

## Examples of William T. Grant Scholars Proposals

The following abstracts and proposals, submitted by recent William T. Grant Scholars award recipients, are intended to serve as examples only. We do not intend for the research and mentoring plans they contain to be replicated by future grantees. Rather, we hope that they will serve as examples to prospective grantees of what strong proposals look like. Please note that in some instances, the applicants proposed enhancements to their research and/or mentoring plans during their interviews as finalists for the award. In addition, the proposals were funded under the Foundation's social settings research interest, which was retired in 2014.

All content contained in these proposals is the property of the individual author and cannot be distributed or cited in any form without the express written permission of the author.

### Proposals included, in order:

Stefanie DeLuca, Ph.D., Johns Hopkins University\*

"Moving Matters: Residential Mobility, Neighborhoods, and Family in the Lives of Poor Adolescents"

Guanglei Hong, Ph.D., University of Chicago\*

"Causal Inference Methods for Studying Instruction Effects on Language Minority Students"

Noelle Hurd, Ph.D., University of Virginia

"Critical Contexts for the Formation of Natural Mentoring Relationships among Economically Disadvantaged African American Adolescents: A Focus on Families and Neighborhoods"

Nikki Jones, Ph.D., University of California, Santa Barbara\*

"Pathways to Freedom: How Young People Create a Life after Incarceration"

*(UC Santa Barbara was the institution at time of submission. Dr. Jones is currently at UC Berkeley)*

\* Please note that, since the submission of these proposals, the Foundation has made significant changes to the format of the five-year mentoring plans. Therefore, applicants should carefully review the most recent Scholars application guide before moving forward with their proposals.

**WILLIAM T. GRANT SCHOLARS APPLICATION**  
**ABSTRACT**

Principal Investigator: Stefanie DeLuca  
Institution: **Johns Hopkins University**

**PART I: FIVE-YEAR RESEARCH PLAN (maximum of 4 pages)**

**Summarize your five-year research plan, which includes one or more research projects. Describe the rationale for the research including a brief literature review, its significance in terms of policy and/or practice, and the unique contribution of the research to understanding the setting(s) under study. Also describe how the research plan will expand your expertise.**

Research on youth development is increasingly confronted by two issues. First, the various contexts, familial, school, and neighborhood are seen as pivotal in providing the circumstances of adolescent experiences and activities and are key for understanding the social contexts of adolescent development. Second, youth lives are increasingly dynamic. Adolescents change residences; they change schools; they change neighborhoods; and they often change family structures. At the heart of such issues is the question of residential mobility and its implications for youth development. This proposal offers a multi-faceted strategy to examine the role of residential mobility in the lives of American youth, its implications for the healthy development of adolescents with respect to educational attainment, (refrained) involvement in crime and delinquency, and both physical and mental health.

To examine these issues, I draw upon unique data from three sources, the National Longitudinal Survey of Youth, 1997, the Mobile Youth Survey (1998-2005), and data from the Moving to Opportunity (MTO) studies. To map patterns of mobility, their precursors and consequences, I make use of longitudinal data analyses, mapping techniques and household interviews with parents in poor communities. My aims include:

**Aim 1: To map out detailed patterns of youth residential mobility and how it relates to family change, school change, and neighborhood context.**

**Aim 2: To identify the family and youth level factors that predict mobility, and whether the factors that predict mobility differ across family socioeconomic status.**

**Aim 3: To identify how housing interventions affect mobility patterns for poor families.**

**Aim 4: To identify how mobility affects adolescent educational attainment, delinquency and health, once family, school and neighborhood contexts are considered.**

**Aim 5: To understand the mobility process among poor families, specifically by exploring the decision making processes behind moving and how moving affects the social networks, institutional resources and family relationships that are important for youth development.**

Residential mobility has captured the attention of social scientists for more than a half century. It was initially thought that frequent moving was a sign of pathology, and that families who moved were in some ways abnormal. In 1955, Rossi's groundbreaking study challenged such assumptions and showed that moving was a normal response to the life cycle and changing needs of families. Subsequent research in economics and sociology suggested that families engage in a calculated choice process, and will move when the benefits of doing so outweigh

**All content is the property of the author, Stefanie DeLuca, and should not be distributed or cited in any form without the express written permission of the author.**

the costs (Tiebout, 1956; Speare, Goldstein and Frey, 1974; Cadwallader, 1992). More recent work examines general patterns of mobility and migration as life cycle events with both socio-demographic origins and important life course consequences (e.g. Hagan, Macmillan and Wheaton, 1996; Haveman, Wolfe and Spaulding, 1991). Even more recently, emerging research focuses on what happens when poor families move, whether they move to better neighborhoods via housing voucher interventions, and the consequences of such moves (Rubinowitz and Rosenbaum, 2000; DeLuca et al, 2007; Orr et al, 2003). Recent policies, such as the HOPEVI program, have further increased the amount of mobility among poor families in the nation's cities, prompting even more reason to understand the possible benefits of geographic mobility and its consequences. Such work has important implications for understanding *different* patterns of mobility across race and class and how these might explain both racial segregation and the concentration of poverty among inner city neighborhoods (Massey and Denton 1993; South and Crowder, 1997, 1998), as well as the reduced life chances of families and youth growing up in poor segregated neighborhoods (Brooks-Gunn et al, 1997; Crane, 1991; Wilson, 1996). Yet, even with such power implications, little research examines whether multidimensional nature of residential mobility, how it connects to and interacts with family, school and neighborhood contexts, and the relation of these both broad patterns of stratification and inequality that characterize the lives of young people in America. This is the focus of my WT Grant Scholars proposal.

From one perspective, residential mobility is really all about improving social contexts should enhance youth well being. In Rossi's (1955) seminal work, people moved to bigger homes and better neighborhoods as part of the broad pattern of upward economic mobility in the post World War II era. Likewise, recent initiatives to relocate poor people are premised on the idea that safer neighborhoods relieve family stress and might reduce the exposure of adolescent to crime and violence. From another perspective, however, considerable research emphasizes the detrimental effects of residential mobility on individual youth. Here, it is theorized that breaking social ties and disrupting home space creates psychological stress for adolescents and deprives both families and young people of the resources that established social connections bring (Kroger, 1991; Hagan et al. 1996). Many researchers also suggest that residential moves enhance the likelihood or frequency of behavioral problems such as juvenile delinquency, and undermine school performance and attainment (South and Haynie, 2004; Pribesh and Downey, 1999). In fact, residential mobility has been at the center of some of the most influential literatures in the study of human development. In his seminal paper on social capital theory, Coleman noted that school mobility was a strong predictor of high school dropout because moving broke the ties that provided intergenerational closure (1988). Social disorganization theory in criminology suggests that high rates of residential turnover make areas prone to crime because transient populations exhibit less social control and collective efficacy (cf. Sampson et al, 1997). Research in mental health and developmental psychology has long emphasized how residential mobility is associated with negative adjustment, depression and even suicide, in part because of the stress induced by broken attachments (cf. Wood et al, 1993). All of this work implies that moving is a significant event in the lives of young people, both because of the experience of moving, but also because mobility affects the subsequent environments youth are exposed to.

Still, mobility dynamics and their implications are complicated, theoretically and analytically, since the social and psychological deficits that accompany mobility occur alongside changes in context that may both enhance and deplete social resources. This conundrum leads one to ask whether it is better for youth and their families to attempt moves from poor neighborhoods to more advantaged communities or remain in a poor neighborhoods where they can maintain their social and institutional ties. The answer likely depends on whether a residential move also disrupts family structure, causes youth to switch schools or whether the new community is rich enough in opportunities to outweigh these instabilities in the long run. Middle class families often

choose to move to increase social status or meet changing consumption needs; one might assume that mobility under these circumstances would be less detrimental for adolescents, since the process is characterized by motivation and aspirations on the part of parents. However, poor families often move unexpectedly, or from one disadvantaged neighborhood to another, and may have little choice over the conditions of relocation. Research also assumes that when a family moves, the entire household relocates. This is often not the case for low income families, who sometimes disperse children across the homes of many family members when resources are low and new units are too small. Moving under these conditions might increase parental stress, result in overcrowded housing or lead to a series of short term relationships with teachers and peers; it is possible that these factors could lead already disadvantaged youth to high rates of school disengagement, delinquency and depression. Not only are neighborhood environments changing, but so is household composition. Children may also change schools when families move, or they may travel longer distances to remain in their old schools. Each of these dynamics has different implications for how youth make successful transitions in school and whether they become involved in different social groups that might lead to delinquency or affect overall psychological well being.

However, most of the research to date on neighborhood effects and residential mobility programs assumes that the *context* drives the processes of interest, leaving unanswered the question of whether and how *mobility* also matters. In the reverse situation, studies in residential mobility usually leaves out considerations of the contexts into which youth move, or how mobility operates differently if we consider the alternatives housing policy provide. Prominent researchers in the field have recently suggested that we cannot understand neighborhood effects without understanding housing and mobility decisions and that neighborhood researchers need to pay more attention to residential mobility and how moving affects children and families (Galster, 2003; Brooks-Gunn et al, 1997). For my WT Grant proposal, I will explore these processes using three unique data sets: a nationally representative longitudinal survey of youth, follow-up data from a five city housing experiment, and a panel study of extremely disadvantaged youth in the South. I will combine longitudinal data analysis, mapping techniques and the collection of household interviews to better understand how residential mobility connects to stability and change in the family, school and neighborhood environment, to identify the long term patterns of mobility and disruption for all types of families, to determine what drives mobility among poor families in particular, and to study how moving affect important developmental outcomes like high school dropout, delinquency and health. The general orienting theme of this research is how family, school, and neighborhood dynamics before and after moves interact with residential change to influence these outcomes, as well as the characteristics of neighborhoods and schools the youth move among.

### **How Project Enhances Expertise**

For the last 8 years, I have analyzed data from three residential mobility programs that helped poor families relocate to better neighborhoods—Gautreaux, MTO and the Thompson program in Baltimore. Through this work, I have become skilled in the use of census data, administrative data from government agencies and some geocoding applications. I have also had the opportunity to conduct fieldwork as a result of my MTO involvement. If I receive this award, the resources will allow me to further develop much needed skills to advance my research career and support my time in the field in Alabama. The award assists my professional development in four major ways: conceptual stretch, methodological skills, support for data collection, resources to support my time working on the project goals. In terms of conceptual growth, this award allows me to expand the theoretical framework of my research to include a more serious consideration of the dynamics of families in poor neighborhoods and how they interact with neighborhood effects. In previous work, I focused heavily on neighborhoods, and now can also incorporate the details of family life. I am also excited that the support from this grant will allow

me to execute my first original data collection effort and spend extended periods of time learning about the urban environment in which I will conduct some my work. By supporting my summer fieldwork in Alabama, I can also travel throughout the region to meet with other scholars who study the South.

**PART II: FIVE-YEAR MENTORING PLAN (maximum of two pages)**

**Summarize your five-year mentoring plan, including one to three mentors who have agreed to assist you in expanding specific areas of your expertise.**

I have selected Kathryn Edin, John Bolland and J. Michael Oakes to be my mentors if I receive funding for this project. All of my mentors have been very successful in translating their research into work that matters for policy and the community, and raising funding support for their work. All three are experts in research that deals with the hardships that poor families face and how environments matter for their life outcomes.

**For each proposed mentor, briefly describe below:**

- **How the mentoring relationship will expand your expertise;**
- **Rationale for choosing this particular mentor;**
- **Nature of the proposed mentor's current relationship to you and the contribution of the award to establishing or developing a mentoring relationship;**
- **Content of the mentoring and the form it will take; and**
- **How potential barriers such as long distance and busy schedules will be addressed.**

Mentor #1: Kathy Edin, on faculty at the Kennedy School of Government at Harvard University, is a nationally recognized expert in the use of qualitative and mixed methods research for studying low income families. Her book, *Making Ends Meet* (1997) is a staple in field methods courses, and has demonstrated the power of qualitative methods for understanding how social policies and contexts of disadvantage affect the choices of poor women. I have had some limited experience with Kathy previously, as I helped to collect qualitative data for the Baltimore MTO study that she had organized. Through this experience I got to know her and we developed a casual at-a-distance mentorship, which I would like to strengthen through this proposed research. Kathy has years of experience studying the challenges of family life and she knows how to get useful answers to complicated questions, and turn theoretical paradoxes into empirical questions. Kathy has had extensive experience in the field, designing surveys, conducting interviews and getting the most out of combining mixed methods research approaches. As I develop my residential mobility interview instruments, I will seek guidance from Kathy about how to ask questions that make sense out of the chaos of people's lives without losing any of the richness of the data. I haven't conducted my own interview study before, and know that Kathy can provide guidance for locating participants, ensuring high follow up rates and learning how to integrate the information from the interviews with survey data on family neighborhoods. Her extensive ethnographic experience can help me consider the "street level" measures of neighborhoods because she has spent extended periods of fieldwork time in over a half dozen urban areas, including several areas in the South.

I plan to visit Kathy at Harvard University at least twice a year, as well as meet with her at professional meetings, to work on my measures and the pilot interview protocol. As I start to gather my data from the interviews, Kathy can also advise me in creating an appropriate codebook and I can exchange drafts of analyses with her via email. I already know that Kathy will personally read some of these interviews to get a handle on how she can best help me. As I

eventually try to publish the findings from these new data collection efforts, I will seek Kathy's advice for translating them into high quality academic publications as well as useful policy briefs.

Mentor #2 (if applicable): John Bolland is on the faculty at the School of Public Health at the University of Alabama. John has had over 15 years of experience collecting data in low income neighborhoods in Alabama, where he has been examining the risk behaviors and contexts of very poor adolescents. John is the primary investigator for the Mobile Youth Study which serves as the core for my proposal. John has also had great success in turning the results of his work in Huntsville and Mobile into intervention programs to reduce risk behaviors in the neighborhoods he studies—something rarely done in social science research. His success in designing and funding these programs is due in part to his rigorous and intensive research activities, but it is also due to his strong and long term relationships with many city and state agencies in Mobile. These agencies trust John, and have been providing him with wide access to essential individual level data for the MYS, such as juvenile court records. I can learn firsthand from John about Mobile and the MYS because he designed the study, and is more familiar with the data and the neighborhoods than anyone else. He can help me create appropriate and sensitive interview questions and neighborhood measures that will reflect his extensive experience in the areas. After all, John walked every street in all 13 targeted neighborhoods in 1998 to create the sampling frame for the non-public housing sites!

John will also introduce me to a rich interdisciplinary team of Southern researchers who are very familiar with Mobile and the socioeconomic and structural contexts of the region. This network of scholars can also help me interpret my work from a public health perspective and enhance my psychometric skills, given the batteries they have designed for the MYS. John's experience with program evaluation and programs to reduce adolescent risk behaviors through community development will help me interpret how my findings about residential mobility and neighborhood change can be useful for the city of Mobile.

The summer support I receive to do the fieldwork in Mobile will also help John and I develop our mentorship plan. I will be working side by side with John to collect the surveys in Mobile, and he will be present in Mobile the entire time I will be conducting my mobility interviews and street level observations. During the school year, John and I will exchange analytic results and manuscript drafts via email and hard copy (I have allowed for this in my postage budget). These efforts will also be supplemented by weekly phone calls and additional meetings at academic conferences.

Mentor #3 (if applicable): My third mentor, J. Michael Oakes, is an Associate Professor at the University of Minnesota in the Division of Epidemiology and Community Health. He is a social epidemiologist with expertise in research methodology and applied statistics, particularly methods that examine the effects of social systems and socioeconomic status on health outcomes. Oakes has published widely on the application of hierarchical linear models, SUTVA assumptions, propensity scores and community/group randomized trials as they apply to the study of neighborhoods. His recent book, *Methods in Social Epidemiology*, has received acclaim as a guide for researchers attempting interdisciplinary work in public health and has been helpful for me as I designed this proposal. Michael is about to begin a project to examine the effects of social environments using the Mobile Youth Survey, so he is also aware of its strengths and limitations.

Michael will help me as I design the analysis of the panel survey data for all three datasets; in particular, he will assist with the determination and application of appropriate model specifications and methodology, such as the use of propensity scores for estimating the effect of

mobility on youth, latent class analysis, as well as concerns about measurement and statistical power. In addition to the methodological mentoring Michael will provide, he will also help me to better understand how to study the effects of mobility, family and neighborhood context on the mental and physical health related outcomes across my three datasets. Critically, he will help me see and explain the assumptions necessary to infer effects. While my training thus far has prepared me to study processes related to educational and behavioral outcomes, I am eager to extend my work into health related domains. With support from my WT Grant award, I will travel to Minneapolis to meet with Michael twice a year, as well as meet with him at professional meetings. This allows us the opportunity to talk through the design of the research as it develops, and strategize how best to adjust the modeling techniques as I grapple with the complexities of the panel studies when they arise. An additional meeting with Michael will occur each year when he travels to Mobile, since that trip will coincide with the fieldwork and survey collection I will be conducting there. During the rest of the year, I will correspond with Michael via email, as he has agreed to review my empirical progress and research results in preparation for journal submissions.

NOT FOR DISTRIBUTION

**Moving Matters: Residential Mobility, Neighborhoods and Family in the Lives of Poor Adolescents**

Stefanie DeLuca  
Johns Hopkins University

Introduction

Residential mobility has captured the attention of social scientists for more than a half century. It was initially thought that frequent moving was a sign of pathology, and that families who moved were in some ways abnormal. In 1955, Rossi's groundbreaking study challenged such assumptions and showed that moving was a normal response to the life cycle and changing needs of families. Subsequent research in economics and sociology suggested that families engage in a calculated choice process, and will move when the benefits of doing so outweigh the costs (Tiebout, 1956; Speare, Goldstein and Frey, 1976; Cadwallader, 1992). More recent work examines general patterns of mobility and migration as life cycle events with socio-demographic origins and important life course consequences (e.g. Hagan, Macmillan and Wheaton, 1996; Haveman, Wolfe and Spaulding, 1991). Even more recently, emerging research focuses on what happens when poor families move, whether they move to better neighborhoods via housing voucher interventions, and the consequences of such moves (Rubinowitz and Rosenbaum, 2000; DeLuca et al, 2007; Orr et al, 2003). Recent policies, such as the HOPEVI program, have further increased the amount of mobility among poor families in the nation's cities, prompting even more reason to understand the possible benefits of geographic mobility and its consequences. Such work has important implications for understanding different patterns of mobility across race and class and how these might explain racial segregation and the concentration of poverty among inner city neighborhoods (Massey and Denton 1993; South and Crowder, 1997, 1998), as well as the reduced life chances of families and youth growing up in poor segregated neighborhoods (Brooks-Gunn et al, 1997; Crane, 1991; Wilson, 1996). Yet, even with such powerful implications, little research examines the *multidimensional* nature of residential mobility, and how it connects to and interacts with family, school and neighborhood contexts to influence the broader patterns of stratification and inequality that characterize the lives of young people in America. These issues are the focus of my WT Grant Scholars proposal.

From one perspective, residential mobility is really all about improving social contexts to enhance youth well being. In Rossi's (1955) seminal work, people moved to bigger homes and better neighborhoods as part of the broad pattern of upward economic mobility in the post World War II era. Likewise, recent initiatives to relocate poor people are premised on the idea that safer neighborhoods relieve family stress and might reduce the exposure of adolescents to crime and violence. From another perspective, however, considerable research emphasizes the detrimental effects of residential mobility on individual youth outcomes. Here, it is theorized that breaking social ties and disrupting home space creates psychological stress for adolescents and deprives both families and young people of the resources that established social connections bring (Kroger, 1980; Hagan et al. 1996). Many researchers also suggest that residential moves enhance the likelihood or frequency of behavioral problems such as juvenile delinquency, and undermine school performance and attainment (South and Haynie, 2004; Pribesh and Downey, 1999). In fact, residential mobility has been at the center of some of the most influential theories in the study of human development. In his seminal paper on social capital theory, Coleman noted that school mobility was a strong predictor of high school dropout because moving broke the ties that provided intergenerational closure (1988). Social disorganization theory in criminology suggests that high rates of residential turnover make areas prone to crime because transient populations exhibit less social control and collective efficacy (cf. Sampson et al, 1997). Research in mental health and developmental psychology has long emphasized how residential mobility is associated with negative adjustment, depression and even suicide, in part because of the stress induced by broken attachments (cf. Wood et al, 1993). All of this work implies that moving is a significant event in the lives of young people, both because of the experience of moving, but also because mobility affects the subsequent environments youth are exposed to.

Still, mobility dynamics and their implications are complicated, theoretically and analytically, since the social and psychological deficits that accompany mobility occur alongside changes in context that may both enhance and deplete social resources. This conundrum leads one to ask whether it is better for youth and their families to attempt moves from poor neighborhoods to more advantaged communities or remain in a poor neighborhoods where they can maintain their social and institutional ties. The answer likely depends on whether a residential move also disrupts family structure, causes youth to switch schools or whether the new community is rich enough in opportunities to outweigh these instabilities in the long run. Middle class families often choose to move to increase social status or meet changing consumption needs; one might assume that mobility under these circumstances would be less detrimental for adolescents, since the process is

characterized by motivation and aspirations on the part of parents. However, poor families often move unexpectedly, or from one disadvantaged neighborhood to another, and may have little choice over the conditions of relocation. Research also assumes that when a family moves, the entire household relocates. This is often not the case for low income families, who sometimes disperse children across the homes of many family members when resources are low and new units are too small. Moving under these conditions might increase parental stress, result in overcrowded housing or lead to a series of short term relationships with teachers and peers; it is possible that these factors could lead already disadvantaged youth to high rates of school disengagement, delinquency and depression. Not only are neighborhood environments changing, but so is household composition. Children may also change schools when families move, or they may travel longer distances to remain in their old schools. Each of these dynamics has different implications for how youth make successful transitions in school and whether they become involved in different social groups that might lead to delinquency or affect overall psychological well being.

However, most of the research to date on neighborhood effects and residential mobility programs assumes that the *context* drives the processes of interest, leaving unanswered the question of whether and how *mobility* also matters. In the reverse situation, studies in residential mobility usually leave out considerations of the contexts into which youth move, or how mobility operates differently if we consider the alternatives housing policy provides. Prominent researchers in the field have recently suggested that we cannot understand neighborhood effects without understanding housing and mobility decisions and that neighborhood researchers need to pay more attention to how moving affects children and families (Galster, 2003; Brooks-Gunn et al, 1997). For my WT Grant proposal, I will explore these processes using three unique data sets: a nationally representative longitudinal survey of youth, follow-up data from a five city housing experiment, and a panel study of extremely disadvantaged youth in the South. I will combine longitudinal data analysis, mapping techniques and the collection of household interviews to better understand how residential mobility connects to stability and change in the family, school and neighborhood environment, to identify the long term patterns of mobility and disruption for all types of families, to determine what drives mobility among poor families in particular, and to study how moving affects important developmental outcomes like high school dropout, delinquency and health. The general orienting theme of this research is how family, school, and neighborhood dynamics before and after moves interact with residential change to influence these outcomes.

The aims of my project include:

**Aim 1: To map out detailed patterns of youth residential mobility and how mobility relates to family change, school change, and neighborhood context.**

**Aim 2: To identify the family and youth level factors that predict mobility, and whether the factors that predict mobility differ across family socioeconomic status.**

**Aim 3: To identify how housing interventions affect mobility patterns for poor families.**

**Aim 4: To identify how mobility affects adolescent educational attainment, delinquency and health, once family, school and neighborhood contexts are considered.**

**Aim 5: To understand the mobility process among poor families, specifically by exploring the decision making processes behind moving and how moving affects the social networks, institutional resources and family relationships that are important for youth development.**

## **PREVIOUS RESEARCH ON MOBILITY**

### *Why Do Families Move?*

While the notion of residential mobility had been historically considered a natural consequence of social mobility and increased opportunity (cf. Kopf, 1977), not all early views of mobility were so positive. By the early 20<sup>th</sup> century, mobility was seen as indicative of a character flaw, an inability to maintain social relationships in one's community. Research on social ecology in Chicago prompted concerns that residential transience was contributing to problems of urban decay, as studies noted associations between residential mobility and mental hospital admissions, juvenile delinquency and crime in city neighborhoods (Shaw and McKay, 1942; Farris and Dunham, 1939; Henry and Short, 1954). As a result of

government funding aimed at “curing mobility”, Peter Rossi carried out a groundbreaking study in Philadelphia that overturned that common belief that mobile families are “pathological” and suggested that families move instead because of changing needs at different points in the life cycle, which lead to a need for “housing adjustment” (Rossi, 1980; Rossi and Shlay, 1982). Later work in economics focused on how families choose housing that maximizes utility within budget constraints, or, satisfies consumption needs within a certain price range (Kennedy and Finkel, 1994), while sociological work focused on the factors that determined residential satisfaction (e.g., Speare, Goldstein and Frey, 1976). In general, most of the residential mobility literature has framed moving out as “moving up”, which is also consistent with Blau and Duncan’s (1967) idea that part of social mobility was social “motility”. Thus, locational attainment is one way families can acquire more human capital—that is, people move because they want “bigger and better things” for themselves and their families. For example, parents may move from the city to the suburbs when they acquire a new job, or if they want a larger house for a growing family. Parents might also move to neighborhoods with better schools to enhance their children’s human and social capital. However, from the 1960’s through the late 1990’s almost no literature talked about mobility among the poor as a distinctly different phenomenon, motivated by different forces.

In the early 1980’s some researchers introduced the idea that *voluntary* mobility occurs mostly for educated whites (cf. Stokols and Shumaker, 1982), but that blacks were more likely to face exogenous shocks that lead to *involuntary*, often shorter distance mobility (Fairchild and Tucker, 1982). Newman and Owens (1982) noted that poor minority families are often displaced as a result of cities reinvesting in some neighborhoods (which drives up rent and housing costs), disinvestment in other neighborhoods (which contributes to physical deterioration and abandonment), and urban policy and renewal programs that lead to demolition and property acquisition. Other causes of forced mobility include evictions, poor housing quality and domestic violence (Bartlett, 1997; Crowley, 2003). Some researchers estimate that among the poor, involuntary moves account for three times as many relocations as planned moves (Schafft, 2006). The HOPE VI initiatives, which tear down high rise public housing and replace developments with mixed income communities, can also displace families with no guarantee of relocation to stable areas (Clampet-Lundquist, 2004; Kotlowitz, 2002). The issue of involuntary mobility is of special importance to the kind of population represented in one of my proposed data sets, the Mobile Youth Survey. In 1998 and 2005, Hurricanes Georges and Katrina hit the Gulf Coast and flooded many of the neighborhoods in Alabama, Mississippi and Louisiana. While Hurricane Katrina was an unusual storm, poor families in Mobile (and other southern coastal cities) regularly face mobility as a result of flooding. Their housing is located in flood plains or swamps and the quality of housing that poor families secure is usually so low that wind damage from storms can also force families to move.

However, it is inaccurate to assume that because families are poor, they don’t choose to move for some of the same reasons more advantaged families do, such as safety, better schools and better jobs. In fact, there has been significant voluntary relocation among the urban poor, via housing choice vouchers (formerly known as Section 8) and residential mobility programs, such as the Moving to Opportunity (MTO) program. The research base to date has suggested that families who use housing vouchers experience variation in their residential relocation outcomes. Early work demonstrated that poor minority families who used vouchers were very likely to end up back in impoverished and racially segregated areas (Cronin and Rasmussen, 1981), findings that have been recently replicated and debated (Basolo and Ngyuen, 2006 and comments; Varady, 2000). However, other recent work suggests that minority voucher holders experience increases in neighborhood quality when they use their vouchers to move away from their original communities (Varady and Walker, 2003; Feins and Patterson, 2005; Comey, 2007). Voluntary mobility under the auspices of residential mobility programs is similar in some ways to that of regular vouchers, in that families choose to sign up for a subsidy, but programs can differ in terms of their restrictions about the neighborhoods families can move into. For example, the Gautreaux program required that families had to move to neighborhoods that had fewer than 30% African American residents, while the MTO program required experimental movers to relocate to census tracts with poverty rates that were 10% or lower. Recent research suggests mixed results as well for the long term destinations of families who participate in such mobility programs. For example, most of the residents who moved to more affluent and less segregated neighborhoods through the Gautreaux program in the 1980’s were still in safer, more racially diverse and more advantaged areas over a decade later (Keels, Duncan, DeLuca and Mendenhall, 2005). The recent MTO interim impacts report suggests that families in the experimental and Section 8 groups had success in initially relocating to lower poverty neighborhoods, and that while the improvements narrowed 4-7 years later, many families were still in areas with much lower poverty rates than their original public housing communities (Orr et al, 2003). However, the program was less successful in helping families move to less racially segregated neighborhoods (ibid).

