effects by investigating the role of “collective efficacy,” referring to the combination of trust and cohesion among residents in a neighborhood that allows for social control (Sampson, Raudenbush and Earls 1997). They found that collective efficacy affects perceived neighborhood violence

and victimization, and that collective efficacy moderates the relationship between residential stability and violence. In short, collective efficacy works as one of the mechanisms by which social relationships and social networks within the neighborhood moderate and/or mediate the relationships between neighborhoods' structural factors and individual outcomes.

Although the momentum of theoretical development of neighborhood-effects research has slowed since the early 2000s¹, the empirical applications of neighborhood-effects research have been revamped in the last few decades as new data, software, and methods have become more readily available (Entwisle 2007). The number of neighborhood-effects studies has skyrocketed, and scholars have started to investigate multiple dimensions of neighborhoods beyond neighborhood socioeconomic status. For example, previous studies investigated the role of the physical environment, the social environment (e.g., social capital, social interactions in the neighborhood), and the symbolic environment (e.g., representations and identities), as well as other dimensions of neighborhoods (Chaix et al. 2012). In addition to the broader spectrum of neighborhood characteristics being investigated, the neighborhood-effects research field has witnessed significant methodological development, including the development of various geographically informed statistical models (e.g., spatial lag, spatial error, and geographically weighted regression). Despite these empirical applications and methodological development, the lack of theoretical expansion remains one of the most importance challenges in neighborhood-effects research (Entwisle 2007).

¹ See Sampson (2012) and Sharkey and Faber (2014) for important recent exceptions.

A Critical Missing Piece in Neighborhood-Effects Theories: The Role of Families

The underdevelopment of theory to guide neighborhood-effects research is partially due to the lack of explicit consideration of families. Although neighborhood-effects research expands the traditional focus on individual-level influences on individual outcomes, it largely ignores the role of the families (Chase-Lansdale et al. 1997; Simons et al. 2002). Family factors may be considered in the framing of research questions, but “the conceptual and methodological treatment of family variables range from unspecified and vaguely implied to modestly defined and measured in most studies” (Burton and Jarrett 2000). For example, in an influential review, Jencks and Mayer (1990) suggested five mechanisms by which neighborhood characteristics affect child outcomes; yet, they ignored the role of families in mediating and moderating neighborhood influences (Burton and Jarrett 2000).

The inclusion of families in neighborhood-effects research is essential because families are critical microsystems that embed individual members within the larger ecological system (Cox and Paley 1997). Moreover, families themselves are embedded in larger contexts, such as neighborhoods (Bronfenbrenner 1979; Bronfenbrenner and Morris 1998). Families critically influence individual outcomes, given that the family is typically an individual’s earliest and most foundational context. But family is also important for studying neighborhood effects because families are often the units that make decisions about neighborhoods and that absorb neighborhood effects. For example, parents’ desires to move to a neighborhood with a good school district will significantly influence residential choice and mobility decisions (Lareau and Goyette 2014).

Furthermore, families may be particularly influential for determining neighborhood effects on children because children typically have little agency in choosing their own neighborhoods. In this regard, family studies can challenge the typical approach of neighborhood-effects research by highlighting the need to consider individuals, families, and households as units of analysis for some outcomes.

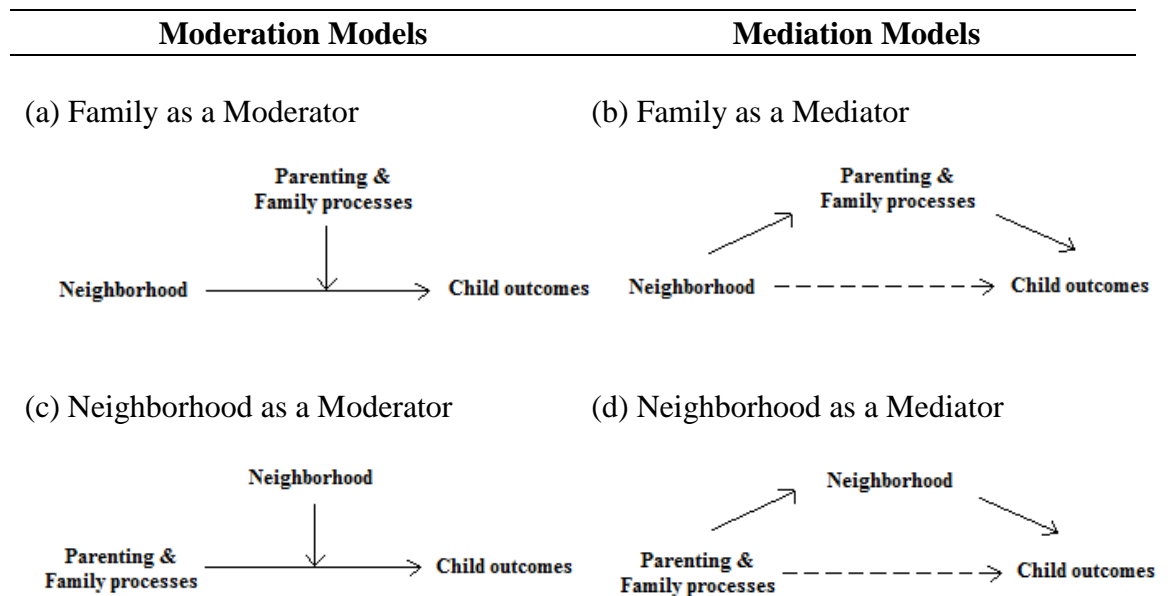
Incorporating Neighborhoods into Family Studies

Perhaps more important than the potential contributions of family studies scholars to the development of neighborhood-effects theories are the substantial benefits to family science from the incorporation of space and place for studying family variations. Studies that focus only on families can be problematic because families are embedded in larger social contexts such as neighborhoods (Bronfenbrenner 1979); thus, the exclusion of neighborhoods can lead to serious specification errors, either from omitted variables bias producing overestimates of the effects of included variables or from possible interactions between family and neighborhoods (Parcel, Dufur and Cornell Zito 2010). Furthermore, incorporating neighborhoods into family studies can help elucidate the specific mechanisms through which nonproximate factors (i.e., neighborhood) matter for individual outcomes through their influences on proximate factors (i.e., family) and for families.

Families have largely remained at the margin in neighborhood-effects research because of limited theoretical and methodological attention devoted to family variables (Burton and Jarrett 2000). Nonetheless, it is critical to acknowledge the important

contributions that family studies researchers have made to neighborhood-effects research by investigating (a) family as a moderator, (b) family as a mediator, (c) neighborhood as a moderator, and (d) neighborhood as a mediator for understanding individual outcomes (see Figure 2.1. for a visual representation of these conceptual models).

Figure 2.1. Moderating and Mediating Mechanisms in Neighborhood Effects Research



First, the *parental buffering hypothesis* states that the negative effects of disadvantaged neighborhoods on children are moderated by parental behaviors (see Figure 2.1.a). For example, McKelvey, Connors-Burrow, Mesman, Pemberton, and Casey (2014) found that a supportive family environment—measured by family-level cohesion—can attenuate the negative effects of community violence and other characteristics of disadvantaged neighborhoods.

Second, the *environmental stress model* suggests that negative neighborhood characteristics affect children but are mediated by parenting and family processes (see Figure 2.1.b). For example, Pachter, Auinger, Palmer, and Weitzman (2006) found that neighborhood effects on children's internalizing and externalizing problems are partially or fully mediated through parenting.

Third, several models have been proposed to examine the role of neighborhood as a moderator. The *amplified disadvantage model* states that the negative impacts of family-level risk factors (e.g., harsh parenting and inconsistent discipline) are magnified in socioeconomically disadvantaged neighborhoods (see Figure 2.1.c). The *family compensatory effects model* argues that positive family-level protective factors (e.g., high nurturance and parental involvement) are more important for children in socioeconomically disadvantaged neighborhoods than for children in other neighborhoods (see Figure 2.1.c). These two models suggest that the influence of family-level factors on child outcomes can be moderated by the neighborhood context. For example, Yonas and colleagues (2010) found that neighborhood characteristics moderate the relationship between child maltreatment and outcomes in adulthood by working as a buffer for the negative effects of child maltreatment.

Fourth, the *contextual dissipation model* explains that positive family-level protective and harmful factors can disappear in, or are completely overwhelmed by, disadvantaged neighborhood characteristics (see Figure 2.1.d). For example, Simons and colleagues (2002) found that the deterrent effect of negative parenting (measured by

caretaker control and corporal punishment) disappears when these parenting behaviors are widespread and thus normative within a community.

Most neighborhood-effects studies primarily focus on individual outcomes, with fewer studies focused on the roles of neighborhoods on family outcomes, such as family stress (e.g., family conflict and parental depression) and family resilience (e.g., family belief systems and communication/problem-solving).² Key constructs of research on families are critical for informing the mechanisms by which neighborhoods contribute to individual and family outcomes. Furthermore, neighborhood-effects studies focusing on families as the unit of analysis can aid the design of more effective place-based public policies to address the needs of families rather than individuals.

Empirical Limitations in Neighborhood-Effects Research

As discussed earlier, the potential contribution of family studies to theoretical development in neighborhood-effects research is great, and a better integration of neighborhood studies and family studies can advance both fields. In this section, I provide a comprehensive overview of neighborhood-effects research and its methodological limitations, setting the stage for a discussion of how the innovative *activity spaces* methodology addresses these limitations.

² Important exceptions are studies examining neighborhood effects on maternal mental health. See Klebanov et al. (1994) and Kotchick et al. (2005).

Definition of Neighborhoods

One of the most important limitations of neighborhood-effects research stems from the operationalization of neighborhoods. Most commonly, neighborhoods are operationalized by the use of administratively defined units, such as census tracts or census blocks. The great majority of neighborhood-effects studies simply define individuals' neighborhoods as the census tract or census block of their residence. The use of such administratively defined boundaries makes analysis feasible (Basta, Richmond and Wiebe 2010), and some researchers have argued that such delimitations of neighborhood can have sociological meaning (Lebel, Pampalon and Villeneuve 2007).

Despite these practical advantages, administratively defined units may not be accurate proxies for individuals' neighborhoods because such units may not represent individuals' unique spatial experiences (Perchoux et al. 2013). For example, individuals and families who live near the boundaries of the unit may have qualitatively different spatial experiences than individuals and families who live near the center of the unit (Chaix et al. 2012; Perchoux et al. 2013). The former may reside in that unit but spend the majority of their working and leisure hours in the adjacent administratively defined unit. In this case, using the administratively defined unit corresponding to their residence will not accurately capture their actual *lived* experience of their neighborhoods. Furthermore, individuals' perceptions of neighborhood size, recognition of neighborhood names, and boundaries vary significantly (Lee and Campbell 1997; Pebley and Sastry 2009).

In addition, using an administratively defined unit of residence as a measure of neighborhood can lead to *residential trap bias*, or restricting the influence of neighborhood context to the residential context (Perchoux et al. 2013). In addition, focusing only on the local area can lead to *local trap bias*, ignoring the influence of nonresidential neighborhoods and nonlocal areas (Purcell and Brown 2005). Empirical evidence shows that residential neighborhood characteristics differ significantly from workplace neighborhood characteristics; for example, segregation levels in the workplace neighborhoods are, on average, much lower than individuals' residential neighborhoods (Ellis, Wright and Parks 2004). Thus, defining individuals' residential contexts as their neighborhoods ignores this "spatial polygamy" (Matthews and Yang 2013). Census tracts are quite small, on average, covering about one square mile, especially in urban areas (Matthews and Yang 2013). Thus, individuals and families are very likely to be exposed to multiple administratively defined units in their daily lives if they work or participate in other activities outside their residential neighborhood. In addition, lived neighborhoods differ by individual characteristics. For example, individuals with a long commute to work may spend the majority of their time in a neighborhood other than their neighborhood of residence. Also, children in childcare may spend more time in a neighborhood of a caretaker, such as a grandparent, rather than their neighborhood of residence.

Scale of Neighborhood and Inferential Errors

Even if we accept the assumption that administratively defined units adequately represent the unique spatial experiences of individuals and families, using these units can introduce two significant problems: the *modifiable areal unit problem* (MAUP) (Openshaw 1983) and the *uncertain geographic context problem* (UGCoP) (Kwan 2012). First, the MAUP is essentially a spatial ecological fallacy problem with two components (de Castro 2007): (1) a scale effect, in which using different scales may produce different results; and (2) a zoning effect, in which regrouping zones may produce different results (Fotheringham, Brunson and Charlton 2000). That is, when point-based measures of spatial phenomena are aggregated to larger spatial units, the zoning and scale of the aggregation can produce different results. For example, using census tracts or ZIP codes as proxies for individuals' neighborhoods may create discrepancies.

Second, the UGCoP implies that neighborhood effects can be affected by how administratively defined units differ from the accurate, causally relevant geographic context (Kwan 2012). For example, a smaller geographic unit, such as a census tract, may be the causally relevant geographic context for assessing the effects of social relationships within the neighborhoods; on the other hand, a larger geographic unit, such as the county, may be the causally relevant geographic context for assessing the effects of large policy. Yet, identifying the causally relevant geographic context is theoretically and empirically challenging. These two problems can lead to serious inferential errors (see Table 2.1.). As Kwan (2012) demonstrated, misspecification of the geographic unit can lead to both false positive and erroneous negative findings.

Table 2.1. Inferential Errors Resulting From the Uncertain Geographic Context Problem

True state of contextual effects	Observed state of contextual effect	
	Had effect	No effect
Has effect	* Contextual units correct * Correct inference	* Contextual units incorrect * False negative findings (obscured contextual effect)
No effect	* Contextual units incorrect * False positive findings (spurious association)	* Contextual units correct * Correct inference

Source: Kwan (2012), Table 1

Neighborhoods as Isolated Geographic Units

The current conceptualization of neighborhood is also limited in that it considers only immediate areas (e.g., the individual’s own neighborhood) without investigating the impacts from the adjacent areas, treating neighborhoods as isolated geographic units. That is, the underlying assumption of the typical approach of using residential locations, such as using census tracts as proxies for neighborhoods, ignores the larger spatial processes that may occur among neighborhoods. Because social processes are spatially embedded, understanding the role of neighboring areas is theoretically important. Expanding the theoretical boundaries of neighborhood from intraneighborhood effects to interneighborhood effects, two mechanisms can be identified in understanding how neighborhood characteristics may influence individual outcomes: *spatial spillover* and *social relativity*. First, the *spatial spillover* perspective hypothesizes that individual and family outcomes are related to the characteristics and processes of the neighboring areas in addition to an individual’s or family’s own immediate area through diffusion of ideas,

practices, and resources (Capello 2009; Rogers 2010). For example, the opening of a family resource center in one neighborhood potentially affects not only the residents of that particular neighborhood but also residents in its surrounding neighborhoods. Second, the *social relativity* perspective hypothesizes that proximate neighborhoods serve as a point of comparison for individuals and families in assessing their own context (Wilkinson 1997). For example, individuals and families who reside in a disadvantaged neighborhood surrounded by affluent neighborhoods may experience stronger negative neighborhood effects because their perceptions of the affluent neighborhoods may amplify their negative subjective perceptions of their own neighborhood.

Such limitations have been recognized in the health literature, which includes a scholarly push to expand the theoretical scope to examine the effects of contexts beyond the immediate residential area (Dietz 2002; Matthews and Yang 2013; Takagi, Ikeda and Kawachi 2012; Vallée et al. 2011). To address this issue, some studies have started using innovative modeling approaches, such as spatial Durbin modeling, that allow researchers to separate the direct (i.e., within-own-neighborhood) impact on individual outcomes from the indirect (i.e., to/from neighboring neighborhoods) impact (for more detailed discussion of the spatial Durbin approach and an empirical example, see Yang, Noah, & Shoff (2013)). Also, neighborhood-effects research incorporating an activity space framework has increased dramatically in health studies. Yet, most family studies focusing on neighborhood-effects continue to use the simplistic approach of accounting only for individuals' and families' immediate neighborhoods without considering both absolute and relative characteristics of neighborhoods (Dietz 2002).

Assumption of Inevitability in Neighborhood-Effects Research

Another important potential problem in neighborhood-effect research is that the typical approach of using administratively defined units assumes equivalent exposure across residents and overlooks the role of human agency. The first assumption of this inevitability is that neighborhood influences are exogenous and universal to everyone living in the same neighborhood (Entwisle 2007). However, effects of various neighborhood characteristics on individuals' outcomes operate differently across individuals (Macintyre and Ellaway 2003; Vallée et al. 2011). For example, Kwan (1999) found that neighborhood effects on individuals significantly differ by gender because of gendered differences in accessibility and mobility. Individuals' neighborhood geospatial experiences also differ by other sociodemographic characteristics, such as race (Jones and Pebley 2014), class, immigration status, and legal status.

The second assumption of the inevitability in neighborhood-effects research is that individuals are passive recipients of predetermined neighborhood influences (Entwisle 2007). This assumption largely ignores the role of human agency, overlooking individuals' decision-making capacity regarding their own mobility. In response to negative conditions and changes in conditions of neighborhoods, individuals may move out of the neighborhood or limit their interactions within the neighborhood. In addition, individuals may employ different coping mechanisms (e.g., "street efficacy", the perceived ability to avoid dangerous situations and be safe in neighborhood (Sharkey 2006)) to counteract the negative aspects of their neighborhood, some of which may positively affect outcomes. Scholars have increasingly argued for the importance of

considering residential mobility and daily travel patterns to account for individuals' agency (Browning and Soller 2014; Graif, Gladfelter and Matthews 2014).

Given these limitations, some critiques have questioned the validity and applicability of neighborhood-effects research. However, with the strong need to incorporate multilevel contexts in theories for investigating individual and family outcomes, addressing these theoretical and methodological limitations is imperative. In addition, some scholars have argued that a relatively small effect of neighborhood factors may be underestimated and that such underestimation may be attributable to these limitations, particularly the misspecification of contextual boundaries (Spielman and Yoo 2009). Thus, addressing these methodological limitations will help researchers to assess the causally relevant effects of neighborhoods. To better capture individuals' and families' exposures and experiences of neighborhoods, new innovative perspectives and methodologies have emerged: these approaches can be largely categorized as egohood and activity spaces approaches.

Methodological Innovation in Neighborhood-Effects Research

To address the current empirical limitations of neighborhood-effects research, scholars have proposed several person-centered approaches to study individuals' and families' neighborhoods (Browning and Soller 2014; Hipp and Boessen 2013). One approach centers on *egohoods*, or egocentric local environments, in which the individual is designated as the center of his or her neighborhood (Crowder and South 2008; Hipp and Boessen 2013; Reardon et al. 2008). Egohoods are constructed using a geographic

information system (GIS) to create a buffer or to encircle the target individual's residential location. These egohoods may overlap with several census units, and the proportions of the area that are in different census units are recalculated to assess the characteristics of egohoods. In addition to creating a simple buffer (i.e., egohood), egocentric local environments incorporate the distance decay function, such that local environments have less influence as distance from residence increases. Although egohood measures move beyond the typical approach of using administratively defined geographic units as individuals' neighborhoods, this approach is subject to some of the same empirical limitations. For instance, it reduces individuals' neighborhood contexts to their residential contexts (i.e., is subject to residential trap bias), and decisions regarding the scale of the buffer (e.g., a buffer with approximately a one-mile radius) remain somewhat arbitrary.

Another innovative methodological approach in neighborhood-effects research is the concept of activity spaces: "the subset of all locations within which an individual has direct contact as a result of his or her day-to-day activities" (Golledge and Stimson 1997), which reflect individuals' actual lived contexts (Jones and Pebley 2014). The activity spaces approach has a long history in various disciplines, including geography, public health, and sociology (Mason and Korpela 2009). Geography has been at the forefront of developing the concept of activity spaces, with Hagerstrand's (1968) pioneering work on space-time geography providing the foundation for activity spaces. Despite the long history of the concept of activity spaces, neighborhood-effects research has paid little attention to individuals' activity patterns because of a lack of available data and methods

(Basta, Richmond and Wiebe 2010). However, the activity spaces approach has been gaining traction and has been identified as an important way to conceptualize space and reduce methodological misspecification (Matthews and Yang 2013).

The activity spaces approach captures the fundamental mechanisms of neighborhood-effects research (Browning and Soller 2014). It measures levels of exposure to different urban opportunities and resources based on individuals' activity patterns. The activity spaces approach rejects the inevitability assumption of neighborhood-effects research that ignores individuals' agency in choosing and defining their own neighborhood. Instead, activity spaces are specifically defined for individuals. By assessing the actual geographic areas to which individuals are exposed, activity spaces bypass the use of administratively defined boundaries as proxies for individuals' neighborhoods and avoid residential trap bias and local trap bias. In addition, because activity spaces are constructed by individuals' actual travel patterns, they also use an appropriate scale for measuring neighborhoods. In other words, the activity spaces approach addresses most of the current limitations of neighborhood-effects research by allowing person-centered definitions of neighborhoods that can vary with individual characteristics.³ For example, two mothers residing in the same residential neighborhood can have different activity spaces. The daily activities of a stay-at-home mother may center closely on her neighborhood of residence, whereas a mother residing in the same neighborhood but who works outside the home may travel to multiple neighborhoods if

³ Admittedly, the activity spaces approach does not solve all problems of traditional neighborhood-effects research, and it actually creates some new ones that will be addressed later in this section of the chapter.

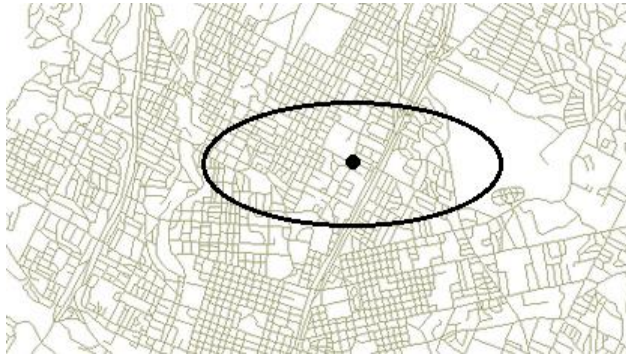
she travels to take her children to daycare, creating a different profile of activity spaces than for the stay-at-home mother.

Activity spaces have been measured using three main approaches: (a) a two-dimensional ellipse, (b) kernel densities, and (c) shortest-path networks (Schönfelder and Axhausen 2003; Wong and Shaw 2011) (see Figure 2.2. a-c for a visualization of these methods). First, measuring a two-dimensional (standard deviational) ellipse of all the locations of regular activities has been the most prominent approach historically (Vallée et al. 2011).⁴ However, some scholars have argued that ellipses do not accurately represent the concept of exposure (Wong and Shaw 2011) because this measure assumes that individuals know and experience all the areas covered by the ellipse surrounding the locations they visited. Second, kernel densities also use information about the locations the individual visited. The researcher calculates kernel densities by mapping kernel density distributions of visited locations (data points) and then overlapping those locations to derive a more continuous density surface showing the clustering of activities. Although kernel densities provide an excellent measure of individuals' travel patterns, this approach is not best suited to study the characteristics of the neighborhoods that individuals visited during their travels. Third, shortest-path networks (SPN) measure the minimum distance of routes between locations that individuals have visited and/or the area covered by a buffer around those routes (Schönfelder and Axhausen 2003). Similar to kernel densities, SPN are better suited for studying travel patterns than for studying neighborhood characteristics of areas that individuals visited.

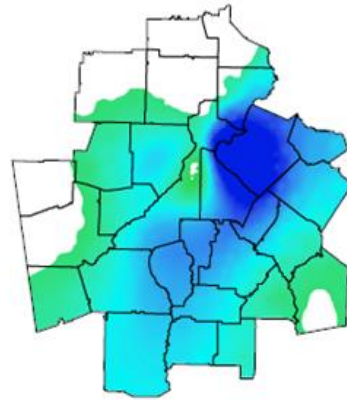
⁴ For a detailed illustration of how these ellipses are constructed, see Newson et al. (1998)

Figure 2.2. Various Measures of Activity Spaces

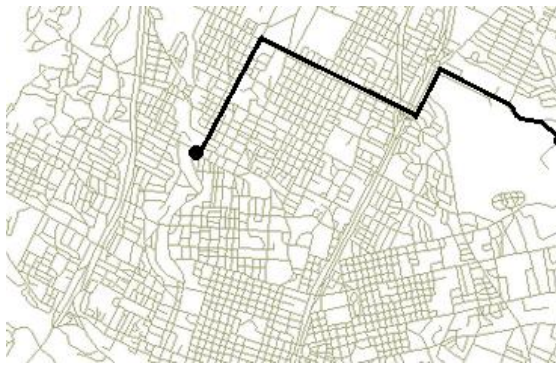
(a) Ellipse (egohood)



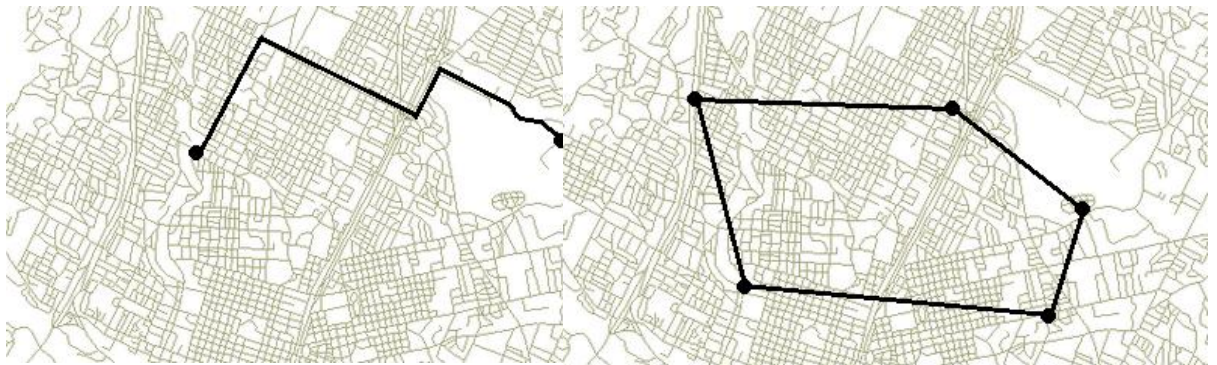
(b) Kernel Densities



(c) Shortest Paths Networks (SPN)



(d) Minimum Convex Hull / Polygon



No consensus has been reached about which measure best represents individuals' activity spaces, but one approach to measuring activity spaces that has been gaining traction is the use of the minimum convex hull or polygon (Browning and Soller 2014; Jones and Pebley 2014) (see Figure 2d for visualization). To construct a minimum convex hull, the researcher geocodes the geographic coordinates of individuals' residences and the places they visited during a given time; then, with each location used as the vertex, the minimum convex hull (or polygon) is the smallest area with all the

destinations points embedded within it. The polygon may be completely inside individuals' residential census units, or it may be spread across several census units. Then, activity spaces of individuals are calculated by a reapportioning of the census information. This approach assumes that individuals are exposed to both the places they visit and the areas through which they travel in between those destinations (Jones and Pebley 2014).

Rather than relying on information from one administratively defined unit, this approach allows researchers to examine individuals' exposure to multiple neighborhoods in terms of the individuals' travel patterns.⁵ Although the other, aforementioned measures of activity spaces work best with point data and are best suited to study individuals' travel patterns to different institutions (e.g., health care facilities), the minimum convex hull approach can create an area-based estimation of neighborhood effects.

The advantages of using the minimum convex hull for assessing individuals' activity spaces aside, some limitations do exist. First, because the construction of the polygon requires at least three vertices, rarely visited locations may fail to meet the geometric requirements and thus will be excluded from analysis despite their potential influences. Second, the polygon may include extensive areas beyond the visited locations, which may not be a part of individuals' actual lived activity spaces. Third, this approach does not weight exposures by destinations to capture the time spent in those destinations

⁵ The use of activity spaces approach is not designed to replace the use of administratively defined units, such as census tracts, because these two approaches capture qualitatively different aspects of neighborhoods. The operationalization of neighborhoods should depend on the research question. For example, studying the effects of local resources on families (e.g., exploring how many family counseling resources are within families' local neighborhoods) may dictate using administratively defined units.

or the intensity of activity (e.g., through a neighborhood history calendar technique; (Axinn and Yabiku 2001)).

Several pioneering studies have investigated the characteristics of activity spaces and how they vary by individual and family characteristics. Some scholars have found that activity spaces are generally larger than individuals' residential neighborhoods as defined by a census tract (Jones and Pebley 2014; Matthews and Yang 2013), and that activity spaces are considerably more heterogeneous in terms of key social characteristics than are individuals' residential neighborhoods (Jones and Pebley 2014; Krivo et al. 2013). For example, segregation levels in work neighborhoods are much lower than in residential neighborhoods (Ellis, Wright and Parks 2004; Wong and Shaw 2011). In addition, fewer structural resources exist within the activity spaces of individuals from more disadvantaged neighborhoods (Browning and Soller 2014). Furthermore, characteristics of activity spaces also vary by individual and family characteristics. The different locations and resources individuals can access depend on individual characteristics, such as individual spatial trajectories and life situations (Kwan 1999). In an exploratory study of activity spaces in Los Angeles County, Jones and Pebley (2014) found that African Americans have significantly larger activity spaces than whites and Latinos. Latinos are the most segregated, with activity spaces shared primarily with members of their own racial/ethnic groups. Furthermore, Perchoux and colleagues (2013) demonstrated that other family characteristics—such as having children at home, being in a marriage or partnership, and the distance from other family members—can influence individuals' activity spaces.