### *Who Moves and Where?*

For some time, researchers have incorrectly assumed that mobility is very common or increasingly prevalent among American families (Fischer, 2002) and demographers have noted that average national mobility rates have actually declined over the last century (Fischer, 2002; Cadwallar, 1992; Rodgers, 1987; Schacter, 2004). Generally, when white individuals with high levels of education do move, they tend to move longer distances to attend college or start new jobs (Fischer, 2002; Schacter, 2004). Whites almost always move between white neighborhoods and between non-poor tracts (South and Crowder, 1997; 1998). Mobility occurs among the poor in part because they are more likely to be renters (Schacter, 2004; Stokols and Shumaker, 1982). It is also well established that the youth from poor minority families move more often than other children and they are more likely to attend multiple schools than more advantaged peers (Astone and McLanahan, 1994; Pribesh and Downey, 1999; DeLuca and Estacion, 2005). For such students, mobility may add to their risk, coming from non-intact families, having parents with little education, and themselves having poor academic histories (Alexander, Entwisle & Dauber, 1996; Temple & Reynolds, 2001).

Historically, African Americans' lives have been characterized by high levels of mobility and migration (Tolnay, 2001; Lemann, 1991), and black families are less likely to convert human capital into desirable neighborhood amenities such as low crime and other resources (Alba, Logan and Bellair 1994; Massey and Denton, 1987; Logan and Alba, 1993, 1991). They have difficulty translating economic resources into housing, and blacks are also much less likely to turn residential dissatisfaction into a move (South and Deane, 1993; Crowder, 2001). This leads to the common finding that when poor black families make residential changes, they move into white areas less often and exit white areas more often than white families (South and Crowder, 1997; Gramlich, Laren and Sealand, 1992, Massey, Gross and Shibuya, 1994). Recent research has demonstrated that blacks also have a high rate of moving into poor neighborhoods once they have been in a low poverty neighborhood, suggesting that blacks' tenure in low poverty areas is precarious (South, Crowder and Chavez, 2005). Additional stratification mechanisms, like housing discrimination and predatory lending also determine where poor black families reside (Charles, 2003). However, many researchers agree that we do not know enough about the causes of poor mobility and selection into neighborhoods (Rossi and Shlay, 1982; Shumaker and Stokols, 1982; Charles, 2003; DeLuca, 2006).

### *Does Moving Affect Youth Educational, Psychological and Behavioral Outcomes?*

As Shumaker and Stokols (1982) point out, "moving, per se, is not necessarily bad for people or places, and staying is not necessarily good" (p. 2). However, most research concludes that mobility has negative effects on many educational and developmental outcomes. Educational researchers have established strong links between residential mobility and academic performance, such as grade retention and test scores, and have found that *multiple* moves are particularly detrimental for schooling outcomes (Rumberger, 2003; Ream, 2003; Pribesh and Downey, 1999; Tucker, Marx and Long, 1998; Ingersoll et al, 1989; Wood et al, 1993; Straits, 1987). Residential mobility is also associated with longer term educational deficits such as high school dropout (Haveman et al, 1991; Teachman et al, 1996; Rumberger and Larson, 1998; Coleman, 1988; South et al, 2005; Astone and McLanahan, 1994; Hagan et al, 1996), although such effects may be conditional on age (Swanson and Schneider, 1999; Haveman et al, 1991; Ingersoll et al, 1989).

Given the demonstrated importance of home for young people (cf. Fischer, 1982; Wells, 2005; Evans, Saltzman and Cooperman, 2001), developmental psychologists and medical researchers have tested theories of stress and coping (cf. Pearlin et al, 1981) by studying whether residential mobility affects youth mental health, overall psychological functioning and behavior. A wide body of work shows that youth who move exhibit lower levels of social functioning and interpersonal adjustment and as well as higher rates of behavioral problems (Adam and Chase-Lansdale, 2002; Vernberg, 1990; Simpson and Fowler, 1994; Brown and Orthner, 1990). Even more alarming, frequent residential instability is related to higher levels of depression and stress, increased probability of suicide, and higher rates of psychiatric hospitalization (Beautrais and Mulder, 1996; Mundy et al, 1989; Wood et al, 1993; Kroger, 1980, 1991; Hendershott, 1989; Raviv et al, 1990; Haynie, South and Bose, 2006;). Additional research has linked moving to delinquent behavior, such as violence, substance use or early sexual intercourse (Haynie and South, 2005; South, Bose and Haynie, 2006; Stack, 1994; Tucker, Marx and Long, Hoffman and Johnson, 1998).

### *When is Mobility a Good Thing?*

Despite the evidence that mobility harms young people, moves to better neighborhoods might eventually provide opportunities for improved educational outcomes and development, especially if origins are particularly disadvantaged. Moves to better schools might attenuate initial disruptions and improve outcomes in the long run, if teachers and programs are a better match for students' strengths and weaknesses (Hanushek et al, 2004; Swanson & Schneider, 1999). Safer neighborhoods and schools might increase school attendance and decrease delinquency, since less energy is spent worrying about peer threats. Youth can make new friends, escape detrimental environments and even become flexible at handling new social situations.

Since low income and minority families rarely relocate to more advantaged neighborhoods (South and Crowder, 1997), we rely on evidence from residential mobility programs that allow for more radical neighborhood change via random and quasi-random assignment of low-income families to better areas. The Gautreaux program, for example, followed families who moved from public housing to the affluent suburbs of Chicago. Such improvements in neighborhood conditions enhanced children's educational outcomes, such as high school completion and college attendance (Rubinowitz & Rosenbaum, 2000) as well as family economic outcomes and long-term neighborhood conditions (Keels et al, 2005). However, the effectiveness of such programs for adolescents is mixed. Recent work suggests that boys who moved to the suburbs with the Gautreaux program were less likely to be arrested, while girls were more likely to be arrested (Keels, 2007). The experimental Moving To Opportunity program (which placed randomly selected public housing families into low poverty census tracts in five cities and included control groups) has also shown contradictory results, as female adolescents experienced some positive effects of moving to low poverty neighborhoods on their mental health, while boys demonstrated higher rates of delinquency (Kling and Liebman, 2004; Orr et al, 2003; Kling et al, 2004; Kling, Ludwig and Katz, 2005). Studies also found mixed results when comparing the effects of these programs on parents' well being and economic self sufficiency, which is also likely to condition the effect of moving on youth outcomes. Women who moved to less segregated and more affluent neighborhoods experienced some reductions in welfare use and increases in time employed (Mendenhall, DeLuca and Duncan, 2006), but mothers who moved to low poverty neighborhoods with MTO did no better than control group mothers (Orr et al, 2003). However, these residential mobility studies do not factor in the disruption caused by moving, or interactions of mobility effects with family and school context. This leads to some problems interpreting their effects on outcomes, since it is hard to know how much of what happens to youth after a move is a function of the new neighborhood, or a function of moving itself.

### **CONTRIBUTIONS TO EXISTING WORK**

The research literatures referenced above have operationalized residential mobility as largely independent of school change and family instability. In residential mobility research, moves are merely counted or tallied, but the nature of these moves—what causes them, which household members move each time, and how the family changes—are mostly overlooked. In neighborhood effects research, mobility is rarely discussed, or the number of moves is added as a control variable to adjust for “unobserved” family characteristics or neighborhood stability. In the work on residential mobility experiments, only *changes* in neighborhood quality are examined. The actual process of moving and how it affects the way neighborhood level characteristics can be interpreted is left out of the analyses. These considerations are important because low income families sometimes disperse children across the homes of many family members when resources are low and new units are too small. This suggests that not only are neighborhood environments changing, but so is household composition, both having different implications for youth social development, emotional stability and family dynamics. Additionally, most research measures residential mobility in only one way—residential change, school change, family change, or neighborhood change, but not usually together, despite the fact that each disruption might matter differently for youth development. In my proposed study, *I examine disruption in the combined contexts of family, school and neighborhood as they account for the effect of residential mobility.*

Most research measures mobility at only one point in time, rather than looking at the patterns of school, family and community instability that accompany residential mobility across adolescence. Mobility, by its nature, complicates the use of one time measures. Although there is debate about the merits of “window estimates” relative to multiple measures, recent work suggests that there are important advantages to the latter (cf. Wu and Thomson, 2001; Kunz et al, 2003; Jackson and Mare, 2007; Wheaton and Clarke, 2002; Wolfe et al, 1996) for accurately capturing childhood environment. *In the proposed work, I construct mobility measures at multiple points in time across adolescence.*

Research on neighborhood effects doesn't take mobility into account as an influence on youth outcomes that might explain why or how new neighborhoods matter (or as a factor in determining new neighborhood location). *I consider both context and mobility in my proposed analyses.*

Research on mobility programs doesn't take mobility itself into account, despite the fact that the processes that facilitate or impede mobility are also likely to affect neighborhood location as well as interact with the effects of neighborhood on youth. Research on such programs shows that participating families can make gains in neighborhood quality, but are less likely to experience large improvements in other domains, such as economic self sufficiency and children's schooling (DeLuca et al, 2007). Poor families have a constellation of disruptions already at work that might diminish the potential for improved neighborhoods to matter, or make the improvements less effective. In fact, policy induced mobility might make it worse. For example, thousands of families have moved as a result of the HOPE VI program, and we need to know more about how these moves affect poor youth in our metropolitan areas. *In my proposed analyses, I use data from mobility programs to examine how family context interacts with mobility decisions to affect adolescent outcomes.*

Much previous research also does not take into account that many unobserved factors may contribute to mobility as well as adolescent outcomes. It is particularly likely that some unobserved characteristics related to family instability or individual youth traits might be operating as well. *I improve upon previous work by using methods appropriate for taking such factors into consideration, such as propensity score matching methods.*

Finally, most research on mobility assumes that the process works the same way for poor and middle class families, and therefore, little research explicitly examines this process for poor families. Choice models might work for middle class families who can afford the search process, but not for poor families whose lives are characterized by higher levels of uncertainty and lower resources. Currently, the literature suggests that mobility is another characteristic of single parent families and poor families, and doesn't push the issue further. This literature comes up short on three important counts: first, outside the arena of mobility programs, family change and residential mobility are usually considered as negative outcomes, although such changes may have a positive effect on youth; second, current literature also assumes that families choose to move, which is not always the case for poor families; and third, the intersection of poverty, kin networks and mobility decisions is overlooked despite prior research in the sociology of the family, especially the study of black families, suggests that these are intertwined aspects of poor minority families. *In this study, I propose to examine variation in mobility for a large sample of poor youth and supplement these analyses with in depth interviews to better understand how mobility operates in the lives of the poor.*

## **THEORETICAL FRAMEWORK: HOW DOES MOVING MATTER?**

There are several ways to understand the links between residential mobility and the fortunes of young people. First, mobility might affect the social relationships that help determine outcomes. Second, mobility is often coincident with other family and school disruptions known to have detrimental effects on adolescent behavior and well being. Third, mobility determines neighborhood location and there is an established literature associating neighborhood effects and high school dropout, delinquency and health. To guide my research questions and develop hypotheses about why residential mobility might matter under certain conditions, I rely on two primary theoretical frameworks developed across the disciplines of sociology, education, human development and psychology. Here, the *social capital* and *stress process* frameworks are most significant in suggesting the hypothesized relationships between mobility and youth outcomes, and in particular how these relationships are affected by the important social contexts of family, school and neighborhood. Neighborhood effects traditions and sociology of the black family also inform these hypotheses. These frameworks motivate all of the research questions, but in particular shape my hypotheses for Aims 4 and 5. Aims 1-3 serve to describe the phenomena of residential mobility, examine patterns for poor and non-poor youth, and to see whether the determinants of mobility differ across unique samples. Aims 4 and 5 look more closely at how mobility experiences influence important measures of adolescent well being and attainment at the transition to adulthood.

Vast literature on **social capital** has suggested that young people benefit from the resources inherent in their relationships with adults, like parents and teachers. For example, Coleman's seminal work suggests that students who change schools as a result of moving are more likely to experience high school dropout in part because of the loss of important social ties (1988; 1990). In particular, he argues that mobility is significant because it affects three forms of closure—parents are less likely to know the teachers in a new school, parents are less likely to know new parents and the child is less likely to know the parents of other youth in the school (1990, p. 596). These relationships are significant for understanding educational attainment, mental health and whether youth engage in delinquent behaviors (Coleman, 1988; Hagan et al, 1996; Briggs

1997, 1998; Pribesh and Downey). Additional work has confirmed that the effects of mobility on schooling outcomes is in part due to the loss of relationships with school personnel, parents and peers (McLanahan and Booth, 1989; Pribesh and Downey, 1999; South and Haynie, 2004). Ream (2003) shows that the higher rates of residential mobility among Mexican youth help explain their diminished educational attainment, and that this operates through decreasing the stability of their social networks.

Residential mobility might also matter because it occurs alongside other important transitions, such as family structure changes and school switching, which are stressful events in adolescence (Simmons et al, 1987; Kroger, 1980). Mobility might affect the mental health of adolescents because of the stress involved in becoming separated from loved ones, or conversely, by becoming too close to many other family members. Studies generally find that mobility rates are higher among children of divorced families or stepfamilies (Speare and Goldscheider, 1987; McLanahan and Sandefur, 1994; South, Crowder and Trent, 1998). Given that sociologists have widely documented the effects of family instability and divorce on the outcomes of children (cf. Amato, 2000; Morrison and Coiro, 1999; Wu, 1996; Wu and Martinson, 1993), residential mobility could have its effects on youth through these additional sources of instability and change. Astone and McLanahan (1994) find that mobility helps explain the differences in dropout between intact families and other family structures, and Crowder and Teachman (2001) find that the effects of childhood living arrangements on dropout and teenage pregnancy are reduced once mobility is considered. Residential mobility might also lead to school change, which could have even more significant effects on educational attainment and delinquency. While most studies do not separate the effects of school and residential change, the research to date suggests that the school and residential mobility may have both interactive and independent effects (Pribesh and Downey, 1999; Swanson and Schneider, 1999).

To explain these connections between mobility and other transitions, **stress process frameworks** suggest that moving is a stressful event for both families and adolescents, especially if there is little control over the process or if it is unanticipated, as are many moves among the poor (cf. Pearlin et al 1981; Agnew, 1992; Stokols and Shumaker, 1982). Such a disruption might make it difficult for youth to achieve desired goals, such as the maintenance of friendships and school ties, or family routines may be stressed. Moving may exacerbate the already significant events occurring in other domains of a youth's life, such as school performance, friendships and puberty (Simmons and Blyth, 1987; Pearlin et al, 1981; Agnew, 1992; Raviv et al, 1990). Moving could also lead families "double up", which limits privacy, and creates excessive distractions that can make sleeping and concentrating difficult (Furstenberg and Cherlin, 1991; Gove et al, 1979).

These two perspectives suggest several sets of hypotheses related to how mobility interacts with other domains or social connections. First, the effects of residential mobility might be accounted for by the changes it brings about in important social contexts. **I expect that the effects of residential mobility could be largely accounted for once I consider the subsequent family structure changes, school switches and change in community that accompany the move.** For example, youth might be more likely to dropout of school because there are fewer adults who know them in the new community or school and therefore, there will be less monitoring of academic engagement. Similarly, youth might be more likely to engage in delinquent behavior if neighbors, teachers and parents don't know each other well enough to communicate about recent changes in behavior. Youth might be more prone to injury or illness if there are fewer adults or peers around to protect them or attend to minor physical problems before they become serious.

Second, if residential mobility has negative effects on youth development because of the stress it induces via family disruption, school switching or neighborhood change, I hypothesize that **these effects will occur through (be mediated by) increased levels of psychological distress and youth reported loss of social connections.** By combining the social capital and stress process frameworks, I hypothesize another possible process. Some research suggests that good relationships with parents or other significant adults might act as buffers to offset the effects of moving (Hagan et al 1996; Wheaton, 1988). Research on risk and resilience implies that some protective factors (like parents and schools) can help individuals respond to stressful situations and enhance their coping abilities (Rutter, 1987; Jarret, 1997). Extending this, it is possible that stability in some domains might also protect against the effects of mobility. For example, youth may move, but not change schools or move out of the community; another possibility is that youth move and the whole family moves too. Therefore, **I expect that any negative effects of residential mobility on youth outcomes might be reduced by stability in other domains, or offset by supportive social connections, such as strong relationships with parents or beneficial attachments in a new neighborhood.**

Drawing upon research on African American families, I further hypothesize that extended kin networks may be connected to decisions about residential mobility and this link may have implications for youth development (cf. Burton, 1997; Stack and Burton, 1993; Burton and Jarret, 1999). For example, Stack (1974) writes, "...how misleading it is to regard child keeping apart from residence patterns, alliances and the interpersonal relationships of adults". Researchers note that sharing

residential resources can create strong interdependencies among family members, and heavy reliance on such personal networks to “get by” can interfere with development of the kinds of networks needed to “get ahead” (MacDonald and Richards, 2007; Dominquez and Watkins; 2003; Briggs, 1998). Jarret and Burton (1999) also note that the pace of change in black family structure, as well as the blurring of roles in the age hierarchy, have serious consequences for how youth are cared for and how behaviors are monitored. This implies that the more fluid family structure of poor black households may either make residential mobility less disruptive and more likely to facilitate positive outcomes for young people, or it may create additional stress and instability (Stack, 1974). Therefore, in my interviews with the heads of households in poor communities, **I hypothesize that residential mobility decisions will be affected quite strongly by family networks and frequent household composition change. I also expect that it will be necessary to consider the joint effects of kin ties, resources and residential mobility on youth well being in poor areas.**

Residential mobility may also have its effects on youth outcomes because moving determines neighborhood contexts, and neighborhoods have been associated with the educational attainment, delinquency and health outcomes of young people. As an extension of social capital and stress process frameworks, the neighborhood and school effects research tradition has developed an additional set of theories about the effects of communities on adolescents. Ranging from theories of relative deprivation to collective efficacy, the extent to which a residential move results in a neighborhood with more or fewer social resources can have implications for adolescent development. The characteristics of disadvantaged neighborhoods (such as racial segregation, high poverty levels, high levels of unemployed adults, and high levels of crime) affect high school dropout (Crane, 1991; Aaronson, 1998; Crowder and South, 2003) and teenage childbearing (Crane, 1991; Ensminger, Lamkin and Jacobson, 1996), behavioral problems (Brooks-Gunn et al 1993, Elliott et al, 1996) and drug use (Case and Katz, 1991). Disadvantaged neighborhoods also diminish educational attainment and other schooling outcomes of middle to older adolescents in part via collective socialization and collective efficacy (Catsambis and Beveridge, 2001; Garner and Raudenbush, 1991; Connell and Halpern-Fisher, 1997; Card and Rothstein, 2005; Ainsworth, 2002; Sampson et al, 2002). Neighborhoods can also factor into youth expectations about work, drug use, and college attendance (MacLeod 1987; Lillard 1993; Sullivan, 1989). More recent work has also begun to link disadvantaged neighborhoods with diminished health outcomes (cf. Acevedo-Garcia et al, 2003). This suggests that neighborhood context provides a backdrop for a complicated set of life decisions about the tradeoffs among work, school, and delinquency (Gruber 2001; Galster and Killen 1995). By considering the neighborhood effects literature, **I hypothesize that any negative effects of residential mobility may be offset by appreciable increases in neighborhood quality.**

While these hypothesized relationships might apply to most youth, I do expect that the results might differ if we considered samples of youth who are particularly disadvantaged and relocate with few resources, or those who may face involuntary mobility and therefore move under unexpected or constrained conditions. As I describe below, I can examine how these processes work not only for a nationally representative group of youth (the NLSY97 cohorts), but also for very poor samples of youth (the youth from the MTO program and the Mobile Youth Survey). Both the MTO and MYS samples provide an additional set of conditions under which to test my hypotheses. The MTO youth come from families who volunteered to get the chance to relocate and many experienced such moves to better neighborhoods. The MYS youth come from poor families, most of which do not experience the opportunity to relocate with vouchers and move for a wide variety of voluntary and involuntary reasons. The MYS youth also provide an opportunity to examine these processes for youth whose families were forced to relocate because their projects were being demolished under the HOPE VI program.

## **DATA SOURCES**

I use several different sources of data for my project, which have various strengths and weaknesses (additional data source details are in Appendix A). They all share two common strengths—they allow for the tracking of youth themselves, not just households, and they all have measures of predictors and outcomes at multiple points in time, a component encouraged by scholars (Furstenberg and Hughes, 1997). Both of these components allow for a more accurate representation of adolescent trajectories. For example, the NLSY follows youths regardless of household changes, the MTO address files include mobility data for all members of the baseline household, regardless of family changes, and the MYS collects annual surveys of youth, regardless of household relocation or change. This is an improvement over much current research which depends on the report of household heads for mobility data, making the assumption that households remain intact over time.

In addition, my datasets range in their ability to answer questions for certain subgroups of youth. For example, national datasets like the NLSY97 are representative of a wide variety of youth and allow for generalizability, but suffer from the exchangeability problem (Oakes, 2004). Local datasets may produce findings that are less applicable in other settings, but allow one to remove some sources of hidden bias. Observational data allow for the exploration of natural patterns, but lacks

the advantage of experimental data for causal inference. Quantitative data allow for the estimation of population parameters from large samples, while qualitative data provide opportunities to examine social processes and their contingencies. Census data allow for comparability over sites, while GIS and mapping techniques allow for flexibility in interpreting spatial patterns and social outcomes. In my project, I try to employ all of these various sources of data, since no one data set can adequately answer any of my research questions. My datasets cover a variety of metropolitan areas, as seen in Table 1, and Tables 2-5 show how the three data sets compare in terms of sample size and descriptives and lay out the data components across each source and examples of key outcome measures.

#### National Longitudinal Survey of Youth 1997 (NLSY97)

The NLSY97 is a nationally representative longitudinal survey of 8,984 youth who were 12 to 16 years old as of December 31, 1996. The survey includes annual data on youth schooling, employment and various transitions to adulthood. With this data source, I can construct national measures of residential mobility on a yearly basis, total moves since age 12, migration data, schooling mobility on a monthly basis and family structure changes on a yearly basis. I can also connect restricted geocode data to the Census to characterize neighborhood change. Monthly schooling data (including start and stop dates, type of school and gaps) is collected in cumulative roster format, so I know what the school trajectory was, even if the youth missed a wave. This helps identify school mobility and high school dropout. Delinquency is collected with a special confidential laptop procedure to ensure more accurate reporting of sensitive information, and is also collected every year. Youth were asked annually about their involvement since the last interview in six types of delinquent offenses: (1) theft of something worth less than \$50, (2) theft of something worth more than \$50, (3) vandalism, (4) other property crimes, (5) aggravated assault, and (6) selling drugs. For each offense type, respondents are asked whether they committed it since the last interview and, if so, how many times they committed it. Annual self reports of substance use are also included. Physical health outcomes are measured with annual self reports of general health, whether youth was ever injured or experienced a serious illness, and whether the injuries or illness required that the youth visit the doctor's office. Many controls exist for family background and individual youth characteristics. The annual nature of the data allows for panel estimation techniques, the sampling allows for subgroup analyses for poor minority youth. Where the data fall short is that there are no measures of psychological or social processes that might show how mobility affects outcomes and no measures of mental health. It is also hard to compare the outcomes of youth from one city to the next. These two concerns motivate my use of the Mobile Youth Survey, which contains psychological measures and involves a local homogenous sample (see below). Another concern is that while there are poor youth in the sample, there may not be much variation in their mobility patterns or the kinds of communities they relocate to. This motivates my use of data from the Moving To Opportunity program, which induced variation in mobility patterns and locations by providing families a chance to move with a housing voucher. The NLSY analyses also set up the use of MTO and MYS because the latter are high poverty samples, and MTO has policy induced mobility, which is much less common to observe in a national sample. For example, only about 2% of US households receive a voucher each year, making it hard to come to valid conclusions about the effects of this kind of mobility on youth from a national dataset.

#### Moving To Opportunity (MTO)

*Interim Impacts Survey, 2002*

The MTO interim follow up survey data allow me to examine mobility patterns for a high poverty five city sample who participated in a random assignment housing voucher experiment. Beginning in 1994, low-income residents of public housing located in extremely poor neighborhoods voluntarily applied to MTO. Residents in public housing or Section 8 project-based housing located in extremely poor neighborhoods in the five cities were eligible to apply to the MTO program. They were then randomly assigned into one of three groups. One group, the MTO *experimental* group, received a Section 8 voucher that would allow them to rent an apartment in the private market, but only in census tracts with 1990 poverty rates of less than 10 percent. This group also received housing counseling to assist them in relocating. Another group received a *Section 8* voucher with no geographical restrictions. Finally, the *control* group received no new housing assistance but could continue to live in public housing or apply for other housing assistance that became available to public housing residents in the interim (usually a Section 8 voucher). There is rich multi-source data on address spells for all family members, even if only one member relocates. This allows for the identification of mobility patterns that are even more frequent than yearly, as well as the household composition changes that accompany mobility. The interim data also provide youth schooling history since baseline, detailed neighborhood and housing conditions, and motivations for moving. The experimental nature of MTO allows me to compare the long term residential mobility trajectories of the families who did and did not receive vouchers and then see how patterns of moves change after voucher receipt. There are also multiple outcomes to characterize youth educational attainment and delinquency, although not on a yearly basis. At the interim survey, I have measures of educational outcomes, such as whether the youth ever dropped out of high school and was ever suspended or expelled. The measures for delinquent outcomes include indices for whether youth ever carried a gun, was a

member of a gang or stole property. Substance use is also reported. Health outcomes are measured by self reports of general health, injury in the last year and whether youth was sick or hurt bad enough to see a doctor. Mental health measures include reports of anxiety, depression and psychological distress.

#### *Baltimore MTO Interviews, 2003-2004*

I will also use supplemental interviews I helped to collect from a subsample of 149 MTO Baltimore families in 2003-2004. Several questions at the beginning of the interviews asked about residential history and mobility after MTO participation, as well as unit quality, landlords and neighbors. These interviews allow me to examine why program moves did or did not translate into better neighborhoods and understand the selection of new neighborhoods. I can also understand the family and youth dynamics that lead to mobility and in part determine the nature of housing choice, and how mobility is used by parents as a strategy for family and youth well being.

#### Mobile Youth Survey, 1998-2006 (MYS)

In 1998, researchers at the University of Alabama targeted the 13 most impoverished neighborhoods (based on 1990 census data) in the Mobile, Alabama Metropolitan Statistical Area (MSA) for a study of adolescent risk behaviors. This population is extremely poor, with most adolescents living in census tracts with poverty rates over 50%. The Mobile Youth Survey provides another appropriate data set to examine the effects of mobility and neighborhood change on youth outcomes. The staggered longitudinal cohort design with 10-18 year olds followed yearly, and new sample of 10-18 year olds added every year permits developmentally appropriate analyses and the estimation of factors influencing trajectories of behaviors. Few studies have yearly, multiple item reports of delinquent behavior and exposure to violence. The MYS also provides for quasi-experimental comparison groups (youth who moved because of HOPE VI demolitions and those who remained in public housing), allowing me to examine both endogenous and exogenous reasons for neighborhood change and the subsequent effects of mobility on youth educational and developmental outcomes. Additionally, the study is a neighborhood based study, not a school based study, which means that we are better able to follow youth who drop out of school (or aren't in school on a given day). In addition, these youth are the most likely to participate in delinquent activities (Macallum and Bolland, 1999). The quality of the data is high because teams of summer undergraduate interns administer the surveys in community centers and work one on one with youth who are having difficulty filling out the survey booklets.

The Mobile Youth Study complements the MTO and NLSY data because the MYS has annual measures of a wide variety of youth recruited from 13 poor neighborhoods. Since 1998, over 8000 youth have participated and almost 3000 have four or more waves of data. A key strength of the MYS is that I can examine more closely the most common forms of mobility among the very poor, since so few of them receive housing subsidies. I can compare subgroups of youth who have lived in public housing for long periods of time with youth who live in poor non-public housing neighborhoods. The data also contain multiple sources for address data and mobility—the Mobile City Housing Board records, the Mobile County school records, as well as yearly self reports of address. Educational and delinquent outcomes, such as high school dropout, suspension, expulsion, school violations and arrests (arson, vandalism, possessing alcohol or drugs) are measured with the administrative data from the Mobile School Board and juvenile court records from the state of Alabama. Additional measures of substance use and whether youth have been arrested are self reported annually, as are general measures of physical health, such as injury, illness and doctor visits. These data also include psychological and social process mediators that might link mobility to adolescent outcomes, such as sense of hopelessness, stress, self efficacy and neighborhood attachment. Mental health outcomes are measured with some of these same indicators at later waves. Last, the MYS covers a geographic area that is very different from those commonly studied in the literature. While some research has examined Southern rural poverty, many *cities* in the deep South have been left out. Information about these urban areas is needed more than ever, because recent events, like Hurricane Katrina, have shown some of the particular vulnerabilities of low income minority families in these areas (Briggs, 2006).