New Opportunities in Family Theory and Research

Although spatial approaches in the social sciences have increased rapidly over the past two decades, especially in neighborhood-effects research, applications of spatial approaches in family studies have been scant. That is, although the concept of family has been central in designing research questions in neighborhood studies, the theoretical and methodological attention devoted to family variables has been limited (Burton and Jarrett 2000). Neighborhood-effects research has gained popularity in the past two decades, but the field is faced with both theoretical and methodological challenges. One of the challenges in neighborhood-effects research has been underdeveloped theories, resulting in too many exploratory empirical applications without theoretical guidance (Entwisle 2007). Attention to families can help the theoretical development of neighborhood-effects research by shedding light on the specific mechanisms through which neighborhoods affect both individuals and families. At the same time, incorporating neighborhood context into family studies can advance family scholarship by “putting family into place” (Entwisle 2007), which in turn can contribute to our understanding of the complexity and heterogeneity of families.

The activity spaces approach captures exposure, the fundamental mechanisms of neighborhood-effects research (Browning and Soller 2014), and it reflects the spatial experiences of individuals in their day-to-day lives. The use of this approach in neighborhood-effects research is still in its infancy (Jones and Pebley 2014), but it has immense potential for use in family studies. Specifically, the activity spaces approach can further our understanding of family processes, family behaviors, and family–work

balance. First, moving beyond South and colleagues' classic body of work investigating the role of residential neighborhood characteristics in individuals' family transitions (e.g., first-union formation, childbearing) (Crowder and South 2008; South 1996; South 2001; South and Crowder 1999), the activity spaces approach can incorporate the characteristics of the neighborhoods and networks that individuals encounter in their activity spaces. For example, individuals who are exposed to higher potential mate availability in their activity spaces may have a greater probability of making early family transitions, compared with individuals who have less exposure. Also, individuals who are exposed to different norms about family transitions (e.g., transitions into marriage versus cohabitation) may choose specific types of family transitions. Similarly, activity spaces can be useful for identifying factors that influence the onset and patterns of adolescents' sexual behaviors, which can have consequences for unintended family transitions. Understanding how activity spaces influence patterns of union formation and dissolution is important because these patterns can influence the family structure and living arrangements of children (Glick 2010).

Second, activity spaces can help researchers to better understand the relationship between neighborhood characteristics and family behaviors, such as parenting. Previous studies have documented that parenting is closely intertwined with the characteristics of the neighborhoods in which parents are embedded (Pachter et al. 2006; Yonas et al. 2010). For example, positive parenting can fully mediate the negative effects of neighborhoods on adolescents' behavioral problems (Pachter et al. 2006). Instead of using the neighborhood characteristics measured by census tracts, activity spaces can be

used to assess what types of social networks exist within the neighborhoods to which parents are exposed in their day-to-day lives and how individuals learn about parenting norms. For example, an African American parent who resides in a predominantly non-Hispanic white neighborhood may travel outside of the neighborhood to interact with family and friends and may rely on people in his or her daily activity spaces to form his or her parenting norms. In addition, parents in disadvantaged neighborhoods may choose to participate in more activities outside their residential neighborhoods to gain exposure and access to resources from nonresidential neighborhoods.

Third, using activity spaces can better inform family studies researchers about family–work balance because activity spaces may be influenced by the location of the workplace, child care, and other factors. Consistent with this line of thought, Matthews (2011) found that characteristics of mothers’ activity spaces are significantly different from characteristics of their neighborhoods as defined by census units. Examining this topic more thoroughly is important for understanding how the choice of approach affects our knowledge of family–work balance and family relationships, especially among working mothers. For example, mothers who work in more-affluent neighborhoods may bring some psychological and physical resources back to their less-affluent neighborhoods or reduce their neighborhood satisfaction relative to the more-affluent neighborhoods. Also, having larger activity spaces resulting from a long commute to work may increase in family conflict. By using the activity spaces approach, we can better understand the variations, outliers, and contradictions found in family studies (Coontz 2013).

On the basis of this review, I offer several suggestions for future studies using the activity spaces approach. First, future studies could define activity spaces in more-nuanced ways by collecting information about *what types* of activities individuals and families engaged in (e.g., fixed activities versus habitual or spontaneous activities) (Jones and Pebley 2014; Perchoux et al. 2013), *how often* and *how much time* they spend in each location (i.e., frequency and duration) (Jones and Pebley 2014), and *why* they visited each location (McCray and Mora 2011). To collect more-detailed information on individuals' activity spaces, researchers have designed new approaches to collecting data and analyzing complex data. For example, using Global Positioning System (GPS) technology, researchers have started to assess individuals' travel patterns and activities, analyzing them using ecological momentary assessment (EMA) and social network analysis (SNA). These emerging data collection efforts and methodological advances are steps toward more-nuanced research on activity spaces (Browning and Soller 2014). By collecting such nuanced and in-depth information, family studies researchers will be able to understand how multiple family members' experiences in and exposures to neighborhoods differ and how they affect individuals and families.

Second, future studies might investigate how individuals' perceptions, mobility, and family contexts can influence activity spaces. Individuals' definitions and perceptions of their neighborhoods vary significantly, and these subjective perceptions may influence the locations and resources that individuals and families access (Colabianchi et al. 2014). Also, as mentioned earlier, increasing complexity in family structure and dynamics exposes individuals and families to multiple neighborhood

contexts, and exposures to multiple neighborhood contexts may help to elucidate how neighborhoods matter for individuals and families.

Third, the activity spaces approach and neighborhood-effects research in general need to expand their scope by considering *protective* factors in neighborhoods, given that most research has focused on the negative effects of neighborhoods. For example, individuals and families from a disadvantaged neighborhood may be able to tap into neighborhood advantages by traveling to or through affluent neighborhoods.

Fourth, future studies that use qualitative approaches of geoethnographic methods, such as in-depth interviews and participant observation, in conjunction with quantitative approaches could capture the subjective understanding of activity spaces and provide a more comprehensive understanding of individuals' and families' neighborhood and activity spaces (Kwan 1999; Matthews, Detwiler and Burton 2005). This approach can also help elucidate whether, how, and why multiple family members' experiences and outcomes may differ despite sharing the same residential neighborhood.

Finally, more systematic attention to the diversity of families and how multiple contexts can interact with activity spaces would enhance neighborhood-effects research. For example, undocumented immigrant families may limit their activity spaces in fear of deportation, and their limited activity spaces may protect them from neighborhood disadvantages but may also deprive them of neighborhood resources. Incorporating the diversity of families across multiple dimensions, such as race/ethnicity, class, immigration status, legal status, and sexual orientation, should be carefully considered in using the activity spaces approach to understand individuals and families. That is, more

systematic attention to the diversity of families, as well as to the interaction of multiple contexts with activity spaces to influence individuals and families, can highlight the intersection of families and places.

In conclusion, the field of family studies has much to contribute to developing better theories of neighborhood effects and elucidating the specific mechanisms through which neighborhoods affect individuals. The concept of activity spaces from neighborhood-effects research also has much to offer family studies both theoretically and methodologically. In addition, the methodological innovation of the activity spaces approach provides an exciting opportunity to move toward transdisciplinary family sciences (Blume 2014) and guide prevention and intervention efforts with children and families. For example, in cases of child problem behaviors, incorporating activity spaces can better identify potentially modifiable mediators of neighborhood contexts.

Information regarding where individuals and families spend their time can be used to design more effective prevention and interventions specific to the needs of families in certain neighborhoods (Burton and Jarrett 2000). In addition, policy makers and researchers could use an activity spaces approach to identify spatially entrapped individuals and families in an effort to increase their accessibility of resources (e.g., health care infrastructure and family resource centers) (Matthews and Yang 2013).

Facilitating more discussion and an incorporation of the activity spaces approach in family studies will require more effort devoted to data collection and training. The underutilization of neighborhood contexts within family studies is largely due to data constraints; data sources used in family studies typically do not contain the appropriate

geographic information (e.g., addresses) for investigating neighborhoods. Although data increasingly include addresses of individuals' residences, which allow researchers to use census units as proxies for individuals' neighborhoods, the field needs more data containing detailed information about the places people visit regularly. In addition, because the construction of activity spaces requires extensive computation skills using GIS, additional training for family scholars is needed. With more effort in data collection and training, the activity spaces approach can provide exciting new opportunities for family scholars to explore the complexity and heterogeneity of families across time and space.

CHAPTER 3

LEGAL STATUS, NEIGHBORHOOD TYPES, AND NEIGHBORHOOD PERCEPTIONS AMONG MEXICAN-ORIGIN ADULTS

The demography of the U.S. population is inherently linked to immigration. Since the 1965 enactment of the Immigration and Nationality Act, which removed immigration quotas based on country of origin, an influx of new immigrants from Asia and Latin America has produced a more heterogeneous U.S. immigrant population. Despite this growing heterogeneity, Mexican immigrants have been at center stage in shaping the portrait of the U.S. immigrant population. Mexico sends more immigrants to the United States than does any other country, with approximately 12 million immigrants living in the United States; more than 30% of all current U.S. immigrants were born in Mexico (Passel, Cohn and Gonzalez-Barrera 2012). Furthermore, Mexican immigrants have distinct migration histories and migratory patterns. In particular, more than half (51%) of all Mexican immigrants in the United States are undocumented (Passel and Cohn 2011). Undocumented migration has historically been temporary and circulatory (Chavez et al. 1997). However, after the Immigration Reform and Control Act of 1986, which instituted strict border control, undocumented Mexican immigrants increasingly planned to stay in the United States (Massey and Akresh 2006). The large share of Mexican immigrants who are undocumented and choose to remain in the United States makes public policy discourse on immigrant incorporation more complex.

With the large number of immigrants in the United States (about 13% percent of the total population in 2010 (Grieco et al. 2012)), successful immigrant incorporation has important implications for the overall population—for U.S. natives, immigrants, and children of immigrants. Immigrant incorporation is often discussed within the framework of assimilation, whereby immigrants adapt to the dominant host society by abandoning their origin society (e.g., acculturation) (Lara et al. 2005). Early research on the assimilation process (i.e., classic assimilation theory) largely used one-dimensional and individual-centered definitions of assimilation that assume a linear progression (e.g., by nativity, duration in the United States, and language use) (Alba and Nee 2003). Although this individual-centered approach allows researchers to use some crude measures of assimilation, it does not provide a comprehensive understanding of the complex assimilation processes that immigrants experience. Furthermore, its overreliance on individual-centered explanations precludes an examination of the effects of structural factors on immigrant assimilation (Viruell-Fuentes 2007; Viruell-Fuentes, Miranda and Abdulrahim 2012).

Moving beyond the classic assimilation theory, Portes and Zhou (1993) highlighted the critical importance of immigrants' contexts of reception—often measured by their residential neighborhoods—for multiple dimensions of immigrants' lives. They argued that neighborhoods provide social networks and particular physical spatial locations for immigrants and therefore present differential exposures to factors contributing to and prohibiting immigrant assimilation. Thus, an explicit consideration of neighborhoods is imperative.

Despite researchers' increasing recognition of the critical role of neighborhoods in immigrants' assimilation trajectories, little is known about the neighborhoods where immigrants reside and how these neighborhoods vary by immigrants' individual characteristics. In addition, little is known about how neighborhood perceptions vary by immigrants' individual characteristics and types of neighborhoods. To fill this research gap, this chapter examines (1) the types of local contexts of reception for Mexican-origin adults⁶, (2) whether residential characteristics differ by Mexican-origin adults' key individual characteristics (e.g., legal status, age and life course stage, marital status, and education), and (3) how different types of Mexican neighborhoods⁷ influence Mexican-origin adults' neighborhood perceptions. I have three main objectives: (1) to create neighborhood typologies using latent profile models to identify distinct profiles of Mexican neighborhoods; (2) to examine how the types of neighborhoods in which Mexican-origin adults reside differ by their individual characteristics; and (3) to investigate how different types of Mexican neighborhoods are associated with perceived neighborhood danger and collective efficacy. In addition, for a more nuanced investigation, I define individuals' neighborhoods using administrative boundaries (i.e., census tract) and, as a sensitivity test, three innovative methods of defining neighborhoods. In doing so, I examine whether and how immigrants' neighborhood characteristics vary by different operationalizations of neighborhoods.

⁶ I use the term "Mexican-origin adults" instead of "Mexican immigrants" because my analytic sample includes both U.S.-born Mexican-origin adults and foreign-born Mexican-origin adults. However, it should be noted that nearly 75% of my sample is made up of Mexican immigrants.

⁷ I use the term "Mexican neighborhoods" rather than "Mexican immigrant neighborhoods" throughout because the sample includes Mexican-origin adults who are born in the United States.

Background

Most early studies of immigrant incorporation used an individual-centered approach emphasizing the role of immigrants' individual characteristics, such as nativity, duration in the United States, and language use (Alba and Nee 2003). This individual-centered approach allows researchers to use some crude measures of assimilation, but it largely ignores important structural inequalities in immigrant reception contexts that can influence immigrants above and beyond their individual and family characteristics. Furthermore, previous studies have ignored a key individual-level stratification variable for understanding immigrant incorporation: the potential role of immigrants' legal status. Legal status has emerged as a critical factor for understanding immigrant incorporation and well-being (Glick 2010; Landale et al. 2015; Massey and Bartley 2005), and it plays an important role in post-migration neighborhood contexts (Yoshikawa and Kalil 2011). A better understanding of the complex assimilation processes that immigrants experience in the United States requires an examination of how multiple dimensions of inequality at both the individual and contextual levels intersect to influence immigrant incorporation.

Neighborhoods as Critical Contexts of Reception

Migration is a dynamic social process occurring across time and space. Although earlier studies of immigrant incorporation focused exclusively on immigrants' assimilation process in the destination country, there is new scholarly momentum to capture a more comprehensive picture of immigrants' migration experiences by incorporating pre-migration characteristics and migration process characteristics in an

attempt to understand immigrant incorporation (Glick 2010). Furthermore, to understand immigrant incorporation in the destination country, scholars have started to call for an integrative model that includes multiple spheres of influence, including individual, family, and community contexts (Glick 2010). Within this integrative framework, contexts of reception are particularly important because structural characteristics can affect opportunities for immigrants and can shape changes in the values and expectations immigrants bring with them from their origin communities. Neighborhoods represent one of the most critical contexts of immigrant reception given that immigrants are embedded in the social networks and physical spatial locations of neighborhoods. Neighborhoods also represent the physical space for the great majority, if not all, of immigrants' daily activities. Neighborhoods are a primary place where immigrants are exposed to socioeconomic, political, and physical aspects of the host society. In addition, neighborhoods can determine access to resources that influence employment, quality of education, health, and social prestige, as well as exposure to crime (Massey and Denton 1985). In short, neighborhoods are critical because they are associated with factors that contribute to and impede immigrant incorporation.

Neighborhoods can have significant and lasting implications for multiple dimensions of immigrants' lives, including physical and mental health behaviors and family formation behaviors. For example, Kimbro (2009) found that Latino immigrants are less likely to engage in unhealthy behaviors (i.e., smoke and binge drink) when they reside in immigrant neighborhoods, defined as having a high concentration of foreign-born residents. Noah and colleagues (2015) found the same pattern for maternal smoking

during pregnancy: immigrant mothers are less likely to smoke during pregnancy when they reside in immigrant neighborhoods, this time measured by segregation indices. These findings demonstrate that immigrants' neighborhoods can have implications not only for immigrants but also for their children. The emerging body of literature on neighborhood and immigrant outcomes clearly demonstrates the critical need to better understand immigrants' neighborhood contexts. Most importantly, characteristics of their neighborhoods can contribute to or prohibit immigrant assimilation.

In particular, neighborhood perceptions – perceived neighborhood danger and collective efficacy – are critical dimensions of immigrants' neighborhood contexts that can contribute to or prohibit immigrant assimilation. Perceived neighborhood danger may put additional stress on individuals' psychological well-being and limit how much exposure to their neighborhoods Mexican-origin adults have (Kotchick et al. 2005; White et al. 2009). For example, perceived neighborhood danger may limit Mexican immigrants' activities and interactions in neighborhoods, which in turn reduce their exposure to socioeconomic, political, and physical aspects of the host society. On the other hand, collective efficacy – a form of social organization that combines social cohesion and informal social control (Sampson et al. 1997) – can facilitate more social interactions in neighborhoods that can expose Mexican immigrants to opportunities for assimilation.

Neighborhoods as Proxy of Immigrant Assimilation

Although scholarly momentum for promoting an integrative framework that includes individual, family, and community contexts in the study of immigrant incorporation is relatively new (Glick 2010), immigrants' neighborhoods are at the core of classic assimilation theory. Originating from the Chicago School, spatial assimilation—achieving geographic proximity to the majority group (i.e., non-Hispanic whites)—has been conceptualized as the bodily representation of racial/ethnic relations in which residential segregation is a result of unsuccessful spatial assimilation (Park 1925). Extending the theory of assimilation from the Chicago School, neoclassic assimilation theorists have proposed four levels of assimilation: cultural, socioeconomic, spatial, and structural. Under this categorization, spatial assimilation is a critical stepping stone to achieving the ultimate level of assimilation: structural assimilation (Alba and Nee 2003). Others have argued that spatial assimilation is not one stage of the assimilation process, but is the most crucial underlying component in every stage of assimilation because residential segregation can hinder assimilation at every stage (Lieberson 1961; Marston and Van Valey 1979). Both perspectives highlight spatial assimilation as being at the core of immigrants' assimilation process, and neighborhoods are often seen as proxies for immigrant (socioeconomic) assimilation (Massey and Denton 1985).

Classic assimilation theory assumes that immigrants' residential neighborhoods follow a linear progression: newly arrived immigrants typically reside in segregated immigrant enclaves that are often located in older and socioeconomically disadvantaged neighborhoods in central cities or inner-ring suburbs, but they transition out of these

segregated immigrant enclaves as they assimilate to the host society (Alba and Nee 2003; Cutler, Glaeser and Vigdor 2008). Newly arrived immigrants may choose immigrant enclaves because these neighborhoods have well-established immigrant networks and institutions that can lower the costs of immigration for new immigrants (Massey and España 1987). The concentrated social and structural resources in immigrant enclave neighborhoods can therefore buffer negative effects of socioeconomic disadvantages and provide financial and educational resources that are not available in other similarly disadvantaged neighborhoods (Walton 2009). However, as immigrants experience “the decline of an ethnic distinction and its corollary cultural and social differences” (Alba and Nee 2003), they will move out of these immigrant enclave neighborhoods and into non-Hispanic white neighborhoods.

At the level of the metropolitan area, residential segregation patterns have largely supported spatial assimilation theory. Previous studies have found that Latinos’ residential segregation from non-Hispanic whites has remained stable since 1980; by contrast, black-white segregation has declined substantially during the same period, and foreign-born Latinos are more segregated than native-born Latinos (Crowder, Hall and Tolnay 2011; Iceland 2009). Alba and colleagues (2010) also found that Latino families are located in metropolitan areas with a higher proportion of immigrants and in relatively disadvantaged neighborhoods (e.g., neighborhoods with high levels of poverty, racial segregation, and linguistic isolation). Although these studies provide important insights into the residential circumstances of Latinos, the application of their findings to Mexican immigrants’ neighborhoods is limited for two main reasons. First, the metropolitan area,

which typically consists of one or more counties, is too large to serve as proxy of immigrants' neighborhoods. Although the metropolitan area might be suitable for understanding the effects of larger sociopolitical contexts for immigrants, a smaller census unit, such as the tract, may be more appropriate for assessing the effects of *immediate* neighborhoods (Wight et al. 2013). Second, using the panethnic identity *Latino* as the population of interest may mask the important heterogeneity across various racial/ethnic groups and within-group differences (Waters and Jiménez 2005).

Identifying Types of Mexican Neighborhoods

To move beyond the previous studies that have utilized metropolitan areas as the unit of analyses (Alba et al. 2010; Crowder, Hall and Tolnay 2011; Iceland 2009), it is critical to examine immigrants' neighborhoods at a smaller level of geography. An example of such an effort is the pioneering work of Logan and colleagues (2002) on immigrant neighborhood typology. Using the 1990 Public-Use Microdata Sample (PUMS), they identified three types of immigrant neighborhoods in the New York and Los Angeles metropolitan regions in 1990 using clusters of tracts: (1) immigrant enclaves, (2) ethnic communities, and (3) minority ghettos. This categorization highlights the process of neighborhood change, whereby the characteristics of immigrants' neighborhoods result from population sorting (e.g., out-mobility for native householders (Crowder, Hall and Tolnay 2011)) and self-selection based on group preference (Logan, Zhang and Alba 2002).

Immigrant enclaves are neighborhoods with a high proportion of immigrants, non-English speakers, and residents of lower socioeconomic status (SES). Immigrant enclave neighborhoods are transitional in that immigrants are assumed to move out of such enclaves as they obtain more socioeconomic means. *Ethnic communities* are neighborhoods with a high proportion of “long-resident immigrants and second generations” (Logan, Zhang and Alba 2002) who have an SES comparable to those in other locales (e.g., non-Hispanic white communities). Ethnic communities comprise residents with ethnic group preferences who could afford to reside in socioeconomically similar neighborhoods with a different racial/ethnic composition (e.g., non-Hispanic white neighborhoods). *Minority ghettos* are neighborhoods with a high proportion of minority residents with a lower SES; minority ghettos are referred to as *residential apartheid* (Massey and Denton 1993). These neighborhoods may result from majority-group prejudice and discrimination regardless of immigrants’ socioeconomic resources and preferences as predicted by the place stratification model (Charles 2003). These three types of immigrant neighborhoods challenge the binary definition of immigrant neighborhoods offered by classical assimilation theory (i.e., immigrant enclaves and non-Hispanic white majority neighborhoods) and demonstrate the complexity of immigrant neighborhoods.

In addition to systematically identifying different types of neighborhoods, Logan and colleagues (2002) estimated the probabilities of residence in these neighborhoods for group members. For example, they found that two key predictors of residing in an immigrant enclaves are nativity and language—typical measures of acculturation—such

that foreign-born individuals and those who do not speak English are more likely to reside in these neighborhoods. Education and income are also significant predictors: higher educational attainment and income predict a lower probability of residing in immigrant enclaves. In short, their findings generally provide empirical support for the spatial assimilation model.

The Logan et al. (2002) study has two limitations. First, they overlooked the critical role of immigrant legal status. About 11 million undocumented immigrants were estimated to be in the United States in 2010, and half of recent Mexican immigrants are undocumented (Passel and Cohn 2011). Furthermore, legal status is not randomly distributed: undocumented immigrants are younger, less likely to be partnered, and have less schooling compared with their legal counterparts (Hall and Greenman 2013). These patterns suggest that legal status is important for understanding heterogeneity within the Mexican immigrant population. In addition, legal status is a primary source of disparities in social, economic, and political incorporation for immigrants (Massey and Bartley 2005); it is also closely connected to human capital and the specific social networks in which immigrants are embedded (McConnell 2008). Thus, legal status may determine immigrants' neighborhood characteristics. For example, undocumented immigrants tend to reside in neighborhoods with fewer material and social advantages (Hall and Greenman 2013) and with a high level of segregation from non-Hispanic whites (Hall and Stringfield 2014).

Second, their use of clusters of tracts as a proxy for immigrant neighborhoods may be problematic. In attempting to identify types of ethnic neighborhoods, they used

Local Indicators of Spatial Association (LISA), a useful method for assessing the extent of significant spatial clustering (Anselin 1995). Following Alba and colleague's (1997) definition of ethnic neighborhoods, they defined ethnic neighborhoods as clusters of tracts with 40% or more of the same racial/ethnic group at the core and with surrounding tracts having at least 35% racial/ethnic concentration. This innovative approach to identifying ethnic neighborhoods is superior to other traditional approaches (e.g., using a single tract to define an immigrant neighborhood), but it also relies on administratively defined geographic units (i.e., census tract). Although using administratively defined boundaries makes analysis feasible (Basta, Richmond and Wiebe 2010), it is problematic because such boundaries do not accurately represent individuals' unique spatial experiences (Perchoux et al. 2013). Using administratively defined boundaries to define neighborhoods can reduce the influence of neighborhoods to only residential and local areas - which leads to *residential trap bias* (Perchoux et al. 2013) and *local trap bias* (Purcell and Brown 2005). In other words, this approach ignores the fact that individuals may be exposed to multiple neighborhood contexts via work and social networks—what Matthews and Yang (2013) termed “spatial polygamy.”

Statement of the Problem

In this chapter, I attempt to address these research gaps by answering three questions: (1) What are the types of neighborhoods in which Mexican-origin adults reside? (2) Do neighborhoods vary by Mexican-origin adults' individual characteristics? (3) How are different types of Mexican immigrant neighborhoods associated with

Mexican-origin adults' neighborhood perceptions (perceived neighborhood danger and collective efficacy)? By addressing these questions, I explore the characteristics of local contexts of reception for Mexican immigrants and whether these contexts differ by Mexican immigrants' key individual characteristics.

These questions are addressed using data on Mexican-origin adults in Los Angeles County. Los Angeles is a traditional immigrant destination and gateway with an historical presence of a large Mexican-origin population and well-established immigrant networks (Light 2006; Portes and Rumbaut 1996). For example, Los Angeles County had the largest Latino, foreign-born and undocumented immigrant population in the United States in 2000 (McConnell 2012).⁸ Despite the racial and ethnic diversity and long history of immigrant settlement in Los Angeles County, the county is highly segregated and Hispanics are becoming more isolated compared with all other racial/ethnic groups (Ethington, Frey and Myers 2001). Thus, Los Angeles County is well-suited to an examination of the neighborhood contexts of Mexican-origin adults.

This dissertation project departs from many previous studies of immigrant incorporation in three ways. First, compared with previous research based on comparisons across various racial/ethnic groups, I take a more in-depth approach to understanding heterogeneity *within* one subpopulation: Mexicans. This within-group approach can help provide an essential route to understanding outcomes in that group.

⁸ In light of increasing anti-immigrant sentiment (e.g., Proposition 187) and other factors, many immigrants from Los Angeles have moved to other destinations since the 1990s. Still, the majority of Mexican immigrants still settle in large immigrant destinations like Los Angeles County (Waters and Jiménez 2005).

Second, I examine immigrant legal status in addition to several other important factors (e.g., measures of acculturation) in order to understand heterogeneity within this population. Third, I use and compare innovative methods of defining individuals' neighborhoods.

Data and Methods

Data

The data I use are drawn from two sources. Individual-level data come from the first wave of the Los Angeles Family and Neighborhood Survey (L.A.FANS), which was conducted in 2000–2002. The L.A.FANS is based on multistage stratified random sampling of 65 neighborhoods and 50 households within each neighborhood; poor neighborhoods and households with children were oversampled (Sastry et al. 2006). The L.A.FANS, which was designed to study neighborhood effects and to support multilevel analyses, contains a representative sample of all residents in Los Angeles County. This study is based on an analytic sample that includes Mexican-origin individuals who completed an adult questionnaire (N = 1,565). The final sample includes 372 U.S.-born Mexican adults (i.e., second or higher generation Mexican immigrants),⁹ 709 documented Mexican immigrants, and 484 undocumented Mexican immigrants. Thus, more than 75% of the included adults are immigrants.

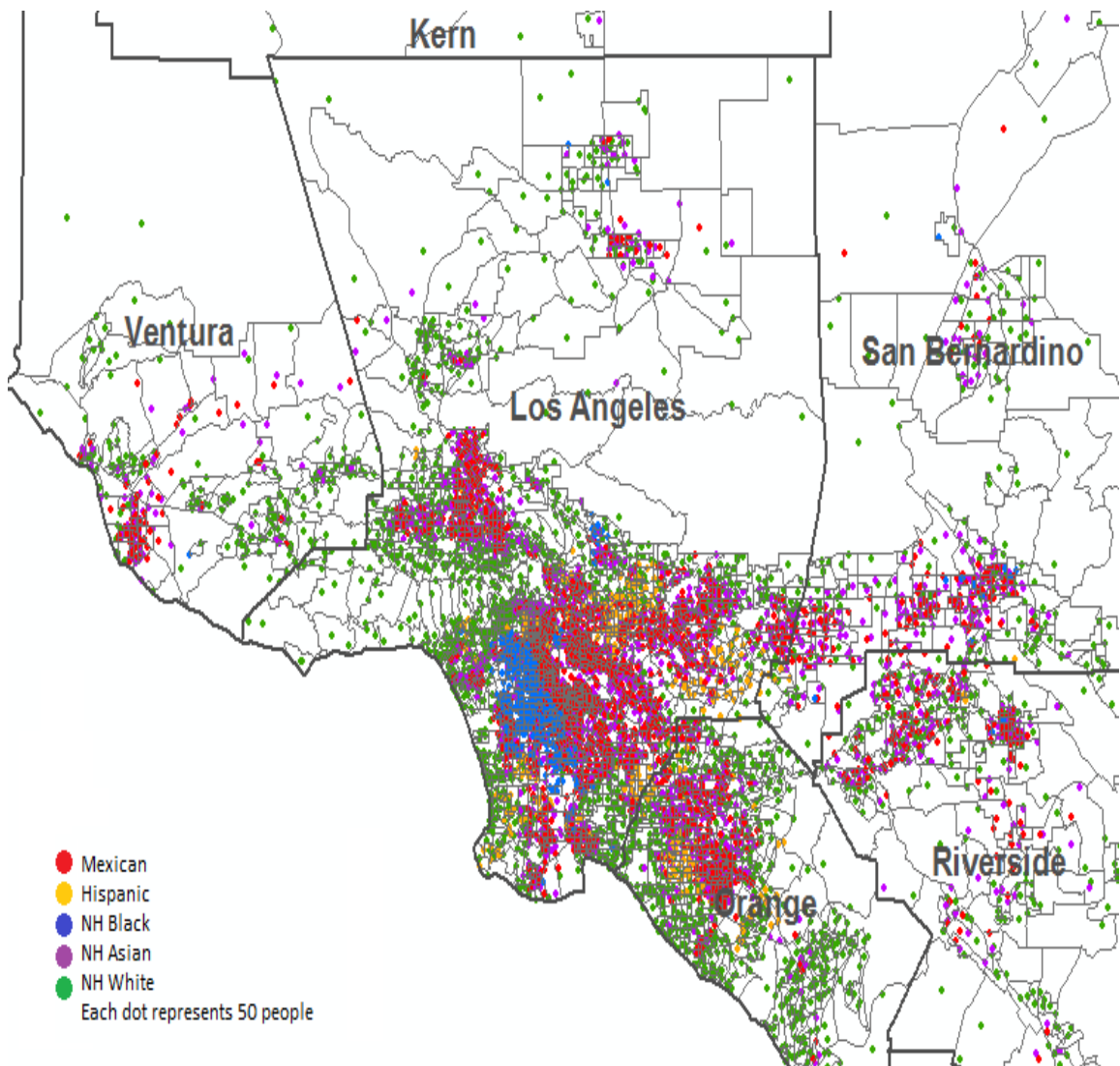
The contextual-level data are from the 2000 U.S. decennial census (U.S. Census Bureau 2000) and the Los Angeles Neighborhood Services and Characteristics (LANSC)

⁹ Of 372 U.S.-born adults, 187 are second-generation immigrants (50.3%).

database. The two data sets were linked using Federal Information Processing Standard (FIPS) geographic identification codes for tract area of residence.

Figure 3.1 shows the racial and ethnic distribution of Los Angeles in 2000. The relatively large number of Mexicans and their high level of segregation are apparent.

Figure 3.1. Racial and Ethnic Distribution in Los Angeles, 2000



Measures

Individual-Level Variables

The key individual characteristics are individuals' legal status and nativity. Legal status is estimated from a series of questions asking foreign-born individuals whether they (a) were naturalized citizens; (b) had a green card or legal permanent residence; (c) had refugee, asylee, or temporary protected status; or (d) had a valid visa for temporary U.S. residence. Using the residual method, I code foreign-born individuals who did not have one of these statuses as undocumented immigrants. Combining individuals' nativity and legal status, I create three groups: U.S.-born (i.e., second and higher generation immigrants, which is the reference category), documented immigrants, and undocumented immigrants. Furthermore, I include two acculturation measures in the model. First, *duration in the United States* is measured with three dummy variables: 0 to 5 years (reference category), 6 to 15 years, and 16 or more years. If the respondent is U.S.-born, then his or her age is assumed to be the duration in the United States. Second, I include a dummy variable indicating the *language* used for the survey: respondents are coded 1 if they use English and 0 if they use Spanish.

I also include sociodemographic characteristics in the model. *Female* is coded 1 if female and 0 if male. *Age* at the time of survey is measured as a continuous variable ranging from 18 to 88 years of age. I create a set of dummy variables to measure respondents' *marital status*: married (reference category), cohabitating, divorced, and single. A continuous variable measuring the *number of children* is included in the model. In addition, I include three measures of socioeconomic characteristics: education,

employment status, and median family income. *Education* is measured as a set of four dummy variables: 0 to 8 years of education (reference category), 9 to 11 years, high school, and beyond high school. *Employment status* is a dichotomous variable indicating whether the respondent was partially or fully employed at the time of the survey (coded 1 if employed part-time or full-time, and 0 if unemployed). *Family income* is measured as a set of dummy variables: less than \$10,000 (reference); \$10,000 to \$29,999; \$30,000 to \$49,999; and \$50,000 and higher.

Lastly, two subjective measures of neighborhood quality are considered. First, *perceived neighborhood danger* is a dichotomous variable indicating whether the respondent reported his or her neighborhood as dangerous (coded 1 for dangerous, and 0 for not dangerous). Second, *perceived neighborhood collective efficacy* is a form of social organization among residents that combines social cohesion and informal social control. Following previous research (Sampson, Raudenbush and Earls 1997), I construct a measure of collective efficacy from individuals' level of agreement with statements about whether (a) the neighborhood is close-knit, (b) people are willing to help neighbors, (c) neighbors generally get along, (d) people in the neighborhood share the same values, (e) people in the neighborhood can be trusted, (f) neighbors would intervene if children were hanging out, (g) neighbors would intervene if children were spray-painting graffiti on a building, and (h) neighbors would intervene if children were showing disrespect to an adult. Response options to each question range from 1 to 5, with some questions reverse-coded such that higher values represent higher collective efficacy. Eight questions are

summed to create a scale of collective efficacy (Sampson, Raudenbush and Earls 1997).

Operationalization of individual variables is summarized in Table 3.1.a.

Table 3.1.a. Operationalization of Individual Variables

Variable	Definition
Key immigrant characteristics	
Nativity/Legal status	
U.S.-born citizen	Coded 1 if respondent was born in the United States (reference)
Documented	Coded 1 if respondent is documented immigrant
Undocumented	Coded 1 if respondent is undocumented immigrant
Duration in the United States	
0 to 5 years	Coded if respondent spent 0 to 5 years in the United States
6 to 15 years	Coded if respondent spent 6 to 15 years in the United States
16 or more years	Coded if respondent spent 16 or more years in the United States
English language use	Coded 1 if respondent used English language and 0 if used Spanish
Sociodemographic characteristics	
Female (gender)	Coded 1 if female and 0 if male
Age	Age of the respondent
Marital status	
Married	Coded 1 if married (reference)
Cohabiting	Coded 1 if cohabiting
Single	Coded 1 if single
Number of children	Number of children the respondent has (continuous)
Education	
0 to 8 years	Coded 1 if educational attainment is between 0 to 8 years
9 to 11 years	Coded 1 if educational attainment is between 9 to 11 years
High school	Coded 1 if educational attainment is 12 years
Beyond high school	Coded 1 if educational attainment is more than 12 years
Employed	Coded 1 if employed
Household income	
Less than \$10,000	Coded 1 if family income is less than \$10,000 (reference)
\$10,000–\$29,999	Coded 1 if family income is between \$10,000 and \$29,999
\$30,000–\$49,999	Coded 1 if family income is between \$30,000 and \$49,999
\$50,000 or more	Coded 1 if family income is \$50,000 or higher

Source: Los Angeles Family and Neighborhood Survey, Wave 1 (2000–2002)

Neighborhood-Level Variables

I include measures capturing several dimensions of neighborhood characteristics relevant to understanding immigrant neighborhoods in the model. Neighborhood-level characteristics are operationalized at the census tract level. First, *demographic composition* comprises six variables from Summary File 1 of the 2000 decennial census: percentage foreign-born, percentage non-Hispanic white, percentage non-Hispanic black, percentage non-Hispanic Asian, percentage Hispanic, and percentage Mexican. Second, I include concentrated disadvantage as an SES indicator (Sampson, Raudenbush and Earls 1997). *Concentrated disadvantage* includes the percentage of individuals who are below the poverty line, on public assistance, unemployed, less than 18 years old, as well as the percentage of households that are female-headed. The principal component analysis of these five variables confirms the emergence of one factor; thus, I use a regression-weighted method to create the scale of concentrated disadvantage, which ranges from 0 to 1. Third, *residential stability* is constructed from the percentage living in the same location in 1995 and the percentage of owner-occupied housing (see Table 3.1.b).

Table 3.1.b. Operationalization of Neighborhood Variables

Variable	Definition
Individual-level neighborhood characteristics	
Perceived danger	Coded 1 if respondents indicated perceived danger
Collective efficacy	Used a principal component analysis and regression-weighted method Respondent's level of agreement with: (a) the neighborhood is close-knit (b) people are willing to help each other (c) neighbors generally get along (d) people in the neighborhood share the same values (e) people in the neighborhood can be trusted (f) neighbors would intervene if children were hanging out (g) neighbors would intervene if children were spray-painting / graffiti (h) neighbors would intervene if children disrespecting an adult
Contextual-level neighborhood characteristics	
Percentage foreign-born	Percentage of population in a census tract who are foreign-born
Percentage noncitizen	Percentage of population in a census tract who are noncitizens
Percentage Mexican	Percentage of population in a census tract who are Mexican
Percentage recent immigrants	Percentage population in a census tract who are of recent immigrants
Concentrated disadvantage	Used a principal component analysis and regression-weighted method (a) percentage of individuals below the poverty line (b) percentage of individuals on public assistant (c) percentage of individuals unemployed (d) percentage of individuals younger than 18 years (e) percentage of female-headed households
Residential stability	Used a principal component analysis and regression-weighted method (a) percentage living the same location in 1995 (b) percentage of owner-occupied housing

Sources: Los Angeles Family and Neighborhood Survey, Wave 1 (2000–2002); 2000 U.S. decennial census

Analytic Approach

Before identifying different types of neighborhoods, I address missing data. In the data set, Level 1 variables have few missing values, and Level 2 variables have no missing values. I use multiple imputation to handle missing data for all variables that are

missing at random (MAR). As Johnson and Young (2011) suggested, I generate 20 imputed data sets in which the imputations are informed by all the variables included in the model for the second and third stages of my analyses. I also conducted sensitivity analyses to compare the results without multiple imputation (i.e., listwise deletion), and the results are substantively consistent.

The analytic approach proceeds in three stages (see Figure 3.2.). The first stage is to identify different types of Mexican neighborhoods. To identify different types of Mexican neighborhoods based on selected neighborhood-level variables, I perform latent profile analysis (LPA) using Mplus Version 7.13 (Muthén and Muthén 2010). LPA is an analytic strategy that identifies categorical profiles emerging from the data based on a set of continuous indicators (Collins and Lanza 2010). LPA is particularly useful analytic method for the intersectionality of multiple characteristics because it allows researchers to identify subgroups based on multiple domains, as opposed to traditional analytic methods (e.g., multiple regressions and structural equation models) that identify variable-centered patterns of association among separate characteristics (Collins and Lanza 2010). I estimate a series of LPA models in which each subsequent model includes an additional profile that is then compared with a model having $k - 1$ profiles. To identify the ideal number of profiles, I compare models using the Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR). Models including an additional profile were included until the VLMR was non-significant ($VLMR > 0.05$), indicating that the inclusion of an additional profile does not improve the model fit and the model with $k - 1$ profiles should be retained. I also evaluate the models using Akaike's information criterion (AIC), the Bayesian

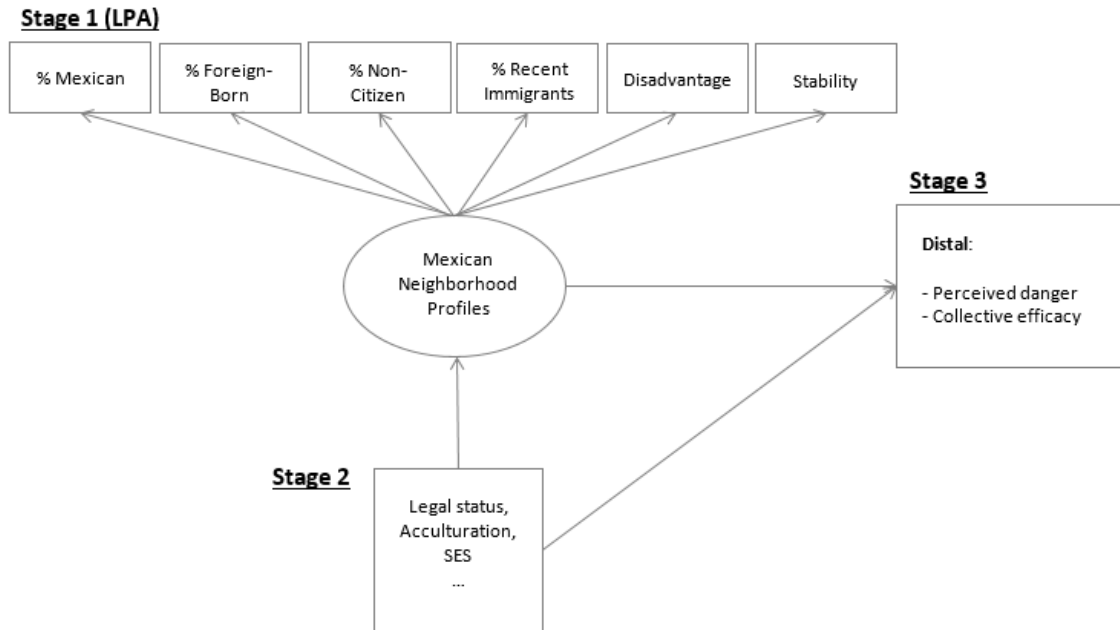
information criterion (BIC), the adjusted Bayesian information criterion (ABIC), and entropy (E).

In the second stage, I examine the associations between Mexican-origin adults' individual characteristics and probabilities of residing in different types of Mexican neighborhoods. After determining the number of profiles during the first step, I create profiles and include them as dependent variables in the subsequent models. Each profile indicator is dichotomous, indicating whether a neighborhood is identified as a specific type of Mexican neighborhood. For example, a neighborhood that satisfies the necessary conditions to be categorized as a Mexican immigrant enclave is coded as 1. I estimate multivariate models for each type of Mexican neighborhood using a series of logistic regressions in Stata 13.

In the third stage, I examine the association between profiles of Mexican-origin adults' neighborhoods and their neighborhood perceptions—specifically, perceived neighborhood danger and collective efficacy. I use a multilevel logistic regression for the models predicting perceived neighborhood danger and a multilevel linear regression for the models predicting neighborhood collective efficacy; both regressions are conducted using Stata 13.

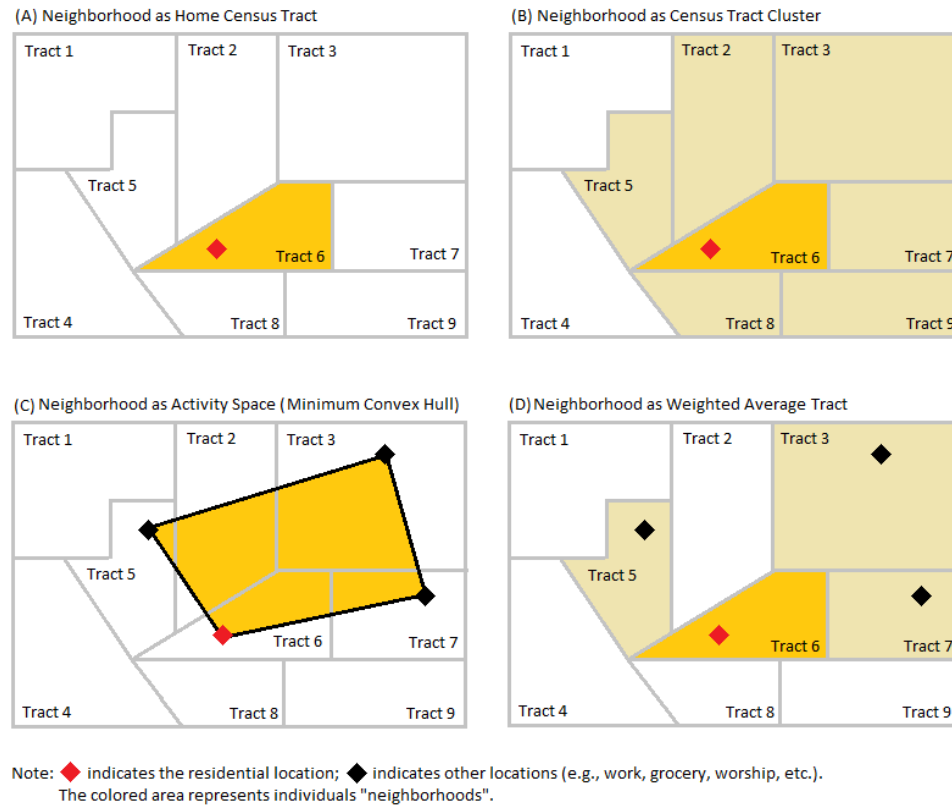
Figure 3.2. Summary of the Analytic Strategy and Key Variables

Figure 2. Summary of the analytic strategy and key variables



After this three-stage analytic approach, I then explore the types of Mexican neighborhoods using alternative neighborhood definitions. Specifically, I create three additional sets of neighborhood-level variables using innovative methods of defining individuals' neighborhoods using ArcGIS 10.2: (1) neighborhoods as census tract clusters (Figure 3.3.b), (2) neighborhoods as activity spaces (assessed using the minimum convex hull) (Figure 3.3.c), and (3) neighborhoods as weighted averaged tracts (Figure 3.3.d). I then compare the results of LPA models using four definitions of neighborhoods, as described in the following subsection.

Figure 3.3. Multiple Methods of Neighborhood Conceptualization



Defining "Neighborhoods": Comparing Four Selected Methods

Although the critical importance of considering multiple social contexts in which individuals are embedded has been incorporated into theory since the classic sociological writings (Durkheim 1897; Park 1915), developments in data, software, and methods in the last few decades have revamped the empirical applications of research on neighborhood effects (Entwisle 2007). Moreover, it has become clear that the exclusion of contextual-level variables can lead to specification errors that produce overestimates of the effects of included individual-level variables (Parcel, Dufur and Cornell Zito 2010).

Nonetheless, despite the increase in research on neighborhood effects in the last few decades (Macintyre and Ellaway 2003; Voss 2007), discussion on how to “conceptualize, operationalize, and measure” individuals’ neighborhoods (Macintyre, Ellaway and Cummins 2002) has been limited. How neighborhoods are defined, however, is crucial for capturing individuals’ unique spatial experiences (Perchoux et al. 2013) and for avoiding serious inferential errors (Kwan 2012).

The first method of defining individuals’ neighborhoods is using their home census tracts (Figure 3.3.a). This approach makes analysis very feasible (Basta, Richmond and Wiebe 2010), and such delimitations of neighborhood can have true sociological meaning (Lebel, Pampalon and Villeneuve 2007). However, this approach may not accurately capture individuals’ lived neighborhood experiences (Perchoux et al. 2013), especially for *urban* residents. Census tracts, which are geographic units defined for the census, usually contain about 4,000 people (ranging from 1,200 to 8,000 people). Census tracts usually cover about one square mile (two to three street blocks) in urban neighborhoods because of high population density in urban areas (Matthews 2011). Thus, using administratively defined boundaries such as the census tract of home residence as individuals’ neighborhoods can be problematic, especially in an urban area like Los Angeles County. Furthermore, this approach does not take into account other important locations, such as the workplace.

The second method of defining individuals’ neighborhoods is based on census tract clusters (Figure 3.3.b). This approach addresses the criticism of using only the census tract of home residence as an individual’s neighborhood by extending the

definition to include other adjacent census tracts that share boundaries with the home census tracts. The central idea for this extension is that individuals' neighborhoods are not spatially isolated; they are spread over larger areas. Using this approach, Alba and colleagues (1997) operationalized an ethnic neighborhood as "a set of contiguous tracts, which must contain at least one tract where a group is represented as 40% or more of the residents and whose other tracts each have a level of ethnic concentration among residents of at least 35%" (p. 893). Extending this approach, Logan and colleagues (2002) used a class of "local indicators of spatial association" (LISA) (Anselin 1995)—a spatial analysis tool for identifying significant spatial clustering—to identify and measure the clusters of census tracts systematically; they defined a neighborhood as a cluster of census tracts having a focal census tract along with adjacent tracts. Researchers can also assign different weights to the tracts to give more weight to the home census. Here, I weight the home census tract (foci of the cluster) by 1 and all surrounding counties by 0.75.¹⁰ Although this approach addresses the issue of treating individuals' home census tracts as spatially isolated neighborhoods, it still does not consider other important locations.

The third method of defining individuals' neighborhoods is using person-centered activity spaces (Browning and Soller 2014) (Figure 3.3.c), which are "the subset of all locations within which an individual has direct contact as a result of his or her day-to-day activities" (Golledge and Stimson 1997). Activity spaces capture the actual lived context of individuals and their exposure to multiple contexts (Jones and Pebley 2014).

¹⁰ I assigned other weights to surrounding counties (0.5 and 0.6) and the results are consistent.

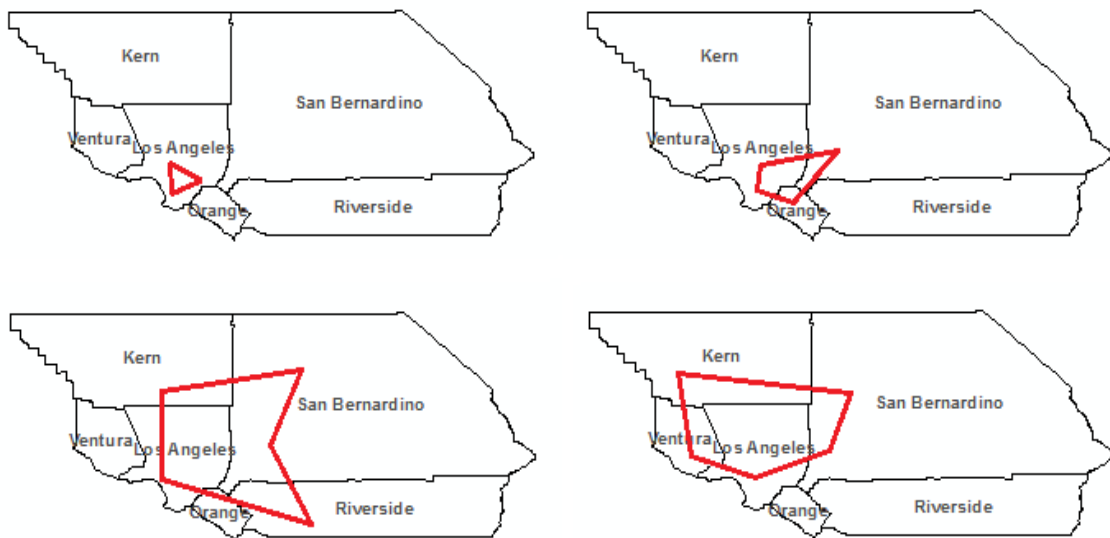
Following previous research (Browning and Soller 2014; Jones and Pebley 2014), I measure activity spaces by creating the minimum convex hull or polygon. Specifically, I use the geographic coordinates of individuals' residences and places they visit (i.e., where they work, shop, worship, and access healthcare) during the week prior to the survey in order to geocode these locations; and I create the smallest area containing all destination points (i.e., the minimum convex hull polygon). I then calculate the characteristics of activity spaces by reapportioning the census information. Because the construction of the minimum convex hull polygons requires at least three points (Jones and Pebley 2014), I exclude individuals who reported less than three places they visited during the week (36.9%; $N = 577$).

The central assumption of this approach is that individuals are exposed to all the places they visit and areas through which they travel in between those locations (Jones and Pebley 2014). Although this assumption may be plausible if individuals' activity spaces are relatively small and cover several tracts, it may be problematic when individuals' activity spaces are too large, which increases the likelihood that individuals are not exposed to all areas within the minimum convex hull. For example, in one of the first studies to examine individuals' neighborhoods using this approach, Jones and Pebley (2014) used the minimum convex hull to examine individuals' neighborhoods in Los Angeles County. Because individuals' activities were not geographically confined in Los Angeles County but instead spread across other counties, they included all the activities (visited locations in the past week) in five counties in the greater Southern California region (i.e., Los Angeles, Ventura, Kern, San Bernardino, and Orange Counties). When I

replicated their analysis using the same data, method, and exclusion criteria, the areas of some individuals' activity spaces were very large (Figure 3.4.), which raises a question about whether activity spaces defined as minimum convex hull truly represent individuals' neighborhoods.

The fourth method of defining individuals' neighborhoods is using a weighted average of tracts (Figure 3.3.d). This approach accounts for all places individuals visited but disregards the distance between places. For this approach, I identify the census tract of all places individuals visited (i.e., where they work, shop, worship, and access healthcare) during a one-week period. Instead of using the smallest area containing all destination points (as with the minimum convex hull), I average the area characteristics of all tracts visited.

Figure 3.4. Examples of Activity Spaces of L.A.FANS Adults



Results

Descriptive Statistics

Table 3.2. shows descriptive statistics for all variables included in the analyses by Mexican-origin adults' nativity and legal status. For key immigrant characteristics, the majority of documented Mexican immigrants (76.6%) have been in the United States for 16 years or longer; only a small percentage of documented Mexican immigrants (3.5%) are recent immigrants (i.e., 0 to 5 years in the United States). On the other hand, the majority of undocumented Mexican immigrants (86.5%) have been in the United States for 6 to 15 years, and a substantial percentage of undocumented Mexican immigrants (35.2%) have been in the United States for five or fewer years. As expected, English language use was the highest for U.S.-born Mexicans (88.9%) and lowest for undocumented Mexican immigrants (3.0%).

The sociodemographic characteristics of Mexican-origin adults vary substantially by nativity and legal status. Although the majority of U.S.-born Mexicans (53.7%) and undocumented Mexican immigrants (47.2%) were single, a large percentage of documented Mexican immigrants (61.9%) were married at the time of the survey. This differential pattern of marital status by nativity might reflect the older average age of documented Mexican immigrants (40.5 years) compared with U.S.-born Mexicans (33.6 years) and undocumented Mexican immigrants (30.9 years). U.S.-born Mexicans had the highest educational attainment: almost one-half (48.4%) of them had education beyond high school. Most documented Mexican immigrants (44.6%) and undocumented Mexican immigrants (49.8%) had 0 to 8 years of education. Similarly, U.S.-born Mexicans had a

Table 3.2. Descriptive Statistics for All Variables in the Model

	U.S.-born Mexican	Documented	Undocumented
Variable	Mean / %	Mean / %	Mean / %
Key immigrant characteristics			
Duration in the United States			
0 to 5 years	0%	3.5%	35.2%
6 to 15 years	0%	22.3%	51.3%
16 or more years	100%	76.6%	13.5%
English language use	88.9%	25.7%	3.0%
Sociodemographic characteristics			
Female (gender)	51.5%	50.2%	41.6%
Age	33.60	40.50	30.92
Marital status			
Married	38.0%	61.9%	37.7%
Cohabiting	8.3%	5.8%	15.1%
Single	53.7%	32.4%	47.2%
Number of children	1.34	1.56	2.02
Education			
0 to 8 years	4.1%	44.6%	49.8%
9 to 11 years	15.7%	20.6%	34.1%
High school	31.7%	20.6%	10.2%
Beyond high school	48.4%	14.1%	5.9%
Employed	73.6%	66.8%	44.9%
Household income			
Less than \$10,000	31.5%	34.8%	30.8%
\$10,000–\$29,999	23.0%	40.7%	66.7%
\$30,000–\$49,999	20.9%	16.6%	2.5%
\$50,000 or more	24.6%	8.0%	0.1%
Individual-level neighborhood characteristics			
Perceived danger	3.6%	0.5%	5.9%
Collective efficacy	26.06	27.41	27.13
Contextual-level neighborhood characteristics			
Percentage foreign-born	38.5%	44.5%	46.1%
Percentage noncitizen	24.7%	30.8%	34.7%
Percentage Mexican	47.7%	54.9%	52.4%
Percentage recent immigrants	14.2%	16.0%	18.8%
Concentrated disadvantage	0.43	0.80	1.24
Residential stability	-0.01	-0.24	-0.71

Sources: Los Angeles Family and Neighborhood Survey, Wave 1 (2000–2002)

higher rate of employment (73.6%) than documented Mexican immigrants (66.8%) and undocumented Mexican immigrants (44.9%). However, the low employment level for undocumented Mexican immigrants may be due to underreporting, lesser job tenure, and multiple short unemployment spells among Mexican immigrants (Aguilera 2003). Although most documented Mexican immigrants (75.5%) and undocumented Mexican immigrants (87.5%) had household income below \$30,000, 45.5% of U.S.-born Mexicans had a household income above \$30,000.

Both individual-level and contextual-level neighborhood characteristics differ substantially by legal status and nativity among Mexican-origin adults. Although undocumented Mexican immigrants (5.9%) reported the highest level of perceived neighborhood danger, documented Mexican immigrants (0.5%) reported the lowest level of perceived neighborhood danger—even compared with U.S.-born Mexicans (3.6%). Similarly, documented Mexican immigrants reported the highest level of perceived neighborhood collective efficacy. Not surprisingly, undocumented Mexican immigrants resided in the neighborhoods with the highest level of concentrated disadvantage and the lowest level of residential stability. These differences in perceived and objective neighborhood characteristics were statistically significant compared with both U.S.-born Mexicans and documented Mexican immigrants.

Stage 1: Latent Profile Results

Home census tracts (N = 90) of all Mexican-origin adults in the sample are included in the model identifying types of neighborhoods. Drawing from previous studies

(Alba, Logan and Crowder 1997; Logan, Zhang and Alba 2002), I include six variables in the model to identify distinct profiles of Mexican neighborhoods: percentage Mexican, percentage foreign-born individuals, percentage unauthorized (i.e., foreign-born population without permanent legal status), percentage recent immigrants (i.e., foreign-born population that entered the United States between 1995 and 2000), concentrated disadvantage, and residential stability (see Figure 3.2.). Table 3.3 reports the model fit statistics for the latent profile models. Based on different model fit statistics discussed in the methods section (i.e., AIC, BIC, adjusted BIC, VLMR, and entropy), five distinct profiles of Mexican neighborhoods emerge.

Table 3.3. Model Fit Statistics of the Latent Profile Models

No. of profiles	No. of free parameters	AIC	BIC	A-BIC	VLMR p-value	Entropy
1	12	3434.327	3464.191	3426.321		
2	19	3209.478	3256.762	3196.802	0.0064	0.941
3	26	3132.276	3196.981	3114.929	0.0680	0.933
4	33	3072.522	3154.647	3050.504	0.4116	0.966
5	40	3038.669	3138.215	3011.981	0.0002	0.963
6	47	3039.136	3137.102	3010.213	0.1281	0.965

Note: Fit statistics for the best fitting model are in red.