Importantly, all of the MYS youth were recruited from the same neighborhoods, and while some eventually move to other non-target areas, most remain within the Mobile MSA. The advantage of such data, relative to a multi-city or national survey is that by the nature of its homogeneity, the MYS controls for some hidden bias. In a recent article, Paul Rosenbaum notes that in the absence of randomization, “reducing heterogeneity... reduces both sampling variability and sensitivity to unobserved bias...increasing sample size reduces sampling variability...but does little to reduce concerns about unobserved bias.” (p. 148-151). The MYS has families living in areas that are extremely poor and are much more likely to be subjected to involuntary moves. There are two HOPE VI sites in the MYS, and I have pre- and post-measures of the outcomes for youth from these demolition sites and can compare them to youth who did not experience this kind of mobility.

## ANALYSIS PLAN<sup>1</sup>

**Aim 1: To map out detailed patterns of youth residential mobility and how mobility relates to family change, school change, and neighborhood context.**

### *Research Questions:*

What kinds of disruptions does residential mobility involve? How often is it linked to neighborhood change, family structure change and school change?

Do patterns of mobility vary by age, gender, race, and socioeconomic status?

Do patterns of mobility look different for youth whose families have been affected by housing policies?

### General analytic strategy:

To carry out this aim, I will use basic descriptive statistics, mapping techniques and latent class analysis to examine patterns of mobility across adolescence and for youth from different socioeconomic backgrounds. First, I will look at frequency of residential mobility per year, as well as the additional disruptions that may occur (i.e., household composition change, school change, neighborhood change, neighborhood quality change). I will also examine the prevalence of these events across years with sample proportions. I will also calculate how many sample members experienced one change, two changes, etc. to come up with an “instability index”. I will look at means and variance for these variables subgroups by gender, race/ethnicity, age, parental education level and income quartiles. I will carry this out for all three data sets. The NLSY97 descriptives allow me to characterize patterns of mobility for a national sample of youth, and will serve as a point of comparison as I analyze the same patterns for the high poverty samples in the MTO and MYS data sets. The MTO sample allows me to examine mobility and instability among a sample of youth whose families were interested in moving to a better neighborhood through a voucher program. The MYS data allow me to examine mobility among an observational, high poverty sample of youth from one metropolitan area, half of which started in public housing. An additional feature of mobility for the MYS sample is that youth from two target neighborhoods experience forced relocation because of HOPEVI demolitions.

In addition to the descriptive data, I will employ hierarchical latent class models to examine the pattern of multidimensional (i.e., residential mobility, familial, school, neighborhood) changes over time. The advantages of the HLCM are similar to common cluster analysis approaches, in that I can construct typologies to examine the full spectrum of transition patterns in the data (McCutcheon, 1987; Vermunt, 2003). I can use these methods for all three datasets, since I have measures of each kind of mobility at several points in time. The latent class models have the advantage of using all of the information in the data to estimate class probabilities, and reduce measurement error. HLCM can be treated as either a heuristic that guides the development of mobility measures or more formally as a basis for constructing a latent variable for “mobility typologies” to be used in the subsequent analyses. In other words, I can use the HLCM to see how I might want to construct the mobility pattern variables or I can use the results from these models to assign youth to different classes and then use the class indicator in the predictive models below. See Appendix B for an example of latent class analysis for one wave of the MTO data. Types of classes I expect to see might include: chronic movers with other instabilities, very stable families, youth whose most frequent disruption is family level, poor youth for whom neighborhood change occurs, but not household disruption, etc.

In addition to the quantitative indicators, I will use ArcGIS to map the changes each year for poor youth, using the MTO and MYS samples (similar maps cannot be made for the NLSY97, since the data represent all geographic areas in the US). I

---

<sup>1</sup> All quantitative models described in Aims 2-4 will include a set of baseline covariates, including youth race, age, gender, baseline family structure, baseline family income, receipt of free lunch, duration in baseline neighborhood and lagged baseline controls for all dependent variables and mediators. A more detailed description and data sources for the measures are included in Appendix A, and descriptions of measures are included in Tables 2-5. The standard errors of model estimates will also be corrected for the clustered nature of the sample in both the MYS and MTO samples, since youth are nested in neighborhoods at baseline. For all analyses, I will be careful to properly model the timing of processes and outcomes, to make sure that the moves and disruptions occurred before the outcome of interest.

will map the individual address locations against the backdrop of relevant census indicators, such as racial composition and poverty rate. For the MTO families, mapping the moves over time allows me to see whether, for previous public housing residents, the “shock” of the voucher receipt changed the pattern of moving for the experimental and section 8 voucher recipients, relative to the control groups (I can also make comparisons among the five cities, which differ in terms of rental markets and the location of poor areas relative to the central city). I can examine whether the act of moving is associated with gains in neighborhood quality over time, as suggested by the latest round of the HOPE VI Panel study results (cf. Comey, 2007). For example, the Section 8 group might make better moves over time, as each new move is a “stepping stone”, while the experimental families might make large initial gains and then move back to neighborhoods where they are more socially comfortable or where there are more available rental units and cheaper utilities.

**Aim 2: To identify the family and youth level factors that predict mobility, and whether the factors that predict mobility differ across family socioeconomic status.**

**Aim 3: To identify how housing interventions affect mobility patterns for poor families.**

*Research Questions:*

Which youth, family and neighborhood characteristics predict moving?

Are the predictors of mobility different for very poor families?

How does housing policy (i.e., low poverty vouchers, HOPE VI) affect mobility patterns? Does it increase or decrease mobility?

General analytic strategy:

My second aim moves from characterizing the nature and prevalence of mobility patterns among youth from different backgrounds to understanding what kinds of background characteristics lead to mobility and whether the predictors of mobility are different for youth from poor families, relative to more advantaged families. To do this, I will predict the different combinations of mobility I created in Aim 1 (e.g., residential mobility only, residential and school mobility, residential, school and family change) with individual youth, family and neighborhood characteristics. I will use logistic regression for binary outcomes, such as residential mobility (1=yes; 0=no), negative binomial regression for the prediction of the instability count index (total number of disruptions could be 0 through 4) and multinomial logistic models to compare the odds of different types of mobility combinations (e.g., residential move or school change vs. no move). Where possible (i.e., when patterns are consistent across samples), I will examine similarities and differences in predictors of mobility across the NLSY and MYS samples. For the MTO data, I will predict mobility patterns using both treatment group assignment (control, Section 8 and experimental, with complier distinctions) and baseline data on family and youth characteristics. An interesting possible comparison here is whether the random assignment of vouchers affects the long term mobility patterns and family instability experienced by the MTO families, relative to control families. Another comparison would be the mobility patterns of the MYS youth from HOPEVI sites relative to the patterns and instability of youth who stayed in public housing projects or moved for other reasons from private housing neighborhoods.

**Aim 4: To identify how mobility affects adolescent educational attainment, delinquency and health, once family, school and neighborhood contexts are considered.**

*Research questions:*

Which types of mobility affect educational, delinquency and health outcomes? Are some types of mobility more detrimental than others?

Does stability in some domains buffer possible negative effects of residential mobility?

To what extent are mobility estimates influenced by unobserved heterogeneity in the sampled populations? Does this vary by type of population?

To what extent are mobility effects mediated by psychological processes, like anxiety or hopelessness?

#### General analytic strategy:

The research questions in Aim 4 move toward understanding how mobility affects important indicators of youth well being, such as high school dropout, engagement in delinquent behavior, mental health and physical health. To begin, I will use simple models that predict these outcomes with indicators for whether youth ever experienced each type of mobility, starting with residential mobility to assess its independent association with each outcome and then adding each type of additional disruption (residential, family, school, neighborhood) to see how or whether they can account for these relationships. I will also explore models that use dummy variables for all possible “ever” combinations (eight total, with no moves as reference). I will then move to models that use the measures of mobility patterns as predicted by the latent class models, and see whether the results change substantively. To test for possible subgroup differences, I will include interaction terms for gender and age (plus race and SES in the NLSY, given that the sample is more heterogeneous than the other two).

In an additional set of analyses using the MYS, I will explore the mediating processes that might condition the effect of mobility on outcomes. For example, I will create a set of models that explore whether psychological processes (such as stress, sense of self worth and hopelessness), the quality of family relationships (such as youth rating of caregiver support) and neighborhood attachment (such as youth report that she can turn to someone in the neighborhood for help) function as mediators for the effects of mobility. For example, if mobility has an effect on delinquency, net of background characteristics and previous delinquency, it might operate through an increased sense of hopelessness, or the lost social ties in the community. On the other hand, it might be offset by supportive and close relationships with caregivers who provide a sense of stability during the stress of relocating. I will also examine the effects of mobility once the quality of the new neighborhood is considered, given the importance of neighborhood context for youth outcomes.

If I find that there are significant relationships between mobility and youth outcomes with the basic regression models, I will next turn to fixed effects models using time varying mobility measures to account for (time invariant) unobserved heterogeneity. These models assess whether within youth mobility matters once between youth differences are accounted for (Halaby, 2004; Allison, 2005). I can perform these analyses with both the NLSY97 and the MYS, given that I have multiple waves of data for both the predictors and outcome variables.

To further examine the possible causal effect of mobility, I will use two additional strategies. First, I will employ propensity score matching methods to compare the outcomes of MYS youth who did not experience mobility to very similar youth who did experience mobility. Second, I will take advantage of an exogenous cause of mobility, a HOPE VI demolition that forced families to move. These additional approaches allow me to deal with the problem of unobservable pre-existing differences between mobile youth and non mobile youth in ways that are considered more effective than methods employing only controls for observable characteristics.

Propensity score matching methods provide significant benefits over traditional regression analyses (Rosenbaum and Rubin, 1983). For example, they rely on the comparability of cases, which is often masked in regression models that rely on extrapolation, and allow for a more appropriate counterfactual design (Oakes and Johnson, 2006). The MYS provide a good opportunity to use propensity score matching, since the data includes a large sample of poor youth, a significant proportion of which experience mobility on a regular basis, and many youth of who do not experience mobility. Preliminary examination of the MYS data indicates that at least half of the MYS youth have relocated at some point during the eight waves, and 20-30% of the youth report a different mother figure between waves (37-48% report a different father figure)<sup>2</sup>. Another condition of the MYS that enhances its use for propensity score analysis is that the youth all originate from the same MSA area, and remain in that general area for most of the study. As mentioned in the data description, this reduces “hidden bias” that might accompany selection into different environments (cf. Rosenbaum, 2005), and also makes it likely that MYS youth are “exchangeable” (Winship and Sobel, 2004; Oakes, 2004; Oakes and Johnson, 2006). This is important for ensuring that there will be enough comparable cases for matching. To carry out these analyses, I will match youth on a series of covariates that are not affected by mobility itself, such as parental education, number of siblings, youth baseline delinquency, etc. and then estimate an “average treatment effect” to see whether youth who experienced residential

---

<sup>2</sup> Although I have not examined the school administrative records yet, I anticipate that there will also be a large number of school changes as well.

mobility were more likely to dropout, ever participate in delinquency or be arrested, ever report psychological stress or ever report experiencing illness or injury (propensity scores can only be used to assess dichotomous treatments).

My second advanced strategy is the use of the HOPE VI demonstration to test the effects of policy induced mobility on youth outcomes. I can compare youth who were forced to move out of public housing projects with youth who lived in adjacent projects that were not slated for demolition. In the first eight years of the MYS, several exogenous neighborhood changes have occurred to cause unexpected mobility among the Mobile youth and their families. In 2004, Mobile found out about that it had been awarded a HOPE VI grant to transform the public housing units that included the Orange Grove neighborhood. In the Winter of 2005, families were notified that they needed to move. In April 2005, the first families began leaving Orange Grove. Hurricane Katrina hit the coast of Mobile in August 2005 and spurred early mobility among many Orange Grove families. Families in the other HOPE VI site in Prichard city, Bessemer Homes, began moving out in 2002. By 2003 they were all empty, and between 2004-2005, the units were all torn down. When I visited in April 2006, these units were still being rebuilt, so no families had returned.

To utilize the HOPEVI sample, I will estimate models comparing developmental and educational outcomes for youth from one HOPE VI site (the Orange Grove housing projects) to youth in an adjacent non-HOPE VI housing project (Roger Williams Homes) who did not relocate (see Jacob, 2004 for a similar approach). However, I will do some additional analyses to make sure that these neighborhoods, families and youth are comparable across the two sites. To estimate the causal effects of residential mobility, I need to assume that the families who were forced to relocate are identical (a counterfactual) to the families who remain (see Jacob, 2004 for a similar approach).

**Aim 5: To understand the mobility process among poor families, specifically by exploring the decision making processes behind moving and how moving affects the social networks, institutional resources and family relationships that are important for youth development.**

*Research Questions:*

Why do poor families move?

How do poor families strategize about moving, and where do they get information from about where to live?

How do kin, social networks and information enter into the consideration of whether to move and where to move?

How does mobility affect social networks that are important for both parents and youth?

How common is it to disperse youth across households, with or without a move?

How do these processes change when moves are not voluntary?

General analytic strategy:

To answer the more detailed questions in Aim 5, I will use two sources of qualitative interview data—the interviews I helped to collect from the Baltimore site of the MTO program, and new interviews that I will collect in Mobile, AL with the heads of MYS families. I will use the MTO interviews as a foundation from which to design more detailed questions for the new data collection. I have interviews with 149 Baltimore families, and will analyze the interviews to explore themes around the original MTO move (or any early moves for the control families), subsequent mobility, kin networks, school switching and employment. My goal is to examine why some of the experimental movers did not translate the voucher receipt into stable residence in more advantaged neighborhoods, or why, once they relocated, they could not stay in such neighborhoods. I am in the process of examining these interviews to look at school choice, and early exploration is revealing the significance of family commitments, mothers' poor health and a lack of good information about the contexts that will enhance youth outcomes (DeLuca, 2007). The advantages of using the MTO interviews are two-fold: first, I can explore some of the hypothesized links between family characteristics and mobility for families who experienced an intervention, as well as examine how mobility decisions were (or were not) influenced by considerations of youth well being; second, I can use the MTO interviews as a foundation for the collection of new data in Mobile. When we collected the MTO interviews, there were only a few questions devoted to mobility, since the interview had to cover many other domains. Therefore, the interview data cannot answer all of the questions of interest in this proposal, and motivate the collection of interviews that are deeply focused on the mobility process itself.

In preparation for the new interviews in Mobile, I will implement a sampling design that first selects families of youth with high and low histories of mobility (as ascertained by administrative address sources), forced vs. voluntary mobility (as indicated by housing records for HOPE VI demolitions), as well as large and small families, who are likely to make different decisions about moves due to space considerations. I will administer a survey to one hundred of these selected families in year 2, and I will choose a sample of approximately fifty families for in depth interviewing the following summer. The survey helps me to select families whose report high and low patterns of mobility and families who reported that they planned to move in the following year. In appendix C, I include an example of a preliminary mobility questionnaire that I will use in Year 2. In year 3, I will carry out in depth interviews with this subsample of families and then re-interview them in Year 4 to capture repeat moves.

For this component of my project, I will rely heavily on my mentors, Kathy Edin and John Bolland, to help me with the design of the survey, design of the interview protocol and location techniques. Kathy has recent experience with residential mobility interviews and John is very familiar with the sample and neighborhoods. The funding award will also allow me to hire a research assistant, who will help me complete some of the interviews in the field. By conducting this data collection, I can see how voluntary and involuntary mobility affect families differently, and how decisions are made about where to move and, in some cases more importantly *who* to move. Given the significance of kin networks in low income black families, I will include several questions that address how these relationships enable or inhibit mobility. I can also assess the extent to which residential mobility is used as a strategy to enhance child well being (Myers, 1999), or is subject to last minute decisions and outside forces (landlords renovations, flooding). Through these more detailed interviews, I can explore possible reasons why repeat moving or stability in poor neighborhoods works to help improve adolescent well being, or causes harm. For example, I can examine whether coping with frequent instability prevents poor families from getting too attached to environments that aren't permanent. I can also explore how often moving involves thoughts about "getting by" or "getting ahead" and how family and local networks help determine these possibilities (Briggs, 1997, 1998).

### **PROJECT FEASIBILITY AND LIMITATIONS**

The work I have proposed in the aims above is ambitious and I am excited to have the chance to carry out these analyses and the fieldwork in Mobile. An important consideration when proposing research plans is whether the work is feasible and whether the principal investigator is capable of executing the work. I believe that the proposed work is feasible (but not without challenge) and that I am well prepared to carry out the proposed research for several reasons. First, I have extensive experience working with the NLSY97 data and know its challenges and benefits. Having been previously funded to use the data, I have written papers with it that examine the effects of schooling and neighborhood context on adolescent educational attainment and delinquency (cf. DeLuca, Plank and Estacion, 2006; Estacion and DeLuca, 2007). I have also had previous experience accessing and using the restricted access geocode data at the Bureau of Labor Statistics in Washington and know the personnel available to assist with technical issues at the Center for Human Resources Research at Ohio State University. Second, I am currently using relevant components of the MTO interim survey data (such as the address files and schooling data) and analyzing the MTO interviews I collected in Baltimore for a project on school choice (DeLuca, 2007 and DeLuca & Rosenblatt, 2007). While the proposed work will require me to extend my use of the data to the four other cities, I am already familiar with the codebooks, data dictionaries and file structures. Third, I have spent the last year and a half becoming acquainted with the city of Mobile and the Mobile Youth Survey data in preparation for this grant. I have already received access to the data from the researchers in Birmingham. However, I am least familiar with this data, and will rely on my mentors for assistance. I have long term experience with most of the methodological approaches proposed here (such as fixed effects analyses, logistic regression applications, qualitative analysis methods), with the exception of latent class analysis and propensity score matching, which I am excited to learn in more detail through this award with the help of Dr. Oakes.

However, the work I have proposed is not without significant challenges. First, the project will require work across three longitudinal data sets, which is always more difficult than one initially imagines. To help with this work, I have written a research assistant into my budget for four out of five years to assist specifically with issues of data cleaning, variable construction, file structuring and geocoding procedures. Second, I anticipate that the collection of interview data in Mobile will be particularly challenging, despite its high payoff in terms of "stretch" and its ability to address many unanswered questions about mobility among the poor. I am not as familiar with Mobile as other cities where I have conducted research on residential mobility, and the race and class issues that exist in the South will make it harder for a white middle class outsider like me to "break in". I also know that following mothers over several years will present a daunting task, since mobile and unstable families tend to be harder to find. While I will have to face and manage these issues and be prepared to adjust my research plans accordingly, I will have support while I manage them. My mentor John Bolland and his extensive

team of researchers are very familiar with the Mobile area, as they have been collecting the surveys there for nine years. I expect that much of my first summer in Mobile (which is a year before I collect any interview data) will involve spending time observing in the neighborhoods and assisting John and the interns as we collect the annual surveys. As evidenced by the high cooperation, retention and return rate of the MYS, John and his team are a familiar sight to many of the residents in the target neighborhoods, an advantage I hope to share to get to know the communities. When I do enter the field to first conduct the survey I use to select the interview sample, and subsequently carry out interviews, I will have a research assistant to help me locate and relocate the heads of household. While poor families can be hard to find, the multiple sources of address data linked to the MYS should help, and the local nature of the sample means that families don't often move very far away--someone is likely to know where they went. Last, I have the help of Kathy Edin, who has had extensive experience with both interviewing in unfamiliar cities, but also with locating "hard to find" low income families.

### Timeline

	Survey Analysis	Fieldwork and Skill Development	Analysis of New Data Collected
Yr 1	Clean NLSY, MTO and MYS data; Compile addresses from school, survey and housing authority data; Geocode addresses; Begin analyses of mobility patterns	Spend part of the summer in Mobile, collecting some of the baseline surveys, getting more familiar with the city/neighborhoods and working with interns; Visit with local researchers	Analyze field notes from Mobile neighborhood visits and experiences collecting the surveys
Yr 2	Continue analyses of mobility patterns, correlates and mediators; create maps of patterns with MTO and MYS data; Begin analyses linking individual outcomes with mobility patterns	Design and carry out mobility survey in Mobile; Design propensity score models and HOPE VI comparison groups; study MTO interviews to design Mobile interview protocol	Use the surveys to create possible groups for interviews in summer of year 3
Yr 3	Continue analyses of youth outcomes with survey data	Conduct first full round of residential mobility interviews in Alabama	Transcribe first mobility interviews; Create codebook for interviews; Modify interview instrument
Yr 4	Begin writing up the results of the survey work into papers and present work at conferences	Conduct second round of mobility interviews	Analyze qualitative data from first mobility interviews; Transcribe/code second mobility interviews
Yr 5	Continue to work on papers and revisions from journal submissions	Do any necessary follow-ups to interviews and neighborhood observations	Analysis of mobility interviews

### Career Trajectory and the Proposed Research—How Did I Get Here?

The research aims I propose here build upon my research interests developed over the past several years. During my second year in graduate school, I worked on the long term follow up to Chicago's Gautreaux residential mobility program, under the supervision and support of James Rosenbaum and Greg Duncan at the Institute for Policy Research at Northwestern University. For three years, I collected the addresses for Gautreaux families, trying to find out where they were living fifteen years after their moves with the program. I also analyzed the long term effects of living in a safer, more integrated neighborhood on child and family outcomes such as welfare use, special education referral, unemployment and long term neighborhood safety, economic advantage and racial integration (see attached vita for list of my published articles on Gautreaux). As a result of this work, I saw how powerful neighborhood change could be, particularly for the families who relocated to affluent, more racially integrated neighborhoods. I learned the value of census data, administrative data from state and city agencies, and gained introductory geocoding skills. I analyzed interviews collected from the Gautreaux mothers, who spoke about their social interactions in the new neighborhoods. I soon learned that I had become involved in one of the most high profile social science "natural experiments" to date. My work with Gautreaux put me in the middle of housing policy discussions, media communication and methodological challenges. All of these activities continued to intensify over the next 8 years to provide invaluable lessons on how social science evidence is used to inform policy and

practice. These experiences left me with many questions unanswered. After seeing the striking results of the Gautreaux program, I wondered WHY neighborhood level characteristics matter. I also wondered what the conditions of life were really like for poor black families in the city. Despite the quality of my Gautreaux experience, I knew I had only incomplete answers at best.

After I completed graduate school and took a faculty position in the Department of Sociology at Johns Hopkins University, I became part of the fieldwork team for the MTO Baltimore qualitative study, with Kathy Edin, Greg Duncan, and Jeff Kling, among others. After spending almost five years analyzing census data and quantitative measures from the Gautreaux program, I was particularly interested in conducting my own interviews with low income families, learning field methods, and gaining a better understanding of Baltimore neighborhoods and their implications for the lives of their residents. Between the summer of 2003 and the spring of 2004, I conducted almost thirty interviews with mothers and teenagers from the Baltimore MTO site. It was thrilling to spend time in the homes of the families and learn first hand how difficult it can be to collect qualitative data. I spent hours in basements, kitchens and bedrooms, thinking I was going to be able to make sense of everything that happened in the lives of these youth and their families—to fill in the gaps where the quantitative measure fell short. I was wrong. One interview in a federal prison in Western Maryland left me devastated, after spending two hours interviewing a young man who was in prison for attempted murder. I couldn't make sense out of how a person—who said that his biggest hope for life was to meet a woman who would love and trust him—would try to kill the same man twice over a drug deal. But I did begin to understand why interviewing people was so important: it helps you understand standardized quantitative measures and helps you design better ones.

About six months later, I was hired by the Maryland ACLU to give expert witness testimony in a housing desegregation case (*Thompson v HUD*) that was very similar to the *Gautreaux* case in Chicago. The residents of Baltimore's public housing projects had sued HUD, and the judge found HUD liable for intentionally segregating the housing projects in low income minority areas of the city. I testified in court in March 2006 about the importance of where families use their vouchers, based on my Gautreaux research. Since then, I have been following the relocation of these public housing residents from housing projects in Baltimore city to more advantaged areas in the larger metropolitan area. I have been given access to the data from the lawyers and have worked with the staff who administer the vouchers to understand how the mobility program actually works and gets implemented. This experience brought me even closer to current debates on housing policy and neighborhood effects. I was recently asked by Baltimore housing advocates to help brainstorm about designing a pilot mobility program to give families enhanced support when they move. I could see how important it was to figure out how mobility experiences and neighborhoods interacted to affect the lives of families and young people, especially since these were the very characteristics that the judge for the *Thompson* case was trying to use to design a remedy.

As I spent the past few years analyzing the outcomes for families and youth who participated in these various residential mobility programs, I also became increasingly interested in mobility patterns for youth elsewhere in the nation. To combine my interests in neighborhood and school contexts, I began a project in September 2005, funded by a National Academy of Education/Spencer Foundation Postdoctoral Fellowship to link patterns of mobility across adolescence to changes in neighborhood and school quality. However, when my graduate assistant and I got knee deep in the data, we were struggling to make sense out of the residential mobility data and the monthly schooling rosters showing where students were attending school and when. We couldn't figure out a way to write a neat SAS program to deal with these cases, many of whom seemed to be constantly moving or moving back and forth between neighborhoods and schools. As researchers, we often try to "assume away" variation, "put in a flag for missing data", or only use cases that have data for all rounds. When I thought about the mobility programs I had studied, in light of these data issues, I suddenly realized that we really don't know very much about the complexity of residential mobility in poor people's lives. Instead of "cleaning" away the mess, I thought I would rather try to measure and model the complexity of what happens when families move, and learn from it to understand what lies beneath our simplifying assumptions about the way environments affect youth.

The last piece of the puzzle involves the serendipity of my relationship to the Mobile Youth Survey. John Bolland (the PI of MYS) and I started exchanging email messages more than two years ago. I became familiar with the MYS and realized the potential it held for me to begin answering some of these frustrating empirical questions. The opportunity provided by the WT Grant Scholars program is a key source of support for this work. In April 2006, I went to Mobile, Alabama, to meet John and the MYS researchers and to visit the neighborhoods in preparation for writing this grant. What I saw shocked me. I had never seen Mobile before, but I knew that the MYS neighborhoods were very similar to Baltimore neighborhoods—extremely poor and racially segregated—according to what they "looked like" with census data. However, once we actually went into the neighborhoods, I was struck by how different they were. For example, the non-public housing neighborhood

of Alabama Village was suffocating and frightening--a place overgrown with garbage and crumbling houses, scowling children and one of the most isolated collections of streets I had ever seen. It is important to note that this reaction occurred even after I conducted fieldwork in Baltimore's worst neighborhoods! The housing projects at RV Taylor looked inviting by comparison. The projects at Orange Grove were completely isolated from the rest of the world by a swamp, an interstate, and industrial park, but the isolated Josephine Allen homes seemed somehow less daunting. Coincidentally, the day after I got back from Mobile, I had to give a talk to Johns Hopkins alumni about neighborhoods in a country club in Westchester County. I realized that I was at a loss as to how to explain the differences between the neighborhoods I had just seen, let alone assume the census data would capture it. The combination of these research fueled questions over the years provides the basis for my current proposal and how I would like to advance my work in the field. It is my desire to know more about what happens when families move, how we can better measure the environments where children live, and how we can combine such information into rigorous multi-method research designs, and how programs might best be designed to enhance individual youth and community development.

## **CAREER DEVELOPMENT**

### **Mentors and Support**

I have selected Kathryn Edin, John Bolland and J. Michael Oakes to be my mentors if I receive funding for this project. All of my mentors have been very successful in translating their research into work that matters for policy and the community, and raising funding support for their work. All three are experts in research that deals with the hardships that poor families face and how environments matter for their life outcomes.