Unstandardized and standardized estimated means are reported in Table 3.4. To aid comparison of the five distinct profiles of Mexican neighborhoods, Figure 5 shows a graph of standardized estimated means. First, *ethnic communities* (N = 11) are characterized as having high percentages of Mexicans (69.5%) and foreign-born residents (44.8%) but a relatively low percentage of recent immigrants. They have a high level of residential stability and a somewhat high level of concentrated disadvantage, although the

level of concentrated disadvantage is lower than in Mexican immigrant enclaves or ethnic ghettos. Second, *Mexican immigrant enclaves* (N = 30) have high percentages of Mexicans (59.2%), foreign-born residents (51.6%), and noncitizens (40.6%). They are also characterized by a high level of concentrated disadvantage and low level of residential stability. Third, *ethnic ghettos* (N = 12) ghettos have a relatively high percentage of Mexicans (48.6%) but low percentages of foreign-born residents (35.4%) and noncitizens (24.2%). These neighborhoods have high levels of concentrated disadvantage and residential stability. Surprisingly, the level of concentrated disadvantage in ethnic ghettos is lower in absolute terms than in Mexican immigrant enclaves. Fourth, *non-Hispanic white neighborhoods* (N = 25) are characterized by low percentages of Mexicans (19.7%), foreign-born residents (18.0%), and noncitizens (13.6%), and have a low level of concentrated disadvantage and a high level of residential stability. Finally, *Asian immigrant enclaves*¹¹ (N = 12) have a relatively low percentage of Mexicans (29.1%) but have high percentages of foreign-born residents (66.0%) and noncitizens (49.2%). Similar to Mexican immigrant enclaves, these neighborhoods are characterized by a high level of concentrated disadvantage and a low level of residential stability.

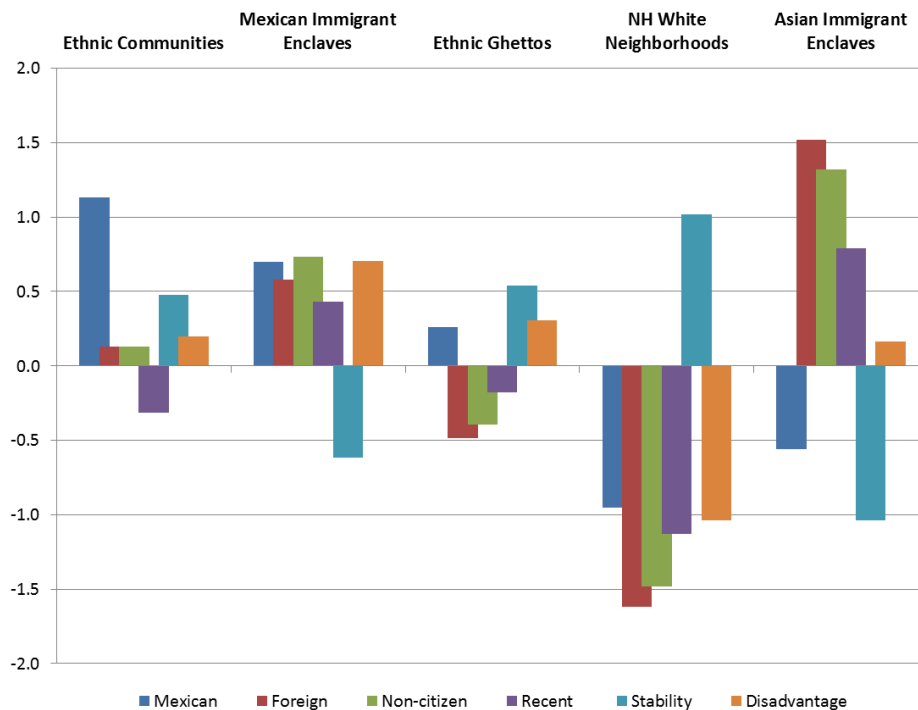
¹¹ The latent profile results showed two distinct types of immigrant enclaves. In order to further identify how these two types of immigrant enclaves differ, I investigated the racial and ethnic distributions of them. *Asian immigrant enclaves* are immigrant enclaves where about 70% of residents are non-Hispanic Asians.

Table 3.4. Descriptive Statistics of Mexican Immigrant Neighborhood Profiles

Variable	Ethnic Communities	Mexican Immigrant Enclaves	Ethnic Ghettos	Non-Hispanic White Neighborhoods	Asian Immigrant Enclaves
Unstandardized estimated means					
Percentage foreign-born	44.8%	51.6%	35.4%	18.0%	66.0%
Percentage noncitizen	31.8%	40.6%	24.2%	13.6%	49.2%
Percentage Mexican	69.5%	59.2%	48.6%	19.7%	29.1%
Percentage recent immigrants	15.1%	20.6%	16.1%	10.9%	23.3%
Concentrated disadvantage	1.05	1.64	1.18	-0.40	1.01
Residential stability	0.02	-1.00	0.08	0.53	-1.40
Standardized estimated means					
Percentage foreign-born	0.13	0.58	-0.48	-1.62	1.52
Percentage noncitizen	0.13	0.73	-0.39	-1.48	1.32
Percentage Mexican	1.13	0.70	0.26	-0.95	-0.56
Percentage recent immigrants	-0.32	0.43	-0.18	-1.13	0.79
Concentrated disadvantage	0.20	0.71	0.31	-1.04	0.16
Residential stability	0.48	-0.62	0.54	1.02	-1.04
Unweighted N	11	30	12	25	12

Source: 2000 U.S. decennial census

Figure 3.5. Standardized Means of Latent Neighborhood Profile Indicators



Stage 2: Probabilities of Membership in Mexican Immigrant Neighborhood Profiles

The results from latent profile models (i.e., memberships in each neighborhood profiles) are exported from Mplus and merged to the individual-level data. Each neighborhood is assigned as falling into one neighborhood type by its posterior latent class probabilities. Table 3.5. shows the descriptive statistics for Mexican neighborhood profiles. Not surprisingly, non-Hispanic white neighborhoods had a high percentage of U.S.-born Mexicans: 53.3% of all Mexican adults residing in non-Hispanic white neighborhoods were U.S.-born Mexicans. Ethnic communities and ethnic ghettos each had a high percentage of documented Mexican immigrants, at 51.8% and 51.5%, respectively. Mexican immigrant enclaves and Asian immigrant enclaves had high percentages of documented and undocumented Mexican immigrants. The patterns were similar for other acculturation measures. Non-Hispanic white neighborhood contained Mexicans who were the most acculturated, as measured by duration in the United States and English language use. More-stable neighborhoods (i.e., ethnic communities, ethnic ghettos, and non-Hispanic white neighborhoods) had a high percentage of married individuals, whereas less-stable neighborhoods (i.e., Mexican immigrant enclaves and Asian immigrant enclaves) had a high percentage of single individuals. Compared with all the other types of Mexican immigrant neighborhoods, non-Hispanic white neighborhoods had higher SES as measured by educational attainment, employment, and household income.

Table 3.6. reports odds ratios from multivariate models which investigate the associations between Mexican-origin adults' individual characteristics and their

probabilities of membership in each Mexican neighborhood type. Three models were estimated for each Mexican neighborhood type. The first model controls only for Mexican-origin adults' nativity and legal status, the second model adds other key immigrant characteristics (i.e., duration in the United States and English language use), and the third model is a full model that adds all other covariates. The first model shows that Mexican-origin adults' nativity and legal status are associated with residence in a Mexican immigrant enclave, an Asian immigrant enclave, and/or a non-Hispanic white neighborhood. For Mexican immigrant enclaves and Asian immigrant enclaves, undocumented Mexican immigrants had significantly higher odds of memberships. For example, compared with U.S.-born Mexicans, undocumented Mexican immigrants were 3.55 times more likely to reside in a Mexican immigrant neighborhood and 3.03 times more likely to reside in an Asian immigrant neighborhood. On the other hand, compared with U.S.-born Mexicans, documented and undocumented Mexican immigrants were, respectively, 73% and 59% less likely to reside in a non-Hispanic white neighborhood.

The second model for Mexican immigrant enclaves, where recent immigrants (i.e., those in the United States for 5 or fewer years) and immigrants with limited English language use are more likely to reside, shows that the legal status associations disappear when other acculturation characteristics are controlled for. These patterns persist in the third model. The second model for ethnic communities shows that duration in the United States is positively associated with the probability of residing in an ethnic community.

The third model indicates that education is significantly associated with the types of neighborhoods in which Mexican immigrants live. Specifically, having an education

beyond high school is associated with reduced odds of residing in a Mexican immigrant enclave or an ethnic community, and with increased odds of residing in a non-Hispanic white neighborhood. An intriguing finding is that undocumented Mexican immigrants have significantly higher odds of residing in an Asian immigrant enclave than U.S.-born Mexicans. This association is consistent across all three models. In addition, the odds of residing in an Asian immigrant enclave are significantly lower for recent Mexican immigrants and Mexican immigrants with a high household income (i.e., \$50,000 and higher). Mexican immigrants living in the United States for 6 to 15 years have higher odds of residing in an Asian immigrant enclave than those in the United States longer; this finding, however, is not statistically significant.

Stage 3: Mexican Immigrant Neighborhood Profiles and Neighborhood Perceptions

I use a multilevel framework to examine the associations between the type of Mexican neighborhood an individual lives in and his or her neighborhood perceptions—that is, perceived neighborhood danger and collective efficacy. The results are reported in Table 3.7. Those residing in Mexican immigrant enclaves and Asian immigrant enclaves are, respectively 2.86 and 3.39 times more likely to perceive neighborhood danger than those residing in non-Hispanic white neighborhoods. However, these associations disappear when other individual-level covariates are controlled for. Compared with U.S.-born Mexicans, undocumented Mexican immigrants and recent Mexican immigrants were more likely to report perceived neighborhood danger.

Table 3.5. Descriptive Statistics for Mexican Immigrant Neighborhood Profiles

Variable	Ethnic Communities	Mexican Immigrant Enclaves	Ethnic Ghettos	Non-Hispanic White Neighborhoods	Asian Immigrant Enclaves
Key immigrant characteristics					
Nativity/Legal status					
U.S.-born citizen	23.8%	14.9%	24.5%	53.3%	14.2%
Documented	51.8%	44.7%	51.5%	31.1%	38.3%
Undocumented	24.4%	40.4%	24.0%	14.8%	47.5%
Duration in the United States					
0 to 5 years	5.8%	11.9%	6.9%	5.3%	12.6%
6 to 15 years	26.2%	47.7%	34.9%	19.3%	52.5%
16 or more years	73.1%	51.1%	63.3%	80.3%	47.1%
English language use	31.8%	20.1%	34.9%	66.7%	22.5%
Sociodemographic characteristics					
Female (gender)	68.2%	70.0%	68.1%	71.9%	71.7%
Age	38.62	34.21	35.79	37.87	34.29
Marital status					
Married	60.1%	54.9%	61.1%	71.1%	38.3%
Cohabiting	10.1%	14.5%	10.9%	3.7%	20.0%
Single	29.8%	30.6%	27.9%	25.2%	41.7%
Number of children	2.18	2.24	2.34	2.10	1.94
Education					
0 to 8 years	42.4%	42.2%	38.2%	14.3%	42.2%
9 to 11 years	22.0%	27.3%	21.8%	9.8%	25.9%
High school	19.5%	19.4%	20.0%	24.8%	17.2%
Beyond high school	16.1%	11.0%	20.0%	51.1%	14.7%
Employed	53.6%	59.5%	61.0%	77.0%	56.7%
Household income					
Less than \$10,000	34.2%	33.4%	24.6%	20.8%	40.9%
\$10,000–\$29,999	40.8%	51.6%	49.2%	24.7%	42.4%
\$30,000–\$49,999	16.3%	12.2%	18.9%	19.5%	13.6%
\$50,000 or more	8.7%	2.8%	7.4%	35.1%	3.0%
Unweighted N	334	656	227	230	118

Sources: Los Angeles Family and Neighborhood Survey, Wave 1 (2000–2002); 2000 U.S. decennial census

Table 3.6. Odds Ratios Predicting Residence in Different Types of Mexican Immigrant Neighborhoods

Variable	Ethnic Communities			Mexican Immigrant Enclaves			Ethnic Ghettos			Non-Hispanic White Neighborhoods			Asian Immigrant Enclaves		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Key immigrant characteristics															
Nativity/Legal status															
U.S.-born citizen (ref.)															
Documented	1.49+	1.39	0.99	2.00***	1.19	1.50	1.24	1.13	1.07	0.27**	0.42*	0.42*	1.29	1.68	2.18
Undocumented	0.65	0.96	0.71	3.55***	1.26	1.06	0.84	0.94	0.86	0.41**	0.72	1.09	3.03**	5.13*	4.75*
Duration in the United States															
0 to 5 years															
		0.85	0.96		1.87**	1.23**		1.24	1.32		1.25	1.71		0.44*	0.34*
6 to 15 years															
		0.47**	0.64		0.98	0.74		0.59	0.58		0.96	1.06		1.11	1.12
16 or more years(ref.)															
English language use															
		0.71	0.99		0.55*	0.51*		0.74	0.73		2.04*	1.46		1.57	1.57
Sociodemographic characteristics															
Education															
0 to 8 years (ref.)															
9 to 11 years															
			0.75			1.02			1.01			1.46			1.68
High school															
			0.71			0.74			1.29			2.05			1.46
Beyond high school															
			0.54*			0.51*			1.26			3.76***			0.76
Employed															
			0.58*			1.60*			0.89			1.78			1.03
Household income															
Less than \$10,000 (ref.)															
\$10,000–\$29,999															
			1.19			0.96			1.45			0.63			0.66
\$30,000–\$49,999															
			1.26			0.76			1.01			0.81			1.03
\$50,000 or more															
			0.84			0.31			0.71			1.13			0.16**
Unweighted N = 1,565															

Sources: Los Angeles Family and Neighborhood Survey, Wave 1 (2000–2002); 2000 U.S. decennial census

Table 3.7. Multilevel Models Predicting Neighborhood Danger and Collective Efficacy

Variable	Perceived danger (OR)			Collective efficacy		
	1	2	3	1	2	3
Immigrant neighborhood profiles						
Ethnic communities	0.88	1.05	0.80	-1.91*	-2.68**	-2.04**
Mexican immigrant enclaves	2.28+	2.86*	2.26	-2.23	-3.20***	-2.34**
Ethnic ghettos	1.77	2.17	1.83	-2.06*	-2.77**	-2.07**
Asian immigrant enclaves	2.78*	3.39*	2.48	-2.88***	-3.79***	-2.93***
Key immigrant characteristics						
Nativity/Legal status						
U.S.-born citizen (ref.)						
Documented		0.37	0.77		0.73	0.45
Undocumented		0.52	1.56		0.45	0.38
Duration in the United States						
0 to 5 years		0.14	1.74		0.70	0.94
6 to 15 years		0.15	0.64		-0.22	0.18
16 or more years (ref.)						
English language use		0.29	1.58		-1.57***	-1.16*
Sociodemographic characteristics						
Female (gender)			1.16			-0.10
Age			1.01			0.03
Marital status						
Married (ref.)			0.75			-0.44
Cohabiting			1.15			0.50
Single			0.87			-0.01
Education						
0 to 8 years (ref.)						
9 to 11 years			1.62			-1.38+
High school			1.24			-0.87+
Beyond high school			0.88			-1.51*
Employed			0.73			-0.04
Household income						
Less than \$10,000 (ref.)						
\$10,000–\$29,999			0.58			1.01
\$30,000–\$49,999			0.54			1.06
\$50,000 or more			0.55			3.31

Sources: Los Angeles Family and Neighborhood Survey, Wave 1 (2000–2002); 2000 U.S. decennial census
+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001 (two-tailed tests)

For perceived neighborhood collective efficacy, somewhat unexpectedly, the coefficients for residing in a Mexican immigrant enclave or an ethnic ghetto are negative, as is residing in an Asian immigrant enclave. In addition, English language use and education are negatively associated with perceived neighborhood collective efficacy. Compared with individuals who have only 0 to 8 years of education, individuals with higher levels of education reported lower perceived neighborhood collective efficacy, and individuals with the highest educational attainment (i.e., beyond high school) reported the lowest perceived neighborhood collective efficacy.

Sensitivity Analyses

To examine whether using different operationalizations of neighborhood would result in different profiles of Mexican neighborhoods, I created three additional sets of neighborhood-level variables using innovative methods of defining individuals' neighborhoods: census tract cluster, activity spaces (i.e., minimum convex hull), and weighted average tract. The descriptive statistics for key neighborhood measures used in estimating the latent profile models are reported in Table 8. Not surprisingly, the census tract cluster yields estimations similar to those based on the home census tract. Although neighborhood characteristics for the census tract cluster were similar to those based on the home census tract, the percentages were a bit lower, which is likely due to the fact that I weight the surrounding counties by 0.75.

However, when Mexican-origin adults' neighborhood characteristics are estimated using the activity spaces and weighted average tract approaches, they are

substantially different: Mexican-origin adults' neighborhoods have significantly lower proportions of Mexican, foreign-born, noncitizen, and recent immigrants. This pattern is true for U.S.-born Mexicans, documented Mexican immigrants, and undocumented Mexican immigrants. Furthermore, concentrated disadvantage is also substantially lower when these neighborhood definitions are used. For example, the neighborhood percentage Mexican is reduced by a factor of 4 for U.S.-born Mexicans (i.e., 47.7% to 11.5%) and by a factor of 5 for undocumented Mexican immigrants (i.e., 52.4% to 9.9%) when the activity space definition is used.

Table 3.8. Descriptive Statistics of Neighborhood Characteristics by Neighborhoods

Variable	% Mexican	% Foreign-born	% Noncitizen	% Recent	Disadvantage	Stability
A. Home census tract						
U.S.-born citizen	47.7%	38.5%	24.7%	14.2%	0.43	-0.01
Documented	54.9%	44.5%	30.8%	16.0%	0.80	-0.24
Undocumented	52.4%	46.1%	34.7%	18.8%	1.24	-0.71
B. Census tract cluster						
U.S.-born citizen	41.2%	33.6%	22.1%	13.4%	0.46	-0.02
Documented	45.6%	38.0%	27.2%	15.0%	0.88	-0.27
Undocumented	45.2%	40.3%	30.5%	16.8%	1.12	-0.57
C. Activity space						
U.S.-born citizen	11.5%	10.5%	6.5%	4.2%	0.10	0.01
Documented	12.3%	10.7%	7.6%	4.3%	0.22	-0.08
Undocumented	9.9%	9.2%	6.9%	3.7%	0.24	-0.11
D. Weighted average tract						
U.S.-born citizen	17.1%	13.7%	9.0%	5.5%	0.18	-0.03
Documented	20.7%	17.3%	12.3%	6.9%	0.36	-0.14
Undocumented	24.3%	21.1%	16.0%	8.7%	0.57	-0.32

Sources: Los Angeles Family and Neighborhood Survey, Wave 1 (2000–2002); 2000 U.S. decennial census

Note: Sample size is 988 for activity spaces and weighted average tract

The results from latent profile models also show significant differences (Table 3.9). When the activity spaces and weighted average tract definitions are used, Mexican immigrants are significantly less likely to reside in Mexican immigrant enclaves and Asian immigrant enclaves. Instead, their neighborhood characteristics closely resemble non-Hispanic white neighborhoods and ethnic communities. For example, 33.3% of Mexican immigrants' neighborhoods can be characterized as Mexican immigrant enclaves when neighborhoods are defined according to home census tracts, compared with only 9.6% when defined using activity spaces and weighted average tract.

Table 3.9. Immigrant Neighborhood Profiles by Neighborhood Definitions

Variable	A. Home Census Tract	B. Census Tract Cluster	C. Activity Space	D. Weighted Average Tract
Ideal number of profiles	5	4	5	5
Immigrant neighborhood profiles				
Ethnic communities	12.2%	27.8%	21.1%	33.4%
Mexican immigrant enclaves	33.3%	40.0%	9.6%	2.7%
Ethnic ghettos	13.3%	0.0%	28.9%	16.6%
Non-Hispanic White neighborhoods	27.8%	20.0%	37.4%	43.9%
Asian immigrant enclaves	13.3%	12.2%	2.9%	3.3%

Source: 2000 U.S. decennial census

Discussion and Conclusion

Moving beyond the traditional individual-centered approach which emphasizes the role of acculturation in immigrant incorporation, immigrant scholars have called for an integrative model that includes various spheres of influence by considering individual, family, and community contexts (Glick 2010). Within the integrative model, incorporating the contexts of reception is particularly important for an understanding of

the complex assimilation process: immigrants' neighborhood contexts can shape contributing and prohibiting factors that influence immigrants' incorporation. Despite such scholarly momentum to incorporate immigrant neighborhoods into studying immigrants' individual outcomes, relatively little is known about the characteristics of their neighborhoods. To fill this research gap, I explored three important interrelated questions in this study: (1) What are the types of neighborhoods where Mexican-origin adults reside? (2) Do neighborhood characteristics vary by Mexican-origin adults' individual characteristics? and (3) How are different types of Mexican neighborhoods associated with Mexican-origin adults' neighborhood perceptions? In addition to answering these questions, I also conducted sensitivity analyses to examine whether Mexican-origin adults' neighborhood characteristics vary by how the neighborhood is defined.

The results of this study identified three types of neighborhoods that are consistent with previous studies (Alba, Logan and Crowder 1997; Logan, Zhang and Alba 2002): immigrant enclaves, ethnic communities, and minority ghettos. Immigrant enclaves identified in this study are characterized by high proportions of foreign-born residents (i.e., immigrants), lower SES, and lower residential stability. These results echo those of previous studies showing that immigrant enclaves are transitional (Logan, Zhang and Alba 2002). However, two additional types of neighborhoods were identified. Interestingly, Mexicans are not only residing in coethnic immigrant enclaves (i.e., Mexican immigrant enclaves) but they are also residing in non-coethnic immigrant enclaves (i.e., Asian immigrant enclaves). Most previous studies have only focused on

coethnic immigrant enclaves, and little is known about the presence, processes, and characteristics of non-coethnic immigrant enclaves. For example, does residing in an Asian immigrant enclave provide the same benefits to Mexicans as residing in a Mexican immigrant enclave? Given the considerably lower level of concentrated disadvantage in Asian immigrant enclaves compared with Mexican immigrant enclaves, Mexicans may be better protected if they live in an Asian immigrant enclave. In addition, residing in a non-coethnic immigrant enclave might reduce the perceived or actual competition that occurs among coethnic members in Mexican immigrant enclaves, which can translate to better social relationships among Mexicans. On the other hand, Mexicans residing in Asian immigrant enclaves may experience more social isolation because some resources within Asian immigrant enclaves are ethnicity-specific, thus limiting Mexicans' access to these ethnicity-specific neighborhood resources. Future studies should investigate how residence in non-coethnic immigrant enclaves occurs and how it affects Mexican immigrants.

Characteristics of ethnic communities and ethnic ghettos are also largely consistent with those found in previous studies (Alba, Logan and Crowder 1997; Logan, Zhang and Alba 2002). Ethnic communities are characterized by high proportion of older immigrant cohorts and second-generation immigrants and by relatively lower socioeconomic disadvantage. Ethnic ghettos are characterized by high proportion of racial/ethnic minorities and higher socioeconomic disadvantage. However, contrary to the conventional depiction of ethnic ghettos in previous studies (Logan, Zhang and Alba 2002; Massey and Denton 1993), socioeconomic disadvantage in ethnic "ghettos" was

not as high in Mexican immigrants' ethnic ghettos in Los Angeles County. In fact, the level of concentrated disadvantage is significantly higher in Mexican immigrant enclaves than in ethnic ghettos, perhaps because Los Angeles County is one of the majority-minority counties where more than half of the population self-identifies as being in a racial/ethnic category other than non-Hispanic white alone. Because many other racial/ethnic minority groups reside in Los Angeles County, SES may vary more within minority groups; and other racial/ethnic minority members in these ethnic "ghettos" may not be the most disadvantaged members within their racial/ethnic groups. In other words, these neighborhoods could also be characterized as working-class neighborhoods with members of multiple racial/ethnic groups (i.e., having lower SES compared with non-Hispanic white neighborhoods, on average), rather than as ethnic "ghettos." If these neighborhoods are interpreted as working-class neighborhoods with a diverse racial/ethnic composition, the absence of ethnic ghettos—at least in Los Angeles County—challenges the segmented assimilation theory, which posits that one of the assimilation pathways is into the underclass and permanent poverty (Portes and Zhou 1993).

The results from the multivariate models predicting membership in different types of Mexican neighborhoods are also consistent with previous studies that found empirical support for the spatial assimilation theory (Alba et al. 2010; Crowder, Hall and Tolnay 2011; Iceland 2009). Specifically, recent Mexican immigrants and undocumented Mexican immigrants are significantly more likely to reside in Mexican immigrant enclaves, and more-aculturated Mexican immigrants—as measured by duration in the

United States and English language use—are more likely to reside in ethnic communities and non-Hispanic white neighborhoods. In addition, other SES measures, such as education and employment, are associated with increased odds of residing in non-Hispanic white neighborhoods. In other words, more culturally and socioeconomically assimilated immigrants are likely to reside in ethnic communities and non-Hispanic white neighborhoods.

One intriguing finding is that although undocumented Mexican immigrants are significantly more likely to reside in Asian immigrant enclaves, recent Mexican immigrants (i.e., those in the United States for five or fewer years) are significantly less likely to reside in Asian immigrant enclaves. On the other hand, Mexican immigrants who have been in the United States longer (i.e., 6 to 15 years) have higher odds of residing in Asian immigrant enclaves. This finding might suggest that recent undocumented Mexican immigrants are more likely to choose Mexican immigrant enclaves when they first arrive in the United States because they are embedded in a specific transnational social network (Massey and España 1987) but may move to other types of immigrant enclaves as their duration in the United States becomes longer. As mentioned earlier, undocumented Mexican immigrants may experience less coethnic competition in Asian immigrant enclaves, and Asian immigrant enclaves may have more desirable qualities because of its lower level of concentrated disadvantage (e.g., better housing availability and better school districts). This type of neighborhood might offer the dual advantages of more desirable features (e.g., safety) and of better access to jobs despite undocumented status. In this regard, for undocumented Mexican immigrants,

moving to non-coethnic immigrant enclaves may be an alternative pathway for achieving upward residential mobility.

The results from the multilevel models investigating the associations between different types of Mexican neighborhoods and Mexican-origin adults' neighborhood perceptions show that undocumented Mexican immigrants and recent Mexican immigrants are more likely to report perceived neighborhood danger. This finding echoes previous studies (Reese 2002; Yoshikawa and Kalil 2011) which show that Mexican immigrants have a high level of perceived neighborhood danger compared with non-Hispanic whites and U.S.-born Mexicans. Both undocumented Mexican immigrants and recent Mexican immigrants may report perceived neighborhood danger because they are more likely to reside in disadvantaged neighborhoods with poor physical conditions or they fear their new environment. They may also report higher perceived neighborhood danger because of concerns about being a victim of hate crimes. In addition, undocumented Mexican immigrants may report a high level of perceived neighborhood danger because they fear being identified by authorities and being deported (Yoshikawa and Kalil 2011). Residence in Mexican immigrant enclaves and Asian immigrant enclaves is also associated with high level of perceived neighborhood danger compared with residing in non-Hispanic white neighborhoods.

Similarly, compared with residing in a non-Hispanic white neighborhood, residing in other types of neighborhoods is associated with a significantly lower level of perceived neighborhood collective efficacy. This finding is somewhat surprising because previous studies have suggested that even socioeconomically disadvantageous immigrant

neighborhoods might provide social and cultural protective factors that buffer the negative effects of socioeconomic disadvantage for immigrants (Cardoso et al. 2014; Walton 2009). In fact, this finding is more consistent with the work of Sampson et al. (Sampson, Raudenbush and Earls 1997), which showed that neighborhood structural characteristics (e.g., concentrated disadvantage and residential instability) reduce collective efficacy. In addition, the results indicate that a high level of education and English language use—measures of acculturation—are associated with lower levels of collective efficacy. I offer four possible explanations for these unexpected findings. First, the buffering effects of social and cultural protective factors may work through the sphere of family rather than neighborhoods; that is, despite residing in socioeconomically disadvantageous neighborhoods, immigrants—especially recent immigrants—may experience positive individual outcomes because of social and cultural protective factors embedded within their families. Second, immigrants’ positive individual outcomes may result from positive selection (Jasso et al. 2004). Third, the presence of ethnic-specific resources (e.g., Spanish-speaking health care) might trump the low collective efficacy among residents of ethnic communities. Finally, perceived neighborhood collective efficacy may be high only among specific immigrant groups. Future studies can contribute to the understanding of collective efficacy in Mexican neighborhoods by replicating this study using different geographic locations and by investigating the specific mechanisms by which a high level of collective efficacy is generated in non-Hispanic white neighborhoods.

The results of the sensitivity analyses must be interpreted with caution because the characteristics of Mexican-origin adults' neighborhoods change substantially by how neighborhoods are defined. Notably, the characteristics of Mexican-origin adults' neighborhoods are similar when census tract and census tract cluster approaches to defining neighborhoods are used. However, when neighborhoods are defined using activity spaces and weighted average tracts, the results are significantly different: Mexican-origin adults' neighborhoods have significantly lower proportions of Mexican, foreign-born, noncitizen, and recent immigrants and lower levels of concentrated disadvantage. These findings suggest Mexican-origin adults' neighborhoods and spatial experiences differ significantly. That is, although Mexican-origin adults are exposed to high proportion of Mexican immigrants and high levels of disadvantage around their home (as measured by the characteristics of home census tract), their regular activities take place in neighborhoods that are more advantageous and racially heterogeneous. For example, Mexican immigrants might reside in Mexican immigrant enclaves, but they may be spending time at home only while sleeping; during daytime hours, they might work and spend leisure time in non-Hispanic white neighborhoods.

In light of the results from the sensitivity analyses, future studies should investigate how the discrepancies in the characteristics of Mexican neighborhood based on neighborhood definitions may influence individual outcomes. Such discrepancies may both positively and negatively influence Mexican-origin adults. On one hand, if Mexican-origin adults are exposed to more positive neighborhood characteristics during their daytime activities, they may be able to tap the resources from those nonresident

neighborhoods (e.g., going to a better hospital in a non-Hispanic white neighborhood). On the other hand, Mexican-origin adults might compare themselves with individuals in more-affluent neighborhoods, resulting in relative deprivation that can negatively affect them (e.g., feeling more depressed about their neighborhood conditions). Furthermore, a large proportion of Mexican-origin adults (36.9%, N = 577) reported only one or two places they visited during the past week, which excluded them from the analysis of activity spaces. Future studies should also investigate the factors that contribute to Mexican-origin adults being trapped in their residential contexts (e.g., access to vehicle, workplace near home). This type of more-nuanced investigation will be invaluable to broadening our understanding of “whether, how, for whom, [and] under what conditions” (Viruell-Fuentes, Miranda and Abdulrahim 2012) immigrant neighborhoods influence immigrants’ individual outcomes.

This study has several important limitations due to use of cross-sectional data. First, whether different types of Mexican neighborhoods would emerge from these data during other time points is unclear; that is, types, characteristics, and distributions of Mexican neighborhoods might differ across time. Thus, this study is unable to address how these Mexican neighborhoods may change over time. This limitation is particularly relevant for interpreting the results from latent profile models (Stage 1). Second, because of the use of cross-sectional data, causal relationships between individual characteristics and memberships in different types of neighborhood profiles cannot be established. For example, it is not possible to distinguish whether English language use predicts a higher probability of residing in non-Hispanic white neighborhoods or whether residence in non-

Hispanic white neighborhoods improves Mexican immigrants' English language use. This limitation is particularly relevant for interpreting the results from the multivariate models (Stages 2 and 3). Third, because this study focuses only on Mexican-origin adults in Los Angeles County—a majority-minority county—the findings are not generalizable to the full Mexican-origin adult population in the United States. Currently, about 11% of all U.S. counties are majority-minority counties. However, 75% of the nation's largest counties are majority-minority counties, and this demographic profile is becoming more common across the United States (Pew Research Center 2015; U.S. Census Bureau 2013).

Despite these limitations, this research offers significant contributions toward better understanding Mexican neighborhoods and the complex relationships among Mexican immigrants' legal status, neighborhood types, and neighborhood perceptions. First, to the best of my knowledge, this is the first study to use latent profile analyses to examine the types of neighborhoods where Mexican-origin adults reside. As mentioned earlier, latent profile analysis is an analytic strategy that identifies categorical profiles emerging from the data based on a set of continuous indicators (Collins and Lanza 2010). This approach is particularly informative for discovering underlying neighborhood types based on multiple domains of identities (Collins and Lanza 2010; Jones and Huh 2014).

Second, compared with previous studies that focused on ethnic-specific neighborhoods (e.g., Mexican immigrant enclaves) (Alba, Logan and Crowder 1997; Logan, Zhang and Alba 2002), this study suggests that a nontrivial number of Mexican immigrants reside in non-coethnic immigrant enclaves (e.g., Asian immigrant enclaves)

and more acculturated undocumented Mexican immigrants—as by duration in the United States and English language use—are more likely to reside in non-coethnic immigrant enclaves. This is the first study to identify non-coethnic immigrant enclaves, and it challenges future studies to examine the processes and characteristics of non-coethnic immigrant enclaves and how they may affect immigrants.

Third, the multivariate results provide empirical evidence for the spatial assimilation theory (Alba et al. 2010; Crowder, Hall and Tolnay 2011; Iceland 2009); and they suggest that Asian immigrant enclaves offer undocumented Mexican immigrants a pathway for achieving upward residential mobility as an alternative to moving to ethnic communities.

Fourth, the results from the multilevel models examining the associations between types of Mexican neighborhoods and Mexican-origin adults' neighborhood perceptions challenge the conventional notion that Mexican neighborhoods offer high levels of social and cultural protective factors despite their socioeconomic disadvantages (Cardoso et al. 2014; Walton 2009).

Finally, I replicate the creation of Mexican neighborhood types by using innovative methods to define individuals' neighborhoods then comparing them. The results suggest that Mexicans' residential neighborhoods defined by the administrative boundaries significantly differ from their actual lived spatial experiences. Thus, future research can use these alternative methods of defining neighborhoods to better understand Mexican-origin adults' experiences. In addition, the results indicate that place-based public policy prevention and intervention programs to target Mexican-origin

adults may be inefficient if they target only the residential neighborhood without considering their activity spaces. In short, the results of the study offer important theoretical and methodological contributions toward an understanding of Mexican-origin adults' contexts of reception by examining the types of neighborhoods where Mexican-origin adults reside, who lives in which neighborhoods, and how different types of Mexican neighborhoods are associated with Mexican-origin adults' neighborhood perceptions.

CHAPTER 4

LEGAL STATUS, NEIGHBORHOODS, AND FAMILY FORMATION

TRANSITIONS AMONG MEXICAN-ORIGIN ADULTS

Family formation processes have significant individual and societal consequences that impact both immigrants and U.S. natives. At the individual level, family formation events can influence achievements and circumstances in other important life domains, such education and employment; and they also play a crucial role in assimilation processes (Alba and Nee 2003; Parrado and Morgan 2008). At the societal level, family formation processes can be an important mechanism for maintaining inequality between groups (Landale and Forste 1991), thereby influencing the U.S. population as a whole. One of the key predictors of family formation patterns among Mexican American individuals is their nativity status. For example, in 2000, compared with U.S.-born Mexicans, foreign-born Mexicans were more likely to marry early (57% versus 36%) (Landale and Oropesa 2007), less likely to cohabit (4.8% versus 6.5%) (Brown, Van Hook and Glick 2006), and less likely to have nonmarital births (35% versus 46%) (Wildsmith and Raley 2006).¹² Despite the well-documented descriptive data on nativity differences in the patterns of family formation and the critical importance of family formation processes, surprisingly little is known about multilevel factors influencing the

¹² Statistics on marriage come from the 2000 Integrated Public Use Microdata Series (IPUMS); statistics on cohabitation come from the 2000–2004 Current Population Survey; and statistics on nonmarital births come from the 2000 National Vital Statistics Report.

transitions to family formation among Mexican-origin adults.¹³

While a complex set of interrelated social, economic, and cultural changes clearly influences the family formation behaviors of an individual (Oropesa and Landale 2004), a long-standing debate centers on cultural versus structural explanations of Hispanic family patterns. Previous studies tended to pit these explanations against each other without considering the complex interrelation between culture and structure (Landale and Oropesa 2007). However, scholars have started to call for an integrative model that considers both cultural and structural perspectives on how Hispanic families are shaped. The integrative model includes multiple spheres of influence by considering individual, family, and community contexts (Glick 2010). Within the integrative framework, contexts of reception are particularly important because structural conditions can affect opportunities for family formation, and other aspects of host communities may shape changes in the values and expectations immigrants bring with them from their origin communities (Glick 2010).

To address the call for an integrative model in understanding family formation among Hispanics, this chapter investigates how various individual-level and contextual-level characteristics conjointly influence Mexican-origin adults' transitions to family formation using the Los Angeles Family and Neighborhood Survey (L.A. FANS). Specifically, the chapter investigates the role of two major axes of stratification that have profound implications for Mexican-origin adults (especially for foreign-born Mexican-

¹³ I use the term “Mexican-origin adults” instead of “Mexican immigrants” because my analytic sample includes both U.S.-born Mexican-origin adults and foreign-born Mexican-origin adults.

origin adults): namely, *legal status* and *post-migration neighborhood contexts* (Glick 2010; Massey and Bartley 2005). In addition, by systematically comparing the results using the administrative boundaries (i.e., census tract) with those using the activity spaces measure to define neighborhoods, this paper examines whether and how the influence of neighborhood context on family formation for Mexican-origin adults may differ by the operationalization of neighborhoods.

Theoretical Background and Gaps in the Family Formation Literature

Individual-Level Explanations of Family Formation

The early literature on family formation predominately focused on individual-level factors that influence individuals' transitions to family formation (e.g., Moore and Hofferth 1980). Explanations of the observed racial and ethnic differences in patterns of family formation have identified two main individual-level influences: individuals' *family background* and *socioeconomic characteristics*. First, previous studies have found that individuals' family background characteristics are important determinants of family formation behaviors (Axinn and Thornton 1996; Larson et al. 1998; Moore and Hofferth 1980; Oropesa 1996; Trent and South 1992). Characteristics of the family of origin are key factors that shape individuals' marital norms, including marital attitudes and readiness (Larson et al. 1998; Oropesa 1996; South 1993; Waite and Spitze 1981), which in turn influence family formation behaviors and patterns. Second, previous studies have found that individuals' socioeconomic characteristics are important determinants of family formation behaviors (Blossfeld and Huinink 1991; McLaughlin and Lichter 1997;

Trent and South 1992; Waite and Spitze 1981). These studies have shown that human capital investments, which are often measured by high educational attainment and economic independence, postpone women's transitions to family formation (Blossfeld and Huinink 1991); lack of human capital investments, which is often measured by low educational attainment and poverty, facilitate women's early transitions to family formation (Trent and South 1992; Waite and Spitze 1981). In short, the literature on family formation suggests that racial and ethnic differences in family formation transitions are attributable to differences in family background and socioeconomic characteristics (i.e., compositional effect) and how they shape individuals' marital attitudes and behaviors (i.e., specific mechanisms).

Family background and socioeconomic characteristics largely explain the observed racial and ethnic differences in the patterns of family formation between non-Hispanic whites and non-Hispanic blacks (South 1993; Wildsmith and Raley 2006). However, the findings of these studies may not be applicable to family formation among Mexican-origin adults. For example, despite the disadvantaged economic circumstances of Mexican-origin adults compared with non-Hispanic whites, their marriage patterns are comparable to those of non-Hispanic whites, implying a "paradox of Mexican American nuptiality" (Oropesa, Lichter and Anderson 1994). This paradox suggests that individuals' family background and socioeconomic characteristics may have different effects on Mexican-origin adults' family formation transitions compared with non-Hispanic whites and non-Hispanic blacks.

These two key individual-level factors may have different influences on Mexican-origin adults, whose family and socioeconomic norms and beliefs may have been formed in Mexico. For example, compared with individuals in the United States, a larger proportion of individuals in Mexico may come from married, two-parent families with a strong emphasis on marriage. They may also perceive family formation as a central dimension of their transition to adulthood, facilitating early transitions to family formation for Mexicans. Furthermore, individuals' socioeconomic characteristics may not be as crucial for family formation in Mexico compared with the United States. Parrado and Zenteno (2002) examined the multilevel determinants of union formation in Mexico and found that women's socioeconomic conditions did not affect the desire for marriage and union formation in Mexico, contrary to the pattern observed in the United States. In addition, understanding how foreign-born Mexican-origin adults' family background and socioeconomic characteristics affect their family formation transitions in the United States becomes even more complex: as Mexican immigrants spend more time in the United States and become more acculturated, they may adopt norms, attitudes, and behaviors that are more prevalent in the United States. For example, studies have found that acculturation is associated with changes in traditional sex role attitudes and behaviors (Kranau, Green and Valencia-Weber 1982; Phinney and Flores 2002). In turn, these changes in sex role attitudes and behaviors may affect individuals' family formation attitudes and behaviors. Moreover, although largely unexplored to date, understanding the individual-level determinants of family formation for Mexican-origin adults can be

further complicated by the possible influences of migration experiences and post-migration neighborhood contexts.

Contextual-Level Explanation of Family Formation

With the long history of theories on the importance of larger structural contexts on individuals (Bronfenbrenner 1979; Durkheim 1897; Park 1915) and readily available data, software, and methods (Entwisle 2007) as a basis, the literature on family formation began to broaden the research scope to incorporate individuals' neighborhood contexts in the late 1990s. Previous studies documented that several neighborhood characteristics are associated with family formation behaviors for non-Hispanic whites and blacks (South 1996; South and Crowder 1999) and for Hispanics (Lloyd 2000; 2006). These studies have focused on two main aspects of neighborhood contexts: characteristics of the marriage market and socioeconomic disadvantage.

First, a *marriage markets* refers to the availability of potential partners. It is commonly conceptualized as the male-to-female sex ratio, or the number of “eligible males” who are employed in the local marriage pool of neighborhoods (Lloyd 2000; 2006; South 1996; South and Crowder 1999). Four prominent theoretical frameworks articulate how the marriage market can influence individuals' family formation behaviors: imbalanced sex ratios theory (Guttentag and Secord 1983), marital search behavior theory (Becker 1991; Oppenheimer 1988), race–male marriage pool theory (Wilson 1987), and macrostructural-opportunity theory of marital dissolution (South et al. 2001). *Imbalanced sex ratios theory* posits that an imbalance in the number of men and

women in a given population will influence the dyadic relationship such that individuals of the more numerous sex will lower their standards to acquire a partner of the less numerous sex (Guttentag and Secord 1983). This theory postulates that men and women have different family formation goals: men prefer to delay the long-term commitment of marital unions, and women prefer a stable relationship through marriage. *Marital search behavior theory* similarly assumes that mate selection is based on marriage market dynamics. According to this theory, both men and women are rational actors seeking to maximize personal gains through marriage (Becker 1991), but individuals' relative success in family formation will also partially depend on the relative position of individuals within the marriage market (Oppenheimer 1988). *Race-male marriage pool theory* builds on the two previous theories but also includes an emphasis on the relative shortage of "marriageable" black men in the marriage market, which may delay women's family formation (Wilson 1987). *Macrostructural-opportunity theory of marital dissolution* (South and Lloyd 1995; South et al. 2001) posits that the availability of spousal alternatives – measured by sex ratio of the local marriage market – increases the risk of divorce for both men and women.

Previous studies have documented that neighborhood marriage market characteristics similarly affect different racial and ethnic groups. For example, the availability of potential partners (e.g., the number of "eligible males" who are employed in the local marriage pool) accelerates the rate of transition to marriage and elevates the risk of premarital childbearing for non-Hispanic white and black women (Landale and Forste 1991; Lichter et al. 1992; McLaughlin, Lichter and Johnston 1993; South 1996)

and for Hispanic women (Lloyd 2000; 2006; Oropesa, Lichter and Anderson 1994). Similarly, the availability of spousal alternatives accelerates the rate of transition to singlehood (South and Lloyd 1995; South et al. 2001).

Second, *socioeconomic disadvantage* is commonly measured as a poverty rate or concentrated disadvantage composite score.¹⁴ Theories on neighborhood effects suggest that neighborhood socioeconomic disadvantage can influence family formation behaviors through multiple sequential, interconnected mechanisms (Jencks and Mayer 1990; South and Crowder 2010), and the most fundamental of neighborhood effect mechanisms may be *situational mechanisms* (Coleman 1990; Hedström and Ylikoski 2010). Situational mechanisms refer to how the social structures of neighborhoods (i.e., norms) shape individuals' desires and beliefs. Two prominent theoretical frameworks—epidemic or contagion theory, and institutional theory—suggest different situational mechanisms. *Epidemic or contagion theory* emphasizes the role of peers in shaping neighborhoods' family formation norms (Crane 1991); *institutional theory* emphasizes the importance of local institutions (e.g., schools, churches) in shaping the costs and benefits of family formation (Jencks and Mayer 1990). In short, both theories suggest that neighborhood socioeconomic disadvantage may influence individuals' family formation through its influence on the norms or subcultures of neighborhoods. In contrast to marriage market characteristics, which influence different racial and ethnic groups similarly,

¹⁴ The neighborhood disadvantage composite score is commonly constructed using factor analysis based on multiple measures of neighborhood socioeconomic status. One of the most commonly used indicators, *concentrated disadvantage*, is calculated using a factor regression score based on six neighborhood variables (i.e., percentages of individuals/households below poverty line, on public assistance, female-headed families, unemployed, less than age 18, and black) (Sampson and Raudenbush 1997).

neighborhood socioeconomic characteristics affect different racial and ethnic groups differently. For example, neighborhood socioeconomic disadvantages increase the risk of marriage and premarital childbearing for non-Hispanic white women; however, these same disadvantages have little effect on premarital childbearing and a nonlinear effect on the probability of marriage for non-Hispanic black women (South and Crowder 1999).

These previous studies clearly demonstrate that incorporating neighborhood-level factors is critical for understanding family formation behaviors. For example, one study found that individual and family characteristics accounted for only about 30% of the baseline difference in sexual behaviors by race (Browning, Leventhal and Brooks-Gunn 2004).¹⁵ Browning and colleagues also point to the importance of considering both marriage market characteristics and socioeconomic characteristics concurrently when investigating the potential role of post-migration neighborhood context in family formation for Mexican-origin adults.

Gaps in the Family Formation Literature

Since the late 1990s, studies of family formation have made substantial progress in moving beyond simple black-white comparisons by including Hispanics (Lloyd 2000; 2006) and examining neighborhood contexts. Yet, several substantive and methodological gaps remain in the family formation literature. The first important gap results from treating Hispanics as an aggregated group without differentiating native and

¹⁵ Neighborhood factors significantly added to the explanatory power of their model after the “effects of family, peer, and individual characteristics have been considered” (Browning et. al, 2004: 712).

foreign-born Hispanics and those from different countries of origin. “Hispanic” as an aggregated category can be useful for some comparisons, but it can also mask meaningful differences among subgroups within the Hispanic population (Bean and Tienda 1987; Landale and Oropesa 2007).

Furthermore, previous studies have overlooked a key characteristic of Hispanics: legal status. It is estimated that nearly 51% of all Mexican immigrants in 2011 were undocumented (Passel and Cohn 2011). Legal status of foreign-born individuals is particularly important because it is a critical aspect of stratification that can influence social, economic, and political opportunities in the United States (Glick 2010; Massey and Bartley 2005); legal status is also linked with human capital and immigrants’ social networks (McConnell 2008). Thus, legal status is important for understanding family formation of Mexican-origin adults –especially for foreign-born Mexican-origin adults– because it can influence both individual characteristics (i.e., relative positioning within the marriage market based on economic independence and employment) and contextual characteristics (i.e., level of exposure and access to marriage markets).

Another limitation is the way *Hispanic marriage markets* are defined. Lloyd (2000) extended the literature by including Hispanics in studies of marriage formation. She attempted to define the Hispanic marriage market by systematically testing different scenarios based on multiple assumptions about individual racial and ethnic preferences and racial exogamy (Lloyd 2000). In her detailed analyses, she compared eight sex ratio measures based on marriage preferences (see Table 4.1.), finding that the only substantively and significantly meaningful sex ratio for Hispanics was the *Hispanic sex*

ratio. She then included the Hispanic sex ratio and several theoretically driven socioeconomic variables in her analysis of marriage. Although her approach of defining different marriage markets based on marital preference was novel, it cannot establish the qualitatively distinct types of marriage markets that result from both marriage market characteristics and the socioeconomic characteristics of neighborhoods. Furthermore, most previous studies did not account for the hierarchical structure of the data. Without accounting for this hierarchical structure, results may be biased, leading to incorrect estimates of the associations between the independent and dependent variables (Raudenbush and Bryk 2002).

To address these limitations and to understand more fully whether and how residential contexts influence Mexican-origin adults' family formation, this chapter investigates how both marriage market characteristics and socioeconomic characteristics of neighborhoods concurrently affect family formation among Mexican-origin adults. Specifically, I aim to answer two main questions. First, what types of marriage markets are Mexican-origin adults exposed to? Second, how do different types of marriage markets influence Mexican-origin adults' transitions to family formation?

In addition, by systematically comparing the results using administrative boundaries (i.e., census tract) to results using activity spaces to define neighborhoods, I examine whether and how the influence of neighborhood contexts on Mexican-origin adults' family formation may differ by the operationalization of neighborhoods. This methodological extension is important two reasons. First, the census tract of home residence may be too small to constitute a marriage market; the typical census tract in a

large urban area is quite small, typically covering less than one square mile (Matthews and Yang 2013). Second, the census tract may capture the individual's residential neighborhoods, whereas activity spaces capture the actual spatial exposure shaped by the individual's activity patterns. In fact, the findings from the third chapter illustrated that the characteristics of residential neighborhoods (defined by census tract) and activity spaces are quite different for Mexican-origin adults. Thus, comparing the results using census tract and activity spaces will raise important questions about how neighborhoods should be conceptualized for studying Mexican-origin adults.

Table 4.1. Operationalization of Eight Different Sex Ratio Measures Utilized in Analyses of Sexual and Familial Transitions among Hispanic, Anglo, and African American Respondents in the NLSY, 1967-1990.

<i>Sex Ratio Measure</i>	<i>Marriage Preference</i>	<i>Respondent's Race</i>	<i>Ethnicity of Marriage Market</i>
1. Total Sex Ratio (TSR)	Racial and Ethnic Exogamy	White & Black	Anglo, African American, & All Hispanics
2. Hispanic Sex Ratio (HSR)	Ethnic Endogamy	White & Black	All Hispanics
3. White Sex Ratio (WSR)	Exogamy with Majority Group Members	White	Anglo & Hispanics
4. Black Sex Ratio (BSR)	Exogamy with Minority Group Members	Black	African American & Hispanics
5. White-Black Sex Ratio (WBSR)	Racial Endogamy	White	Anglo & White Hispanic only
		Black	African American & Black Hispanic only
6. White-Black Hispanic Sex Ratio (WBHSR)	Racial and Ethnic Endogamy	White	White Hispanics only
		Black	Black Hispanics only
7. Anglo Sex Ratio (ASR)	Racial and Ethnic Endogamy	White	Anglo (Non-Hispanic White)
8. African American Sex Ratio (AASR)	Racial and Ethnic Endogamy	Black	African American (Non-Hispanic Black)

Data and Methods

This paper draws from two data sources: Individual-level data come from the first and second waves of the Los Angeles Family and Neighborhood Survey (L.A.FANS), and contextual-level data come from the 2000 decennial census. The first wave of the L.A.FANS is based on a representative sample of the population of Los Angeles County and was collected between 2000 and 2002. The second wave, collected between 2006 and 2008, includes panel respondents who participated in the first wave of L.A.FANS and new respondents added to refresh the sample. This data set has unique advantages for investigating how both marriage market characteristics and socioeconomic characteristics of neighborhoods concurrently affect family formation among Mexican-origin adults because it includes detailed information on foreign-born Mexican-origin adults' legal status and individuals' activities (Sastry et al. 2006). Marriage market characteristics and socioeconomic characteristics of neighborhoods come from the 2000 decennial census. The two data sets are linked using the geographic identification codes for the census tract of residence. The analytic samples include all Mexican-origin adults who have made any of three family transitions (i.e., transitions to marriage, cohabitation, or singlehood) between the first wave and the second wave. Of 1,789 Wave 2 respondents, the 1,578 panel respondents were selected. The panel respondents were then restricted to Mexican-origin adults (n = 907). The final sample includes 335 U.S.-born Mexicans (i.e., second- or higher-generation Mexican immigrants)¹⁶, 320 documented Mexican immigrants, and 252 undocumented Mexican immigrants.

¹⁶ Of 335 U.S.-born Mexican adults, there are 249 second-generation Mexican immigrants (74.3%).

Individual-Level Variables

The three dependent variables—transitions to marriage, cohabitation, and singlehood—are dichotomous variables (coded 1 if the respondent made the transition between two waves for each specific indicator and 0 otherwise). Because Mexican-origin adults in the L.A.FANS are much older than the average age of first family formation, it is not possible to model only the transitions to first family formation. Thus, in this chapter, I consider family formation transitions that occurred between the first two waves. For each family formation transition, only individuals who are at risk of a given transition at Wave 1 are included in the analysis. For example, individuals who were married at Wave 1 are excluded from the analysis of the transition to marriage.

I include three key immigrant and sociodemographic characteristics: nativity/legal status, duration in the United States, and English language use. *Nativity/legal status* consists of three dummy variables: U.S.-born status (reference), documented status, and undocumented status. Respondents who were not born in the United States were asked a series of questions to determine their legal status at the time of the survey. Specifically, respondents were sequentially asked about whether they (1) were a naturalized citizen, (2) had a Green Card or permanent resident status, (3) had refugee, asylee, or Temporary Protected Status, or (4) had a valid visa for temporary residence. Respondents who did not fall into one of these four categories were assumed to be undocumented. This residual estimation procedure yielded profiles consistent with other sources (Bachmeier, Van Hook and Bean 2014). *Duration in the United States* is coded into three dummy

variables: 0 to 5 years, 6 to 15 years, and 16 or more years (reference).¹⁷ *English language use* is a dichotomous variable indicating whether the respondent answered the survey questions in a non-English language or not (coded 1 if used non-English, and 0 otherwise).

Sociodemographic variables used in the models are female, age, poverty status, education, and employment status. *Female* is coded 1 if female, and 0 if male. *Age* is a continuous variable reflecting the respondent's age at the time of the survey. *Poverty status* is a dichotomous variable indicating whether the respondent lives below the individual-level federal poverty thresholds for 2001. An individual-level income below the federal poverty thresholds in 2001 is coded as being poor (coded 1 if poor, and 0 otherwise). *Education* is a dichotomous variable indicating whether the respondent had less than a high school education (coded 1 if less than high school, and 0 otherwise). *Employment status* is a dichotomous variable coded as 1 if the respondent was employed part-time or full-time at the time of the survey, and 0 otherwise.

Contextual-Level Variables

To create the typology of qualitatively distinct neighborhoods that account for both socioeconomic and marriage market characteristics of neighborhoods, I start with six objective measures of neighborhoods: percentage of Mexican-origin individuals, percentage of foreign-born individuals, percentage of noncitizens, percentage of recent

¹⁷ I tested other sets of dummy variables for duration in the United States (e.g., 0 to 10 years, 10 to 15 years, and 16+ years), but the set of dummy variables used in the analyses yields the most equal distribution of individuals in each category.

immigrants (who arrived in the United States after 1995), concentrated disadvantage, and residential stability. In addition, I add three theoretically driven measures of neighborhoods that are relevant for defining marriage markets for Mexican immigrants. First, drawing from previous work on family formation among Hispanics (Lloyd 2000; 2006), I include a measure of the Hispanic sex ratio (male-to-female). Additionally, I include the percentage of all Hispanic females living in the neighborhood with high educational attainment (i.e., high school and beyond) and the percentage of Hispanic males who were unemployed to measure the characteristics of “marriageable partners” in neighborhoods.

To measure and account for multiplicities of neighborhood characteristics, I create two variables—concentrated disadvantage and residential stability—as composite scores, consistent with previous studies (Sampson and Raudenbush 1997). *Concentrated disadvantage* is a scale created from five variables: the percentage of individuals below the poverty line, on public assistance, unemployed, less than 18 years old, and the percentage of female-headed households. A principal component analysis of these five variables confirmed the emergence of one factor; thus, I use a regression-weighted method to create the scale of concentrated disadvantage, which ranges from 0 (no concentrated disadvantage) to 1 (complete concentrated disadvantage). *Residential stability* is constructed from the percentage living in the same location in 1995 and the percentage of owner-occupied housing using the principal component analysis and regression-weighted method; this scale ranges from 0 (no residential stability) to 1 (complete residential stability).

Analytic Approaches

I use multiple imputation methods to account for variables that are missing at random (MAR) at the individual level. I generate 20 imputed data sets to generate the correct parameter estimates and standard errors (Rubin 1987). To investigate my first research question in order to better understand the neighborhood contexts of Mexican-origin adults, I use latent profile analysis (LPA). This analysis identifies qualitatively distinct categorical profiles emerging from continuous indicators; instead of a variable-centered approach, this approach allows researchers to create a typology based on multiple characteristics (Collins and Lanza 2010). I estimate a series of LPA models in which each subsequent model includes an additional profile and then is compared with a model that has $k - 1$ profiles using Mplus software. To identify the ideal numbers of profile, models are compared using the Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR) and other model fit statistics (i.e., the Akaike information criterion (AIC), Bayesian information criterion (BIC), the adjusted Bayesian information criterion (ABIC), and entropy (E)).

After creating the neighborhood typology of marriage market using LPA, I use multilevel models using the *mi estimate xtmixed* command in Stata to investigate the relationship between neighborhood types and three family formation transitions. Because of a high level of missingness on timing of these family transitions (i.e., date and year of the event), I use a multilevel approach rather than an event history approach. Without a high level of right-censoring, the results from a multilevel approach using duration as outcomes should be largely consistent with the results from event history models. To

establish whether the multilevel approach is a superior to the ordinary least squares (OLS) approach, I test the null models without any explanatory variables. After confirming that the null models have statistically significant variances of intercept, I model family formation transition as follows:

$$\eta_{ij} = \log(\phi_{ij}/1 - \phi_{ij}) = \gamma_{00} + u_{0j} + \sum \gamma_{0l} W_{lj} + \sum \beta_{kj} Z_{ijk},$$

where η_{ij} is the log odds of making the specific family formation transition (i.e., transition to marriage, transition to cohabitation, and transition to singlehood) for the i th individual living in the j th neighborhood (i.e., tract), ϕ_{ij} refers to the odds of the specific family formation transition outcome, γ_{00} indicates the intercept, u_{0j} represents the random effect specific to each neighborhood, γ_{0l} estimates the association of neighborhood level factor W_{lj} (covariate l in the j th neighborhood) with the specific family formation transition outcome, and β_{kj} captures the individual-level effect of Z_{ijk} (feature k or the i th respondent in the j th neighborhood) on making the specific family formation transition. I also test for cross-level interactions to investigate whether the influence of neighborhood contexts varies by nativity and legal status of Mexican-origin adults. All analyses account for a complex survey design (i.e., stratification and clustering) to adjust standard errors and are weighted using the adult sample weight at the individual level. Contextual-level weights are created and rescaled to account for the unequal probabilities of selection for the neighborhoods (West, Welch and Galecki 2014).