Kathy Edin, on faculty at the Kennedy School of Government at Harvard University, is a nationally recognized expert in the use of qualitative and mixed methods research for studying low income families. Her book, *Making Ends Meet* (1997) is a staple in field methods courses, and has demonstrated the power of qualitative methods for understanding how social policies and contexts of disadvantage affect the choices of poor women. *Promises I Can Keep* has admirably done the very same thing, as Kathy knows how to make sense of the seemingly irrational behavior of families struggling with few resources. It is precisely this skill that I hope to develop through my mentorship with Kathy. I have had some limited experience with Kathy previously, as I helped to collect qualitative data for the Baltimore MTO study that she had organized. Through this experience I got to know her and we developed a casual at-a-distance mentorship, which I would like to strengthen through this proposed research. Kathy has years of experience studying the challenges of family life and she knows how to get useful answers to complicated questions, and turn theoretical paradoxes into empirical questions. Kathy has had extensive experience in the field, designing surveys, conducting interviews and getting the most out of combining mixed methods research approaches. As I develop my residential mobility interview instruments, I will seek guidance from Kathy about how to ask questions that make sense out of the chaos of people's lives without losing any of the richness of the data. I haven't conducted my own interview study before, and know that Kathy can provide guidance for locating participants, ensuring high follow up rates and learning how to integrate the information from the interviews with survey data on family neighborhoods. Her extensive ethnographic experience can help me consider the "street level" measures of neighborhoods because she has spent extended periods of fieldwork time in over a half dozen urban areas, including several areas in the South.

I plan to visit Kathy at Harvard University at least twice a year, as well as meet with her at professional meetings, to work on my measures and the pilot interview protocol. As I start to gather my data from the interviews, Kathy can also advise me in creating an appropriate codebook and I can exchange drafts of analyses with her via email. I already know that Kathy will personally read some of these interviews to get a handle on how she can best help me. As I eventually try to publish the findings from these new data collection efforts, I will seek Kathy's advice for translating them into high quality academic publications as well as useful policy briefs.

John Bolland is on the faculty at the School of Public Health at the University of Alabama. John has had over 15 years of experience collecting data in low income neighborhoods in Alabama, where he has been examining the risk behaviors and contexts of very poor adolescents. John has raised over 46 million dollars to support multiple original data collection projects, including the nine year and counting Mobile Youth Study which serves as the core for my proposal. John has also had great success in turning the results of his work in Huntsville and Mobile into intervention programs to reduce risk behaviors in the neighborhoods he studies—something rarely done in social science research. His success in designing and funding these programs is due in part to his rigorous and intensive research activities, but it is also due to his strong and long term relationships with many city and state agencies in Mobile. These agencies trust John, and have been providing him with wide access to essential individual level data for the MYS, such as juvenile court records. I can learn firsthand

from John about Mobile and the MYS because he designed the study, and is more familiar with the data and the neighborhoods than anyone else. He can help me create appropriate and sensitive interview questions and neighborhood measures that will reflect his extensive experience in the areas. After all, John walked every street in all 13 targeted neighborhoods in 1998 to create the sampling frame for the non-public housing sites!

John will also introduce me to a rich interdisciplinary team of Southern researchers who are very familiar with Mobile and the socioeconomic and structural contexts of the region. This network of scholars can also help me interpret my work from a public health perspective and enhance my psychometric skills, given the batteries they have designed for the MYS. John's experience with program evaluation and programs to reduce adolescent risk behaviors through community development will help me interpret how my findings about residential mobility and neighborhood change can be useful for the city of Mobile. Lastly, John will guide me as I help him direct the 25-30 undergraduate interns, who collect the yearly survey data every summer (the hope is also that some of the students who take my neighborhoods course at Johns Hopkins will be part of this team during the span of this study). The team of interns not only makes data collection of this magnitude possible, it also provides an incredible chance for the students to learn field methods while John and I teach them about social science theory and research design. I can also learn how to implement a similar kind of research program in the future.

The summer support I receive to do the fieldwork in Mobile will also help John and I develop our mentorship plan. I will be working side by side with John to collect the surveys in Mobile, and he will be present in Mobile the entire time I will be conducting my mobility interviews and street level observations. During the school year, John and I will exchange analytic results and manuscript drafts via email and hard copy (I have allowed for this in my postage budget). These efforts will also be supplemented by weekly phone calls and additional meetings at academic conferences.

My third mentor, J. Michael Oakes, is an Associate Professor at the University of Minnesota in the Division of Epidemiology and Community Health. He is a social epidemiologist with expertise in research methodology and applied statistics, particularly methods that examine the effects of social systems and socioeconomic status on health outcomes. Oakes has published widely on the application of hierarchical linear models, SUTVA assumptions, propensity scores and community/group randomized trials as they apply to the study of neighborhoods. His recent book, *Methods in Social Epidemiology*, has received acclaim as a guide for researchers attempting interdisciplinary work in public health and has been helpful for me as I designed this proposal. Michael is about to begin a project to examine the effects of social environments using the Mobile Youth Survey, so he is also aware of its strengths and limitations.

Michael will help me as I design the analysis of the panel survey data for all three datasets; in particular, he will assist with the determination and application of appropriate model specifications and methodology, such as the use of propensity scores for estimating the effect of mobility on youth, latent class analysis, as well as concerns about measurement and statistical power. In addition to the methodological mentoring Michael will provide, he will also help me to better understand how to study the effects of mobility, family and neighborhood context on the mental and physical health related outcomes across my three datasets. Critically, he will help me see and explain the assumptions necessary to infer effects. While my training thus far has prepared me to study processes related to educational and behavioral outcomes, I am eager to extend my work into health related domains. With support from my WT Grant award, I will travel to Minneapolis to meet with Michael twice a year, as well as meet with him at professional meetings. This allows us the opportunity to talk through the design of the research as it develops, and strategize how best to adjust the modeling techniques as I grapple with the complexities of the panel studies when they arise. An additional meeting with Michael will occur each year when he travels to Mobile, since that trip will coincide with the fieldwork and survey collection I will be conducting there. During the rest of the year, I will correspond with Michael via email, as he has agreed to review my empirical progress and research results in preparation for journal submissions.

In addition to Kathy, John and Michael, I receive strong intellectual support in the Department of Sociology here at Hopkins. Andrew Cherlin and Karl Alexander are both internationally recognized scholars who have designed and conducted original data collection projects involving disadvantaged families and youth. Both Andy and Karl have expressed interest and excitement for my proposed work and have always been committed to my professional development as a junior member of the department. Lingxin Hao is a methodological expert in the study of poverty, social policy and youth and is a wonderful resource for additional skills.

In addition to the Sociology faculty, faculty at the Institute for Policy Studies and the Bloomberg School of Public Health provide extensive local support for the study of neighborhoods. Sandra Newman at IPS is a recognized scholar in the field of poverty and housing research, especially HOPE VI sites, and is enthusiastic about my research agenda. Tama Leventhal is also a supportive colleague, who works in very similar areas and provides me with feedback from a developmental point

of view. At the School of Public Health, Nan Astone has been gracious over the years and is very excited about the prospect of my new work becoming part of the research at the Center for Adolescent Health. Clea McNeeley has also been generous with her support of my work, including the development of this current proposal.

My proximity to Washington also allows me to share my work with colleagues in the world of housing policy. Susan Popkin and Margery Turner at the Urban Institute are both national experts on housing policy and neighborhood effects. Sue has agreed to act as an additional source of local research support for me, and her experience with the HOPE VI panel study as well as the MTO Three City study will be of great help as I try to understand the effects of involuntary mobility on youth outcomes in my samples. Phil Tegeler at the Poverty, Race and Research Action Council is active in connecting legal issues with social science. I can seek their advice about the usefulness of my research findings for housing policy.

### **Role of Award**

For the last 8 years, I have analyzed data from three residential mobility programs that helped poor families relocate to better neighborhoods—Gautreaux, MTO and the Thompson program in Baltimore. Through this work, I have become skilled in the use of census data, administrative data from government agencies and some geocoding applications. I have also had the opportunity to conduct fieldwork as a result of my MTO involvement. If I receive this award, the resources will allow me to further develop much needed skills to advance my research career and support my time in the field in Alabama. The award assists my professional development in four major ways: conceptual stretch, methodological skills, support for data collection, resources to support my time working on the project goals. In terms of conceptual growth, this award allows me to expand the theoretical framework of my research to include a more serious consideration of the dynamics of families in poor neighborhoods and how they interact with neighborhood effects. In previous work, I focused heavily on neighborhoods, and now can also incorporate the details of family life as well. Dr. Edin will be particularly helpful in this respect. I will also be able to bring together research in psychology and sociology by considering some psychological mediators of mobility and environment, such as hopelessness, stress and efficacy. I will also extend my work to include an examination of adolescent health outcomes, which I have not previously done. Drs. Bolland and Oakes will be instrumental in guiding this development. In terms of learning new methodological skills, I will be employing models that help advance my research questions, such as latent class models to measure mobility patterns and propensity score methods to better assess the causal links between mobility and youth outcomes. I can also spend supported time learning how to use the full capabilities of GIS software and the ArcView mapping program.

I am also excited that the support from this grant will allow me to execute my first original data collection effort and spend extended periods of time learning about the urban environment in which I will conduct some my work. By supporting my summer fieldwork in Alabama, I can also travel throughout the region to meet with other scholars who study the South. I have already contacted Debra MacAllum at UA Tuscaloosa and Alex Vazsonyi at Auburn University and both have offered to meet with me to discuss our research interests. The summer salary support and teaching release afforded by the grant will allow me the protected time to execute analyses, write up research results and travel to present the results of my work.

Lastly, the work that I begin with the WT Grant award will set the course for a rich long term research agenda using the NLSY97 and the MYS, which will continue to be collected, and further developing research projects that take advantage of the mobility interviews I will conduct. I can extend my work on mobility by looking directly at the schooling experiences of the MYS youth and the intersection between neighborhood and schooling effects. I can take the mobility interview instrument that I design during the period of the award and develop a larger scale, multi-city study of how mobility affects youth development and family functioning.

### **Implications and Dissemination**

I see the proposed research being of use in several different capacities. First, by studying the nature and effects of residential mobility on youth and family life, I can help inform how housing policy operates in people's lives, especially the HOPE VI program. It is my hope that the work will help us understand the conditions under which residential *mobility* initiatives are appropriate and effective for improving educational, social and health outcomes, and when residential *stability* is more conducive to positive outcomes for young people. For example, learning whether the negative effects of

mobility can be attenuated by stability in school environment indicates that programs aimed at reducing school mobility may have positive effects on long term educational attainment (see Kerbow, 1996, 2003). After learning how mobility can be a strategy or an unwelcome disruption, I can communicate this work to local foundations who are concerned with these issues. This is a very timely topic in Baltimore, as the Johns Hopkins University has been displacing residents in East Baltimore to make room for new medical centers (in addition to the large HOPE VI relocations here). The Annie E. Casey Foundation is particularly interested in mobility processes and their effects on children's' outcomes. I have provided research assistance about neighborhood effects to the Casey foundation in the recent past, and still communicate with the foundation staff who are interested in findings that could come from this proposed research. Additionally, I work directly to help fair housing lawyers in Baltimore interpret the early results of the Thompson mobility program. I can therefore also directly communicate my new findings about the role of mobility in the lives of families and youth, to help them better understand some of the challenges the Thompson families face. I work with the lawyers who run the mobility program as part of a court ordered remedy, but also regularly communicate with the voucher administrators who implement the program for families, so I have multiple points of practical access.

Given the significance of concentrated poverty for youth life chances, I hope that the findings from this research may also help social scientists and policy makers better understand the processes of segregation and why they affect youth. This involves acquiring knowledge about how low income black families make residential decisions, in addition to understanding the dynamics of white flight and white preferences. My experience testifying in the Thompson v HUD lawsuit last spring made it very clear how important it was for us to have better research about the mobility decisions of poor minority families. Critics suggest that co-ethnic preferences drive and support racial segregation, so housing policy can do little to promote racial integration or affect the choices of poor families. However, in my research for the testimony report, I realized that most of this research uses observational data to infer the preferences of low income black families, which prevents us from understanding the structural correlates of these patterns. Also, the data used do not have large counts of very poor black families, so the conclusions that can be drawn are somewhat limited. My research on Gautreaux and MTO was invoked to support the idea that black families will choose to improve their neighborhood condition if given the opportunity. In this process, I realized that we know quite a bit about on segregation patterns and neighborhood effects, but we know little about why poor families move where they do and how their mobility decisions affect youth. If the proposed work is funded, I will get a chance to examine these issues more carefully.

I am qualified to see to it that the products of this proposed research are communicated in applied settings and in ways that can inform public knowledge. I have been lucky to have the chance to share my work with many different kinds of audiences in the recent past, including, but not exclusive to the academic community. I have provided expert witness testimony for a housing desegregation case, provided research consulting for the Annie E Casey Foundation, given a sponsored Congressional briefing about the effects of neighborhoods on special education, and have been a resource for multiple newspapers and magazines. I was also recently profiled in a full length feature story about my neighborhood research in the Johns Hopkins magazine, which I agreed to do so that I could have a chance to provide an additional perspective on the recent housing case in Baltimore, which has become very politically charged. I will be able to disseminate the findings from this proposed research with the contacts I have already established at the Casey Foundation, other researchers at the School of Public Health's Baltimore Neighborhood Research Consortium, academic conferences, Poverty and Race Research Action Council, and continued communication with the *Baltimore Sun* and other media outlets. I also hope to be able to establish connections with the press in Mobile, and through some of the other researchers on the MYS team.

## REFERENCES

- Aaronson, Daniel. 1998. "Using Sibling Data to Estimate the Impact of Neighborhoods on Children's Educational Outcomes." *Journal of Human Resources* 33: 915-946.
- Acevedo-Garcia, Dolores et al, 2004. "Does Housing Mobility Policy Improve Health?" *Housing Policy Debate* 15: 41-98.
- Adam, Emma and P. Lindsay Chase-Lansdale. 2002. "Home Sweet Home(s): Parental Separations, Residential Moves, and Adjustment Problems in Low Income Adolescent Girls." *Child Development* 38:792-805.
- Agnew, Robert. 1992. "Foundation for a General Strain Theory of Crime and Delinquency." *Criminology* 30:47-87.
- Ainsworth, James W. 2002. "Why Does It Take a Village? The Mediation of Neighborhood Effects on Educational Achievement." *Social Forces*, Vol. 81, No. 1. (Sep., 2002), pp. 117-152.
- Alba, Richard, John R. Logan, Paul E. Bellair. "Living with Crime: The Implications of Racial/Ethnic Differences in Suburban Location". *Social Forces*, Vol. 73:395-434.
- Alexander, Karl L., Doris R. Entwisle, and Susan Dauber. 1996. "Children In Motion: School Transfer and Elementary School Performance." *Journal of Educational Research* 90:3-12.
- Allison, Paul D. 2005. *Fixed Effects Regression Methods for Longitudinal Data Using SAS*. Cary, NC: SAS Institute.
- Amato, Paul. 2000. "The Consequences of Divorce for Adults and Children." *Journal of Marriage and Family* 62 (4), 1269-1287.
- Astone, Nan Marie and Sara McLanahan. 1994. "Family Structure, Residential Mobility and School Dropout: A Research Note." *Demography* 31:575-584.
- Bartlett, Sheridan. 1997. "The significance of relocation for chronically poor families in the USA." *Environment and Urbanization*, Vol. 9, No. 1, 121-132.
- Basolo and Ngyuen, 2006. "Does Mobility Matter? The Neighborhood Conditions of Voucher Holders by Race and Ethnicity". *Housing Policy Debate* 16: 297-324.
- Beautrais, Annette and Peter Mulder et al. 1996. "Risk Factors for Serious Suicide Attempts among Youths Aged 13 through 24 Years". *Journal of the American Academy of Child & Adolescent Psychiatry*. 35(9):1174-1182.
- Blau and Duncan, 1967. *The American Occupational Structure*. Wiley and Sons.
- Bolland, John M. 2003. "Hopelessness and Risk Behavior Among Adolescents Living in High Poverty Inner City Neighborhoods." *Journal of Adolescence* 26: 145-158.
- Bolland et al 2006. "The Origins of Hopelessness Among Inner City African American Adolescents." *American Journal of Community Psychology*. (in press)
- Briggs, Xavier de Souza. 1997. "Moving up Versus Moving out: Neighborhood Effects in Housing Mobility Programs." *Housing Policy Debate* 8: 195-234.
- \_\_\_\_\_. 1998. "Brown Kids in White Suburbs: Housing Mobility and the Many Faces of Social Capital." *Housing Policy Debate* 9:177-221.
- \_\_\_\_\_. 2006. "After Katrina: Rebuilding Places and Lives." *City and Community* 5:119-128.

- Brooks-Gunn, Jeanne, Greg J. Duncan, Pamela Klebanov, and Naomi Sealand. 1993. "Do Neighborhoods Influence Child and Adolescent Development?" *American Journal of Sociology* 99:353-395
- Brooks-Gunn Jeanne, Duncan GJ, Aber JL, eds.1997a.. *Neighborhood Poverty: Vol. I: Context and Consequences for Children*. New York: Russell Sage Foundation.
- Brooks-Gunn Jeanne, Duncan GJ, Aber JL, eds.1997b. *Neighborhood Poverty: Vol. II: Policy Implications in Studying Neighborhoods*. New York: Russell Sage Foundation.
- Brown, Anita and Dennis Orthner. 1990. Relocation and Personal Well-Being among Early Adolescents". *The Journal of Early Adolescence*, Vol. 10, No. 3, 366-381.
- Burton, Linda. 1997. "Ethnography and the Meaning of Adolescence in High Risk Neighborhoods." *Ethos* 25: 208-217.
- Burton, Linda and Jarrett, Robin, 1999. "Dynamic Dimensions of Family Structure in Low-Income African American Families: Emergent Themes in Qualitative Research". *Journal of Comparative Family Studies*, Vol. 30.
- Cadwallader, Martin. 1992. *Residential Mobility and Migration: Macro and Micro Approaches*. University of Wisconsin Press.
- Card, David and Jesse Rothstein. 2005. "Racial Segregation and the Black-White Test Score Gap." CEPS Working Paper No. 109.
- Case, Anne and Larry Katz. 1991. *The Company You Keep: The Effects of Family and Neighborhood on Disadvantaged Youths*. Cambridge, MA: National Bureau of Economic Research.
- Catsambis, Sophia and Andrew A. Beveridge. 2001. "Does Neighborhood Matter? Family, Neighborhood, and School Influences on Eighth Grade Mathematics Achievement." *Sociological Focus* 34:435-458.
- Charles, Camille. 2003. "The Dynamics of Racial Residential Segregation." *Annual Review of Sociology* 29:167-207.
- Clampet-Lundquist, Susan. 2004. "Hope IV Relocation: Moving To New Neighborhoods and Building New Ties." *Housing Policy Debate* 15: 415-447.
- Coleman, J.S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology* 94:S95-S120.
- \_\_\_\_\_ 1990. *Foundations of Social Theory*. Cambridge University Press.
- Comey, Jennifer. 2007. "HOPE VI'ed and On The Move". Urban Institute Metropolitan Housing and Communities Center. Brief 1.
- Connell, James and Bonnie Halpern-Fisher. 1997. "How Neighborhoods Affect Educational Outcomes in Middle Childhood and Adolescence" in *Neighborhoods and Poverty*, Volume I, Chapter 7, Pp. 174-199.
- Crane, Jonathan. 1991. "The Epidemic Theory of Ghettos and Neighborhood Effect on Dropping Out and Teenage Childbearing." *American Journal of Sociology* 96 (5): 1226-1259.
- Crowder, Kyle D. 2001. "Racial Stratification in the Actuation of Mobility Expectations: Microlevel Impacts of Racially Restrictive Housing Markets." *Social Forces* 79 (4): 1377-1396.
- Crowder, Kyle and Scott South. 2003. "Neighborhood distress and school dropout: the variable significance of community context." *Social Science Research* 32:659-698.
- Crowder Kyle and Jay Teachman. 2001. "Childhood Living Arrangements and the Formation of Coresidential Unions." *Journal of Marriage and the Family* 65 :507-524.

Crowley, Sheila. 2003. "The Affordable Housing Crisis: Residential Mobility of Poor Families and School Mobility of Poor Children". *Journal of Negro Education* 72: 22-38.

Cronin, F.J., and D. W. Rasmussen. 1981. "Mobility." In *Housing Vouchers for the Poor Lessons from a National Experiment*, edited by R.J. Struyk and M. Bendick, Jr. (107–128). Washington, DC: Urban Institute Press.

DeLuca, Stefanie. 2006b. "Neighborhood Preferences and the Long Term Benefits of the *Gautreaux* Residential Mobility Program: A Rebuttal Report". Report prepared for expert witness testimony in *Thompson v. HUD* (#95-309-D. MD.)

DeLuca, Stefanie. 2007. "All Over the Map: Explaining Educational Outcomes in the Moving to Opportunity Program." *Education Next* Fall Issue: 29-36.

DeLuca, Stefanie and Angela Estacion. 2005. "Coming and Going: The Effects of Residential and School Mobility on Delinquency." Paper presented at the Annual Meeting of the American Association for Public Policy Analysis and Management, Washington.

DeLuca, Stefanie, Stephen Plank and Angela Estacion. "Does the 'New' Vocational Education Promote or Reduce Educational Stratification? The Links between Career and Technical Education and College Enrollment." Under revise and resubmit.

DeLuca, Stefanie and Peter Rosenblatt. "Does Moving To Better Neighborhoods Lead to Better Schooling Opportunities? Parental School Choice in an Experimental Housing Voucher Program." Paper presented at AERA 2007, Chicago.

Domínguez, Silvia and Celeste Watkins. 2003. "Creating Networks for Survival and Mobility: Social Capital Among African-American and Latin-American Low-Income Mothers". *Social Problems* 50: 111-135.

Edin, Kathryn and Laura Lein. 1997. *Making Ends Meet: How Single Mothers Survive Welfare and Low-Wage Work*. New York: Russell Sage Foundation.

Elliott, Delbert, William Julius Wilson, David Huizinga, Robert Sampson, Amanda Elliott and Bruce Rankin. 1996. "The Effects of Neighborhood Disadvantage on Adolescent Development." *Journal of Research in Crime and Delinquency* Vol. 33: 389-426.

Evans, Gary, Heidi Saltzman and Jana Cooperman. 2001. "Housing Quality and Children's Socioemotional Health." *Environment and Behavior*, Vol. 33: 389-399.

Ensminger, M. E., Lamkin, R. P., & Jacobson, N. (1996). School leaving: A longitudinal perspective including neighborhood effects. *Child Development* 67, 2400-2416.

Estacion, Angela and Stefanie DeLuca. "Adolescent Employment and Delinquency: Considering Neighborhood Context for Disadvantaged Groups."

Fairchild, Halford and Belinda Tucker. 1982. "Black Residential Mobility; Trends and Characteristics". *Journal of Social Issues* 38: 51-74.

Faris, HW and Dunham. 1939 (1965). *Mental Disorders in Urban Areas: An Ecological Study of Schizophrenia and Other Psychoses*. University of Chicago Press.

Feins, Judith and Rhiannon Patterson, 2005. "Geographic Mobility in the Housing Choice Voucher Program: A Study of Families Entering the Program, 1995–2002." *Cityscape* 8: 21-47.

Fischer, Claude. 1982. *To Dwell Among Friends: Personal Networks in Town and City*. University of Chicago Press.

\_\_\_\_\_. 2002. "Ever More Rooted Americans." *City and Community*.

Furstenberg, Frank and Mary Elizabeth Hughes 1997. In *Neighborhood Poverty: Vol. I: Context and Consequences for Children*. New York: Russell Sage Foundation.

- Furstenberg, Frank and Andrew Cherlin, 1991. *Divided Families*.
- Galster, George and Sean P. Killen. 1995. "The Geography of Metropolitan Opportunity." *Housing Policy Debate*, 6:7-43.
- Galster, George. 2003. "Investigating Behavioral Impacts of Poor Neighborhoods: Towards New Data and Analytic Strategies." *Housing Studies*, Vol. 18, No. 6, 893-914.
- Garner, C. L., & Raudenbush, S. W. (1991). Neighborhood effects on educational attainment: A multilevel analyses. *Sociology of Education* 64, 251-262.
- WR Gove, M Hughes, OR Galle. 1979. "Overcrowding in the Home: An Empirical Investigation of Its Possible Pathological Consequences." *American Sociological Review*: 44: 59-80.
- Gramlich, Edward, Deborah Laren, Naomi Sealand. 1992. "Moving into and out of Poor Urban Areas." *Journal of Policy Analysis and Management*, Vol. 11: 273-287.
- Gruber, J. 2001. "Introduction." In *Risky Behavior Among Youth: An Economic Analysis*, edited by Jonathan Gruber. Chicago: University of Chicago Press.
- Halaby, Charles, 2004. Panel Models in Sociological Research." *Annual Review of Sociology* 30: 507-544.
- Hagan, John, Ross MacMillan, and Blair Wheaton. 1996. "New Kid in Town: Social Capital and the Life Course Effects of Family Migration on Children." *American Sociological Review* 61:368-385.
- Haynie, Dana, Scott J. South, Sunita Bose. 2006. "The Company You Keep: Adolescent Mobility and Peer Behavior." *Sociological Inquiry* 76 (3), 397-426.
- Haynie, Dana L. and Scott J. South. 2005. "Residential Mobility and Adolescent Violence." *Social Forces* 84:361-374.
- Hanushek, Eric, John F. Kain, and Steven G. Rivkin. 2004. "Disruption versus Tiebout Improvement: The Costs and Benefits of Switching Schools." *Journal of Public Economics* 88:1721-1746.
- Haveman, Robert, Barbara Wolfe, and James Spaulding. 1991. "Childhood Events and Circumstances Influencing High School Completion." *Demography* 28:133-157.
- Hendershott, Anne . 1989. "Residential mobility, social support and adolescent self-concept." *Adolescence*, 24: 217-232.
- Henry, Andrew F. and James F. Short, Jr. 1954. *Suicide and Homicide*. New York: Free Press.
- John P. Hoffmann, John and Robert A. Johnson. 1998. A National Portrait of Family Structure and Adolescent Drug Use ." *Journal of Marriage and the Family*, Vol. 60: 633-645.
- Ingersoll, Gary M., James P. Scamman, and Wayne D. Eckerling. 1989. "Geographic Mobility and Student Achievement in An Urban Setting." *Educational Evaluation and Policy Analysis* 11:143-149.
- Jackson, Margot and Robert Mare. 2007. "Cross-sectional and longitudinal measurements of neighborhood experience and their effects on children." *Social Science Research* 36: 590-610.
- Jacob, Brian. 2004. "Public Housing, Housing Vouchers and Student Achievement: Evidence from Public Housing Demolitions in Chicago". *American Economic Review* 94(1): 233-258.
- Jarrett, Robin L. 1997. "Resilience among Low-Income African American Youth: An Ethnographic Perspective." *Ethos* 25: 218-229.

- Kazdin et al, 1983. "Hopelessness, Depression and Suicidal Intent among Psychiatrically Disturbed Inpatient Children". *Journal of Consulting and Clinical Psychology* 51: 504-510.
- Keels, Micere, Greg J. Duncan, Stefanie DeLuca, Ruby Mendenhall, and James E. Rosenbaum. 2005. "Fifteen Years Later: Can Residential Mobility Programs Provide a Permanent Escape from Neighborhood Crime and Poverty?" *Demography* 42 (1): 51-73.
- Keels, Micere. 2006b. "Second-Generation Effects of Chicago's *Gautreaux* Residential Mobility Program on Children's Participation in Crime." Working paper.
- Kennedy, S. and Finkel, M.1994. *Section 8 Rental Voucher and Rental Certificate Utilization Study*. Abt Associates.
- Kling, Jeffrey R. and Jeffrey R. Liebman. 2004. "Experimental Analysis of Neighborhood Effects on Youth." Working paper.
- Kling, Jeffrey R., Jeffrey B. Liebman, Lawrence F. Katz, and Lisa Sanbonmatsu. 2004. "Moving to Opportunity and Tranquility: Neighborhood Effects on Adult Economic Self-Sufficiency and Health from a Randomized Housing Voucher Experiment." Working Paper. <http://www.mtoforesearch.org>.
- Kling, Jeffrey R., Jens Ludwig, and Lawrence F. Katz. 2005. "Neighborhood Effects on Crime for Female and Male Youth: Evidence from a Randomized Housing Mobility Experiment." *Quarterly Journal of Economics* 120: 87-130.
- Kopf, Edward. 1977. "Untarnishing the Dream: Mobility, Opportunity, and Order in Modern America." *Journal of Social History*, Vol. 11:206-227.
- Kotlowitz, Alex. 2002. "Where is Everyone Going?" *Chicago Tribune Magazine* March 10, 2002.
- Kroger, Jane. 1980. "Residential Mobility and Self Concept in Adolescence." *Adolescence* 15: 967-977.
- Lemann, Nicholas. 1991. *The Promised Land: The Great Black Migration and How it Changed America*. New York: Vintage Books.
- Lillard, Dean. 1993. "Neighborhood Effects on Educational Attainment." CEH Working Paper #RP-93-5. Cornell University, Ithaca, NY.
- Logan, John and Richard Alba. 1991. "Variations on Two Themes: Racial and Ethnic Patterns in the Attainment of Suburban Residence." *Demography*, Vol. 28: 431-453.
- \_\_\_\_\_.1993. "Locational Returns to Human Capital: Minority Access to Suburban Community Resources." *Demography*, Vol. 30: 243-268.
- McCutcheon, Allan. 1987. *Latent Class Analysis*. Sage University Paper series on Quantitative Applications in the Social Sciences. Beverly Hills and London: Sage Publications.
- McDonald, Katrina Bell and Bedelia Richards.2007. Residential Mobility in Gender/Ethnic Context: The Case of Disadvantaged Black Mothers". Paper under review.
- MacLeod, Jay. 1987. *Ain't No Makin It: Aspirations and Attainment in a Low-Income Neighborhood*. Boulder, Colorado: Westview.
- McCallum, D.M. & Bolland, J. M. 1999. "Conducting surveys with youths in low-income urban Neighborhoods". *American statistical association 1999 proceedings of the section on survey research methods*. American Statistical Association: Alexandria, VA.
- Sara McLanahan, Sara and Karen Booth. "Mother-Only Families: Problems, Prospects, and Politics". *Journal of Marriage and the Family*, Vol. 51: 557-580.

- McLanahan, Sara and Gary Sandefur. 1994. *Growing Up with a Single Parent: What Hurts, What Helps*. Harvard University Press.
- Massey, Douglas S. and Nancy Denton. 1993. *American Apartheid*. Cambridge: Harvard University Press.
- Massey, Douglas and Nancy A. Denton. 1987. "Trends in the Residential Segregation of Blacks, Hispanics, and Asians: 1970-1980." *American Sociological Review*, Vol. 52: 802-825.
- Massey, Gross and Shibuya, 1994. "Migration, Segregation, and the Geographic Concentration of Poverty." *American Sociological Review*, Vol. 59: 425-445
- Mendenhall, Ruby, Stefanie DeLuca, and Greg Duncan. 2006. "Neighborhood Resources and Economic Mobility: Results from the Gautreaux Program." *Social Science Research*.
- Mundy P, Robertson J, Greenblatt M, Robertson M. 1989. "Residential instability in adolescent inpatients". *Journal of the American Academy of Child and Adolescent Psychiatry*. 28:176-81.
- Myers, Scott M. 1999. "Childhood Migration and Social Integration in Adulthood." *Journal of Marriage and the Family* 61:774-789.
- Morrison, Donna and Mary Coiro, 1999. "Parental Conflict and Marital Disruption: Do Children Benefit When High-Conflict Marriages Are Dissolved?" *Journal of Marriage and the Family*, Vol. 61: 626-637.
- Newman, Sandra and Owens, Michael. 1982. "Residential Displacement: Extent, Nature and Effects." *Journal of Social Issues* 38: 135-148..
- Oakes, J. Michael. 2004. "The Misestimation of Neighborhood Effects: Causal Inference for a Practicable Social Epidemiology." *Social Science and Medicine* 58: 1929-1952.
- Oakes, J. Michael and Pamela Jo Johnson, 2006. "Propensity Score Methods for Social Epidemiology." In Oakes and Kaufman (Eds.), *Methods in Social Epidemiology*. Wiley.
- Orr, Larry, Judith D. Feins, Robin Jacob, Erik Beecroft, Lisa Sanbonmatsu, Lawrence F. Katz, Jeffrey B. Liebman, and Jeffrey R. Kling. 2003. *Moving to Opportunity for Fair Housing Demonstration Program: Interim Impacts Evaluation*. U.S. Department of Housing and Urban Development, Office of Policy Development and Research.
- Pearlin, Leonard, Elizabeth G. Menaghan, Morton A. Lieberman, Joseph T. Mullan. 1981. "The Stress Process." *Journal of Health and Social Behavior*, Vol. 22: 337-356.
- Pribesh, Shana and Douglas B. Downey. 1999. "Why Are Residential and School Moves Associated with Poor School Performance?" *Demography* 36:521-534.
- Raviv, Amiram, Giora Keinan, Yehuda Abazon, and Alona Raviv. 1990. "Moving as a Stressful Life Event for Adolescents." *Journal of Community Psychology* 18:130-140.
- Ream, Robert. 2005. "Counterfeit Social Capital and Mexican-American Underachievement." *Educational Evaluation and Policy Analysis* Vol. 25:237-262.
- Reifman, A. and Windle, M. 1995. "Adolescent Suicidal Behaviors as a Function of Depression, Hopelessness, Alcohol Use and Social Support: A Longitudinal Investigation". *American Journal of Community Psychology* 23: 329-354.
- Rogerson, Peter. 1987. "Changes in US National Mobility Levels." *The Professional Geographer* 39 (3), 344-351.
- Rosenbaum, James E., Stefanie DeLuca, and Tammy Tuck. 2005. "Crossing Borders and Adapting: Low-Income Black Families in Suburbia." In *The Geography of Opportunity: Race and Housing Choice in Metropolitan America*, edited by Xavier de Souza Briggs (150-175). Brookings Institution Press.

- Rosenbaum, Paul, 2005. "Heterogeneity and Causality: Unit Heterogeneity and Design Sensitivity in Observational Studies". *The American Statistician*, Vol. 59.
- Rosenbaum, Paul and Donald Rubin. 1983. "The central role of the propensity score in observational studies for causal effects." *Biometrika* 70:41-55.
- Rossi, Peter. 1955 (1980, 2<sup>nd</sup> Edition). *Why Families Move: A Study in the Social Psychology of Urban Residential Mobility*. Free Press (Sage).
- Rossi, Peter and Anne Shlay. 1982. "Residential Mobility and Public Policy Issues." *Journal of Social Issues* 38: 21-34.
- Rubinowitz, Leonard, and James E. Rosenbaum. 2000. *Crossing the Class and Color Lines*. Chicago: University of Chicago Press.
- Rumberger, Russell W. and Katherine A. Larson. 1998. "Student Mobility and the Increased Risk of High School Dropout." *American Journal of Education* 107:1-35.
- Rutter, Michael. 1987. "Psychosocial Resilience and Protection Mechanisms." *American Journal of Orthopsychiatry* 57:316-331.
- Sampson, Robert J. and Jeffrey Morenoff. 1997. "Ecological Perspectives on the Neighborhood Context of Urban Poverty: Past and Present." Pp. 1-22 in *Neighborhood Poverty: Policy Implications in Studying Neighborhoods*, edited by J. Brooks-Gunn, G.J. Duncan, and L. Aber. New York: Russell Sage Foundation.
- Sampson, Robert J. Jeffrey D. Morenoff and Gannon R. Thomas. 2002. Assessing "Neighborhood Effects": Social Processes and New Directions in Research. *Annual Review of Sociology* 28: 443-478.
- Schacter, Jason. 2004. *Geographical Mobility: 2002 to 2003*. US Census Bureau, Current Population Reports, P20-549.
- Schafft, K. 2006. "Poverty, Residential Mobility and Student Transiency Within a Rural New York School District." *Rural Sociology*
- Shaw, Clifford R. and McKay, Henry D. 1942. *Juvenile Delinquency and Urban Areas*. Chicago: The University of Chicago Press.
- Simmons, Roberta G., Richard Burgeson, Steven Carlton-Ford, and Dale A. Blyth. 1987. "The Impact of Cumulative Change in Early Adolescence." *Child Development* 58:1220-1234.
- Simpson and Fowler, 1994. "Geographic Mobility and Children's Emotional/Behavioral Adjustment and School Functioning." *Pediatrics* 93:303-309.
- South, Scott and Glenn Deane. 1993. "Race and Residential Mobility: Individual Determinants and Structural Constraints." *Social Forces* 72 (1) 147-167.
- South, Scott and Kyle Crowder. 1997. "Escaping Distressed Neighborhoods: Individual, Community and Metropolitan Influences." *American Journal of Sociology* 102: 1040-1084.
- South, Scott and Kyle Crowder and Chavez. 2005. "Exiting and Entering High-Poverty Neighborhoods: Latinos, Blacks and Anglos Compared". *Social Forces*
- South, Scott J., Kyle D. Crowder, and Katherine Trent. 1998. "Children's Residential Mobility and Neighborhood Environment Following Parental Divorce and Remarriage." *Social Forces* 77:667-693.
- South, Scott J. and Dana Haynie. 2004. "Friendship Networks of Mobile Adolescents." *Social Forces* 83:315-350.
- South, Scott, Sunita Bose and Dana Haynie, 2006. "Residential Mobility and Attempted Suicide Among Adolescents: An Individual-Level Analysis." *The Sociological Quarterly* 47: 693-721.

- Speare, Alden and Frances K. Goldscheider. 1987. "Effects of Marital Status Change on Residential Mobility." *Journal of Marriage and the Family* 49:455-464.
- Speare, A., S. Goldstein and William Frey. 1975. *Residential mobility, migration, and metropolitan change*. Ballinger.
- Stack, Carol B. 1974. *All Our Kin: Strategies for Survival in a Black Community*. New York: Harper & Row.
- Stack, Carol and Linda Burton. 1993. Kinscripts." *Journal of Comparative Family Studies*, Vol. 24.
- Stack, Steven. 1994. "The Effect of Geographic Mobility on Premarital Sex." *Journal of Marriage and the Family* 56:204-208.
- Shumaker, Sally and Daniel Stokols. 1982. "Residential Mobility as a Social Issue and Research Topic." *Journal of Social Issues* 38: 1-20.
- Stokols, Daniel and Sally Shumaker. 1982. "The Psychological Context of Residential Mobility and Well-Being." *Journal of Social Issues* 38:149-173.
- Straits, Bruce C. 1987. "Residence, Migration and School Progress." *Sociology of Education* 60:34-43.
- Sullivan, M. L. 1989 *Getting Paid: Youth Crime and Work in the Inner City*. Ithaca, New York: Cornell University Press.
- Swanson, Christopher B. and Barbara Schneider. 1999. "Students on the Move: Residential and Educational Mobility in America's Schools." *Sociology of Education* 72:54-67.
- Teachman, Jay and Kathleen Paasch, Karen Carver. 1997. "Social Capital and the Generation of Human Capital." *Social Forces*, Vol. 75:1343-1359.
- Temple, Judy A. and Arthur J. Reynolds. 1999. "School Mobility and Achievement: Longitudinal Findings From an Urban Cohort." *Journal of School Psychology* 37:355-377.
- Tiebout, Charles. 1956. "A Pure Theory of Local Expenditures." *The Journal of Political Economy*, Vol. 64: 416-424.
- Tolnay, Stewart. 2003. "The Great Black Migration and Beyond". *Annual Review of Sociology* 29:209-232.
- Tucker, C. Jack, Jonathan Marx, and Larry Long. 1998. "'Moving On': Residential Mobility and Children's School Lives." *Sociology of Education* 71:111-129.
- Varady, David and Carole Walker. 2000. "Vouchering Out Distressed Subsidized Developments: Does Moving Lead to Improvements in Housing and Neighborhood Conditions?" *Housing Policy Debate* 11:115-162.
- \_\_\_\_\_.2003. "Using Housing Vouchers to Move to the Suburbs: How Do Families Fare?" *Housing Policy Debate* 14: 347-382.
- Vernberg, EM. 1990. "Experiences with peers following relocation during early adolescence." *Am Journal of Orthopsychiatry* 60(3):466-72.
- Vermunt, Jeroen K. 2003. "Multilevel Latent Class Models". *Sociological Methodology* 33: 213-239.
- Wells, Nancy. 2005. "Our housing, our selves: A longitudinal investigation of low-income women's participatory housing experiences." *Journal of environmental psychology* 25:22, 189-206.
- Wheaton, Blair. 1988. "Life Transitions, Role Histories, and Mental Health." *American Sociological Review* 55: 209-223.
- Wheaton, Blair and Phillippa Clarke. 2003. "Space Meets Time: Integrating Temporal and Contextual Influences on Mental Health in Early Adulthood." *American Sociological Review*, Vol. 68, No. 5 (Oct., 2003), pp. 680-706.

Wilson, William Julius. 1996. *When Work Disappears*. New York: Knopf.

Winship, Christopher and Michael Sobel. 2004. "Causal Inference in Sociological Studies," in *Handbook of Data Analysis*, Melissa Hardy and Alan Bryman (eds.), Sage Publications, p. 481-503.

Wolfe et al, 1996. "The "Window Problem" in Studies of Children's Attainments: A Methodological Exploration." *Journal of the American Statistical Association*, Vol. 91.

Wood, David, N.Halfon, D. Scarlata, P. Newacheck, and S. Nessim. 1993. "Impact of Family Relocation on Children's Growth, Development, School Function and Behavior." *Journal of the American Medical Association* 270:1334-1338.

Wu, Lawrence.1996, "Effects of Family Instability, Income, and Income Instability on the Risk of a Premarital Birth." *American Sociological Review*, Vol. 61: 386-406.

Wu, Lawrence and Brian Martinson. 1993. "Family Structure and the Risk of a Premarital Birth." *American Sociological Review*, Vol. 58: 210-232.

Zagorsky, Jay L. and Rosella Gardecki. 1998. "What Have Researchers Learned from the National Longitudinal Surveys?" *Journal of Economic & Social Measurement* 25:35.

NOT FOR DISTRIBUTION

**Table 1. Metropolitan Areas Covered in WT Grant Proposal**

<u>City</u>	<u>Pop</u>	<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Median</u>		<u>BA Degree or Higher</u>
					<u>Family Income</u>	<u>Individual Poverty Rate</u>	
US	298 million	75	12	13	50,000	9.2	24
Baltimore	650,000	32	64	1.7	35,438	19	19
NY	8 million	44	25.3	27.9	49,374	19.1	32.2
Chicago	2.7 million	39	35	29	46,888	21.3	29.9
Boston	520,700	55.3	24.6	14.7	49,320	22.3	40.9
Los Angeles	3,700,000	49.1	9.9	48.9	47,434	20.1	28.7
Mobile	193,000	49.2	46.7	1.5	39,752	24	26.2

Source: 2005 American Community Survey. United States Census Bureau

**Table 2. Sample Descriptives Across Three Datasets**

	NLSY97	MTO	MYS
<b>N</b>	8984	3537	2842
<b>Years</b>	1997-2003	1994-2002	1998-2005
<b>Ages at Time 1</b>	12-16	5-12	10-15
<b>Time Points, Time Span</b>	6, 6	2, 4-7	4-8, 4-8
<b>Ages at Last Time Point</b>	18-22	12-19	14-18
<b>Percent Black</b>	26	62.6	94.1*
<b>Percent Hispanic</b>	21.2	30.4	N/A
<b>Percent White</b>	51.9	2.9	N/A
<b>Percent Two Parent Families</b>	51.2	<10	26.7
<b>Mean Family Income</b>	46362	9314	N/A
<b>Percent Free/Reduced Lunch</b>	N/A	N/A	93
<b>Poverty Rate in Baseline Neighborhood</b>	N/A	64, 77 <sup>a</sup>	59%
<b>Percent Black in Baseline Neighborhood</b>	18	89, 99 <sup>a</sup>	94%

\*Most of the rest of the youth are mixed race

<sup>a</sup>These are the numbers for the Baltimore and Chicago MTO sites. The NY, LA and Boston sites had significantly more Hispanic residents, making the black white segregation comparisons to Mobile less straightforward.

**Table 3. Mobility Variables Across Three Datasets**

VARIABLES	DATA SOURCE		
	NLSY97	MTO	MYS
<b>Residential Mobility</b>	Annual measure of youth residential change created from youth report of move	Address spell file for all moves between baseline through interim survey	Three sources of residential location: MYS survey records (annual), Mobile Housing Authority records (annual), Mobile County School records (multiple per year)
<b>Family / Household Change</b>	Annual household roster indicating change in parental figures/caregiver, indicating whether change is mother or father figure	Address spell file identifies all members of the household and each of their address spells from baseline forward to interim survey; from there I can construct a measure of who was in the same household as the child and who left. I can also tell whether a youth left a household and moved somewhere alone.	Annual report of whether youth experienced a change in mother or father figure; how often youth lives with that figure, annually
<b>School Change</b>	Annual school roster gives monthly schooling enrollment status, as well as type of school (elem, middle, HS), grade attended	Mother reported school spell file lists all schools attended by the sampled youth from baseline through interim survey.	Mobile County School records for all MYS youth
<b>Neighborhood Change</b>	Restricted use census data at the Bureau of Labor Statistics allows identification of tract change; public use migration data indicates whether residential change was intra- or extra-county	Address spell file lists all census tracts that correspond with a spell, so I can tell whether a move was made to a different census tract.	MYS annual report of current neighborhood, address will be geocoded to note census tract change as well

**Table 4. Measures of Mobility Mediators Across Three Datasets**

DATA SOURCE			
	NLSY97	MTO	MYS
<b>Psychological Processes (Mediator)</b>	N/A	N/A	<p><b>Measure:</b> Annual measures of hopelessness, worry, self efficacy, anger</p> <p><b>Example:</b> (T/F) All I see ahead of me are bad things; What happens in life is largely a matter of chance; No matter how hard I study, I don't think I will get a good job when I get older; I don't expect to live a very long life; I might as well give up because I cant make things better</p>
<b>Social Capital/ Parents (Mediator)</b>	<p><b>Measure:</b> Composite scores of youth reports of: parental support, parental monitoring, rule setting in the home, parenting style; Report of whether parents know friends, parents know where you are</p>	<p><b>Measure:</b> Parent support: whether saw father and thought he was supportive; whether mother or PC was supportive; parental monitoring</p> <p><b>Example:</b> How many adults do you have in your life who you feel comfortable talking to about personal problems? .... How much does your father know about your close friends?</p>	<p><b>Measure:</b> Quality of mother and father figure relationship, report of family rules</p> <p><b>Example:</b> Who in your life is like a mother (father) figure to you? (for that person) How often do you live with that person? Can you count on him to help you out if you have a problem? Does she spend time talking to you?</p>
<b>Social Capital/ Community (Mediator)</b>	N/A	<p><b>Measure:</b> whether neighbors would do something if they saw a crime; Parent report of social ties; Visit with friends from old neighborhood</p> <p><b>Example:</b> If a neighbor saw your child getting into trouble, how likely is it that they would tell you about it?</p>	<p><b>Measure:</b> Neighborhood attachment measures; measures of neighborhood monitoring</p> <p><b>Example:</b> I feel I am an important part of my n'hood; Very few of my neighbors know me; There are people in my n'hood who really care about me; If you don't look out for yourself in my n'hood, no one else will</p>
<b>Neighborhood Quality (Mediator)</b>	<p><b>Measure:</b> Census data and interviewer reports</p>	<p><b>Measure:</b> Census Data, Interim measures about crime and safety</p> <p><b>Example:</b> In your n'hood, how bad of a problem is [graffiti, public drinking, drug use...]</p>	<p><b>Measure:</b> Census data, youth reports of neighborhood characteristics</p> <p><b>Example:</b> How often do you feel safe in your neighborhood/ school; have you ever seen someone being stabbed/ shot; has someone ever pulled a knife/ gun on you; have any of your family/ friends been shot/ cut with a knife?</p>

**Table 5. Measures of Youth Outcomes Across Three Datasets**

DATA SOURCE			
	NLSY97	MTO	MYS
<b>Educational Outcomes (Outcome)</b>	<p><b>Measure:</b> Monthly schooling rosters allow me to create a dropout variable and note when high school completion occurs; also have measure of expulsion and suspension</p>	<p><b>Measure:</b> high school completion, high school dropout; expulsion; suspension</p> <p><b>Example:</b> <i>Are you currently enrolled in [grade school, High school, two year college, four year college]?... What was the main reason you left High School?</i></p>	<p><b>Measure:</b> Administrative records of dropout, graduation, suspension, expulsion</p>
<b>Delinquent Behavior (Outcome)</b>	<p><b>Measure:</b> Annual youth report of delinquency index, substance use and self report of ever being arrested</p> <p><b>Example:</b> <i>(1) theft of something worth less than \$50, (2) theft of something worth more than \$50, (3) vandalism, (4) other property crimes, (5) aggravated assault, and (6) selling drugs.</i></p>	<p><b>Measure:</b> Interim index for delinquency (guns, gangs, stealing), arrests; risky behavior index (sex, substance use)</p> <p><b>Example:</b> <i>Have you ever been arrested by the police or taken into custody for an illegal or delinquent offense?...Have you ever [smoked a cigarette, used drugs, sold drugs, damaged property, carried a gun, etc.]</i></p>	<p><b>Measure:</b> Self report, School violation records; Alabama State court records</p> <p><b>Example:</b> <i>of school violations: Possessing alcohol or drugs, Truancy, Harassment, Dress Code Violation, Use of Weapon/ Example of administrative data: criminal charges (burglary, theft, arson, rape)</i></p>
<b>Physical Health (Outcome)</b>	<p><b>Measure:</b> Self report of injury, illness, doctor visits in the last year</p> <p><b>Example:</b> <i>In general, how is your health: excellent, vary good, good, fair or poor?; Youth was hospitalized in the last year; Youth was injured in the last year Self report of type of illness</i></p>	<p><b>Measure:</b> General Health, asthma, serious injury, doctor visits.</p> <p><b>Example:</b> <i>In general, how is your health: excellent, vary good, good, fair or poor?...During the pas 12 months, how many times have you gone to the doctors office or ER for [an asthma attack]?</i></p>	<p><b>Measure:</b> Injury, illness, doctor visits</p> <p><b>Example:</b> <i>In the past twelve months, did you have to go to the hospital emergency room because you were sick or injured? In the past year, were you (burned, hurt yourself from a fall, accidentally cut yourself) so badly you had to go to the doctor?</i></p>
<b>Mental Health (Outcome)</b>	N/A	<p><b>Measure:</b> Interim measures of anxiety, depression, psychological distress</p> <p><b>Example:</b> <i>Did you ever have an episode of being worried or anxious lasting at least one month or longer, in the past 12 months?</i></p>	<p><b>Measure:</b> Measures of hopelessness, stress, self worth</p> <p><b>Example:</b> <i>(true/false) "I have trouble sleeping at night"; "I don't like the kind of person I am"; "I get startled easily"</i></p>

**WILLIAM T. GRANT SCHOLARS APPLICATION**  
**ABSTRACT**

**Principal Investigator:** Guanglei Hong  
**Institution:** University of Toronto  
**Project Title:** Causal Inference Methods for Studying Instruction Effects for Language Minority Students

**PART I: FIVE-YEAR RESEARCH PLAN (maximum of 4 pages)**

**Summarize your five-year research plan, which includes one or more research projects. Describe the rationale for the research including a brief literature review, its significance in terms of policy and/or practice, and the unique contribution of the research to understanding the setting(s) under study. Also describe how the research plan will expand your expertise.**

I propose a pair of research projects focusing on developing and applying causal inference methods for studying instruction effects on the literacy growth of language minority students in elementary school years. Previous research has shown that, although language minority students typically achieve a level of word-level skills similar to that of monolingual students in the early-elementary years, they tend to fall behind in text-level skills starting from the middle-elementary years due to their lack of English vocabulary, syntactic skills, and culture-specific background knowledge (Geva, 2006; Lesaux with Koda, Siegel, & Shanahan, 2006). This is also the time period that most elementary schools choose for English Language Learners (ELLs) to exit the ELL programs. Because reading comprehension is a basis for academic learning in subject areas, language minority students experiencing difficulties in comprehending texts in particular will be at a relatively high risk of encountering academic failures in the rest of their schooling years. How to improve the quality of education for language minority students in the middle- and late elementary school years either through continuing the ELL services or through better accommodating these students in regular reading and arts instruction remains an unresolved issue. In my first project, rather than attempting to endorse a standard program for all language minority students, my interest is in understanding the dynamic process of these students' literacy growth in school settings. I aim to empirically identify sequences of educational experiences optimally adapted to language minority students' initial language ability and their evolving learning needs at later time points.

The second project will examine the mediating role of instruction in the context of a multi-year, multi-site randomized experiment of an innovative program for English language learners. The National Literacy Panel identified about two-dozen randomized clinical trials in the past half a century that evaluated school programs for second language learners (Francis, Lesaux, & August, 2006; Shanahan & Beck, 2006). An increasing number of randomized experiments in education are currently being carried out in different parts of the country; many of these are targeted at ELL students. In theory, randomization removes all the selection bias in treatment effect estimation. However, past research has suggested the central role of local implementation if an educational policy or program is to have any major impact on student learning (Cohen & Hill, 2000; Rowan, Camburn, & Barns, 2004). Disentangling the effect of the innovation design and the effect of its implementation is challenging. This is because implementation in instruction is typically associated with pretreatment covariates such as teachers' prior knowledge and skills and students' prior performance. Low compliance with a well-designed intervention program may attenuate the treatment effect; while deliberate adaptation to the local contexts may strengthen the effectiveness of the intervention (McLaughlin, 1987; McLaughlin & Berman, 1975). Applying causal inference theories to mediation problems in multi-level school settings, I will investigate instruction received by language minority students over years as mediators of the initial intervention design in randomized experiments. The goal is to understand the processes that either facilitate or prevent a program targeted at English language learners from achieving its intended results.

The second project will parallel the investigation of mediating relationships in quasi-experimental longitudinal data in the first project. From a methodological point of view, the initial randomization of an intervention program provides important leverages for causal inferences. After clarifying causal estimands and explicating statistical assumptions for evaluating mediation effects in experimental data, naturally the next step will be to extend the methods to quasi-experimental data that often involve additional complexities. Substantively speaking, a different set of implementation issues may arise in naturalistic settings as an innovation program proven to be effective in field experiments is scaled up to affect a broader population (Hedges, 2006).

The proposed research plan will build upon my methodological expertise in causal inferences for multi-level longitudinal educational data, and will greatly expand my knowledge about educational policies and instructional programs for language minority students. Methodological advancements will be essential for generating important knowledge about how to better serve the growing population of language minority students, and will have broad implications for causal inference studies in education.

**For each project, describe below:**

- **Specific research questions or hypotheses;**
- **Population/participants, including sample definition and selection procedures;**
- **Research design and methodology;**
- **Data collection (including key constructs, measures, data sources, and data collection procedures); and**
- **Data analysis plans.**

**(The latter years or latter projects of the research plan may, by necessity, be described in less detail than that of the first few years or first project, but we encourage you to provide enough specificity for reviewers to be assured of the rigor and feasibility of the plan.)**

### **First Project**

Through analyzing a longitudinal data set of a nationally representative sample of students from kindergarten to the end of the fifth grade, I will develop a portrait of the average English literacy growth trajectory of the population of language minority students in comparison with the population of English native-speaking students and will estimate the variation in growth within each of these two populations. I will also obtain a national picture of how ELL educational resources are allocated in elementary schools, the intensity and duration of ELL services, as well as the concurrent regular reading and language arts instruction for ELL students. The information at the national level will supply a foundation for investigating a series of causal questions.

First of all, the data set will allow me to evaluate the long-term effects of ELL services and regular reading and language arts instruction in kindergarten and first grade on students' literacy outcomes in middle- and late-elementary years. More importantly, I intend to find empirical evidence with regard to the following research questions: How many years of ELL services will be optimal for language minority students as a function of their initial and evolving English language ability? To what extent does the optimal length of ELL services depend on resource allocation and instructional processes under various organizational conditions? How are the effects of ELL programs mediated by the actual delivery of ELL services to English language learners given a student's prior development of English literacy?

I hypothesize that, given the demand for ELL services in a school, school policies with regard to the length of these services and the availability of ELL staffing in a certain year may restrict the allocation of ELL resources to classes within a school and to individual students within a class. Within a class, a student's instructional experiences will likely be determined not only by his or her access to ELL services but also by the availability of services to the classmates in need as well as by the classroom teacher's

capability of teaching ELL students. And finally, successful English learning requires targeted and continuing intervention through a coherent program that meets ELL students' needs at different stages of English language development, a program in which efforts to develop ELL students' English language proficiency are in alliance with English language arts learning and with academic content standards.