Activity Spaces

To test whether and how the effects of neighborhoods on the specific family formation transition outcome would change depending on how neighborhoods are conceptualized, I conceptualize neighborhoods in two ways: administratively defined unit (i.e., census tract of residence) and activity spaces. *Activity spaces* are a person-centered measure of neighborhoods that comprises all locations an individual visits during his or her daily activities (Golledge and Stimson 1997). Of several methods of measuring activity spaces, I use the weighted average tract method over the conventional approach of measuring activity spaces by creating the minimum convex hull or polygon. I do so for two reasons. First, constructing the minimum convex hull or polygon requires that individuals have at least three locations. However, many individuals report fewer than three locations in their daily activities (Jones and Pebley 2014). Eliminating these individuals may introduce potential bias into the comparison if their activities are limited by individual characteristics; for example, depressed individuals may limit their daily activities beyond their immediate neighborhoods. Using the minimum convex hull or polygon to measure activity spaces would eliminate nearly 36.9% of my sample (N = 335). Second, the minimum convex hull or polygon may contain large areas to which individuals are not actually exposed, especially if individuals have large activity spaces. For example, in the L.A.FANS, a nontrivial proportion of individuals have very large activity spaces, with activities spread across five counties (i.e., Los Angeles, Ventura, Kern, San Bernardino, and Orange Counties). In addition, because individuals are likely to use transportation between locations, whether individuals are exposed to “in-between”

neighborhoods is unclear. Third, the typical minimum convex hull or polygon does not incorporate the actual time spent in each location. Although weighting individuals' time spent in each location is theoretically possible for the minimum convex hull or polygon, it can lead to serious estimation error because of the aforementioned problem of producing large areas to which individuals are not actually exposed.

The weighted average tract method involves geocoding all locations individuals have visited during the week (e.g., places of residence, work, shop, worship and healthcare), and then averaging the characteristics of all tracts by time spent in each location. Consistent with Sharp and colleagues (2015), I use the following formula to derive the time-weighted contextual measures:

$$\text{Weighted average tract } D_{ji} = \sum_{j=1}^N (D_j * W_j),$$

where D_{ji} is the weighted average value from J tracts individual i has visited during the week, and W_j is the time weight (hours in location j / 24*7 hours). All neighborhood characteristics for activity spaces measures are created using the weighted average tract method.

Results

Descriptive Results

Table 4.2.a reports descriptive statistics for all individual-level variables included in the models by nativity/legal status. There were significant differences for all three family formation transitions. Documented Mexican immigrants had the highest level of transition to marriage (10.3%, compared with 7.5% for U.S.-born Mexicans and 6.4% for

undocumented Mexican immigrants), whereas undocumented Mexican immigrants had the highest level of transition to cohabitation (11.1%, compared with 7.2% for U.S.-born Mexicans and 6.6% for documented Mexican immigrants). In contrast, U.S.-born Mexican immigrants were significantly more likely to transition to singlehood (e.g., to divorce between waves) than were Mexican immigrants (10.3%, compared to 5.0% for documented Mexican immigrants and 6.4% for undocumented Mexican immigrants). These nativity/legal status differences for the three transitions are all statistically significant.

Key immigrant characteristics and sociodemographic characteristics vary substantially by nativity/legal status. Undocumented Mexican immigrants are mostly recent immigrants: Nearly 18.1% had been in the United States for fewer than five years. In contrast, nearly 79.5% of documented Mexican immigrants had been in the United States for more than 15 years. Similarly, 76.3% of documented Mexican immigrants but only 7.5% of undocumented Mexican immigrants answered the survey questions in English. Compared with both U.S.-born Mexican Americans and undocumented Mexican immigrants, documented Mexican immigrants are also significantly older (44.9 years, compared with 30.0 and 36.7 years, respectively). Undocumented Mexican immigrants have disadvantageous socioeconomic profiles: 78.2% had less than a high school education, 33.7% were living below the federal poverty level in 2001, and only 62.2% were employed at the time of the survey.

Table 4.2.a. Descriptive Statistics of All Individual Variables in the Model

Variable	U.S.-born Mexican	Documented	Undocumented
	Mean / %	Mean / %	Mean / %
Family formation / transition			
No transition	72.0%	69.8%	71.9%
Transition to marriage	7.5%	10.3%	6.3%
Transition to cohabitation	7.2%	6.6%	11.1%
Transition to single	47.2%	13.1%	15.9%
Key immigrant characteristics			
Length in the United States			
0 to 5 years	0%	2.3%	18.1%
6 to 15 years	0%	18.3%	66.2%
16 years and longer	100%	79.5%	15.7%
No English language use	8.4%	76.3%	92.5%
Socio-demographic characteristics			
Female (gender)	61.2%	66.6%	73.4%
Age	30.0	44.9	36.7
Poor	14.3%	19.1%	33.7%
Less than high school	20.7%	67.5%	78.2%
Employed	74.9%	75.9%	62.2%
Unweighted N	335	320	252

Source: Los Angeles Family and Neighborhood Survey, Wave 1 (2000-2002)

Table 4.2.b reports the descriptive statistics for all neighborhood-level variables included in the LPA models by nativity/legal status for two operationalizations of neighborhood: census tract and activity spaces (i.e., time-weighted average measure). When neighborhood is operationalized as census tract, individuals' neighborhood characteristics—similar to individual characteristics—vary substantially by nativity/legal status. Undocumented Mexican immigrants are more likely to reside in immigrant neighborhoods with the highest percentages of foreign-born (33.2%), Mexican (44.4%) and recent immigrants (18.4%). All Mexican Americans reside in neighborhoods characterized by a high percentage of Mexicans, but foreign-born Mexican immigrants

are more likely to reside in coethnic neighborhoods (44.0%) than are U.S.-born Mexican Americans (37.8%). Although the difference is not statistically significant, documented Mexican immigrants are slightly more likely than undocumented Mexican immigrants to reside in neighborhoods with a high percentage of recent immigrants (53.2% and 51.5%, respectively). Similar to individual-level socioeconomic profiles, undocumented Mexican immigrants have the most disadvantageous neighborhood socioeconomic profiles; undocumented Mexican immigrants live in neighborhoods with high levels of concentrated disadvantage and low levels of residential stability. In terms of neighborhood characteristics that are presumed to be important for marriage markets, there were no differences in Hispanic sex ratios of neighborhoods by nativity/legal status. The Hispanic sex ratio is about 1.04 (e.g., 104 males for 100 females) for each group. U.S.-born Mexicans reside in neighborhoods in which a high percentage of Hispanic females had attained at least a high school education (47.0%, compared with 34.6% for documented Mexican immigrants and 30.9% for undocumented Mexican immigrants). Furthermore, undocumented Mexican immigrants reside in neighborhoods with the highest level of Hispanic male unemployment.

Table 4.2.b. Descriptive Statistics of All Neighborhood Variables in the Model

Variable	U.S.-born		
	Mexican	Documented	Undocumented
	Mean	Mean	Mean
* Neighborhood operationalized as "tract"			
Percent of Hispanic female with high school and beyond	47.0%	34.6%	30.9%
Percent of Hispanic male unemployed	9.0%	9.5%	10.3%
Hispanic sex ratio (male / female)	1.04	1.03	1.04
Percent of foreign born	24.9%	31.3%	33.2%
Percent of non-citizen	46.9%	53.2%	51.5%
Percent of Mexican	37.8%	43.7%	44.4%
Percent of recent immigrants	14.7%	16.3%	18.4%
Concentrated disadvantage	0.53	1.05	1.27
Residential stability	0.02	-0.26	-0.41
* Neighborhood operationalized as "activity spaces"			
Percent of Hispanic female with high school and beyond	15.5%	13.4%	13.5%
Percent of Hispanic male unemployed	3.2%	3.8%	4.6%
Hispanic sex ratio (male / female)	0.34	0.40	0.51
Percent of foreign born	8.7%	12.0%	15.0%
Percent of non-citizen	16.2%	20.0%	22.9%
Percent of Mexican	13.2%	16.8%	19.9%
Percent of recent immigrants	5.2%	6.7%	8.3%
Concentrated disadvantage	0.17	0.35	0.52
Residential stability	-0.07	-0.14	-0.29
Unweighted N	335	320	252

Source: Los Angeles Family and Neighborhood Survey, Wave 1 (2000-2002); 2000 U.S. decennial census

These descriptive patterns differ somewhat when neighborhood is operationalized as activity spaces. Although undocumented Mexican immigrants still reside in neighborhoods with the highest percentage of foreign-born (15.0%), noncitizens (22.9%), Mexicans (19.9%), and recent immigrants (8.3%), these percentages are substantially lower than when census tracts are used. Furthermore, Mexican immigrants' neighborhoods are substantially less disadvantaged and more stable as well. Similar to

the census tract results, U.S.-born Mexicans reside in neighborhoods with a high percentage of Hispanic females whose educational attainment is high school and beyond (15.5%, compared with 13.4% for documented Mexican immigrants and 13.5% for undocumented Mexican immigrants); undocumented Mexican immigrants reside in neighborhoods with the highest level of Hispanic male unemployment.

Understanding Neighborhood Marriage Markets

Table 4.3. summarizes various model fit statistics for deciding on the ideal numbers of qualitatively distinct neighborhood marriage market profiles. Surprisingly, regardless of how neighborhoods are operationalized, three profiles emerge; some neighborhood types are consistent, whereas some neighborhood types are dissimilar depending on neighborhood operationalization. Standardized estimated means resulting from the LPA are summarized in Table 4.4. First, when neighborhood is operationalized using census tracts, three types of neighborhood marriage markets emerge: (1) non-Mexican, gender-neutral marriage markets, (2) non-Mexican, male-dominant marriage markets, and (3) Mexican immigrant, male-dominant marriage markets (see Figure 4.1. and Table 4.4.). First, the *non-Mexican, gender-neutral marriage market* is characterized by low values on the variables indicating ethnicity and immigration status (i.e., percentages of Mexican, foreign-born, noncitizen, recent immigrants) and a balanced Hispanic sex ratio. One notable characteristic of this marriage market is its high percentage of well-educated Hispanic females. Second, the *non-Mexican, male-dominant marriage market* is similar to the first type of neighborhood marriage market in terms of

Table 4.3. Model Fit Statistics of the Latent Profile Models

*** Neighborhood operationalized as "tract"**

No. of profiles	No. of free parameters	AIC	BIC	A-BIC	VLMR p-value	Entropy
1	18	125327	125428	125371		
2	28	115217	115375	115286	0.577	1.000
3	38	83967	84479	84200	0.003	0.951
4	48	106502	106772	106619	0.352	0.960
5	58	105109	105436	105251	0.081	0.920
6	68	104064	104447	104231	0.493	0.928
7	78	103191	103630	103382	0.209	0.915
8	88	102425	102920	102641	0.663	0.915

Note: Fit statistics for the best fitting model are in bold.

*** Neighborhood operationalized as "activity spaces"**

No. of profiles	No. of free parameters	AIC	BIC	A-BIC	VLMR p-value	Entropy
1	18	107059	107164	107107		
2	28	98323	98486	98397	0.599	0.970
3	38	92502	92724	92603	0.000	0.921
4	48	90416	90695	90543	0.493	0.912
5	58	88713	89051	88867	0.816	0.949
6	68	86932	87328	87112	0.354	0.939
7	78	85153	85607	85359	0.309	0.944
8	88	83967	84479	84200	0.784	0.951

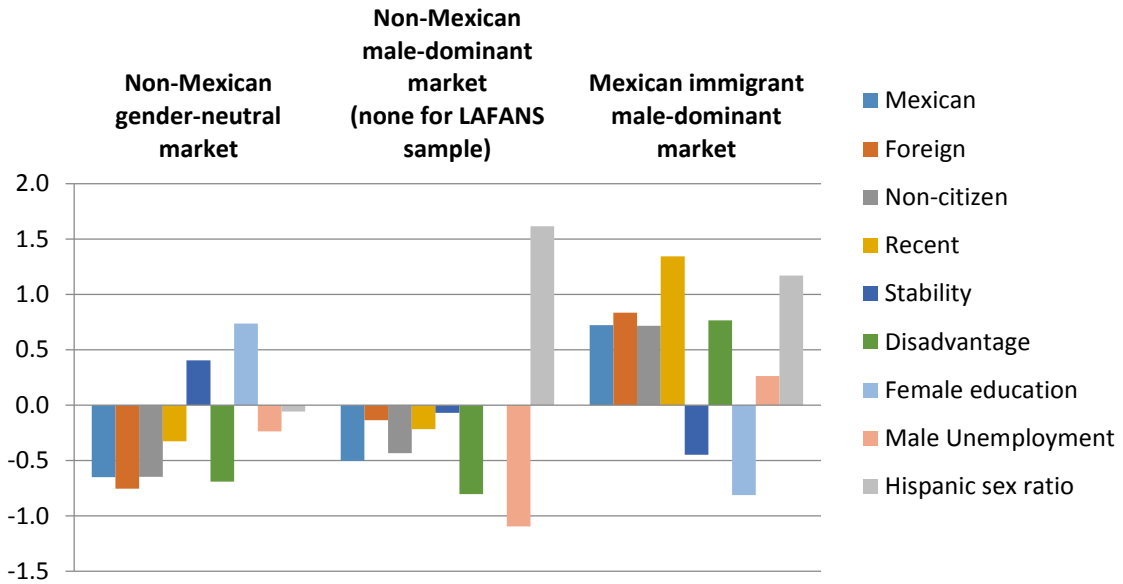
Note: Fit statistics for the best fitting model are in bold.

Table 4.4. Descriptive Statistics of Different Marriage Markets in Los Angeles County

Variable	Non-Mexican gender-neutral market	Non-Mexican male-dominant market	Mexican immigrant male-dominant market	Mexican immigrant gender- neutral market
Standardized estimated means				
* Neighborhood operationalized as "tract"				
Percent of Hispanic female with high school and beyond	0.74	0.00	-0.81	.
Percent of Hispanic male unemployed	-0.24	-1.09	0.26	.
Hispanic sex ratio	-0.06	1.61	1.17	.
Percent of foreign born	-0.65	-0.50	0.72	.
Percent of non-citizen	-0.76	-0.14	0.84	.
Percent of Mexican	-0.65	-0.43	0.72	.
Percent of recent immigrants	-0.33	-0.22	1.34	.
Concentrated disadvantage	0.40	-0.07	-0.45	.
Residential stability	-0.69	-0.80	0.76	.
* Neighborhood operationalized as "activity spaces"				
Percent of Hispanic female with high school and beyond	-1.53	-0.11	.	-0.89
Percent of Hispanic male unemployed	-0.56	-0.67	.	0.54
Hispanic sex ratio	-0.11	1.02	.	-0.01
Percent of foreign born	-1.19	-1.12	.	0.71
Percent of non-citizen	-0.76	-0.71	.	0.97
Percent of Mexican	-0.56	-0.97	.	1.19
Percent of recent immigrants	-1.08	-1.38	.	0.44
Concentrated disadvantage	-0.10	1.42	.	-0.51
Residential stability	0.13	-1.26	.	1.06

Source: 2000 U.S. decennial census

Figure 4.1. Standardized Means of Latent Neighborhood Profile Indicators



ethnic and immigrant indicators, except that it has high Hispanic sex ratios, with more males than females. Third, the *Mexican immigrant, male-dominant marriage market* is the only marriage market that is characterized as ethnicity-specific. It has high levels of ethnic and immigrant indicators, as well as high levels of socioeconomic disadvantages measured by high concentrated disadvantage and low residential stability. This type of marriage market is also characterized by lower percentages of well-educated Hispanic females and by high Hispanic sex ratios, with more males than females.

As mentioned earlier, three types of neighborhood marriage markets also emerge when neighborhoods are operationalized using activity spaces (Figure 4.2.).

Operationalizing neighborhoods as activity spaces yields the following three types of neighborhood marriage markets: (1) non-Mexican, gender-neutral marriage markets, (2) non-Mexican, female-dominant marriage markets, and (3) Mexican immigrant, gender-

neutral marriage markets. Two of these marriage markets are consistent with those obtained using a census tract definition: (1) non-Mexican, gender-neutral marriage markets, (2) non-Mexican, male-dominant marriage markets. First, *non-Mexican, gender-neutral marriage markets* are similar to the census tract results in terms of being characterized by low levels on ethnic and immigrant indicators, but one key distinction is that the percentage of Hispanic females with a high level of education is low in this model. Second, the *non-Mexican female-dominant marriage market* is characterized by low levels of ethnic and immigrant indicators and by a high Hispanic sex ratio, with more males than females. Finally, the *Mexican immigrant, gender-neutral marriage market* is characterized by high levels of ethnic and immigrant indicators and a balanced Hispanic sex ratio. In short, when neighborhoods are operationalized using census tract and activity spaces, both approaches yielded one ethnicity-specific neighborhood marriage market. However, the main difference is that while Mexican immigrant marriage markets have high Hispanic sex ratios when census tracts are used, Mexican immigrant marriage markets have a balanced Hispanic sex ratio when activity spaces are used. The simplified summary of these distinctions is reported in Table 4.5. Because there are no Mexican-origin adults residing in a non-Mexican male-dominant marriage market in my analytic sample (see Figure 4.1 and Figure 4.2), I shift to a dichotomous neighborhood classification where Mexican immigrant marriage market is coded as 1.

Table 4.6 shows descriptive statistics for individual characteristics by neighborhood marriage market profiles. The first two columns show the descriptive statistics when neighborhood is operationalized using census tracts, and the last two

columns show the descriptive statistics when neighborhood is operationalized using activity spaces. The results show that individuals who reside in a Mexican immigrant, male-dominant marriage market are more likely to be undocumented and recent immigrants than are individuals who reside in other neighborhoods. Similarly, compared with individuals residing in other neighborhoods, those who reside in a Mexican immigrant, male-dominant marriage market are more likely to be poor and to have less than a high school education, but they are slightly less likely to be employed (70.2%). These patterns are somewhat similar for the results using activity spaces: more undocumented and more recent Mexican immigrants reside in Mexican immigrant, gender-neutral marriage markets.

Figure 4.2. Standardized Means of Latent Neighborhood Profile Indicators

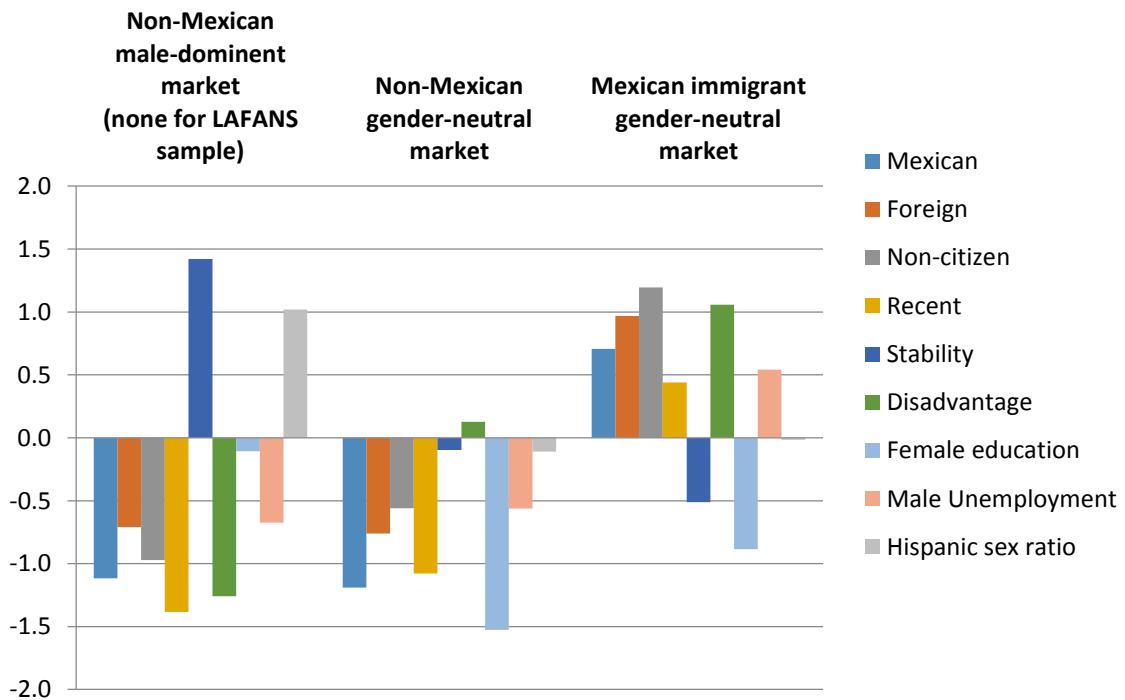


Table 4.5. Summary of Key Characteristics of Different Marriage Markets

Variable	Non-Mexican gender-neutral market	Non-Mexican male-dominant market	Mexican immigrant male-dominant market	Mexican immigrant gender-neutral market
Standardized estimated means				
* Neighborhood operationalized as "tract"				
Ethnic and immigrant indicators	-	-	+	.
Hispanic sex ratio (male / female)	neutral	+	+	.
"Marriagable female" (% of Hispanic females with high education)	+	neutral	-	.
"Less marriagable male" (% of Hispanic males unemployed)	-	-	+	.
* Neighborhood operationalized as "activity spaces"				
Ethnic and immigrant indicators	-	-	.	+
Hispanic sex ratio (male / female)	neutral	+	.	neutral
"Marriagable female" (% of Hispanic females with high education)	-	-	.	-
"Less marriagable male" (% of Hispanic males unemployed)	-	-	.	+

Source: 2000 U.S. decennial census

Table 4.6. Descriptive Statistics for Individual Variables by Immigrant Neighborhood Marriage Market Profiles

Variable	Using Tract		Using Activity Spaces	
	Mexican immigrant male-dominant market	Other	Mexican immigrant gender-neutral market	Other
Key immigrant characteristics				
Nativity/ Legal status				
U.S. born citizen (ref)	28.9%	62.8%	12.5%	25.6%
Documented	38.9%	23.7%	31.3%	42.9%
Undocumented	32.2%	13.5%	56.3%	31.4%
Length in the United States				
0 to 5 years	8.2%	2.8%	12.5%	6.0%
6 to 15 years	23.1%	14.4%	37.5%	28.8%
16 years and longer (ref)	59.8%	75.5%	50.0%	64.4%
English language use	64.9%	26.0%	84.4%	70.7%
Socio-demographic characteristics				
Female (gender)	67.9%	61.9%	65.6%	71.8%
Age	37.7	35.2	44.4	42.2
Poor	24.4%	11.6%	25.0%	20.4%
Less than high school	60.5%	29.8%	65.6%	62.9%
Employed	70.2%	76.6%	71.9%	74.9%

Source: Los Angeles Family and Neighborhood Survey, Wave 1 (2000-2002); 2000 U.S. decennial census

Neighborhood Types and Family Formation Transitions

Tables 4.7.a and 4.7.b report the multilevel model results investigating the relationship between neighborhood types and the specific family transitions, by two methods of neighborhood conceptualization. The first model of each kind of family transition includes only Mexican marriage market, and the second model of each family transition includes key immigrant characteristics. The third model of each family

Table 4.7.a. Multilevel Models of Neighborhood Marriage Market Influences on Family Transitions (Census Tract)

*** Neighborhood operationalized as "tract"**

Variable	Transition to marriage			Transition to cohabitation			Transition to single									
	1	2	3	1	2	3	1	2	3							
Neighborhood profiles																
Mexican immigrant marriage market	1.15	**		1.11	**		1.59	**		1.33	*	4.38	**		5.92	**
Key immigrant characteristics																
Nativity/ Legal status																
U.S. born citizen (ref)																
Documented		2.00	*	2.06	+		1.33		1.48			0.51	*	0.32	+	
Undocumented		0.73		0.79			2.59	*	2.09	*		0.44	*	0.22	+	
Length in the United States																
0 to 5 years																
		0.78		0.90			1.50		1.02			2.59		3.71	+	
6 to 15 years																
		1.49		1.62			1.09		0.99			1.62		2.47		
16 years and longer (ref)																
No English language use		1.81	+	1.80			0.58		0.61			1.22		0.75	**	
Socio-demographic characteristics																
Female (gender)				1.06					1.32					1.96	*	
Age				1.00					0.96	**				1.03	+	
Poor				0.94	*				2.21	*				0.91	***	
Less than high school				0.51					1.43					4.63		
Employed				1.07					1.3					2.12	+	
Unweighted N		503				823				488						

Source: Los Angeles Family and Neighborhood Survey, Wave 1 (2000-2002) and Wave 2 (2006-2008); 2000 U.S. decennial census

Table 4.7.b. Multilevel Models of Neighborhood Marriage Market Influences on Family Transitions (Activity Spaces)

*** Neighborhood operationalized as "activity spaces"**

Variable	Transition to marriage			Transition to cohabitation			Transition to single		
	1	2	3	1	2	3	1	2	3
Neighborhood profiles									
Mexican immigrant marriage market	0.63		0.50	0.27		0.30	1.54		1.43
Key immigrant characteristics									
Nativity/ Legal status									
U.S. born citizen (ref)									
Documented		2.00 *	2.07 +		1.33	1.54		0.51 *	0.42 +
Undocumented		0.73	0.82		2.59 *	2.34 *		0.44 *	0.27 +
Length in the United States									
0 to 5 years									
		0.78	0.90		1.50	1.03		2.59	3.32 +
6 to 15 years									
		1.49	1.61		1.09	0.95		1.62	2.13
16 years and longer (ref)									
No English language use		1.81 +	1.75		0.58	0.65		1.22	1.20
Socio-demographic characteristics									
Female (gender)			1.06			1.31			1.15 +
Age			1.01			0.96 *			1.03
Poor			0.92			2.15 *			0.99 ***
Less than high school			0.50			1.44			4.49
Employed			1.10			1.30			2.15 +
Unweighted N		503			823			488	

Source: Los Angeles Family and Neighborhood Survey, Wave 1 (2000-2002) and Wave 2 (2006-2008); 2000 U.S. decennial census

transition is a saturated model including Mexican immigrant marriage market, key immigrant characteristics and sociodemographic characteristics.

There are several key findings. First, the results in the first model of each family transition show that residing in a Mexican immigrant marriage market is significantly associated with all family transitions (to marriage, cohabitation, and singlehood) when neighborhoods are operationalized as census tracts. Specifically, residing in a Mexican immigrant marriage market is associated with higher odds of transitioning to marriage (15% higher odds), transitioning to cohabitation (59% higher odds), and transitioning to singlehood (338% higher odds) compared with not residing in a Mexican immigrant marriage market (see Table 4.7.a). Mexican immigrant marriage markets remain significantly associated with family transitions in saturated models after controlling for various individual characteristics. Intriguingly, Mexican immigrant marriage markets are no longer significantly associated with family transitions when neighborhoods are operationalized as activity spaces. In addition, the associations between residing in a Mexican immigrant marriage market and transitions to marriage and cohabitation are in opposite directions when activity space measures are used: individuals who reside in a Mexican immigrant marriage market have lower odds of transitioning to marriage and cohabitation (see Table 4.7.b).

Second, the results in the second model for each family transition show that legal status is an important factor for understanding Mexican immigrants' family transitions. Specifically, documented Mexican immigrants are significantly more likely to transition to marriage compared to U.S.-born Mexicans and undocumented Mexican immigrants;

undocumented Mexican immigrants are significantly more likely to transition to cohabitation compared to U.S.-born Mexicans and documented Mexican immigrants. On the other hand, both documented and undocumented Mexican immigrants are significantly less likely to transition to singlehood compared to U.S.-born Mexican adults. These patterns are also consistent when neighborhood is operationalized as activity spaces.

Lastly, the results for the transition to singlehood in Table 4.7a show that gender is significantly associated with making the transition to single where women are almost twice more likely to transition to singlehood compared to men. The statistically-significant cross-level interaction between Mexican immigrant marriage markets and gender (not shown in the table) also indicates that women who reside in Mexican immigrant marriage markets are significantly more likely to transition to singlehood compared to their male counterparts. In addition, the results show that being poor is significantly associated with higher odds of transitioning to marriage and singlehood while it is associated with lower odds of transitioning to singlehood. I tested for all possible cross-level interactions to investigate whether the Mexican immigrant marriage market influences individuals differently by their legal status, but no interactions were significant.

Discussion and Conclusion

Family formation transitions have important implications for both individuals and society. Family formation transitions are key life events that can influence other

dimensions of individuals' lives, such as educational attainment and employment circumstances. For immigrants, they can also influence assimilation processes (Alba and Nee 2003; Parrado and Morgan 2008). In addition, family formation processes can be important mechanisms for maintaining inequality between groups at the societal level (Landale and Forste 1991). More importantly, understanding the factors influencing family formation transitions has important implications for designing public policy to increase the life chances of Mexican immigrants and their children. This chapter extended the traditional individual-centered approach that predominantly focuses on non-Hispanic whites and non-Hispanic blacks by investigating the roles of legal status and post-migration neighborhood contexts in family formation transitions among Mexican-origin adults. To explore more fully whether and how residential contexts influence Mexican-origin adults' family formation transitions using an integrative model (Glick 2010) and two conceptualizations of neighborhood, this chapter investigated two main research questions. First, what types of marriage markets are Mexican-origin adults exposed to? Second, how do different types of marriage markets influence Mexican-origin adults' transitions to family formation?

First, using latent profile analysis, I investigated the types of neighborhood marriage markets Mexican-origin adults are exposed to. Analyses of neighborhood marriage markets using all neighborhoods in Los Angeles County revealed three qualitatively distinct types of neighborhood marriage markets, although the characteristics of these marriage markets varied based on how neighborhoods were operationalized. When neighborhoods were operationalized as census tracts, the

following three types of marriage markets emerged: (1) non-Mexican, gender-neutral marriage markets, (2) non-Mexican, male-dominant marriage markets, and (3) Mexican immigrant, male-dominant marriage markets. When neighborhoods were operationalized using activity space measures, the first two types of marriage markets also emerged. However, instead of a Mexican immigrant, male-dominant marriage market, activity space measures yielded a Mexican immigrant, gender-neutral marriage market. The key difference between these two types of neighborhood marriage markets is the Hispanic sex ratio. When I conceptualized neighborhoods in terms of the census tract of residence, Mexican-origin adults reside in neighborhoods where males outnumber females. On the other hand, when I conceptualized neighborhoods as activity spaces, the results show that Mexican-origin adults engage in daily activities in neighborhoods with a more balanced Hispanic sex ratio. Consistent with imbalanced sex ratios theory (Guttentag and Secord 1983), marital search behavior theory (Becker 1991; Oppenheimer 1988), and previous studies on Latinos (Lloyd 2000; 2006), the results from the latent profile models show that the most salient characteristic that determines the types of neighborhood marriage markets is the Hispanic sex ratio.

When Mexican-origin adults' neighborhood contexts were examined using activity space measures, their neighborhood characteristics were quite dissimilar to when census tracts were used. Specifically, when activity space measures were used, the results show that Mexican-origin adults engage in daily activities in more socioeconomically affluent and less coethnic neighborhoods. These two key findings together suggest that Mexican-origin adults' residential neighborhoods as measured by census tract of home

residence may be qualitatively different from the spatial exposure Mexican-origin adults experience through their daily activities. Although it is not possible to further investigate possible factors influencing the characteristics of Mexican-origin adults' activity spaces, future research should investigate what factors shape individuals' activity space characteristics (e.g., gender, position within life course, mobility resources) and the specific mechanisms through which individual-level characteristics influence their activity space patterns (e.g., work characteristics). Furthermore, these two findings strongly suggest that it is important to critically examine the underlying assumptions about how we operationalize individuals' neighborhoods, given that the use of different definitions of neighborhood can yield substantially different neighborhood characteristics for Mexican-origin adults than for non-Hispanic whites and non-Hispanic blacks (Krivo et al. 2013).

After investigating the types of neighborhood marriage markets where Mexican-origin adults reside, I turned to the question of how these types of neighborhood marriage markets are associated with the three family formation transitions: transitions to marriage, cohabitation, and singlehood. Residing in a Mexican immigrant marriage market was associated with higher odds of making all three types of family transitions. Such findings illustrates that it is indeed important to move above and beyond individual characteristics to consider the influence of neighborhood context to understand Mexican-origin adults' family formation transitions. It is plausible that residing in Mexican immigrant marriage markets is associated with higher odds of transitioning to marriage and cohabitation for Mexican-origin adults because of greater co-ethnic mate availability compared to other

neighborhoods. Similarly, the association between residing in Mexican immigrant marriage markets and higher odds of transitioning to singlehood may be attributable to a larger pool of alternative partners. To better understand the influence of neighborhood marriage markets on Mexican-origin adults' family formation transitions, future studies should investigate the specific mechanisms in which Mexican immigrant marriage markets affect Mexican-origin adults' family formation transitions.

When individuals' neighborhood marriage markets were measured using activity spaces, neighborhood marriage market characteristics were not as important as when measured using census tracts. That is, residing in a Mexican immigrant marriage market was not associated with any of the family transitions when activity space measures were used (see Table 7b). Furthermore, results based on the activity space measures indicate that the direction and magnitude of associations between neighborhood marriage market and family transitions change depending on how neighborhoods are operationalized. For example, the associations between Mexican immigrant marriage markets and transitions to marriage and cohabitation were in opposite directions when activity spaces measures as opposed to census tract measures were used: individuals residing in a Mexican immigrant marriage market had lower odds of transitioning to marriage and cohabitation (see Table 7b). Such varying results illustrate that the conceptualization of Mexican-origin adults' neighborhoods has critical implications for study results. Thus, future studies investigating the neighborhood effects on Mexican-origin adults' outcomes should carefully consider how to conceptualize neighborhoods.

The results from multilevel models also show that legal status is a critical factor in understanding family formation transitions among Mexican-origin adults. Specifically, documented Mexican immigrants were significantly more likely to transition to marriage while undocumented Mexican immigrants were significantly more likely to transition to cohabitation. It is plausible that Mexican immigrants' documented legal status translates to relatively advantageous positioning within the marriage market based on economic independence and employment, which in turn facilitates the transition to marriage. On the other hand, undocumented legal status may hinder legal family formation (i.e., marriage) among undocumented Mexican immigrants, thereby increasing their odds of transitioning to cohabitation as an alternative option to marriage. Overall, such findings provide empirical support for the importance of incorporating legal status to understand immigrant outcomes, as legal status is a critical aspect of stratification that can influence social, economic, and political opportunities in the United States (Glick 2010; Massey and Bartley 2005).

In addition to the results demonstrating the importance of post-migration neighborhood contexts and legal status for understanding Mexican-origin adults' family formation transitions, I find that gender and poverty status also plays critical roles. In particular, women were significantly more likely to transition to singlehood compared to men when residing in a Mexican immigrant *male-dominant* marriage market where the number of men surpassed the number of females (census tract). The gender pattern in the transition to singlehood is consistent with the *macrostructural-opportunity theory of marital dissolution* (South and Lloyd 1995; South et al. 2001) which posits that

availability of spousal alternatives – measured by sex ratio of the local marriage market – increases the risk of divorce.

There are several limitations in the results detailed in this chapter. First, I cannot establish a causal relationship between neighborhood marriage market types and the specific family formation transitions. In other words, Mexican immigrants in certain types of families may choose to reside in specific neighborhoods as the result of their earlier family formation transitions. However, neighborhood choices and preferences are heavily motivated by economic opportunities (e.g., better accessibility to jobs, more job opportunities, higher pay), and it is less likely that Mexican-origin adults make neighborhood choices based on their union status. Second, the chapter investigates how different neighborhoods are associated with the *types* of family formation transitions because of the use of multilevel logistic models. Future research should utilize multilevel event history models to investigate how neighborhoods are associated with both the *types* and the *timing* of family formation transitions. Third, because of the use of cross-sectional data for the neighborhood measures, I could not capture how Mexican-origin adults' neighborhoods and spatial exposure change over time. Future research should utilize a longitudinal design and methods to investigate whether and how individual-level assimilation (measured by length of stay in the United States) influences changes in neighborhood exposure, as well as how neighborhood contexts may influence individual-level assimilation. Lastly, it remains unclear whether these findings are generalizable to other areas in the United States, especially in new immigrant destination areas and non-majority-minority areas.

Despite these limitations, this research offers several contributions and suggestions for future research. The findings illustrate the importance of considering the roles of legal status and post-migration neighborhood contexts for understanding family formation transitions among Mexican-origin adults. They also show that estimating influences of neighborhood on the specific family formation transitions heavily depends on how neighborhoods are conceptualized. In light of the meaningfully different neighborhood contexts to which Mexican-origin adults are exposed depending on different neighborhood conceptualizations, future studies will require careful consideration of how individuals' neighborhood should be conceptualized for Mexican-origin adults. The specific research question will dictate whether neighborhoods are appropriately defined using the census tract of residence or instead using spatial exposures (measured by activity spaces). Furthermore, the results provide strong evidence that legal status is all-encompassing and reaffirm that legal status is a key dimension of stratification for understanding immigrants' post-migration experiences in the United States. Future studies should also consider other aspects of neighborhoods that may be important for Mexican-origin adults' family formation transitions, such as collective efficacy, social cohesion, social support, specific aspects of the physical environment, and other key characteristics such as language isolation and discrimination (Arévalo, Tucker and Falcón 2015; Ostir et al. 2003). For example, one recent study of immigrants in North Carolina has investigated the role of neighborhood-level social cohesion on sexual behaviors, and found that a low level of social cohesion (lack of women) is associated with higher sex worker use and fewer partnerships among Mexican

immigrant men (Parrado and Flippen 2014). This study illustrates that the presence of women is a critical part of the social organization in immigrant neighborhoods and may have larger implications than partner availability. Furthermore, understanding how legal status and post-migration neighborhood contexts influence family formation transitions for Mexican-origin adults in new immigrant destination areas and non-majority-minority areas will enrich our understanding of Mexican-origin adults' family formation transitions.

CHAPTER 5

CONCLUSION

The overarching objective of this dissertation was to advance scholarship on immigrant families by investigating whether and how post-migration residential contexts affect family formation among Mexican immigrants. Drawing from multiple scholarly perspectives—urban sociology and the sociology of immigration—I aimed to incorporate neighborhood effects and the immigrant population in order to enrich the family sociology literature. As discussed at length in the introduction, this extension to include immigrant populations has important implications for understanding both immigrant populations and the total U.S. population because family formation processes and structures among immigrants have significant consequences for the future size and age structure of the population at large (Landale and Oropesa 2007). Furthermore, incorporating immigrant populations can enrich the current literature because immigrant populations have unique characteristics—such as nativity, migration experience, and acculturation—that must be considered when comparing their family formation patterns to those of the U.S.-born population.

Moving beyond the acculturation framework that emphasizes individual-level changes to understand immigrants' experience in the United States, this dissertation incorporated two major axes of stratification with profound implications for Mexican immigrants in a multilevel framework: namely, *legal status* and *post-migration neighborhood contexts* (Glick 2010; Massey and Bartley 2005). Across three studies, I

first examined the theories used in neighborhood effects research and discussed their application to the study of families. Using the Los Angeles Family and Neighborhood Study (L.A.FANS), I then examined the types of neighborhoods in which Mexican-origin adults –both immigrants and natives– reside and how they are associated with neighborhood perceptions and family formation transitions.

The second chapter articulated the importance of incorporating individuals' neighborhood contexts into the study of families, given that neighborhoods are an important context within which individuals and families are embedded. This theoretical chapter reviewed the theories, applications, and limitations of research on neighborhood effects and discussed how researchers can better study families by incorporating a spatial perspective from neighborhood-effects research. I then reviewed an innovative methodology—referred to as *activity spaces*—emerging in neighborhood-effects research, and discussed how this approach can be used to better understand the complexity and heterogeneity of families. I argued that the activity spaces approach—which considers “the subset of all locations within which an individual has direct contact as a result of his or her day-to-day activities” (Golledge and Stimson 1997)—can further our understanding of family processes and family formation behaviors. The activity spaces approach captures exposure, which is the fundamental mechanism of neighborhood-effects research (Browning and Soller 2014), and it reflects the spatial experiences of individuals in their day-to-day lives. This chapter provided both a comprehensive overview of neighborhood-effects theories and a thorough discussion of the importance of incorporating activity spaces to understand post-migration residential

contexts and how they can affect family formation among Mexican immigrants for two subsequent empirical chapters.

Building on the second chapter discussing the importance of incorporating neighborhood contexts for understanding the outcomes of individuals and families, the third chapter explored the characteristics of post-migration neighborhood contexts of Mexican-origin adults and how they are related to their neighborhood perceptions. Despite the large proportion of undocumented immigrants among Mexican immigrants, surprisingly little is known about the post-migration neighborhood contexts to which undocumented Mexican immigrants are exposed. For example, one recent study (Hall and Greenman 2013) found that undocumented Mexican and Central American immigrants have lower subjective assessments of neighborhood quality (i.e., poor neighborhood quality, including lack of services and environmental problems). Yet, little is known about Mexican immigrants' neighborhood perceptions in general. To fill this gap in the research, the second chapter specifically answered three research questions. First, what are the types of neighborhoods in which Mexican-origin adults reside? Second, do neighborhoods vary by Mexican-origin adults' individual characteristics, including legal status? Third, how are different types of Mexican neighborhoods associated with Mexican-origin adults' neighborhood perceptions (e.g., perceived neighborhood danger and collective efficacy)?

Three key findings emerged from the third chapter. First, consistent with previous studies (Alba, Logan and Crowder 1997; Logan, Zhang and Alba 2002), my analysis identified three types of immigrant neighborhoods: immigrant enclaves, ethnic

communities, and minority ghettos. In addition, I identified two additional types of neighborhoods that are often overlooked in the immigrant neighborhood literature: non-Hispanic white neighborhoods and Asian immigrant enclaves. Second, the multivariate results predicting the probabilities of membership in different types of Mexican neighborhoods based on individual characteristics provided empirical support for the spatial assimilation theory (Alba et al. 2010; Crowder, Hall and Tolnay 2011; Iceland 2009). That is, socioeconomic status measures (i.e., education and employment) and acculturation measures (i.e., length of stay in the United States and English language use) are positively associated with the probability of residing in non-Hispanic white neighborhoods but are negatively associated with the probability of residing in Mexican immigrant enclaves. Intriguingly, the results suggest that undocumented Mexican immigrants who have been in the United States for a longer period have higher odds of residing in Asian immigrant enclaves. This finding implies that undocumented legal status may prohibit vertical movement in the socioeconomic hierarchy of neighborhood attainment, as the spatial assimilation theory would predict. Rather, undocumented Mexican immigrants are more likely to move horizontally in the socioeconomic hierarchy of neighborhood attainment because of multiple disadvantages associated with undocumented legal status. Lastly, both individual-level characteristics and neighborhood memberships are important factors in understanding Mexican immigrants' perceived neighborhood danger and collective efficacy. For the individual-level characteristics, undocumented Mexican immigrants and recent Mexican immigrants have a higher level of perceived neighborhood danger and collective efficacy. In addition to being

undocumented or recent immigrants, residing in both Mexican immigrant enclaves and Asian immigrant enclaves is associated with a higher level of perceived neighborhood danger and lower collective efficacy compared with residing in non-Hispanic white neighborhoods.

After understanding the general neighborhood contexts and how Mexican immigrants perceive their neighborhoods, the fourth chapter investigated the relationship between Mexican-origin adults' neighborhood marriage market characteristics and their family formation transitions (i.e., no family transition, transition to marriage, transition to cohabitation, and transition to singlehood). Building on previous work investigating how neighborhood characteristics are associated with family transitions for pan-ethnic Hispanics (Lloyd 2000; 2006), this chapter focused on how this relationship holds for Mexican immigrants with varying legal status. This chapter specifically answered three research questions. First, what types of neighborhood marriage markets are Mexican-origin adults exposed to? Second, how do different types of marriage markets influence Mexican-origin adults' transitions to family formation? Third, how does the relationship between neighborhood marriage market types and family formation differ by neighborhood conceptualization?

The fourth chapter offers three key findings. First, the latent profile models identified only one distinct type of neighborhood marriage market for Mexican immigrants in Los Angeles County: the Mexican immigrant marriage market. The Mexican immigrant marriage market is characterized by high percentages of Mexicans, foreign-born, and recent immigrants, as well as an imbalanced Hispanic sex ratio, with

Mexican immigrant men outnumbering Mexican immigrant women. Second, the Mexican immigrant marriage market is important for understanding Mexican immigrants' family transitions. The significant null multilevel models illustrate that neighborhood characteristics are important for understanding Mexican immigrants' family transitions. Furthermore, the results show that residing in a Mexican immigrant marriage market is associated with higher odds of making a transition to marriage, cohabitation and singlehood. Third, legal status is important for understanding Mexican immigrants' family transitions. Similar to the findings from the third chapter, which demonstrated the importance of undocumented legal status for understanding neighborhood contexts and neighborhood perceptions, the findings in chapter 4 showed that legal status is significantly associated with the reduced odds of making specific family transitions. For example, undocumented Mexican immigrants were significantly more likely to transition to cohabitation compared with both U.S.-born Mexican adults and documented Mexican immigrants.

Findings from this dissertation offer several contributions to previous perspectives on immigrant locational attainment and family formation. The first key contribution is providing empirical evidence for the importance of undocumented legal status for understanding Mexican immigrants' experiences in the United States, measured by both locational attainment and family formation. In the third chapter, the results show that Mexican immigrants' different types of neighborhood contexts depend heavily on their legal status, with undocumented Mexican immigrants most likely to reside in Mexican immigrant enclaves and least likely to reside in non-Hispanic white neighborhoods. This

finding is consistent with previous studies on immigrant locational attainment and spatial assimilation theory (Alba et al. 2010; Crowder, Hall and Tolnay 2011; Iceland 2009). However, the results also show that undocumented Mexican immigrants who have been in the United States longer do not necessarily fit into this spatial assimilation theory because they are more likely to reside in other types of immigrant enclaves: Asian immigrant enclaves. Thus, undocumented legal status may play a role in immigrants' ability to transition out of immigrant enclaves, even with socioeconomic assimilation and acculturation. Similarly, the fourth chapter suggests that undocumented legal status is a key factor in making certain family transitions: undocumented Mexican immigrants are more likely to transition to cohabitation and singlehood.

The second key contribution is providing empirical evidence that neighborhood contexts matter for Mexican immigrants' neighborhood perceptions and family formation, although the role of neighborhood is not as salient as the role of undocumented legal status. The results from the third chapter show that residing in immigrant enclaves is associated with higher odds of reporting perceived neighborhood danger and lower perceived neighborhood collective efficacy. Similarly, the results from the fourth chapter show that residing in a Mexican immigrant marriage market is significantly associated with making certain family transitions, particularly making no family transition and making a transition to singlehood. In both empirical chapters, the neighborhood influence on Mexican immigrants' outcomes was mediated by individual-level characteristics. However, the statistically significant null models indicate that it is important to move beyond the individual-centered approach to consider post-migration

neighborhood contexts for understanding Mexican immigrants' post-migration experiences and outcomes in the United States.

The third key contribution is the systematic comparison of different neighborhood conceptualizations: using administratively defined boundaries (i.e., census tracts) versus using activity space measures. The results demonstrate that post-migration neighborhood contexts vary significantly when different types of neighborhood conceptualizations are used. Mexican immigrants are exposed to less socioeconomically disadvantaged neighborhoods when activity spaces measures are used compared to when census tracts are used. This finding calls for a more nuanced and critical approach to basic assumptions of neighborhood-effects research for Mexican immigrants. Although neighborhood characteristics are similar for non-Hispanic whites and non-Hispanic blacks despite different neighborhood conceptualizations (Krivo et al. 2013), neighborhood characteristics differ significantly for Mexican immigrants depending on which neighborhood conceptualization is used. In other words, for Mexican immigrants, the characteristics of neighborhood may be biased if neighborhoods are measured simply based on census tracts.

Despite these contributions, there are several limitations that are important to mention for future research. First, the use of cross-sectional data in the third chapter and the use of a multilevel modeling approach in the fourth chapter prohibit establishing causal inference. Future studies should utilize both waves of the L.A.FANS and longitudinal methods (e.g., a fixed effects approach) to causally investigate the relationship between Mexican immigrants' characteristics—both individual-level and

contextual-level characteristics—and the outcomes of interests (e.g., neighborhood perception and family formation). Second, because Mexican-origin adults in L.A.FANS were substantially older and because of other sample limitations, it was not possible to investigate the *first* family formation transition. However, first family formation transitions are qualitatively distinct from other family formation transitions, and future studies should utilize alternative data sources to investigate this issue. Lastly, to obtain a more comprehensive understanding of Mexican immigrants' post-migration experiences in the United States, it is important to expand the scope of research to include experiences both before and during migration. In conclusion, this dissertation demonstrates that both the conditions in which Mexican immigrants arrive in the United States (i.e., legal status) and the context of reception in which Mexican immigrants arrive (i.e., neighborhood contexts) are important for understanding their experiences and outcomes in the United States.

REFERENCES

- Aguilera, Michael Bernabé. 2003. "The Impact of the Worker: How Social Capital and Human Capital Influence the Job Tenure of Formerly Undocumented Mexican Immigrants." *Sociological Inquiry* 73(1):52-83.
- Akresh, Ilana Redstone, and Reanne Frank. 2008. "Health Selection Among New Immigrants." *American Journal of Public Health* 98(11):2058-64.
- Alba, Richard D., John R. Logan, and Kyle Crowder. 1997. "White Ethnic Neighborhoods and Assimilation: The Greater New York Region, 1980-1990." *Social Forces* 75(3):883-912.
- Alba, Richard, Nancy Denton, Donald Hernandez, Ilir Disha, Brian McKenzie, and Jeffrey Napierala. 2010. "Nowhere near the same: The neighborhoods of Latino children." Pp. 3-47 in *Growing up Hispanic: Health and development of children of immigrants*, edited by Nancy S. Landale, Susan McHale, and Alan Booth. Washington DC: Urban Institute Press.
- Alba, Richard, Philip Kasinitz, and Mary C. Waters. 2011. "The Kids Are (Mostly) Alright: Second-Generation Assimilation: Comments on Haller, Portes and Lynch." *Social Forces* 89(3):763-73.
- Alba, Richard, and Victor Nee. 2003. *Remaking the American Mainstream*. Cambridge, MA: Harvard University Press.
- Anselin, Luc. 1995. "Local indicators of spatial association—LISA." *Geographical Analysis* 27(2):93-115.
- Arévalo, Sandra P., Katherine L. Tucker, and Luis M. Falcón. 2015. "Beyond Cultural Factors to Understand Immigrant Mental Health: Neighborhood Ethnic Density and the Moderating Role of Pre-Migration and Post-Migration Factors." *Social Science & Medicine* 138(1):91-100.
- Axinn, William G, and Arland Thornton. 1996. "The influence of parents' marital dissolutions on children's attitudes toward family formation." *Demography* 33(1):66-81.
- Axinn, William G, and Scott T Yabiku. 2001. "Social Change, the Social Organization of Families, and Fertility Limitation." *American Journal of Sociology* 106(5):1219-61.

- Bachmeier, James D., Jennifer Van Hook, and Frank D. Bean. 2014. "Can We Measure Immigrants' Legal Status? Lessons from Two U.S. Surveys." *International Migration Review* 48(2):538-66.
- Basta, Luke A., Therese S. Richmond, and Douglas J. Wiebe. 2010. "Neighborhoods, daily activities, and measuring health risks experienced in urban environments." *Social Science & Medicine* 71(11):1943-50.
- Bean, Frank D., and Martha Tienda. 1987. *The Hispanic Population of the United States*. New York, NY: Russell Sage Foundation.
- Becker, Gary S. 1991. *A Treatise on the Family*. Cambridge, MA: Harvard University Press.
- Billy, John O. G., Karin L. Brewster, and William R. Grady. 1994. "Contextual effects on the sexual behavior of adolescent women." *Journal of Marriage and Family* 56(2):387-404.
- Billy, John O. G., and David E. Moore. 1992. "A multilevel analysis of marital and nonmarital fertility in the US." *Social Forces* 70(4):977-1011.
- Blossfeld, Hans-Peter, and Johannes Huinink. 1991. "Human capital investments or norms of role transition? How women's schooling and career affect the process of family formation." *American Journal of Sociology* 97(1):143-68.
- Blume, Libby Balter. 2014. "Making connections: toward a transdisciplinary family science." *Journal of Family Theory & Review* 6(1):1-4.
- Borjas, George Jesus. 1987. "Self-selection and the earnings of immigrants." *The American Economic Review* 77(4):531-53.
- Brewster, Karin L. 1994. "Race Differences in Sexual Activity Among Adolescent Women: The Role of Neighborhood Characteristics." *American Sociological Review* 59(3):408-24.
- Brewster, Karin L., and William R. Grady. 1993. "Social Context and Adolescent Behavior: The Impact of Community on the Transition to Sexual Activity." *Social Forces* 71(3):713-40.
- Bronfenbrenner, Urie. 1977. "Toward an experimental ecology of human development." *American Psychologist* 32(7):513-31.
- . 1979. *The Ecology of Human Development*. Cambridge, MA: Harvard University Press.

- . 1986. "Ecology of the Family as a Context for Human Development: Research Perspectives." *Developmental Psychology* 22(6):723-42.
- Bronfenbrenner, Urie, and Pamela A. Morris. 1998. "The ecology of developmental processes." Pp. 993-1028 in *Handbook of Child Psychology*, edited by William Damon and Richard M. Lerner. Hoboken, NJ: Wiley and Sons.
- Brooks-Gunn, Jeanne, Greg J. Duncan, Pamela Kato Klebanov, and Naomi Sealand. 1993. "Do Neighborhoods Influence Child and Adolescent Development?" *American Journal of Sociology* 99(2):353-95.
- Brown, Susan, Jennifer Van Hook, and Jennifer Glick. 2006. "Generational differences in cohabitation and marriage in the United States." Bowling Green State University: Center for Family Demography Research.
- Browning, Christopher R, and Brian Soller. 2014. "Moving beyond neighborhood: activity spaces and ecological networks as contexts for youth development." *Cityscape* 16(1):165-96.
- Browning, Christopher R., Tama Leventhal, and Jeanne Brooks-Gunn. 2004. "Neighborhood Context and Racial Differences in Early Adolescent Sexual Activity." *Demography* 41(4):697-720.
- Burton, L. M., and R. L. Jarrett. 2000. "In the mix, yet on the margins: The place of families in urban neighborhood and child development research." *Journal of Marriage and Family* 62(4):1114-35.
- Capello, Roberta. 2009. "Spatial spillovers and regional growth: a cognitive approach." *European Planning Studies* 17(5):639-58.
- Cardoso, Jodi Berger, Alan J. Dettlaff, Megan Finno-Velasquez, Jennifer Scott, and Monica Faulkner. 2014. "Nativity and immigration status among Latino families involved in the child welfare system: Characteristics, risk, and maltreatment." *Children and Youth Services Review* 44:189-200.
- Chaix, B., Y. Kestens, K. Bean, C. Leal, N. Karusisi, K. Meghiref, J. Burban, M. Fon Sing, C. Perchoux, F. Thomas, J. Merlo, and B. Pannier. 2012. "Cohort profile: Residential and non-residential environments, individual activity spaces and cardiovascular risk factors and diseases-The RECORD cohort study." *International Journal of Epidemiology* 41(5):1283-92.
- Charles, Camille Zubrinsky. 2003. "The Dynamics of Racial Residential Segregation." *Annual Review of Sociology* 29(1):167-207.

- Chase-Lansdale, P Lindsay, Rachel A Gordon, Jeanne Brooks-Gunn, and Pamela K Klebanov. 1997. "Neighborhood and family influences on the intellectual and behavioral competence of preschool and early school-age children." Pp. 79-118 in *Neighborhood poverty: Context and consequences for children*, edited by Jeanne Brooks-Gunn, Greg J. Duncan, and J. L. Aber. New York: Russell Sage Foundation.
- Chavez, Leo R., F. Allan Hubbell, Shiraz I. Mishra, and R. Burciaga Valdez. 1997. "Undocumented Latina immigrants in Orange County, California: a comparative analysis." *International Migration Review* 31(1):88-107.
- Colabianchi, N., C. J. Coulton, J. D. Hibbert, S. M. McClure, C. E. Ievers-Landis, and E. M. Davis. 2014. "Adolescent self-defined neighborhoods and activity spaces: Spatial overlap and relations to physical activity and obesity." *Health and Place* 27:22-29.
- Coleman, James S. 1990. *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.
- Collins, Linda M., and Stephanie T. Lanza. 2010. *Latent Class and Latent Transition Analysis: with Applications in the Social Behavioral, and Health Sciences*. Hoboken, N.J: Wiley.
- Coontz, Stepanie. 2013. "75th Anniversary Address." in *National Council on Family Relations*.
- Coulton, Claudia, and Molly Irwin. 2009. "Parental and community level correlates of participation in out-of-school activities among children living in low income neighborhoods." *Children and Youth Services Review* 31(3):300-08.
- Coulton, Claudia J., David S. Crampton, Molly Irwin, James C. Spilsbury, and Jill E. Korbin. 2007. "How neighborhoods influence child maltreatment: A review of the literature and alternative pathways." *Child Abuse & Neglect* 31(11):1117-42.
- Cox, Martha J, and Blair Paley. 1997. "Families as systems." *Annual Review of Psychology* 48(1):243-67.
- Cox, Martha J., and Blair Paley. 2003. "Understanding Families as Systems." *Current Directions in Psychological Science* 12(5):193-96.
- Crane, Jonathan. 1991. "The Epidemic Theory of Ghettos and Neighborhood Effects on Dropping Out and Teenage Childbearing." *American Journal of Sociology* 96(5):1226-59.

- Crowder, Kyle, Matthew Hall, and Stewart E Tolnay. 2011. "Neighborhood immigration and native out-migration." *American Sociological Review* 76(1):25-47.
- Crowder, Kyle, and Scott J South. 2008. "Spatial dynamics of white flight: The effects of local and extralocal racial conditions on neighborhood out-migration." *American Sociological Review* 73(5):792-812.
- Cutler, David M., Edward L. Glaeser, and Jacob L. Vigdor. 2008. "When are ghettos bad?: lessons from immigrant segregation in the United States." *Journal of Urban Economics* 63(3):759-74.
- de Castro, Marcia Caldas. 2007. "Spatial demography: An opportunity to improve policy making at diverse decision levels." *Population Research and Policy Review* 26(5-6):477-509.
- Dietz, Robert D. 2002. "The estimation of neighborhood effects in the social sciences: An interdisciplinary approach." *Social Science Research* 31(4):539-75.
- Diez Roux, Ana V. 2001. "Investigating Neighborhood and Area Effects on Health." *American Journal of Public Health* 91(11):1783-89.
- Durkheim, Emile. 1897. *Suicide: A Study in Sociology*. New York, NY: Free Press.
- Ellen, Ingrid Gould, and Margery Austin Turner. 1997. "Does neighborhood matter? Assessing recent evidence." *Housing Policy Debate* 8(4):833-66.
- Ellis, Mark, Richard Wright, and Virginia Parks. 2004. "Work together, live apart? Geographies of racial and ethnic segregation at home and at work." *Annals of the Association of American Geographers* 94(3):620-37.
- Entwisle, Barbara. 2007. "Putting People into Place." *Demography* 44(4):687-703.
- Ethington, Philip J, William H Frey, and Dowell Myers. 2001. "The Racial Resegregation of Los Angeles County, 1940-2000." University of Southern California.
- Fischer, Claude S. 1975. "Toward a subcultural theory of urbanism." *American Journal of Sociology* 80(6):1319-41.
- Fotheringham, A Stewart, Chris Brunsdon, and Martin Charlton. 2000. *Quantitative geography: perspectives on spatial data analysis*: Sage.
- Gans, Herbert J. 1962. *The Urban Villagers*. New York: Free Press.