Building upon my earlier work on causal inferences for multi-level educational data, in this study I plan to develop and apply statistical adjustment methods for investigating moderating and mediating relationships among multiple time-varying treatments and outcomes in school settings using a large-scale quasi-experimental data set. The major methodological challenges I will address in this study include: (1) interference among classmates, (2) selection in treatment assignment, (3) multiple concurrent instructional treatments, (4) time-varying moderation of cumulative effects of sequential instructional treatments, and (5) policy mediators acting in concert on an outcome.

I will select data from the Early Childhood Longitudinal Study-Kindergarten cohort (ECLS-K) restricted-used data provided by the National Center for Education Statistics. ECLS-K followed a nationally representative cohort of children from kindergarten to 5<sup>th</sup> grade. A total of 21,260 kindergartners participated in the study from the 1998-1999 school year (Year 0). This cohort of students was observed in the fall and spring of the base year when they were in kindergarten. Follow-up data collection occurred in the fall and spring of the 1999-2000 school year (Year 1), and again in the spring of 2002 (Year 3) and the spring of 2004 (Year 5). Data were collected from parent interviews, principal surveys, teacher surveys, observer checklists, student record abstracts, and direct indirect child assessments. In addition, students were surveyed in the springs of Year 3 and Year 5. The data set contains extensive and in-depth repeated measures of students' primary home language, English literacy performance, school policies, demands, and resources for ELL programs, within-class ELL resource allocation, student experience of ELL instruction, and regular reading and language arts instruction.

The data analysis plan will involve multiple steps corresponding to the series of research questions. I will start with portraying the English literacy growth trajectory and the sequence of ELL services and regular reading and language arts instruction for the population of language minority students. This will be followed by an evaluation of the long-term effects of ELL services and regular reading and language arts instruction in kindergarten and first-grade on students' literacy outcomes in middle- and late-elementary years. I will then examine the impact of school policies with regard to the duration of ELL services and the availability of ELL staffing on the allocation of ELL resources, and the impact of the latter on regular reading and language arts instruction. Next, I will analyze the effects of resource allocation and instructional processes on ELL students' English literacy growth under various organizational conditions. Finally, I will investigate how the effects of ELL programs are mediated by the actual delivery of ELL services in combination of regular reading and arts instruction to English language learners given a student's prior development of English literacy.

## **Second Project**

The initial task in this study is to identify the major individual and organizational factors that predict variation in implementation or local adaptation of an instructional program targeted at English language learners in a randomized experiment. Although intensive training and ongoing support through professional development are considered to be essential for translating knowledge about an intervention into daily classroom practice, it may take multiple steps for the change to occur (Ruiz, Rueda, Figueroa, & Boothroyd, 1995; Saunders and Goldenberg, 1996). A multi-year study will enable us to examine whether the influences of individual and organizational factors on implementation in instruction will change over time as the intervention program continues.

The core questions about mediation are counterfactual in nature. I will investigate (1) the effect of the intervention program on student learning if the innovation design were followed to its greatest extent in

instruction, and (2) the effect of the intervention if it were only partially implemented in instruction. When an educational innovation shows an effect weaker than anticipated from its underlying theory, the gap can possibly be attributed to deviations of local implementations from the initial design. If so, more resources may be in need for ensuring implementation fidelity. However, if empirical evidence indicates that the innovation does not become more effective even under high-quality implementation, then the focus should be placed on modifying the scientific theory and the innovation design. Additional inquiry will look into (3) the effect of instructional changes induced by the intervention program and (4) the effect of self-initiated instructional changes under the control condition and (5) compare the difference between the two. I will evaluate the accumulation of these effects on students' literacy growth over multiple years and will allow these effects to be a function of an English language learner's prior development of language and reading abilities.

In this project I plan to analyze the experimental data from a school district in Texas serving a large number of Spanish-speaking children. The experimental study was designed and conducted by researchers at the National Research and Development Center for English Language Learners at the University of Texas-Houston. The sample included a cohort of about 1,400 students attending 11 different schools. Twenty classes taught by teachers previously using English-only programs were assigned at random to either an enhanced English-only literacy program or a traditional English-only program. Another 40 classes taught by teachers who had used bilingual education programs in the past were assigned at random to an enhanced bilingual literacy program or a traditional bilingual program. The students were assigned to the same treatment condition from Kindergarten through Grade Three. The study included students who moved into the participating classes, and continued to assess the learning outcomes of students who moved out. In addition to obtaining repeated measures of implementation through observations of classroom instruction, the researchers administered an early reading assessment three times a year to all the K-3 students in the district. My key interest is in grade-3 English proficiency and reading development as the outcomes of the multi-year instructional sequences that the students experienced under different treatment programs.

**PART II: FIVE-YEAR MENTORING PLAN (maximum of two pages)**

**Summarize your five-year mentoring plan, including one to three mentors who have agreed to assist you in expanding specific areas of your expertise.**

Three distinguished scholars with complementary expertise in second-language learning, educational policies and programs for language minority children, and quantitative research methodology have generously agreed to be my mentors. They are Esther Geva from the University of Toronto, David Francis from the University of Texas-Austin, and Larry Hedges from Northwestern University.

**For each proposed mentor, briefly describe below:**

- **How the mentoring relationship will expand your expertise;**
- **Rationale for choosing this particular mentor;**
- **Nature of the proposed mentor's current relationship to you and the contribution of the award to establishing or developing a mentoring relationship;**
- **Content of the mentoring and the form it will take; and**
- **How potential barriers such as long distance and busy schedules will be addressed.**

Prof. Esther Geva will be an ideal mentor for me as I delve into the field of research on second-language learning. She is internationally known for her extensive work on the development of literacy skills in second-language learners. She has closely examined the cognitive, linguistic, and reading processes in the learning of a second language vs. a first language in a variety of cross-cultural settings. In addition to her numerous publications in this area, she authored and co-authored multiple chapters in the Report of the National Literacy Panel on Language-Minority Children and Youth titled "Developing Literacy in Second-Language Learners."

Ever since I started as an Assistant Professor at the University of Toronto in 2004, Esther has generously shared with me her knowledge and research findings and has shown great patience and consideration in explaining to me the subtlety of terminology used in this field, of competing theoretical perspectives, controversies, and beliefs motivated by strong convictions. She has also shared with me her knowledge about under-studied domains with major educational and policy implications. We have worked together on the dissertation committees of a number of Ph.D. students studying language minority students' literacy growth. The award will formalize the mentoring relationship and will enable long-term research collaboration between us that we expect will lead to joint publications on topics of mutual interest. Specifically, Esther has invited me to participate in her biweekly research group meetings. She will suggest a reading list and will update me on the literature. We will have regular communications around the proposed projects in person or over phone or email. We plan to present our ongoing work and seek feedback from colleagues in the Modern Language Centre, a strong cluster of researchers in second language education at the Ontario Institute for Studies in Education of the University of Toronto. Through this mentoring relationship, Esther is committed to introduce me to the research community in second-language learning and will provide me with strong guidance in my attempt to grasp the essence of research issues in this field.

Prof. David Francis is a national leader in research on education for English language learners and has contributed to this field his unique expertise in statistical and psychometric methods. Given the dual nature of my research plan—the focus on language minority students and on causal inference methods for multi-level longitudinal data, David will be a perfect mentor in helping me to pursue this research agenda. I expect to receive great benefit from his knowledge in both substantive and methodological domains about the educational policies, intervention programs, and instructional practices for language minority students. Most importantly, he would be perhaps the best person to direct my efforts at developing and applying cutting-edge analytic methods for addressing more ambitious scientific questions in this field. He is currently serving as a mentor for Nonie Lesaux, a William T. Grant Scholar in the class of 2012 whose research project on vocabulary instruction for 6<sup>th</sup> grade ELL students is complementary to my own.

**All content is the property of the author, Guanglei Hong, and should not be distributed or cited in any form without the express written permission of the author.**

I have learned about David's work through attending his talks and reading his publications. The Award will provide a great opportunity for us to work together. I will seek his input on a regular basis as the first project evolves, and will deliberate a detailed collaborative plan with him for the second project on intervention implementation. He has offered to provide me with a reading list on the most recent literature on English language learning, and has suggested that we study some methodological papers together. In addition to scheduling regular conference calls to review my ongoing work and arranging face-to-face meetings in conjunction with national conferences, he has invited me to participate in biweekly methodological seminars and conferences on substantive issues at the National Research and Development Center for English Language Learners that he is directing. The Center has been using the Webex teleconferencing technology to involve researchers from other universities in these seminars and conferences. The Award will also allow me to pay a number of visits to the Center in Houston to present my research and have more extensive discussions with David and his colleagues in informal settings.

Prof. Larry Hedges is a leading scholar in the fields of educational statistics and evaluation. He has made major contributions in developing and applying statistical methods for social, medical, and biological sciences. He is currently directing the Center for Improving Methods for Quantitative Policy Research (Q-Center) at the Institute for Policy Research at Northwestern University and has recently been a leader in organizing the Society for Research on Educational Effectiveness (SREE) at the national level. He has become familiar with my research program through formal and informal exchanges in the past, and has offered insightful feedback to the methodological work that I presented at the 2007 Annual Meeting of the National Academy of Education.

Larry will be the best critic of my planned efforts to advance causal inference methods for studying moderation and mediation mechanisms in both experimental and quasi-experimental multi-level longitudinal studies. He will also provide important guidance in helping me to develop a career plan in quantitative research methodology. A formal mentoring relationship through this Award will ensure intellectual exchanges with him on a monthly basis through phone, email, or in person to discuss the proposed projects, manuscripts, new literature in the field of causal inference, and potential opportunities for research collaboration. He has invited me to present progress in my methodological research to faculty and graduate students at the Q-Center periodically and in the meantime keep myself updated of their ongoing research. Such opportunities will provide important stimulation of new ideas and will likely bring new perspectives as I tackle the methodological challenges in these projects.

## Causal Inference Methods for Studying Instruction Effects for Language Minority Students

### Full Research Plan

I propose a pair of research projects focusing on developing and applying causal inference methods for studying instruction effects on the literacy growth of language minority students throughout the elementary school years. In the first project, I intend to investigate how instructional programs can be optimally adapted to language minority students' evolving needs. The second project will examine the mediating role of instruction in the context of a multi-year, multi-site randomized experiment of an innovative program for English language learners. The proposed research plan will build upon my methodological expertise in causal inferences for multi-level longitudinal educational data, and will greatly expand my knowledge about educational policies and instructional programs for language minority students. Methodological advancements will be essential for generating important knowledge about how to better serve the growing population of language minority students, and will have broad implications for causal inference studies in education.

#### First Project

##### Significance of the Study

I propose to investigate school contributions to the literacy growth of language minority students—i.e., students whose primary home language is not English—in their middle- and late-elementary years. Previous research has shown that, although language minority students typically achieve a level of word-level skills similar to that of monolingual students in the early-elementary years, they tend to fall behind in text-level skills starting from the middle-elementary years due to their lack of English vocabulary, syntactic skills, and culture-specific background knowledge (Geva, 2006; Lesaux with Koda, Siegel, & Shanahan, 2006). This is also the time period that most elementary schools choose for English Language Learners (ELLs) to exit the ELL programs. Because reading comprehension is a basis for academic learning in subject areas, language minority students experiencing difficulties in comprehending texts will be at a relatively high risk of encountering academic failures in the rest of their schooling years. According to the results from the National Education Longitudinal Survey (NELS: 88), a large number of language minority students displayed low levels of academic performance in English and tended to have relatively high dropout rates in high school (Bennici & Strang, 1995; Bradby, Owings, and Quinn, 1992). A survey of 41 states found less than 20% of the ELL students score above state-established norms in English reading comprehension (Kindler, 2002). How to improve the quality of education for language minority students in the middle- and late-elementary school years either through continuing the ELL services or through better accommodating these students in regular reading and arts instruction remains an unresolved issue.

Many language minority students are officially identified as ELL or students with limited English proficiency (LEP) and therefore are eligible for ELL services. The ELL student population in U.S. schools has shown rapid growth in the recent decades. According to the Schools and Staffing Surveys (SASS), the number of ELL students in public schools nationwide increased from two million students representing 5 percent of the public school population in 1993-1994 to three million students representing approximately 7 percent in 1999-2000 (Meyer, Madden, & McGrath, 2004). In 2003-2004, ELL services were provided to 3.8 million students representing 11 percent of all students (Hoffman & Sable, 2006). However, whether the ELL services ever become available to a particular student in a certain year, for how many years, in which form of instructional organization, how intensive, and how they complement regular reading/language arts instruction often vary across schools and classrooms. Rather than attempting to endorse a standard program for all language minority students, my interest is in understanding the dynamic process of these students' literacy growth in school settings. I aim to empirically identify sequences of educational experiences optimally adapted to language minority students' initial language ability and their evolving learning needs at later time points.

#### Substantive Research Questions and Theoretical Rationale

Through analyzing a longitudinal data set of a nationally representative sample of students from kindergarten to the end of the fifth grade, I will develop a portrait of the average English literacy growth trajectory of the population of language minority students in comparison with the population of English native-speaking students and will estimate the variation in growth within each of these two populations. I will also obtain a national picture of how ELL educational resources are allocated in elementary schools, the intensity and duration of ELL services, as well as the concurrent regular reading and language arts instruction for ELL students. The information at the national level will supply a foundation for investigating a series of causal questions.

First of all, the data set will allow me to evaluate the long-term effects of ELL services and regular reading and language arts instruction in kindergarten and first grade on students' literacy outcomes in middle- and late-elementary years. More importantly, I intend to find empirical evidence with regard to the following research questions: How many years of ELL services will be optimal for language minority students as a function of their initial and evolving English language ability? To what extent does the optimal length of ELL services depend on resource allocation and instructional processes under various organizational conditions? How are the effects of ELL programs mediated by the actual delivery of ELL services to English language learners given a student's prior development of English literacy?

I investigate the effectiveness of ELL programs under the following theoretical framework. First of all, I consider the tension between demand and supply of ELL services as important organizational conditions largely beyond the control of educators within a school. Under the organizational conditions, resource allocation and instructional processes as two major components of service delivery to language minority students.

Secondly, under the resource constraints, schools and teachers nonetheless have considerable discretionary power in allocating ELL services at the local level. Due to the social structure of instruction, resource allocation will likely influence the learning experiences of not only those students receiving the services but also their classmates not receiving the services. Thirdly, ELL services may show limited effectiveness unless it is operated in a concerted way with regular reading and language arts instruction. Finally, to facilitate a language minority student's literacy growth and to overcome his or her unique difficulties in English learning requires teachers' adaptive instructional efforts over consecutive years. I elaborate each of these key constructs below.

*Organizational conditions.* The U.S. law requires that ELL students be provided effective instruction that leads to the timely acquisition of proficiency in the English language and provides equal access to the mastery of the content knowledge and skills that are being taught to all students (Han & Baker, with Rodriguex, 1997). However, the growth of federal funds supplemented by state and local funds did not keep pace with the growth of ELL student population (McCandless, Rossi, & Daugherty, 1997). Given the demand for ELL services in a school, school policies with regard to the length of these services and the availability of ELL staffing in a certain year may restrict the allocation of ELL resources to classes within a school and to individual students within a class. For example, many elementary schools provide no more than two or three years of services to an ELL student. Even in schools that continue ELL services for more years, when there is a shortage of ELL staffing, a relatively high ratio of ELL students to ELL teachers or teacher aides will nonetheless limit access to the services.

*Resource allocation.* At the classroom-level, when the demand for ELL services is given in a certain year, within-class allocation of ELL resources will likely shape individual students' daily experiences with instructional processes including both regular reading/language arts instruction and ELL instruction. This is because children share instructional resources and interact with one another in the classroom setting (Hong, 2004). Teachers also vary in how resourceful and responsive they are in accommodating the needs of language minority students while attending to the rest of the class (Gersten, 1996; Pease-Alvarez, Garcia, & Espinosa, 1991). Unsurprisingly, classroom teachers with more training in ESL or bilingual education appear to have more competence in helping ELL students in regular instruction (Calderon & Marsh, 1988; Hoffman, Roser, & Farest, 1988). As a result, a student's instructional experiences will likely be determined not only by his or her access to ELL services but also by the availability of services to the classmates in need as well as by the classroom teacher's capability of teaching ELL students.

*Instructional processes.* Daily experiences with instructional processes are major contributors to a language minority student's English language learning and reading growth. This is because, in comparison with students from English-speaking families, language minority students generally rely more on school education for their English language development (Hansen, 1989). In general, successful English learning requires targeted and continuing intervention through a coherent program that meets ELL students' needs at different stages of English language development, a program in which

efforts to develop ELL students' English language proficiency are in alliance with English language arts learning and with academic content standards. For example, for language minority students with a relatively low level of English proficiency, intensive instruction in word-level skills in the first few years of schooling may not directly lead to improvement in their English vocabulary, syntactic skills, and background knowledge if these students have not been exposed to enriched English literacy activities in formal and informal educational settings (Hannon & McNally, 1986; Verhoeven, 1990). In the middle-elementary years, for ELL students who have reached a certain level of English proficiency after 3~4 years of ELL services, a program that continues to pull them out from their regular reading classes may show less effectiveness than within-class services especially when regular instruction in reading and language arts has started to place an increasing emphasis on vocabulary and reading comprehension. Moreover, evidence from previous research has suggested that instruction is less than optimal if it has not been tailored to a language minority student's evolving literacy skills (Cohen, & Rodriguez, 1980; Fitzgerald & Noblit, 2000; Slavin, & Madden, 1998). Continual placement in the ELL program for a language minority student who has reached the same level of English performance as the native English-speaking classmates could be as detrimental to the student's reading growth as discontinuing the services for a student still in need of additional assistance in English language learning. I will investigate whether and how the optimal length of ELL services for a given student is determined by the effects of the services in combination with the effects of regular reading and language arts instruction in accumulation over consecutive years.

### Research Design and Methodology

To investigate these important substantive issues comprehensively would require a large-scale, multi-level, longitudinal complex randomized experiment that has never been carried out. Yet there is much knowledge to gain from analyzing national longitudinal survey data through rigorous causal inferences approaches when variations in organizational conditions create natural experiments. Building upon my earlier work on causal inferences for multi-level educational data, in this study I plan to develop and apply statistical adjustment methods for investigating moderating and mediating relationships among multiple time-varying treatments and outcomes in school settings. I will address the following major methodological challenges:

*Interference among classmates.* Following Rubin's causal model (Holland, 1986; Rubin, 1978), the causal effect of one treatment versus another is generally defined as the difference between the potential outcome that a unit would display under the first treatment and the counterfactual outcome that the unit would have displayed if assigned to the alternative treatment instead. The above definition requires the stable-unit-treatment-value assumption (SUTVA) that there is a single value of each potential outcome associated with each treatment for each unit, regardless of how the treatments are assigned and what treatments are received by other units (Rubin, 1986). SUTVA becomes problematic, however, when educational treatments are delivered to individual students who interact with one another (Rubin, 1990). To apply Rubin's Causal Model to multi-level educational data therefore requires relaxation of SUTVA. In my dissertation, I

extended the causal framework by allowing every student's potential outcome value associated with each instructional treatment to depend on the organizational setting characterized by class composition, teacher characteristics, and school context (Hong, 2004). In a subsequent methodological paper published in the *Journal of American Statistical Association* (Hong & Raudenbush, 2006), we specified a student's potential outcomes as a function of the student's school assignment, the student's own treatment assignment, and the peers' treatment assignments under a set of comparatively plausible assumptions. The extended causal framework has enabled us to investigate a broad range of causal effects that would have been undefined under SUTVA.

In the current study, a language minority student's learning outcome may depend not only on the instructional treatments assigned to this student, but also on the classmates and teachers that the student has encountered, the proportion of English language learners in the same class who are currently receiving ELL services, as well as the English performance and reading ability of other classmates. Of particular theoretical interest is the extent to which the instructional experiences and literacy growth of a language minority student are influenced by the ELL resources allocated to one's classmates who are in need of assistance in English language learning.

*Selection in treatment assignment.* In this large-scale, non-experimental data set, student assignment to ELL services could be subject to the influence of a large number of selection factors including a child's past treatment history, past language and literacy development, demographic characteristics, family background, class composition, and school composition. Similarly, class assignment to a particular type of regular reading and language arts instruction can be predicted by class composition, teacher characteristics, and school characteristics. Without statistical adjustment for selection, the estimated treatment effects will likely be biased. The instrumental variable method provides one strategy for identifying these treatment effects (Angrist, Imbens, & Rubin, 1996). In the current study, the length of ELL services and the ratio of ELL students to ELL staffing within a school are both largely determined by external factors. Conditioning on school characteristics including location, sector, enrollment, and demographic composition, these measures of organizational regulations and conditions with regard to ELL service provision are arguably exogenous to within-class ELL service assignment and are unlikely to influence students' language and literacy development except through the actual delivery of ELL services to individual students. Under these assumptions, I will use a school's policy with regard to the length of ELL services and the ELL student-teacher ratio as instrumental variables in estimating the effect of ELL service assignment to each sampled language minority student and the additional effect of the proportion of ELL classmates receiving the services.

Alternatively, when the data set contains comprehensive pretreatment information, it becomes more plausible to assume that, given all the observed pretreatment covariates, the treatment assignment can be viewed as random, as it becomes independent of the unmeasured covariates. Repeated measurements of students' language and literacy development prior to the treatment provide a unique advantage for causal inference because a student's potential outcomes are usually best predicted not only by the prior

ability level but also by the growth trajectory that the student has displayed in the pretreatment years (Bryk & Weisberg, 1977). To take into consideration at the same time a vast number of other observed covariates that predicts the assignment to one treatment instead of another, we can summarize their information in a propensity score. As proved by Rosenbaum and Rubin (1983, 1984), subsets of treated and control units who have the same propensity score should have the same joint distribution of all the observed pretreatment covariates. Statistical adjustment for the propensity score should be sufficient for removing the selection bias associated with all these observed covariates. In my earlier work, I applied the propensity score stratification method to multi-level data in evaluations of early grade retention on children's cognitive and social-emotional development (Hong & Raudenbush, 2005; Hong & Yu, 2007, 2008). This method will provide a viable strategy for estimating the yearly treatment effects in the current study when the number of treatments under consideration is relatively small.

*Multiple concurrent instructional treatments.* Instruction for English language learners has two major components. Typically, a regular classroom teacher delivers reading and language arts instruction to the whole class; individual English language learners may receive concurrent ELL services from an ELL teacher or aide. Each of these two components contains multiple dimensions or categories. For example, regular reading and language arts instruction may differ across classes in terms of instructional time, instructional organization, content coverage, and pedagogical activities. Similarly, we may find variations across classes and even among English language learners within the same class in the provision of ELL services. Statistical adjustment through pooling conditional mean differences between two treatment groups over the distribution of the propensity score has its limited use as the number of treatments increases.

Extending the idea of post-stratification by weighting in survey sampling (Holt & Smith, 1979; Horvitz & Thompson, 1952; Kish, 1965; Little, 1982) and a similar statistical adjustment strategy for non-random selection in treatment assignment (Huang, Frangakis, Dominici, Diette, and Wu, 2005; Imbens, 2004; Rosenbaum, 1987), I developed and applied the method of marginal mean weighting through stratification (MMW-S) for evaluating concurrent multi-valued instructional treatments. Mathematical consideration and a simulation study (Hong, 2008) showed that, due to its nonparametric approach, the MMW-S method often generates more robust estimates in comparison with applications of the existing inverse-probability-of-treatment weighting (IPTW) method (Robins, 2000). An application of the MMW-S method to the Early Childhood Longitudinal Study Kindergarten cohort (ECLS-K) data set revealed the dependence of the effect of homogeneous grouping on the amount of time allocated to reading instruction when evaluating their joint effects on kindergartners' reading growth (Hong & Hong, in press). I have also extended the MMW-S method for analyzing the differential effects of instructional time and homogeneous grouping for kindergartners at different initial ability levels (manuscript under preparation). The same method will be promising for comparing the effects of different combinations of regular reading and language arts instruction with ELL services and for investigating the extent to which the optimal combination depends on a student's prior English proficiency.

*Time-varying moderation of cumulative effects of sequential instructional treatments.* The optimal length of ELL services for a language minority student is to be determined on the basis of the cumulative effects of reading and language arts instruction in combination with ELL instruction over multiple years. The effect of a multi-year sequence of instructional experiences cannot logically be equated to the sum of the effects of instruction occurring each year. This is because the instructional benefit from the earlier years would be hard to sustain if the instruction in the following years failed to capitalize on the students' current knowledge. Standard methods of adjustment, though sufficient for removing observed time-invariant confounding, can lead to bias in the presence of time-varying confounders, defined as covariates that have been subject to the influence of prior treatments but also predict later treatment assignments and outcomes (Robins, 1986; Rosenbaum, 1984). To cope with this problem, we adapted the IPTW method as developed by Robins (2000) to complex multi-level educational data in an earlier study (Hong & Raudenbush, 2008).

However, when the theoretical interest lies in the optimal adaptation of instructional treatments to a student's evolving needs in a study of the cumulative effects of multi-year sequences of instruction, the student's responses to the earlier treatments become time-varying moderators for the later treatments (Peck, 2003; Schochet & Burghardt, 2007). For example, among students who started with a relatively low level of English proficiency, due to the variations in organizational conditions and resource allocation, some are assigned to an instructional program suitable for beginning English language learners while others may not receive equivalent learning opportunities. The former may significantly outperform the latter in English performance a year later. The effectiveness of instructional treatments in the subsequent years will likely depend on how they are tailored to the students' current English language ability. In this case, conventional methods of estimating moderation effects will likely introduce bias due to the fact that the time-varying moderators are outcomes of the prior treatments. Robins and his colleagues (2000) introduced the idea of structural nested models to handle this challenge in single-level epidemiological data. I will explore in the current study how to adapt the method to multi-level educational settings. The additional complexity is related to the social nature of instruction as I explicated earlier. Specifically, the cumulative instructional effects on a student's learning outcomes will become functions of not only the change in this student's English language proficiency but also his or her classmates' changing status that can be attributed to the prior treatments.

*Policy mediators acting in concert on an outcome.* In the theoretical framework that I have adopted for the current study, a school's policy with regard to the length of ELL services and the tension between demand and supply for these services within a school may exert an impact on the students' literacy growth mainly through resource allocation and instructional processes. For example, a school's policy of offering no more than three years of ELL services or temporal shortage of ELL staffing may constrain the availability of appropriate services to English language learners in third-grade classes. Without extra assistance, some teachers may choose to accommodate the needs of English language learners in inclusive reading and language arts classes, for example, by increasing the amount of instructional time for the whole class. Time increase allows these teachers to

provide scaffolding for ELL students through clarifying difficult words and passages within texts and giving ELL students extra practice in reading words, sentences, and stories without lowering academic standards. Previous research has suggested the effectiveness of these adjustment strategies (Calderon, Hertz-Lazarowitz, & Slavin, 1998; Denton, 2000; Ulanoff & Pucci, 1999). On one hand, the lack of service provision and the increase of instructional time can both be viewed as mediators of the effect of school-level policy on student learning. The positive effect of increasing instructional time will likely compensate for the negative effect of service deprivation. Disentangling these mediation relationships will be necessary for a comprehensive understanding of the mechanism through which the school-level policy may influence student learning. On the other hand, the effect of increasing instructional time would perhaps be maximized if extra ELL assistance were made simultaneously available. In that regard, service provision becomes a moderator for the effect of instructional time on student learning.

How to analyze the interaction effects among multiple mediators is a novel problem in causal inference methodology (Bauer, Preacher, & Gil, 2006; Pearl, 2000; Preacher, Rucker, & Hayes, 2007; Ten Have, Joffe, Lynch, Brown, Maisto, & Beck, 2007; VanderWeele, in press). Additional challenges arise when these relationships are further entangled in a multi-year study in which the evolving English proficiency of language minority students in a class must be considered as an important time-varying moderator. Using the potential outcomes framework for multi-level data, I will conceptually define these moderation and mediation effects and will develop analytic strategies for identifying these effects under plausible assumptions.