- Gieryn, Thomas F. 2000. "A space for place in sociology." *Annual Review of Sociology* 26(1):463-96.
- Glick, Jennifer E. 2010. "Connecting complex processes: A decade of research on immigrant families." *Journal of Marriage and Family* 72(3):498-515.
- Golledge, Reginald G., and R. J. Stimson. 1997. *Spatial behavior: a geographic perspective*. New York: Guilford Press.
- Graif, Corina, Andrew S Gladfelter, and Stephen A Matthews. 2014. "Urban poverty and neighborhood effects on crime: incorporating spatial and network perspectives." *Sociology Compass* 8(9):1140-55.
- Greif, Meredith J. 2009. "Neighborhood Attachment in the Multiethnic Metropolis." *City & Community* 8(1):27-45.
- Grieco, Elizabeth M, Edward Trevelyan, Luke Larsen, Yesenia D Acosta, Christine Gambino, Patricia De La Cruz, Tom Gryn, and Nathan Walters. 2012. "The size, place of birth, and geographic distribution of the foreign-born population in the United States: 1960 to 2010." Washington, DC: Census Bureau.
- Guttentag, Marcia, and Paul F. Secord. 1983. *Too Many Women? The Sex Ratio Question*. Beverly Hills, CA: Sage.
- Hagerstrand, Torsten. 1968. *Innovation diffusion as a spatial process*. Chicago: University of Chicago Press.
- Hall, Matthew, and Emily Greenman. 2013. "Housing and neighborhood quality among undocumented Mexican and Central American immigrants." *Social Science Research* 42(6):1712-25.
- Hall, Matthew, and Jonathan Stringfield. 2014. "Undocumented migration and the residential segregation of Mexicans in new destinations." *Social Science Research* 47(1):61-78.
- Hartnett, Caroline Sten, and Emilio A. Parrado. 2012. "Hispanic Familism Reconsidered: Ethnic Differences in the Perceived Value of Children and Fertility Intentions." *Sociological Quarterly* 53(4):636-53.
- Haskett, Mary E., Jason C. Allaire, Shawn Kreig, and Hart Kendrea C. 2008. "Protective and vulnerability factors for physically abused children: Effects of ethnicity and parenting context." *Child Abuse & Neglect* 32(5):567.

- Hawley, Amos H. 1986. *Human ecology: a theoretical essay*. Chicago: University of Chicago Press.
- Hedström, Peter, and Petri Ylikoski. 2010. "Causal Mechanisms in the Social Sciences." *Annual Review of Sociology* 36:49-67.
- Hillier, Bill, and Julienne Hanson. 1984. *The social logic of space*. Cambridge: Cambridge University Press.
- Hipp, John R, and Adam Boessen. 2013. "Egohoods as waves washing across the city: a new measure of "neighborhoods"." *Criminology* 51(2):287-327.
- Hoffman, Saul D, Greg J Duncan, and Ronald Mincy. 1991. "Marriage and welfare use among young women: do labor market welfare and neighborhood factors account for declining rates of marriage among black and white women?". Washington, DC: Annual Meeting of the Population Association of America.
- Hogan, Dennis P., and Nan Marie Astone. 1986. "The Transition to Adulthood." *Annual Review of Sociology* 12(1):109-30.
- Iceland, John. 2009. *Where We Live Now: Immigration and Race in the United States*. Berkeley, CA: University of California Press.
- Jacobs, Jane. 1961. *The death and life of great american cities*. New York: Random House.
- Jasso, Guillermina, Douglas S. Massey, Mark R. Rosenzweig, and James P. Smith. 2004. "Immigrant Health: Selectivity and Acculturation." Pp. 227-66 in *Critical Perspectives on Racial and Ethnic Differences in Health in Late Life*, edited by Norman B. Anderson, Rodolfo A. Bulatao, and Cohen Barney. Washington, DC: National Academics Press.
- Jencks, Christopher, and Susan E Mayer. 1990. "The social consequences of growing up in a poor neighborhood." Pp. 111-86 in *Inner-city Poverty in the United States*, edited by Laurence E. Lynn and Michael G.H. McGeary. New York: National Academies.
- Johnson, David R., and Rebekah Young. 2011. "Toward Best Practices in Analyzing Datasets with Missing Data: Comparisons and Recommendations." *Journal of Marriage and Family* 73(5):926-45.
- Jones, Malia, and Jimi Huh. 2014. "Toward a multidimensional understanding of residential neighborhood: a latent profile analysis of Los Angeles neighborhoods and longitudinal adult excess weight." *Health & Place* 27(1):134-41.

- Jones, Malia, and Anne R. Pebley. 2014. "Redefining Neighborhoods Using Common Destinations: Social Characteristics of Activity Spaces and Home Census Tracts Compared." *Demography* 51(3):727-52.
- Kahn, Joan R. 1988. "Immigrant Selectivity and Fertility Adaptation in the United States." *Social Forces* 67(1):108-28.
- Kasarda, John D, and Morris Janowitz. 1974. "Community attachment in mass society." *American Sociological Review* 39(3):328-39.
- Kimbrow, Rachel Tolbert. 2009. "Acculturation in Context: Gender, Age at Migration, Neighborhood Ethnicity, and Health Behaviors." *Social Science Quarterly* 90(5):1145-66.
- Kotchick, Beth A., Shannon Dorsey, and Laurie Heller. 2005. "Predictors of parenting among African American single mothers: Personal and contextual factors." *Journal of Marriage and Family* 67(2): 448-460.
- Kranau, Edgar J., Vicki Green, and Gloria Valencia-Weber. 1982. "Acculturation and the Hispanic Woman: Attitudes Toward Women, Sex-Role Attribution, Sex-Role Behavior, and Demographics." *Hispanic Journal of Behavioral Sciences* 4(1):21-40.
- Krieger, Nancy. 2012. "Methods for the scientific study of discrimination and health: an ecosocial approach." *American Journal of Public Health* 102(5):936-44.
- Krivo, Lauren J, Heather M Washington, Ruth D Peterson, Christopher R Browning, Catherine A Calder, and Mei-Po Kwan. 2013. "Social Isolation of Disadvantage and Advantage: The Reproduction of Inequality in Urban Space." *Social Forces* 92(1):141-64.
- Kwan, M. P. 1999. " Gender and individual access to urban opportunities: A study using space-time measures " *Professional Geographer* 51(2):210-27.
- . 2012. " The Uncertain Geographic Context Problem " *Annals of the Association of American Geographers* 102(5):958-68.
- Landale, Nancy S, and Renata Forste. 1991. "Patterns of Entry into Cohabitation and Marriage Among Mainland Puerto Rican Women*." *Demography* 28(4):587-607.
- Landale, Nancy S. 1994. "Migration and the Latino family: the union formation behavior of Puerto Rican women." *Demography* 31(1):133-57.

- Landale, Nancy S., Jessica H. Hardie, R. Sal Oropesa, and Marianne M. Hillemeier. 2015. "Behavioral functioning among Mexican-origin children: Does parental legal status matter?" *Journal of Health and Social Behavior* 56(1):2-18.
- Landale, Nancy S., and R. S. Oropesa. 2007. "Hispanic Families: Stability and Change." *Annual Review of Sociology* 33:381-405.
- Lara, Marielena, Cristina Gamboa, M. Iya Kahramanian, Leo S. Morales, and David E. Hayes Bautista. 2005. "Acculturation and Latino health in the United States: a review of the literature and its sociopolitical context." *Annual Review of Public Health* 26(1):367-97.
- Lareau, Annette, and Kimberly Goyette. 2014. *Choosing Homes, Choosing Schools*: Russell Sage Foundation.
- Larson, Jeffry H, Mark J Benson, Stephan M Wilson, and Nilufer Medora. 1998. "Family of origin influences on marital attitudes and readiness for marriage in late adolescents." *Journal of Family Issues* 19(6):750-68.
- Lebel, Alexandre, Robert Pampalon, and Paul Y Villeneuve. 2007. "A multi-perspective approach for defining neighbourhood units in the context of a study on health inequalities in the Quebec City region." *International Journal of Health Geographics* 6(1):27-42.
- Lee, Barrett A, and Karen E Campbell. 1997. "Common ground? Urban neighborhoods as survey respondents see them." *Social Science Quarterly* 78(4):922-36.
- Lee, Jennifer, and Min Zhou. 2015. *The Asian American Achievement Paradox*. Russell Sage Foundation.
- Lichter, Daniel T., George Kephart, Diane K. McLaughlin, and David J. Landry. 1992a. "Race and the Retreat From Marriage: A Shortage of Marriageable Men?" *American Sociological Review* 57(6):781-99.
- Liebertson, Stanley. 1961. "The Impact of Residential Segregation on Ethnic Assimilation." *Social Forces* 40(1):52-57.
- Light, Ivan Hubert. 2006. *Deflecting immigration: networks, markets, and regulation in Los Angeles*. New York: Russell Sage Foundation.
- Lloyd, Kim M. 2000. "Contextual influences on sexual initiation and family formation throughout the life course of young Latino/Latina Americans." University at Albany.

- . 2006. "Latinas' Transition to First Marriage: An Examination of Four Theoretical Perspectives." *Journal of Marriage and Family* 68(4):993-1014.
- Logan, John R., Wenquan Zhang, and Richard D. Alba. 2002. "Immigrant Enclaves and Ethnic Communities in New York and Los Angeles." *American Sociological Review* 67(2):299-322.
- Macintyre, Sally, and Anne Ellaway. 2003. "Neighborhoods and health: an overview." Pp. 20-42 in *Neighborhoods and health*, edited by Ichiro Kawachi and Lisa F. Berkman. New York: Oxford University Press.
- Macintyre, Sally, Anne Ellaway, and Steven Cummins. 2002. "Place effects on health: how can we conceptualise, operationalise and measure them?" *Social Science & Medicine* 55(1):125-39.
- Marston, Wilfred G., and Thomas L. Van Valey. 1979. "The Role of Residential Segregation in the Assimilation Process." *Annals of the American Academy of Political and Social Science* 441(1):13-25.
- Mason, M. J., and K. Korpela. 2009. "Activity spaces and urban adolescent substance use and emotional health." *Journal of Adolescence* 32(4):925-39.
- Massey, Douglas S, and Nancy A Denton. 1985. "Spatial assimilation as a socioeconomic outcome." *American Sociological Review* 50(1):94-106.
- Massey, Douglas S., and Ilana Redstone Akresh. 2006. "Immigrant Intentions and Mobility in a Global Economy: The Attitudes and Behavior of Recently Arrived U.S. Immigrants." *Social Science Quarterly* 87(5):954-71.
- Massey, Douglas S., and Katherine Bartley. 2005. "The Changing Legal Status Distribution of Immigrants: A Caution." *International Migration Review* 39(2):469-84.
- Massey, Douglas S., and Chiara Capoferro. 2008. "The Geographic Diversification of American Immigration." Pp. 25-50 in *New Faces in New Places: The Changing Geography of American Immigration*, edited by Douglas S. Massey. New York: Russell Sage.
- Massey, Douglas S., and Nancy A. Denton. 1993. *American apartheid: segregation and the making of the underclass*. Cambridge, MA: Harvard University Press.
- Massey, Douglas S., and Felipe Garcia España. 1987. "The social process of international migration." *Science* 237(4816):733-38.

- Massey, Douglas S., and Kumiko Shibuya. 1995. "Unraveling the tangle of pathology: The effect of spatially concentrated joblessness on the well-being of African Americans." *Social Science Research* 24(4):352-66.
- Matthews, Stephen A. 2011. "Spatial polygamy and the heterogeneity of place: studying people and place via egocentric methods." Pp. 35-55 in *Communities, Neighborhoods, and Health: Expanding the Boundaries of Place*, edited by L Burton, S Kemp, M Leung, S. A Matthews, and D Takeuchi. New York: Springer.
- Matthews, Stephen A, James E Detwiler, and Linda M Burton. 2005. "Geo-ethnography: coupling geographic information analysis techniques with ethnographic methods in urban research." *Cartographica: The International Journal for Geographic Information and Geovisualization* 40(4):75-90.
- Matthews, Stephen A, and Tse-Chuan Yang. 2013. "Spatial polygamy and contextual exposures (SPACEs): Promoting activity space approaches in research on place and health." *American Behavioral Scientist* 57(8):1057-81.
- McConnell, Eileen Diaz. 2008. "The U.S. Destinations of Contemporary Mexican Immigrants." *International Migration Review* 42(4):767-802.
- . 2012. "House poor in Los Angeles: examining patterns of housing-induced poverty by race, nativity, and legal status." *Housing Policy Debate* 22(4):605-31.
- McCray, T. M., and S. Mora. 2011. "Analyzing the activity spaces of low-income teenagers: How do they perceive the spaces where activities are carried out?" *Journal of Urban Affairs* 33(5):511-28.
- McKelvey, Lorraine M, Nicola A Connors-Burrow, Glenn R Mesman, Joy R Pemberton, and Patrick H Casey. 2014. "Promoting adolescent behavioral adjustment in violent neighborhoods: supportive families can make a difference!" *Journal of Clinical Child & Adolescent Psychology* 1-12.
- McLaughlin, Diane K, and Daniel T Lichter. 1997. "Poverty and the marital behavior of young women." *Journal of Marriage and the Family* 582-94.
- McLaughlin, Diane K., Daniel T. Lichter, and Gail M. Johnston. 1993. "Some Women Marry young: Transitions to First Marriage in Metropolitan and Nonmetropolitan Areas." *Journal of Marriage & Family* 55(4):827-38.
- Moore, Kristin A., and Sandra L. Hofferth. 1980. "Factors Affecting Early Family Formation: A Path Model." *Population and Environment* 3(1):73-98.

- Muthén, Linda K, and Bengt O Muthén. 2010. *Mplus User's Guide: Statistical Analysis with Latent Variables*. Los Angeles, CA: Muthén & Muthén.
- Noah, Aggie J., Nancy S. Landale, and Corey S. Sparks. 2015. "How does the context of reception matter? The role of residential enclaves in maternal smoking during pregnancy among Mexican-origin mothers." *Maternal and Child Health Journal* 1:1-9.
- Openshaw, Stan. 1983. *The modifiable areal unit problem*: Geo Books Norwich.
- Oppenheimer, Valerie K. 1988. "A Theory of Marriage Timing." *American Journal of Sociology* 94(1):563-91.
- Oropesa, R. S., and Nancy S Landale. 2004. "The Future of Marriage and Hispanics." *Journal of Marriage & Family* 66(4):901-20.
- Oropesa, Ralph S, Daniel T Lichter, and Robert N Anderson. 1994. "Marriage markets and the paradox of Mexican American nuptiality." *Journal of Marriage and the Family* 56(4):889-907.
- Oropesa, Ralph Salvatore. 1996. "Normative beliefs about marriage and cohabitation: A comparison of non-Latino Whites, Mexican Americans, and Puerto Ricans." *Journal of Marriage and the Family* 49-62.
- Ostir, G. V., K. Eschbach, K. S. Markides, and J. S. Goodwin. 2003. "Neighbourhood Composition and Depressive Symptoms Among older Mexican Americans." *Journal of Epidemiology & Community Health* 57(12):987-92.
- Pachter, Lee M., Peggy Auinger, Ray Palmer, and Michael Weitzman. 2006. "Do Parenting and the Home Environment, Maternal Depression, Neighborhood, and Chronic Poverty Affect Child Behavioral Problems Differently in Different Racial-Ethnic Groups?" *Pediatrics* 117(4):1329-38.
- Parcel, Toby L, Mikaela J Dufur, and Rena Cornell Zito. 2010. "Capital at home and at school: A review and synthesis." *Journal of Marriage and Family* 72(4):828-46.
- Park, Robert E. 1915. "The City: Suggestions for the Investigation of Human Behavior in the City Environment." *American Journal of Sociology* 20(5):577-612.
- . 1925. *The City*. Chicago, Illinois: University of Chicago Press.
- Parrado, Emilio A. and Chenoa A. Flippen. 2014. "Migration, Social Organization, and the Sexual Partners of Mexican Men." *Social Problems* 61(3): 380-401.

- Parrado, Emilio A., and Philip S. Morgan. 2008. "Intergenerational Fertility among Hispanic Women: New Evidence of Immigrant Assimilation." *Demography* 45(3):651-71.
- Parrado, Emilio A., and René M. Zenteno. 2002. "Gender Differences in Union Formation in Mexico: Evidence From Marital Search Models." *Journal of Marriage and Family* 64(3):756-73.
- Passel, Jeffrey, and D'Vera Cohn. 2011. *Unauthorized immigrant population: National and state trends, 2010*. Washington, DC: Pew Hispanic Center.
- Passel, Jeffrey S, D'Vera Cohn, and Ana Gonzalez-Barrera. 2012. "Net Migration from Mexico Falls to Zero and Perhaps Less." Pew Research Center Washington, DC.
- Pebley, Anne, and Narayan Sastry. 2009. "Our place: Perceived neighborhood size and names in Los Angeles." *California Center for Population Research Working Paper* 26.
- Perchoux, C., B. Chaix, S. Cummins, and Y. Kestens. 2013. "Conceptualization and measurement of environmental exposure in epidemiology: Accounting for activity space related to daily mobility." *Health and Place* 21:86-93.
- Pew Research Center. 2015. "Reflecting a racial shift, 78 counties turned majority-minority since 2000." Washington, DC: Pew Research Center.
- Phinney, Jean S., and Juana Flores. 2002. "'Unpacking' Acculturation: Aspects of Acculturation as Predictors of Traditional Sex Role Attitudes." *Journal of Cross-Cultural Psychology* 33(2):320-31.
- Portes, Alejandro, and Rubén G. Rumbaut. 1996. *Immigrant America: A portrait*. Berkeley, CA: University of California Press.
- Portes, Alejandro, and Min Zhou. 1993. "The New Second Generation: Segmented Assimilation and Its Variants." *Annals of the American Academy of Political and Social Science* 530(1):74-96.
- Purcell, Mark, and J Christopher Brown. 2005. "Against the local trap: scale and the study of environment and development." *Progress in Development Studies* 5(4):279-97.
- Raudenbush, Stephen W., and Anthony S. Bryk. 2002. *Hierarchical Linear Models: Applications and Data Analysis Methods*. New York, NY: Sage.

- Reardon, Sean F, Stephen A Matthews, David O'Sullivan, Barrett A Lee, Glenn Firebaugh, Chad R Farrell, and Kendra Bischoff. 2008. "The geographic scale of metropolitan racial segregation." *Demography* 45(3):489-514.
- Reese, Leslie. 2002. "Parental Strategies in Contrasting Cultural Settings: Families in Mexico and "El Norte"." *Anthropology & Education Quarterly* 33(1):30-59.
- Rogers, Everett M. 2010. *Diffusion of innovations*. New York: Simon and Schuster.
- Rubin, Donald B. 1987. *Multiple Imputation for Nonresponse in Surveys*. New York, NY: John Wiley and Sons.
- Sampson, Robert J, and W Byron Groves. 1989. "Community structure and crime: Testing social-disorganization theory." *American Journal of Sociology* 94(4):774-802.
- Sampson, Robert J., and Stephen W. Raudenbush. 1997. "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy." *Science* 277(5328):918-24.
- Sassen, Saskia. 1991. *The Global City: New York, London, Tokyo*. New York: Princeton University Press.
- Sastry, Narayan, Bonnie Ghosh-Dastidar, John Adams, and Anne R. Pebley. 2006. "The Design of a Multilevel Survey of Children, Families, and Communities: The Los Angeles Family and Neighborhood Survey." *Social Science Research* 35(4):1000-24.
- Schönfelder, S., and K. W. Axhausen. 2003. "Activity spaces: Measures of social exclusion?" *Transport Policy* 10(4):273-86.
- Sharkey, Patrick T. 2006. "Navigating dangerous streets: The sources and consequences of street efficacy." *American Sociological Review* 71(5):826-46.
- Sharp, Gregory, Justin T Denney, and Rachel T Kimbro. 2015. "Multiple Contexts of Exposure: Activity Spaces, Residential Neighborhoods, and Self-Rated Health." *Social Science & Medicine* 146:204-13.
- Shaw, Clifford R, and Henry D McKay. 1942. *Juvenile delinquency and urban areas: a study of rates of delinquency in relation to differential characteristics of local communities in American cities*. Chicago: University of Chicago Press.
- Simmel, Georg. 1903. *The metropolis and mental life*. London: Macmillan.

- Simons, Ronald L., Kuei-Hsiu Lin, Leslie C. Gordon, Gene H. Brody, and Rand D. Conger. 2002. "Community Differences in the Association between Parenting Practices and Child Conduct Problems." *Journal of Marriage and Family* 64(2):331-45.
- South, Scott J. 1993. "Racial and ethnic differences in the desire to marry." *Journal of Marriage and Family* 55(2):357.
- . 1996. "Mate availability and the transition to unwed motherhood: A paradox of population structure." *Journal of Marriage and the Family* 58(2):265-79.
- . 2001. "The geographic context of divorce: do neighborhoods matter?" *Journal of Marriage and Family* 63(3):755-66.
- South, Scott J., and Kyle Crowder. 1999. "Neighborhood Effects on Family Formation: Concentrated Poverty and Beyond." *American Sociological Review* 64(1):113-32.
- . 2010. "Neighborhood Poverty and Nonmarital Fertility: Spatial and Temporal Dimensions." *Journal of Marriage & Family* 72(1):89-104.
- South, Scott J., Katherine Trent, and Yang Shen. 2001. "Changing Partners: Toward a Macrostructural-Opportunity Theory of Marital Dissolution." *Journal of Marriage & Family* 63(1): 743-754.
- South, Scott J. and Kim M. Lloyd. 1995. "Spousal alternatives and marital dissolution." *American Sociological Review* 60: 21-35.
- Spielman, Seth E, and Eun-hye Yoo. 2009. "The spatial dimensions of neighborhood effects." *Social Science & Medicine* 68(6):1098-105.
- Takagi, Daisuke, Ken'ichi Ikeda, and Ichiro Kawachi. 2012. "Neighborhood social capital and crime victimization: Comparison of spatial regression analysis and hierarchical regression analysis." *Social Science & Medicine* 75(10):1895-902.
- Telles, Edward Eric, and Vilma Ortiz. 2008. *Generations of exclusion: Mexican Americans, assimilation, and race*. New York: Russell Sage Foundation.
- Tönnies, Ferdinand. 1955. *Community and association: (Gemeinschaft und gesellschaft)*: Routledge & Paul.
- Trent, Katherine, and Scott J South. 1992. "Sociodemographic status, parental background, childhood family structure, and attitudes toward family formation." *Journal of Marriage and the Family*:427-39.

- U.S. Census Bureau. 2000. "Decennial Census." Washington, DC.
- . 2013. "Six More Counties Become Majority-Minority." Washington, DC: U.S. Census Bureau.
- Vallée, J., E. Cadot, C. Roustit, I. Parizot, and P. Chauvin. 2011. "The role of daily mobility in mental health inequalities: The interactive influence of activity space and neighbourhood of residence on depression." *Social Science and Medicine* 73(8):1133-44.
- Viruell-Fuentes, Edna A. 2007. "Beyond acculturation: Immigration, discrimination, and health research among Mexicans in the United States." *Social Science & Medicine* 65(7):1524-35.
- Viruell-Fuentes, Edna A., Patricia Y. Miranda, and Sawsan Abdulrahim. 2012. "More than culture: structural racism, intersectionality theory, and immigrant health." *Social Science & Medicine* 75(12):2099-106.
- Voss, Paul R. 2007. "Demography as a spatial social science." *Population Research and Policy Review* 26(5-6):457-76.
- Waite, Linda J., and Glenna D. Spitze. 1981. "Young Women's Transition to Marriage." *Demography* 18(4):681-94.
- Walton, Emily. 2009. "Residential Segregation and Birth Weight among Racial and Ethnic Minorities in the United States." *Journal of Health and Social Behavior* 50(4):427-42.
- Waters, Mary C., and Tomás R. Jiménez. 2005. "Assessing Immigrant Assimilation: New Empirical and Theoretical Challenges." *Annual Review of Sociology* 31:105-25.
- West, Brady T., Kathleen B. Welch, and Andrzej T. Galecki. 2014. *Linear Mixed Models: A Practical Guide Using Statistical Software*. New York, NY: CRC Press.
- Wight, Richard G., Carol S. Aneshensel, Christopher Barrett, Michelle Ko, Joshua Chodosh, and Arun S. Karlamangla. 2013. "Urban neighbourhood unemployment history and depressive symptoms over time among late middle age and older adults." *Journal of Epidemiology and Community Health* 67(2):153-58.
- Wildsmith, Elizabeth, and R. Kelly Raley. 2006. "Race-Ethnic Differences in Nonmarital Fertility: A Focus on Mexican American Women." *Journal of Marriage & Family* 68(2):491-508.

- Wilkinson, Richard G. 1997. "Socioeconomic determinants of health. Health inequalities: relative or absolute material standards?" *BMJ: British Medical Journal* 314(7080):591-95.
- Wilson, William J. 1987. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago, IL: University of Chicago Press.
- Wirth, Louis. 1938. "Urbanism as a Way of Life." *American Journal of Sociology* 44(1):1-24.
- White, Rebecca, Mark W. Roosa, Scott R. Weaver, and Rajni L. Nair. 2009. "Cultural and contextual influences on parenting in Mexican American families." *Journal of Marriage and Family* 71(1): 61-79.
- Wong, D. W. S., and S. L. Shaw. 2011. "Measuring segregation: An activity space approach." *Journal of Geographical Systems* 13(2):127-45.
- Yang, Tse-Chuan, Aggie J Noah, and Carla Shoff. 2013. "Exploring geographic variation in US mortality rates using a spatial durbin approach." *Population, Space and Place*.
- Yonas, Michael A, Terri Lewis, Jon M Hussey, Richard Thompson, Rae Newton, Diana English, and Howard Dubowitz. 2010. "Perceptions of neighborhood collective efficacy moderate the impact of maltreatment on aggression." *Child maltreatment* 15(1):37-47.
- Yoshikawa, Hirokazu, and Ariel Kalil. 2011. "The Effects of Parental Undocumented Status on the Developmental Contexts of Young Children in Immigrant Families." *Child Development Perspectives* 5(4):291-9.

Aggie Jooyoung Noah

aggienoah@gmail.com

EDUCATION

- 2016 Ph.D., Sociology and Demography, Pennsylvania State University
2011 M.A., Sociology, University of Illinois at Urbana-Champaign
2009 B.A., Sociology, University of Illinois at Urbana-Champaign

RESEARCH AND TEACHING INTERESTS

Population Health, Immigrant Health and Families, Asia and Asian America
Demography, Quantitative Methodology, Spatial Analysis

SELECTED PUBLICATIONS

- 2016 Yang, Tse-Chuan, [Aggie J. Noah](#), and Carla Shoff. "Revisiting the rural paradox in U.S. counties with spatial Durbin modeling" Pp. 253-273 in *Recapturing Space: New Middle-Range Theory in Spatial Demography* edited by Frank M. Howell, Jeremy R. Porter, and Stephen A. Matthews. New York, NY: Sage Publication.
- 2015 [Noah, Aggie J.](#), Nancy S. Landale, and Corey S. Sparks. "How does the context of reception matter? The role of residential enclaves on maternal smoking during pregnancy among Mexican-origin mothers." *Maternal and Child Health Journal* 19(8): 1825-1833. [PMC4503481]
- 2015 Acciai, Francesco*, [Aggie J. Noah](#)*, and Glenn Firebaugh. "Pinpointing the sources of the Asian mortality advantage in the United States." *Journal of Epidemiology and Community Health* 69(10): 1006-1011. (*denotes equal contribution; listed alphabetically) [PMC4567918]
- 2015 Yang, Tse-Chuan, [Aggie J. Noah](#), Carla Shoff. "Exploring geographic variation in U.S. mortality rates using a spatial Durbin approach." *Population, Space and Place* 21(1): 18-37. [PMC4310504]
- 2015 Yang, Tse-Chuan, I-Chien Chen, and [Aggie J. Noah](#). "Examining the complexity and variation of health care system distrust across neighborhoods: Implications for preventive health care." *Research in the Sociology of Health Care*. 33: 43-66. [PMC4592143]
- 2014 Firebaugh, Glenn, Francesco Acciai, [Aggie J. Noah](#), Christopher Prather, and Claudia Nau. "Why lifespans are more variable among blacks than among whites in the United States." *Demography* 51(6): 2025-2045. [PMC4273584]
- 2014 Landale, Nancy S., R. Sal Oropesa, and [Aggie J. Noah](#). "Immigration and the family circumstances of Mexican-origin children: A binational longitudinal analysis." *Journal of Marriage and Family* 76(1): 24-36. [PMC4163147]