#### Data Sources and Measurement

I will select data from the Early Childhood Longitudinal Study-Kindergarten cohort (ECLS-K) restricted-used data provided by the National Center for Education Statistics. ECLS-K followed a nationally representative cohort of children from kindergarten to 5<sup>th</sup> grade. A total of 21,260 kindergartners participated in the study from the 1998-1999 school year (Year 0). This cohort of students was observed in the fall and spring of the base year when they were in kindergarten. Follow-up data collection occurred in the fall and spring of the 1999-2000 school year (Year 1), and again in the spring of 2002 (Year 3) and the spring of 2004 (Year 5). Data were collected from parent interviews, principal surveys, teacher surveys, observer checklists, student record abstracts, and direct indirect child assessments. In addition, students were surveyed in the springs of Year 3 and Year 5.

This study will focus on language minority students' English literacy learning in school as reported in the last two waves of data collection when most of the sampled students were in 3<sup>rd</sup> grade and then in 5<sup>th</sup> grade. Yet it is important to examine a student's literacy growth in the mid- and late elementary years as a continuation of their earlier development. In that regard, the ECLS-K data set has a unique strength because of its rich information about every student's family environment and learning experiences in the early elementary years. Below I briefly describe the measures corresponding to the

key constructs in my theoretical framework. See Table 1 in Appendix A for details about each domain of measurement.

*Primary home language.* ECLS-K provided multiple sources of information with regard to primary language use at home. These include English oral language development scale score, home language use as reported by parents, home language survey results contained in student record abstract, and teacher report. On the basis of at least one source of the above information, we have identified a total of about 4,000 language minority students in the entire sample.

*English literacy performance.* During the first four waves of data collection, students from non-English speaking households were given an English oral language development scale (OLDS) assessment. Those scoring below the cut point of the English OLDS were administered the Spanish language assessment if the student's home language was Spanish. Those who passed the English OLDS were administered direct cognitive assessment in English. The reading direct assessment covered word-level skills including letter recognition, beginning sounds, ending sounds, sight words, and comprehension of words in context, as well as text-level skills including literal inference, extrapolation, evaluation, and evaluation of non-fiction. All six waves of repeated assessments were vertically equated through item-response-theory (IRT) techniques to allow for measurement of reading growth. In addition, teachers were asked to assess every sampled student's language and literacy skills in speaking, listening, reading, and writing on an academic rating scale (ARS) on the basis of teacher observation and experience with the student. In Year 3 and Year 5, every student was asked to rate his or her self-perceived competence and interest in reading.

*School policies, demands, and resources for ELL programs.* In both Year 0 and Year 1, the principal in each sampled school was asked to report number of years of ELL services that the school provided. At the end of Years 0, 1, 3, and 5, data were collected from principals on the percentages of LEP students in school and in grade as well as the number of ESL/bilingual education teachers and aides in school. Also in Years 0, 1, and 3, principals reported the percentage of LEP students in grade receiving ESL, bilingual education, or both. These measures will enable us to evaluate the demand and supply of ELL services in each sampled school.

*Within-class ELL resource allocation.* At the class level in each data collection year, teachers reported number of LEP students in class, non-English languages spoken by students in class, and number of LEP students in class receiving in-class ELL services, pull-out ELL services, or no ELL services. There were also measures of teacher training, experience, and self-efficacy in teaching ELL students, and non-English languages spoken by classroom teachers to LEP students.

*Student experience of ELL instruction.* At the end of each data collection year, the classroom teacher for each sampled student was asked to report whether the student received pull-out, in-class, or Title I ELL services. Using these measures, we can estimate the approximate length of ELL services actually received by each language

minority student in the sample. Additional measures of instruction at the class level include frequency and duration of ELL instruction per week, language of instruction in class, and availability of ELL aides who worked directly with students in class.

*Regular reading and language arts instruction.* Also at the end of each data collection year, teachers provided detailed information about time allocation, class organization, curricular emphases, and pedagogical activities in reading and language arts instruction for the whole class, and about reading group placement and individual tutoring for each sampled student. Every teacher also reported beginning-of-the-year reading skills displayed by students in the reading class.

### Data Analysis Plans

Below I briefly describe the major analytic tasks involved in addressing the research questions step by step.

*Question 1:* What is the average English literacy growth trajectory of the population of language minority students in comparison with the population of English native-speaking students? What is the variation in growth within each of these two populations?

1.1 Describing individual students' literacy growth trajectories. I will summarize descriptive information about the initial English proficiency and literacy growth of language minority students from kindergarten through the end of the fifth grade. I will use multiple sources of assessment data at each time point to identify every student's relative strengths and weaknesses in different literacy domains including English oral proficiency, decoding and word recognition, reading comprehension, and writing.

*Question 2:* What is the typical sequence of ELL services and the concurrent reading and language arts instruction for language minority students throughout the elementary school years?

2.1 Describing individual students' treatment histories. I will identify the history of ELL treatment assignment for each language minority student from kindergarten through the end of the fifth grade including the onset and duration of receiving the services and the form of service delivery in each time interval. I will also depict the history of reading and language arts instruction received by each language minority student throughout the elementary years including instruction targeted at the whole class and individualized instructional arrangement for the focal student.

*Question 3:* What are the long-term effects of ELL services and regular reading and language arts instruction in kindergarten and first grade on students' literacy outcomes in middle- and late-elementary years?

3.1 Estimating the yearly and cumulative effects of ELL services and regular reading and language arts instruction in Year 0 and Year 1 on students' English literacy achievement in Year 3 and Year 5. The treatment measures of particular interest are ELL service

assignments of each sampled language minority student and his or her classmates, form and intensity of ELL instruction, provision of other individual assistance, and curricular emphases on word-level skills, text-level skills, or both word-level and text-level skills in regular reading and language arts instruction. I will examine Year-3 and Year-5 outcome measures including phonological skills, word recognition, and reading comprehension. The treatment effects will be estimated as a function of individual students' initial oral proficiency in English. This analysis will reveal the long-term effects of ELL instruction and regular reading/language arts instruction in early-elementary years on different domains of English language and reading development in the middle- and late-elementary years. The results will help clarify the task of appropriate instructional designs in grade 3 and grade 5.

*Question 4:* What is the impact of school policies with regard to the duration of ELL services and the availability of ELL staffing restrict the allocation of ELL resources? And how does within-class ELL resource allocation influence regular reading and language arts instruction?

4.1 Estimating the effects of school policies, demand, and resources for ELL programs on within-class ELL resource allocation in Year 3 and Year 5. One important policy question is how ELL services are allocated within school organizations under resource constraints. Controlling for school characteristics including location, sector, enrollment, and demographic composition as well as student personal characteristics and prior treatment history, I will predict language minority students' assignment to ELL services in Year 3 and Year 5 by school policies, demands, and resources for ELL services, and will allow the predictive relationship to be a function of individual students' English literacy performance prior to the treatment assignment. I will also use school policies, demand, and resources for ELL services to predict the proportion of ELL students in class receiving ELL services in Year 3 and Year 5.

4.2 Estimating the effects of within-class ELL resource allocation on regular reading and language arts instruction in Year 3 and Year 5. Controlling for school characteristics, I will predict instructional practices in reading and language arts classes by the provision of ELL services, and will allow the predictive relationship to be a function of class composition measures including proportion of ELL students in class and students' beginning-of-the-year reading skills. The results will help us to determine the extent to which reading and language arts teachers adjust instructional practices to accommodate student needs and to compensate for service shortage in class.

*Question 5:* To what extent does the optimal length of ELL services depend on resource allocation and instructional processes under various organizational conditions?

5.1 Estimating the effects of within-class ELL resource allocation on language minority students' language and literacy learning in Year 3 and Year 5. Controlling for school characteristics, I will use school policy with regard to the length of ELL services and the ratio of ELL students to ELL staffing within a school as instrumental variables for

identifying the effects of ELL service provision for a focal student and the proportion of ELL students in class receiving services.

5.2 Estimating the joint effects of individual-level ELL services, within-class ELL resource allocation, and regular reading and language arts instruction on language minority students' language and literacy learning in Year 3 and Year 5. This analysis will require statistical adjustment for individual, class, and school pretreatment characteristics. The purpose of this analysis is to identify optimal combinations of ELL services and regular reading and language arts instruction as a function of individual students' prior English literacy performance. I will consider allocation of time to reading and language arts instruction, organization of class instruction, curricular emphases on word recognition, vocabulary, reading comprehension, and writing, pedagogical activities, and grouping or individualized arrangement for language minority students.

5.3 Estimating the cumulative effects of individual-level ELL services, within-class ELL resource allocation, and regular reading and language arts instruction on language minority students' language and literacy learning throughout the elementary years. This analysis is intended to evaluate multi-year sequences of instructional experiences for language minority students. The cumulative treatment effects by the end of each time interval will be estimated as a function of individual students' evolving status of English literacy performance.

*Question 6:* How are the effects of ELL programs mediated by the actual delivery of ELL services in combination with regular reading and language arts instruction to English language learners given a student's prior development of English literacy?

6.1 Estimating the effects of school policies, demand, and resources for ELL programs on language minority students' language and literacy learning mediated by individual-level ELL services, within-class ELL resource allocation and regular reading and language arts instruction in Year 3 and Year 5. In this mediation model, I will also examine the interactive relationships among individual-level ELL services, within-class ELL resource allocation and regular reading and language arts instruction as a function of individual students' prior English literacy performance.

6.2 Estimating the effects of school policies, demand, and resources for ELL programs on language minority students' language and literacy learning mediated by the cumulated experiences with individual-level ELL services, within-class ELL resource allocation and regular reading and language arts instruction throughout the elementary years. The time-varying mediating and moderating relationships will be estimated as a function of individual students' evolving status of English literacy performance. Results from this final analysis will provide most comprehensive information about how elementary schools contribute to language minority students' literacy growth and the possibilities of optimizing school contribution for this student population.

## Second Project

### Significance of the Study and Theoretical Rationale

The second project will focus on the mediating role of instruction in the context of multi-year randomized experiments. The National Literacy Panel identified about two-dozen randomized clinical trials in the past half a century that evaluated school programs for second language learners (Francis, Lesaux, & August, 2006; Shanahan & Beck, 2006). An increasing number of randomized experiments in education are currently being carried out in different parts of the country; many of these are targeted at ELL students. In theory, randomization removes all the selection bias in treatment effect estimation. However, past research has suggested the central role of local implementation if an educational policy or program is to have any major impact on student learning (Cohen & Hill, 2000; Rowan, Camburn, & Barns, 2004). Disentangling the effect of the innovation design and the effect of its implementation is challenging. This is because implementation in instruction is typically associated with pretreatment covariates such as teachers' prior knowledge and skills and students' prior performance. Low compliance with a well-designed intervention program may attenuate the treatment effect; while deliberate adaptation to the local contexts may strengthen the effectiveness of the intervention (McLaughlin, 1987; McLaughlin & Berman, 1975). Applying causal inference theories to mediation problems in multi-level school settings, I will investigate instruction received by language minority students over years as mediators of the initial intervention design in randomized experiments. The goal is to understand the processes that either facilitate or prevent a program targeted at English language learners from achieving its intended results.

This second project will parallel the investigation of mediating relationships in quasi-experimental longitudinal data in the first project. From a methodological point of view, the initial randomization of an intervention program provides important leverages for causal inferences. After clarifying causal estimands and explicating statistical assumptions for evaluating mediation effects in experimental data, naturally the next step will be to extend the methods to quasi-experimental data that often involve additional complexities. Substantively speaking, a different set of implementation issues may arise in naturalistic settings as an innovation program proven to be effective in field experiments is scaled up to affect a broader population (Hedges, 2006).

### Substantive Research Questions

The initial task in this study is to identify the major individual and organizational factors that predict variation in implementation or local adaptation of an instructional program targeted at English language learners in a randomized experiment. Although intensive training and ongoing support through professional development are considered to be essential for translating knowledge about an intervention into daily classroom practice, it may take multiple steps for the change to occur (Ruiz, Rueda, Figueroa, & Boothroyd, 1995; Saunders and Goldenberg, 1996). A multi-year study will enable us to examine

whether the influences of individual and organizational factors on implementation in instruction will change over time as the intervention program continues.

The core questions about mediation are counterfactual in nature. I will investigate (1) the effect of the intervention program on student learning if the innovation design were followed to its greatest extent in instruction, and (2) the effect of the intervention if it were only partially implemented in instruction. When an educational innovation shows an effect weaker than anticipated from its underlying theory, the gap can possibly be attributed to deviations of local implementations from the initial design. If so, more resources may be in need for ensuring implementation fidelity. However, if empirical evidence indicates that the innovation does not become more effective even under high-quality implementation, then the focus should be placed on modifying the scientific theory and the innovation design. Additional inquiry will look into (3) the effect of instructional changes induced by the intervention program and (4) the effect of self-initiated instructional changes under the control condition and (5) compare the difference between the two. I will evaluate the accumulation of these effects on students' literacy growth over multiple years and will allow these effects to be a function of an English language learner's prior development of language and reading abilities.

#### Research Design and Methodology

In this project I plan to analyze the experimental data from a school district in Texas serving a large number of Spanish-speaking children. The experimental study was designed and conducted by researchers at the National Research and Development Center for English Language Learners at the University of Texas-Houston. The sample included a cohort of about 1,400 students attending 11 different schools. Twenty classes taught by teachers previously using English-only programs were assigned at random to either an enhanced English-only literacy program or a traditional English-only program. Another 40 classes taught by teachers who had used bilingual education programs in the past were assigned at random to an enhanced bilingual literacy program or a traditional bilingual program. The students were assigned to the same treatment condition from Kindergarten through Grade Three. The study included students who moved into the participating classes, and continued to assess the learning outcomes of students who moved out. In addition to obtaining repeated measures of implementation through observations of classroom instruction, the researchers administered an early reading assessment three times a year to all the K-3 students in the district. My key interest is in grade-3 English proficiency and reading development as the outcomes of the multi-year instructional sequences that the students experienced under different treatment programs.

Social scientists typically employ path analysis or structural equation modeling to decompose the total effect of an intervention into its direct effect and indirect effect (Baron & Kenny, 1986; Bollen, 1987). As I pointed out earlier, variation in a mediator such as implementation that channels the indirect effect is often a result of selection. Researchers have shown that, despite the randomization of the initial assignment of intervention, conventional statistical adjustment methods typically produce biased estimates of the direct and indirect effects (Holland, 1988; Robins & Greenland, 1992;

Rosenbaum, 1984; Rubin, 2004). Rubin's causal model (Holland, 1986; Rubin, 1978) and its applications have provided useful perspectives for clarifying the key concepts in mediation studies. Below I review some of the major advancements in this area and discuss the existing methodological challenges.

*Principal Stratification.* Applying the logic of Frangakis and Rubin (2002), we can define two principal strata of teachers—full compliers and partial compliers. Teachers who are full compliers would implement the enhanced literacy program with high fidelity if assigned to the experimental group, and would not implement the intervention under the control condition. Partial compliers would implement the intervention to a limited extent if assigned to the experimental condition, and would not if assigned to the control. Within this framework, causal effects of the initial assignment to intervention on students' learning outcomes are defined only within each principal stratum. For simplicity, we conceive two potential learning outcomes for each student at each post-treatment time point. Every child in a full-complier class has a potential outcome associated with high-quality implementation of the enhanced literacy program and a potential outcome associated with the control condition. The average difference between these two potential outcomes is the average causal effect of high-quality implementation in instruction for those attending full-complier classes. Similarly, we can define the causal effect of low-quality implementation for those attending partial-complier classes.

*Sequential Randomization.* The framework of sequential randomization (Rubin, 1991) provides a different perspective. Every teacher is considered to have a possibility of implementing the enhanced literacy program with high fidelity as well as a possibility of partial implementation if assigned to the experimental group. The teacher may have a possibility of partial implementation as well as a possibility of no implementation under the control condition. The probabilities of implementation at each level would vary across teachers. Hence at each post-treatment time point, every student would have four potential learning outcomes correspondingly. We can define the causal effect of full implementation versus partial implementation under the experimental condition and the causal effect of partial implementation versus no implementation under the control condition. To proceed, we estimate every teacher's conditional probability (i.e., propensity) of implementation under the given treatment condition as a function of the observed individual and organizational pretreatment characteristics. Because classes were initially assigned at random to the intervention program, the distribution of implementation would have been balanced between the experimental classes and the control classes had they been assigned to the same treatment condition. Hence, we can use the same prediction function to estimate for each class the counterfactual probability of implementation under the alternative treatment condition (Follman, 2000; Hong & Raudenbush, 2006; Joffe, Ten Have, and Brensinger, 2003). These estimated or predicted propensity scores will provide a basis for statistical adjustment in estimating the effect of instructional changes induced by the intervention program and the effect of self-initiated instructional changes under the control condition.

As a typical example of a multi-year experiment in multi-level educational settings, the current study poses additional methodological challenges parallel to the issues that I

discussed under the first project. These include interference among classmates, multiple concurrent instructional treatments as mediators, and time-varying moderation of cumulative effects of intervention and its implementation.

*Interference among classmates.* A major interference may come from students who move into a participating class from an alternative treatment condition or a control condition. These students typically carry with them a treatment history different from that of the rest of the class. Teacher efforts to accommodate these students will likely alter a teacher's instruction and may subsequently affect the learning outcomes of other students in the class. Explicitly modeling instruction and student outcomes as functions of student mobility will provide a solution to this problem.

*Multiple concurrent instructional treatments as mediators.* Placing every teacher's implementation fidelity on a unidimensional scale often disguises the variation in implementation across classes along multiple dimensions. This is true especially when an intervention program is adapted by educators in various ways to the local contexts. Multivariate measures of implementation in instruction predicted by various factors pose a challenge to the causal inference about how instruction mediates the intervention effects. More challenges arise in a multi-year study in which teachers may adjust instruction in a later year in response to the perceived student outcomes of the previous years.

*Time-varying moderation of cumulative effects of intervention and its implementation.* Due to individual variation, an intervention program is unlikely to have a constant effect on all students. As I discussed earlier, in a study of the cumulative effects of multi-year sequences of instruction, a student's responses to the earlier treatments may determine how much he or she will benefit from the treatments in the later years. Hence, measures of the changing performance of a student and his or her classmates become time-varying moderators for the later treatments in a multi-level educational setting. I will explore how to adapt structural nested models to multi-level data in dealing with this challenge.

### **Mentoring Plan**

Three distinguished scholars with complementary expertise in second-language learning, educational policies and programs for language minority children, and quantitative research methodology have generously agreed to be my mentors. They are Esther Geva from the University of Toronto, David Francis from the University of Texas-Austin, and Larry Hedges from Northwestern University.

Prof. Esther Geva will be an ideal mentor for me as I delve into the field of research on second-language learning. She is internationally known for her extensive work on the development of literacy skills in second-language learners. She has closely examined the cognitive, linguistic, and reading processes in the learning of a second language vs. a first language in a variety of cross-cultural settings. In addition to her numerous publications in this area, she authored and co-authored multiple chapters in the Report of the National Literacy Panel on Language-Minority Children and Youth titled “Developing Literacy in Second-Language Learners.”

Ever since I started as an Assistant Professor at the University of Toronto in 2004, Esther has generously shared with me her knowledge and research findings and has shown great patience and consideration in explaining to me the subtlety of terminology used in this field, of competing theoretical perspectives, controversies, and beliefs motivated by strong convictions. She has also shared with me her knowledge about under-studied domains with major educational and policy implications. We have worked together on the dissertation committees of a number of Ph.D. students studying language minority students’ literacy growth. The award will formalize the mentoring relationship and will enable long-term research collaboration between us that we expect will lead to joint publications on topics of mutual interest. Specifically, Esther has invited me to participate in her biweekly research group meetings. She will suggest a reading list and will update me on the literature. We will have regular communications around the proposed projects in person or over phone or email. We plan to present our ongoing work and seek feedback from colleagues in the Modern Language Centre, a strong cluster of researchers in second language education at the Ontario Institute for Studies in Education of the University of Toronto. Through this mentoring relationship, Esther is committed to introduce me to the research community in second-language learning and will provide me with strong guidance in my attempt to grasp the essence of research issues in this field.

Prof. David Francis is a national leader in research on education for English language learners and has contributed to this field his unique expertise in statistical and psychometric methods. Given the dual nature of my research plan—the focus on language minority students and on causal inference methods for multi-level longitudinal data, David will be a perfect mentor in helping me to pursue this research agenda. I expect to receive great benefit from his knowledge in both substantive and methodological domains about the educational policies, intervention programs, and instructional practices for language minority students. Most importantly, he would be perhaps the best person to direct my efforts at developing and applying cutting-edge analytic methods for addressing more ambitious scientific questions in this field. He is

currently serving as a mentor for Nonie Lesaux, a William T. Grant Scholar in the class of 2012 whose research project on vocabulary instruction for 6<sup>th</sup> grade ELL students is complementary to my own.

I have learned about David's work through attending his talks and reading his publications. The Award will provide a great opportunity for us to work together. I will seek his input on a regular basis as the first project evolves, and will deliberate a detailed collaborative plan with him for the second project on intervention implementation. He has offered to provide me with a reading list on the most recent literature on English language learning, and has suggested that we study some methodological papers together. In addition to scheduling regular conference calls to review my ongoing work and arranging face-to-face meetings in conjunction with national conferences, he has invited me to participate in biweekly methodological seminars and conferences on substantive issues at the National Research and Development Center for English Language Learners that he is directing. The Center has been using the Webex teleconferencing technology to involve researchers from other universities in these seminars and conferences. The Award will also allow me to pay a number of visits to the Center in Houston to present my research and have more extensive discussions with David and his colleagues in informal settings.

Prof. Larry Hedges is a leading scholar in the fields of educational statistics and evaluation. He has made major contributions in developing and applying statistical methods for social, medical, and biological sciences. He is currently directing the Center for Improving Methods for Quantitative Policy Research (Q-Center) at the Institute for Policy Research at Northwestern University and has recently been a leader in organizing the Society for Research on Educational Effectiveness (SREE) at the national level. He has become familiar with my research program through formal and informal exchanges in the past, and has offered insightful feedback to the methodological work that I presented at the 2007 Annual Meeting of the National Academy of Education.

Larry will be the best critic of my planned efforts to advance causal inference methods for studying moderation and mediation mechanisms in both experimental and quasi-experimental multi-level longitudinal studies. He will also provide important guidance in helping me to develop a career plan in quantitative research methodology. A formal mentoring relationship through this Award will ensure intellectual exchanges with him on a monthly basis through phone, email, or in person to discuss the proposed projects, manuscripts, new literature in the field of causal inference, and potential opportunities for research collaboration. He has invited me to present progress in my methodological research to faculty and graduate students at the Q-Center periodically and in the meantime keep myself updated of their ongoing research. Such opportunities will provide important stimulation of new ideas and will likely bring new perspectives as I tackle the methodological challenges in these projects.

## Bibliography

- Angrist, J. D., Imbens, G. W., & Rubin, D. B. (1996). Identification of causal effects using instrumental variables. *Journal of the American statistical Association, 91*(434), 444-472.
- Baron, R. M., Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Bauer, D. J., Preacher, K. J., & Gil, K. M. (2006). Conceptualizing and testing random indirect effects and moderated mediation in multilevel models: New procedures and recommendations. *Psychological Methods, 11*, 142-163.
- Bennici, F. & Strang, W.E. (1995). *Special Issues Analysis Center, Annual Report, Year 3, Volume V: An analysis of language minority and limited English proficient students from NELS:88*. Rockville, M.D.: Westat, Inc.
- Bollen, K. A. (1987). Total, direct, and indirect effects in structural equation models. *Sociological Methodology, 17*, 37-69.
- Bradby, D., Owings, J., & Quinn, P. (1992). *Language characteristics and academic achievement: A look at Asian and Hispanic eighth graders in NELS:88*. Washington, DC: U.S. Department of Education, National Center for Education Statistics (NCES, 1992-479).
- Bryk, A., & Weisberg, H. (1977). Use of the nonequivalent control groups design when subjects are growing. *Psychological Bulletin, 84*(5), 950-962.
- Calderon, M., Hertz-Lazarowitz, R., & Slavin, R. E. (1998). Effects of bilingual cooperative integrated reading and composition on students making the transition from Spanish to English reading. *Elementary School Journal, 99*(2), 153-165.
- Calderon, M., & Marsh, D. (1988). Applying research on effective bilingual instruction in a multi-district inservice teaching training program. *NABE: The Journal for the National Association for Bilingual Education, 12*(2), 133-152.
- Cohen, D. K. & Hill, H. C. (2000). Instructional policy and classroom performance: The mathematics reform in California. *Teachers College Record, 102*(2), 294-343.
- Cohen, S. A., & Rodriguez, S. (1980). Experimental results that question the Ramirez-Castaneda model for teaching reading to first grade Mexican Americans. *Reading Teacher, 34*(1), 12-18.

- Denton, C. A. (2000). *The efficacy of two English reading interventions in a bilingual education program*. Unpublished doctoral dissertation. College Station, TX: Texas A & M University.
- Fitzgerald, J. & Noblit, G. W. (2000). Balance in the making: Learning to read in an ethnically diverse first-grade classroom. *Journal of Educational Psychology*, 92(1), 3-22.
- Follmann, D. A. (2000). On the effect of treatment among would-be treatment compliers: An analysis of the multiple risk factor intervention trial. *Journal of the American Statistical Association*, 95(452), 1101-1109.
- Francis, D., J., Lesaux, N., & August, D. (2006). Language of instruction. In Diane August and Timothy Shanahan (eds.), *Developing literacy in second-language learners: Report of the National Literacy Panel on Language Minority Children and Youth* (pp. 365-414). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Frangakis, C. E., and Rubin, D. B. (2002). Principal stratification in causal inference. *Biometrics*, 58, 21-29.
- Gersten, R. (1996). Literacy instruction for language-minority students: The transition years. *Elementary School Journal*, 96(3), 227-244.
- Geva, E. (2006). Second-language oral proficiency and second-language literacy. In Diane August and Timothy Shanahan (eds.), *Developing literacy in second-language learners: Report of the National Literacy Panel on Language Minority Children and Youth* (pp. 123-140). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Han, M. & Baker, D., with Rodriguex, C. (1997). SASS 1993-94: A profile of policies and practices for limited English proficient students: Screening methods, program support, and teacher training. Washington, DC: U.S. Department of Education, National Center for Education Statistics (NCES, 1997-472).
- Hoffman, L., & Sable, J. (2006). Public elementary and secondary students, staff, schools, and school districts: School year 2003-04. Washington, DC: U.S. Department of Education, National Center for Education Statistics (NCES, 2006-307).
- Hannon, P., & McNally, J. (1986). Children's understanding and cultural factors in reading test performance. *Educational Review*, 38(3), 237-246.
- Hansen, D. A. (1989). Locating learning: Second language gains and language use in family, peer and classroom contexts. *NABE: The Journal for the National Association for Bilingual Education*, 13(2), 161-180.
- Hedges, L. V. (2006). Generalizability of treatment effects: Psychometrics and education. In Barbara L. Schneider and Sarah-Kathm McDonald (eds.), *Scale up in education, Volume 1: Ideas in principle* (pp.55-78). Lanham, MD: Rowman & Littlefield.

Hoffman, J. V., Roser, N. L., & Farest, C. (1988). Literature-sharing strategies in classrooms serving students from economically disadvantaged and language different home environments. *Yearbook of the National Reading Conference*, 37, 331-337.

Holland, P. W. (1986). Statistics and causal inference. *Journal of the American Statistical Association*, 81(396), 945-960.

Holland, P. W. (1988). Causal inference, path analysis, and recursive structural equation models. *Sociological Methodology*, 18, 449-484.

Holt, D., & Smith, T. M. F. (1979). Post stratification. *Journal of the Royal Statistical Society, Series A*, 142, 33-46.

Hong, G. (May, 2004). *Causal inference for multi-level observational data with application to kindergarten retention*. Ph.D. Dissertation. University of Michigan, Ann Arbor, Michigan.

Hong, G. (2008). *Marginal mean weighting through stratification: Adjustment for selection bias in multi-level data*. Paper presented at the Annual Meeting of the American Educational Research Association. the New York City, NY.

Hong, G., & Hong, Y. (In Press). Reading instruction time and homogeneous grouping in kindergarten: An application of marginal mean weighting through stratification. *Educational Evaluation and Policy Analysis*.

Hong, G., & Raudenbush, S. W. (2005). Effects of kindergarten retention policy on children's cognitive growth in reading and mathematics. *Educational Evaluation and Policy Analysis*, 27(3), 205-224.

Hong, G., & Raudenbush, S. W. (2006). Evaluating kindergarten retention policy: A case study of causal inference for multi-level observational data. *Journal of the American Statistical Association*, 101(475), 901-910.

Hong, G., & Raudenbush, S. W. (2008) Causal inference for time-varying instructional treatments. *Journal of Educational and Behavioral Statistics*. (Forthcoming article available online at <http://jebs.sagepub.com>).

Hong, G., & Yu, B. (2007). Early Grade Retention and Children's Reading and Math Learning in Elementary Years. *Educational Evaluation and Policy Analysis*, 29(4), 239-261.

Hong, G., & Yu, B. (2008). Effects of Kindergarten Retention on Children's Social-Emotional Development: An Application of Propensity Score Method to Multivariate Multi-Level Data. Special Section on New Methods in *Developmental Psychology*, 44(2), 407-421.

Horvitz, D. G., & Thompson, D. J. (1952). A generalization of sampling without replacement from a finite universe. *Journal of the American Statistical Association*, 47, 663-685.

Huang, I-C., Frangakis, C., Dominici, F., Diette, G. B., and Wu, A. W. (2005). Approach for risk adjustment in profiling multiple physician groups on asthma care. *Health Services Research*, 40, 253-278.

Imbens, G. W. (2004). Nonparametric estimation of average treatment effects under exogeneity: A review. *Review of Economics and Statistics*, 86(1), 4-29.

Joffe, M. M., Ten Have, T. R., and Brensinger, C. (2003). The compliance score as a regressor in randomized trials. *Biostatistics*, 4(3), 327-340.

Kindler, A.L. (2002). *Survey of the states' limited English proficient students and available educational programs and services: 2000-2001 summary report*. Washington, DC: National Clearinghouse for English Language Acquisition.

Kish, L. (1965). *Survey sampling*. New York: Johan Wiley & Sons, Inc.

Lesaux, N. K. with Koda, K., Siegel, L. S., & Shanahan, T. (2006). Development of literacy. In Diane August and Timothy Shanahan (eds.), *Developing literacy in second-language learners: Report of the National Literacy Panel on Language Minority Children and Youth* (pp. 75-122). Mahwah, N.J.: Lawrence Erlbaum Associates.

Little, R. J. A. (1982). Models for nonresponse in sample surveys. *Journal of the American Statistical Association*, 77, 237-250.

McCandless, E., Rossi, R., & Daugherty, S. (1997). Are limited English proficiency (LEP) students being taught by teachers with LEP training? Washington, DC: U.S. Government Printing Office (NCES 1997-907).

McLaughlin, M. W. (1987). Learning from experience: Lessons from policy implementation. *Educational Evaluation and Policy Analysis*, 9(2), 171-178.

McLaughlin, M. W., & Berman, P. (1975). *Macro and micro implementation*. Santa Monica, CA: Rand Corp.

Meyer, D., Madden, D., & McGrath, D. J. (2004). English language learner students in U.S. public schools: 1994 and 2000. Washington, DC: U.S. Department of Education, National Center for Education Statistics (NCES, 2004-035).

Pearl, J. (2000). *Causality: Models, Reasoning, and Inference*. Cambridge University Press.

- Pease-Alvarez, L., Garcia, E. E., & Espinosa, P. (1991). Effective instruction for language minority students: An early childhood case study. *Early Childhood Research Quarterly*, 6(3), 347-363.
- Peck, L. R. (2003). Subgroup analysis in social experiments: Measuring program impacts based on post-treatment choice. *American Journal of Evaluation*, 24(2), 157-187.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42, 185-227.
- Robins, J. M. (1986). A new approach to causal inference in mortality studies with a sustained exposure period—application to control of the healthy worker survivor effect. *Mathematical Modeling*, 7, 1393-1512.
- Robins, J. M. (2000). Marginal structural models versus structural nested models as tools for causal inference. In M. Elizabeth Halloran and Donald Berry (Eds.), *Statistical Models in Epidemiology, the Environment, and Clinical Trials* (pp.95-134). New York: Springer.
- Robins, J. M. and Greenland, S. (1992). Identifiability and exchangeability for direct and indirect effects. *Epidemiology*, 3(2), 143-155.
- Rosenbaum, P. R. (1984). The consequences of adjustment for a concomitant variable that has been affected by the treatment. *Journal of the Royal Statistical Society, Series A*, 147, 656-666.
- Rosenbaum, P. R. (1987). Model-based direct adjustment. *Journal of the American Statistical Association*, 82, 387-394.
- Rosenbaum, P. R., and Rubin, D. B. (1983), "The central role of the propensity score in observational studies for causal effects," *Biometrika*, 70, 41-55.
- Rosenbaum, P. R., and Rubin, D. B. (1984). Reducing bias in observational studies using subclassification on the propensity score. *Journal of the American Statistical Association*, 79, 516-524.
- Rowan, B., Camburn, E., Barnes, C. (2004). Benefiting from comprehensive school reform: A review of research on CSR implementation. In C. Cross (Ed.), *Putting the pieces together: Lessons from comprehensive school reform research* (pp. 1-52). Washington, D.C.: National Clearinghouse for Comprehensive School Reform.
- Rubin, D. B. (1978). Bayesian inference for causal effects: The role of randomization. *The Annals of Statistics*, 6(1), 34-58.

Rubin, D. B. (1986). Comment: Which ifs have causal answers. *Journal of the American Statistical Association*, 81(396), 961-962.

Rubin, D. B. (1990), "Comment: Neyman (1923) and Causal Inference in Experiments and Observational Studies," *Statistical Science*, 5, 472-480.

Rubin, D. B. (1991). Does-response estimands: Comment on Efron and Feldman "Compliance as an explanatory variable in clinical trials. *Journal of the American Statistical Association*, 86(413), 22-24.

Rubin, D. B. (2004). Direct and indirect causal effects via potential outcomes. *Scandinavian Journal of Statistics*, 31, 161-170.

Ruiz, N. T., Rueda, R., Figueroa, R. A., & Boothroyd, M. (1995). Bilingual special education teachers' shifting paradigms: Complex responses to educational reform. *Journal of Learning Disabilities*, 28(10), 622-635.

Saunders, W. M., & Goldenberg, C. (1996). Four primary teachers work to define constructivism and teacher-directed learning: Implications for teacher assessment. *Elementary School Journal*, 97(2), 139-161.

Schochet, P. Z., & Burghardt, J. (2007). Using propensity scoring to estimate program-related subgroup impacts in experimental program evaluations. *Evaluation Review*, 31(2), 95-120.

Shanahan, T., & Beck, I. (2006). Effective literacy teaching for English-language learners. In Diane August and Timothy Shanahan (eds.), *Developing literacy in second-language learners: Report of the National Literacy Panel on Language Minority Children and Youth* (pp. 415-488). Mahwah, N.J.: Lawrence Erlbaum Associates.

Slavin, R. E., & Madden, N. A. (1998). *Success for All/Exito Para Todos: Effects on the reading achievement of students acquiring English* (Report No. 19). Baltimore, MD: The Johns Hopkins University, Center for Research on the Education of Students Placed at Risk.

Ten Have, T. R., Joffe, M. M., Lynch, K. G., Brown, G. K., Maisto, S. A., & Beck, A. T. (2007). Causal mediation analysis with rank preserving models. *Biometrics*, 63, 926-934.

Ulanoff, S. H., & Pucci, S. L. (1999). Learning words from books: The effects of read-aloud on second language vocabulary acquisition. *Bilingual Research Journal*, 23(4), 409-422.

VanderWeele, T. J. (in press). Marginal structural models for the estimation of direct and indirect effects. *Epidemiology*.

Verhoeven, L. T. (1990). Acquisition of reading in a second language. *Reading Research Quarterly*, 25(2), 90-114.

NOT FOR DISTRIBUTION

## Appendix

ECLS-K Measures of ELL Programs, Demand, Availability, and Allocation of ELL Resources, Instruction, and Student Outcomes

### A. ELL Programs

<i>Measures</i>	<i>Fall, K</i>	<i>Spring, K</i>	<i>Fall, 1<sup>st</sup></i>	<i>Spring, 1<sup>st</sup></i>	<i>Spring, 3<sup>rd</sup></i>	<i>Spring, 5<sup>th</sup></i>
Home Language Screening		U2		U4		
Number of years of ESL/Bilingual education services for LEP kindergartners		S2				
Number of years of ESL/Bilingual education services for LEP first graders				S4		

### B. Demand for ESL/Bilingual Education Resources

<i>Measures</i>	<i>Fall, K</i>	<i>Spring, K</i>	<i>Fall, 1<sup>st</sup></i>	<i>Spring, 1<sup>st</sup></i>	<i>Spring, 3<sup>rd</sup></i>	<i>Spring, 5<sup>th</sup></i>
% LEP students in school		S2		S4	S5	S6
% LEP students in grade		S2		S4	S5	S6
% LEP students in class	A1			A4, A4K	A5	G6
Non-English languages spoken by children in class	A1			A4, A4K	A5	

### C. Availability of ESL/Bilingual Education Resources

<i>Measures</i>	<i>Fall, K</i>	<i>Spring, K</i>	<i>Fall, 1<sup>st</sup></i>	<i>Spring, 1<sup>st</sup></i>	<i>Spring, 3<sup>rd</sup></i>	<i>Spring, 5<sup>th</sup></i>
Bilingual Education fund		S2		S4		
# Full-time ESL/Bilingual teachers in school		S2		S4	S5	S6
# Part-time ESL/Bilingual teachers in school					S5	S6
# ESL/Bilingual aides		S2		S4		
Classroom teacher's ESL teaching experience	B1	B2		B4, B4K		
Classroom teacher's ESL training (# courses)	B1	B2		B4, B4K	B5	J61
Classroom teacher's ESL certification					B5	J61
Classroom teacher's self-efficacy in ESL training				B4	B5	J61
Classroom teacher's evaluation of LEP inclusion				B4	B5	J61

## D. Allocation of ESL/Bilingual Education Resources

<i>Measures</i>	Fall, K	Spring, K	Fall, 1 <sup>st</sup>	Spring, 1 <sup>st</sup>	Spring, 3 <sup>rd</sup>	Spring, 5 <sup>th</sup>
% LEP students in grade receiving ESL		S2		S4	S5	
% LEP students in grade receiving Bilingual Education		S2		S4	S5	
% LEP students in grade receiving both ESL and Bilingual Education		S2		S4	S5	
# LEP students in class receiving no ESL/Bilingual Education services	A1			A4, A4K	A5	
# LEP students in class receiving in-class ESL/Bilingual Education services	A1			A4, A4K	A5	
# LEP students in class receiving pull-out ESL/Bilingual Education services	A1			A4, A4K	A5	
Non-English languages spoken by classroom teachers to LEP students	A1			A4, A4K	A5	

## E. Instructional Processes Experienced by Focal Student

<i>Measures</i>	Fall, K	Spring, K	Fall, 1 <sup>st</sup>	Spring, 1 <sup>st</sup>	Spring, 3 <sup>rd</sup>	Spring, 5 <sup>th</sup>
Pull-out ESL/Bilingual Education for the student		T2		T4, T4K	T5	G6
In-class ESL/Bilingual Education for the student		T2		T4, T4K	T5	G6
Title I ESL/Bilingual Education for the student				T4, T4K	T5	G6
Frequency and time of ESL instruction in class		A2		A4, A4K	A5	
Hours per week ESL/Bilingual Education aides working directly with students in class		A2		A4, A4K		
# ESL/Bilingual Education aides working directly with students in class					A5	J61
Language of instruction in class		A2		A4, A4K	A5	G6
Reading and language arts/instruction (organization, curricular emphases and instructional activities)		A2		A4, A4K	A5	G6

F. Language Background, Language Development, and Reading Growth of Focal Student

<i>Measures</i>	<i>Fall, K</i>	<i>Spring, K</i>	<i>Fall, 1<sup>st</sup></i>	<i>Spring, 1<sup>st</sup></i>	<i>Spring, 3<sup>rd</sup></i>	<i>Spring, 5<sup>th</sup></i>
Primary home language	P1	P2, WK	P3	P4, W1		
English Oral Language Development Scale score	C1	C2	C3	C4		
Spanish language proficiency score	C1	C2	C3	C4		
Teacher rating of student literacy scale score (ARS)	T1	T2		T4, T4K	T5	G6
Teacher rating of student oral, reading, and writing abilities	T1	T2		T4, T4K	T5	G6
Teacher rating of student relative standing in class in reading and language arts		T2		T4	T5	G6
Reading IRT total scale scores and T-scores	C1	C2	C3	C4	C5	C6
Reading subscale scores						
- Letter recognition	C1	C2	C3	C4	C5	C6
- Beginning sounds	C1	C2	C3	C4	C5	C6
- Ending sounds	C1	C2	C3	C4	C5	C6
- Sight words	C1	C2	C3	C4	C5	C6
- Comprehension of words in context	C1	C2	C3	C4	C5	C6
- Literal inference	C1	C2	C3	C4	C5	C6
- Extrapolation	C1	C2	C3	C4	C5	C6
- Evaluation	C1	C2	C3	C4	C5	C6
- Evaluating non-fiction	C1	C2	C3	C4	C5	C6
Decoding score						
Student self-rating of competence and interest in reading					C5	C6

Note:

“S” indicates items from school administrator questionnaires; “A” indicates items from teacher questionnaire A; “B” indicates items from teacher questionnaire B; “T” indicates items from teacher questionnaire C; “J” is for items from 5<sup>th</sup> grade classroom teacher questionnaire; “G” is for items from 5<sup>th</sup> grade reading teacher questionnaire; “P” represents items from parent interviews; “U” represents information from student abstract records; and “C” represents student direct assessments.

**William T. Grant Scholars Program Application  
Abstract**

**This abstract is an important part of your application. Foundation senior staff use it to screen applications. In final review stages, all Selection Committee members read the abstract, while only two members conduct detailed reviews of the full application. The abstract should provide a concise, compelling description of your research and mentoring plans.**

Do *not* edit this form or delete instructions from it.

<b>Principal Investigator</b>	Noelle M. Hurd, PhD, MPH
<b>Institution</b>	University of Virginia
<b>Department</b>	Psychology
<b>Project Title</b>	Critical Contexts for the Formation of Natural Mentoring Relationships among Economically Disadvantaged African American Adolescents: A Focus on Families and Neighborhoods

**PART I: FIVE-YEAR RESEARCH PLAN (maximum of four pages)**

**Summarize your five-year research plan. Describe the rationale for the research including a brief literature review, its contribution to understanding the Foundation's Current Research Interests, its significance for informing policy and/or practice, and the ways it will expand your expertise.**

Natural mentors are nonparental adults from youths' pre-existing social networks who youth can go to for support, guidance, and help making important decisions. These adults may be relatives, neighbors, or other adults in youths' everyday lives. A growing body of research points to the potential of natural mentors to help vulnerable adolescents display positive adaptation in the face of risk (Sterrett et al., 2011). Despite increasing research attention to the role of natural mentors in promoting resilience among at-risk adolescents, minimal research attention has been allotted to investigating contextual factors that influence the formation of these relationships. The current research plan aims to address a major gap in the field's understanding of the contexts within which natural mentoring relationships develop. Moreover, the current research plan builds on previous literature by examining heterogeneity in developmental contexts specific to economically disadvantaged African American adolescents. This approach allows for the identification of resilience-promoting factors specific to this population and thus, has direct implications for interventions (García-Coll et al., 1996; McLoyd, 1998). Economically disadvantaged African American adolescents bear an undue burden of exposure to risk factors for negative

developmental outcomes and therefore, focused research efforts on factors that contribute to resilience in this population are warranted. Studies with economically disadvantaged African American adolescents have demonstrated a roughly even split in the number of youth reporting natural mentoring relationships suggesting variability in contextual factors associated with the onset of natural mentoring relationships among these adolescents. Given that economically disadvantaged African American adolescents overwhelmingly identify natural mentors from their extended families and communities (Hurd et al., 2012), a focus on family and neighborhood settings is fitting for the study of the formation of natural mentoring relationships among these youth.

The proposed 5-year research plan will include a focus on the presence and distribution of physical and human resources in family and neighborhood settings wherein natural mentoring relationships develop. Natural mentoring relationships are conceptualized as social processes through which family and neighborhood settings influence adolescents' psychosocial outcomes. Specifically, the proposed research plan aims to 1) examine how family and neighborhood settings independently and interactively influence the formation of natural mentoring relationships and 2) assess the potential of natural mentoring relationships to mediate associations between these settings and adolescents' outcomes. Based on the limited theoretical and empirical work that has been conducted in this area, I advance several tentative hypotheses and will employ multiple study methods to begin to uncover the role of family and neighborhood settings in the development of natural mentoring relationships. Specific hypotheses that will be examined as a part of the current research plan include:

H1: Natural mentoring relationships between extended or fictive kin and adolescents will be more likely to develop if these nonparental adults live with or in close proximity to adolescents, have good relationships with adolescents' primary caregivers, receive support or encouragement for the formation of these relationships from adolescents' primary caregivers, and do not primarily engage with adolescents as authority figures.

H2: The way families structure adolescents' out-of-school time will be associated with the formation of natural mentoring relationships such that adolescents who are signed up for adult-led programs and activities or who are permitted more leisure time to interact with nonparental adults in the home or neighborhood will be more likely to develop natural mentoring relationships in comparison to adolescents whose out-of-school time is heavily scheduled with household chores and caretaking responsibilities for younger family members.

H3: Primary caregivers', nonparental adults', and adolescents' orientation toward collectivist and communalist cultural values will influence their motivation to form (or help form) natural mentoring relationships. Barring other constraints, these

relationships will be more likely to form when primary caregivers, adolescents, and adults in extended or fictive kin networks hold stronger orientations toward collectivist and communalist cultural values.

H4: Natural mentoring relationships will be more likely to develop when there is greater availability and access to safe spaces and youth programming in the neighborhood. More violence in the neighborhood will restrict opportunities for the formation of natural mentoring relationships outside of the home by reducing utilization of community resources and limiting interactions with community adults.

H5: Natural mentoring relationships will be more prevalent in neighborhoods with greater collective efficacy and norms conducive to intergenerational relationships. Neighborhood assets may offset or reduce the potential negative effects of neighborhood violence on adolescents' opportunities to form natural mentoring relationships in the community.

H6: Neighborhood and family settings will interact in complex ways to shape the formation of natural mentoring relationships between adolescents and nonparental adults in their families and communities. Neighborhoods will influence natural mentoring relationships via their influence on family settings.

The proposed 5-year research plan includes the implementation of secondary data analyses, an original mixed-methods data collection project, and the development of a grant proposal aimed at uncovering the role of family and neighborhood settings in the formation of natural mentoring relationships. These projects will build on each other, expand my content knowledge of family and neighborhood settings, and advance my methodological expertise in mixed methods and multilevel research. Collectively, these three projects will elucidate a multitude of setting-level factors that may shape the formation of natural mentoring relationships between economically disadvantaged African American adolescents and the nonparental adults in their families and communities. As one of the first research endeavors to properly assess family and neighborhood predictors of natural mentoring, this proposal seeks to break new ground in the field's understanding of the formation of natural mentoring relationships within key settings. Further, this set of synergistic studies seeks to explore heterogeneity in the settings of marginalized adolescents to both highlight the diversity that exists and leverage this diversity to identify points of intervention. Specifically, findings of the proposed studies may be used to inform setting-level interventions related to promoting natural mentoring relationships between marginalized adolescents and the non-parental adults in their families and neighborhoods. Findings of these studies, for example, may suggest ideal locations and distributions of community resources in high-poverty neighborhoods, indicate the

potential of violence–reduction efforts to influence the utilization of resources, and inform community–level efforts to foster supportive adult–youth interactions (e.g., regularly scheduled events that pair adults and adolescents together to work collaboratively on a community improvement project). Furthermore, findings related to family structures and dynamics most conducive to natural mentoring relationship formation may have important implications for policies and services affecting poor African American families. This research may underscore the benefits of more comprehensive definitions of family and the ways in which greater interdependence among kin networks (e.g., co–residence in multigenerational households) provides increased opportunities for supportive intergenerational connections. These findings may contradict current notions of personal responsibility and individual accountability that so fervently drive U.S. social policy (Geronimus, 2000, 2003).

Moreover, the proposed research plan advocates a paradigm shift in scientific and public discourse regarding youth mentoring interventions. To date, youth mentoring interventions have consisted almost exclusively of programs that are responsible for bringing youth and adults together in the hopes of fostering life–changing relationships. Often, youth and adults do not share backgrounds and more frequently than desired, these relationships fall victim to premature termination (Grossman & Rhodes, 2002). Though youth seem to benefit from formal mentoring relationships (DuBois et al., 2011), a complete reliance on these types of programmatic interventions to foster the intergenerational bonds critical for healthy youth development may be unrealistic. Findings of the proposed research will help to redefine and expand the youth mentoring movement to include setting–level interventions aimed at nurturing the formation of mentoring relationships between adolescents and the adults in their everyday lives. These intervention efforts may yield more sustainable results and hold immense promise for securing youths’ safe passage through adolescence and beyond.

**For each project, summarize: 1) specific research questions or hypotheses; 2) sample definition and selection procedures; 3) research design and methods; 4) data collection including key constructs, measures, data sources, and data collection procedures; and 5) data analysis plans. The latter years or latter projects of the research plan may, by necessity, be described in less detail than that of the first few years or first project, but we encourage you to provide enough specificity for reviewers to be assured of the rigor and feasibility of the plan.**

Project #1:

Data from the Project on Human Development in Chicago Neighborhoods (PHDCN) Study will be used to examine family and neighborhood predictors of natural

mentoring relationships. Data sources for these analyses include adolescents and their primary caregivers who participated in the longitudinal cohort study (3 waves), a separate group of neighborhood residents who reported on characteristics of their neighborhoods, U.S. Census data, and police reports of violent crime. Data from a subset of participants (economically disadvantaged, African American/Black adolescents from the 9-, 12-, and 15-year cohorts and their primary caregivers) will be selected for analyses. I will test a structural model where exposure to nonparental adult kin in the household, family supportiveness, and family conflict predict familial natural mentoring relationships which, in turn predicts adolescents' internalizing symptoms, sexual risk behavior, substance use, and externalizing symptoms (H1). A second set of analyses will employ a multilevel structural equation modeling framework to examine pathways from neighborhood settings to nonfamilial natural mentoring relationships via family processes (H6). Specifically, these multilevel mediation analyses will test whether indicators of neighborhood assets (latent factor comprised of composite variables from each of the following aggregated community survey measures: collective efficacy, reciprocal exchange, intergenerational closure, and availability of services for youth) and indicators of neighborhood violence (latent factor comprised of a composite variable of aggregated perceived neighborhood violence from the community surveys and police-reported violent crime rates) independently and interactively predict nonfamilial natural mentoring relationships via adolescents' participation in afterschool programs (H2, H4, H5).

Project #2 (if applicable):

Building on Project #1, I will develop and implement a mixed methods original data collection project with a sample of economically disadvantaged African American adolescents and their primary caregivers and extended family members. This project will include an in-depth examination of how family settings may influence the formation of natural mentoring relationships with a heavy focus on natural mentoring relationships that develop within the family system. Economically disadvantaged African American students in grades 6–9 residing in Charlottesville, VA will be recruited for participation in this study. Three hundred students will complete surveys where they will report on individual and family functioning, natural mentor presence, and developmental outcomes. Of the students who complete the survey, a stratified random sample of participants will be identified and asked to complete standardized open-ended interviews. Stratification will be implemented based on gender, age, natural mentor presence, and proximity to adult extended/fictive kin. Twelve adolescents who report not having a natural mentor and living in close proximity to at least one adult kin member will be randomly selected from each stratum. These

adolescents' primary caregivers and one adult kin member (of the family members who live in close proximity, the adult family member who has the closest relationships with the adolescent's primary caregiver) also will be asked to complete interviews. In addition, a stratified random sample of 12 participants who reported the presence of a natural mentor within the family system, their primary caregivers, and familial natural mentors will be contacted and asked to complete interviews. Study analyses will be driven primarily by theoretically-derived hypotheses, though it is expected that data from this mixed methods project will be used to generate new theories and hypotheses, as well. Two examples of potential study analyses are included. One set of analyses will explore how access to nonparental adults in the family (i.e., proximity of nonparental adult relatives, frequency of contact), parental efforts to support these relationships, and the nature of familial adults' interactions with adolescents influence the formation of natural mentoring relationships within the family system (H1, H3). Another set of analyses will examine the values, beliefs, and goals that inform adolescents' and primary caregivers' decisions regarding how adolescents spend their out-of-school time and whether these decisions influence the formation of natural mentoring relationships within and outside of the family system (H2, H3).

Project #3 (if applicable):

The results of projects #1 and #2 will inform the development of a grant proposal to be written and submitted during years 4 and 5 of the award. Through this grant proposal, I will seek funding for a longitudinal, neighborhood-based, multi-source data collection project that will be implemented with a sample of high-poverty, predominantly African American neighborhoods and the economically disadvantaged African American adolescent and adult residents of those neighborhoods in Richmond, VA. This project will include:

- geographical information systems data (e.g., locations of parks, recreation facilities, religious institutions, and youth-serving organizations)
- the availability of youth programming (e.g., the quantity of formal afterschool programs available within a .5 mile radius of adolescents' residences)
- surveillance system indicators of locations of violent incidents (sources include emergency room, ambulance service, medical examiner, department of juvenile justice)
- community surveys (20 randomly selected adults per neighborhood will report on neighborhood characteristics, intergenerational interactions, and community norms)
- systematic social observations of community resources (e.g., parks, recreation facilities) in neighborhoods (will provide information on the frequency, types, and amount of intergenerational interactions occurring in those settings)

- a longitudinal cohort study of African American early adolescents and their primary caregivers residing in the study neighborhoods with a primary focus on thoroughly assessing the quantity and quality of natural mentoring relationships, family structure, family dynamics, youths and primary caregivers' experiences of their neighborhood (including perceptions and utilization of neighborhood resources), and youths' psychosocial outcomes (e.g., developmental competencies)

By collecting longitudinal data during a developmental period wherein these relationships are most likely to emerge (early adolescence) and employing propensity-score matching analyses to reduce selection bias based on individual factors, greater opportunities exist for 1) more precisely capturing contextual predictors of natural mentoring relationships and 2) appropriately assessing effects of these relationships on youth outcomes. This proposed project will combine individual strengths of the previous two projects and build on them through its combined focus on family and neighborhood settings, comprehensive assessment of familial and nonfamilial natural mentoring relationships (characteristics of mentors, quality of relationships, quantity of relationships), and heavy emphasis on developmental competencies among marginalized adolescents. This project will be designed to test hypotheses H1-H6; however, these hypotheses may be modified based on findings from projects #1 and #2.

**PART II: FIVE-YEAR MENTORING PLAN (maximum of two pages)**

**Summarize your five-year mentoring plan. For the first two years of the plan, describe 1) the expertise to be acquired; 2) one or two proposed mentors; 3) the rationale for choosing each mentor, your current relationship with each, and how the award would add significant value beyond what would naturally occur in your relationship with each; 4) the mentoring activities, time commitments, and forms of interaction with each mentor; and 5) how potential barriers such as long distance and busy schedules will be addressed with each mentor. For the last three years of the plan, briefly explain the new expertise you plan to gain, your expected mentoring needs, and the attributes and expertise needed in a mentor(s).**

Dr. Jean Rhodes is the most renowned scholar in the youth mentoring field. Dr. Rhodes has devoted her career to building the knowledge base on youth mentoring. She also possesses extensive expertise in the implementation of qualitative and mixed methods research. In addition, Dr. Rhodes' more recent research has considered how youths' relationships with their parents may influence the effectiveness of formal mentoring relationships and how youths' perceptions of their communities may be associated with mentoring relationships. Dr. Rhodes' critical mass of mentoring knowledge and skills in research methodology uniquely situate her to oversee and support my scholarly development in the study of familial and neighborhood influences on natural

mentoring relationships and the implementation of mixed methods research. Furthermore, Dr. Rhodes has an excellent track record of mentoring junior scholars. Having been a William T. Grant Scholar herself and recently serving as a mentor for a former William T. Grant Scholar, Dr. Rhodes knows exactly what is expected of the proposed mentoring arrangement and she has made this commitment to me enthusiastically. In fact, Dr. Rhodes was one of the first people to notify me and encourage me to apply to the Scholars Program. Dr. Rhodes and I have begun corresponding over the past year, beginning with Dr. Rhodes' request to feature me as a "Rising Star" on The Chronicle of Evidence-Based Mentoring website. It is clear that Dr. Rhodes and I share a mutual respect for each other's work and this is sure to enhance the mentoring relationship that we hope to develop through the Scholars Award. Although it is likely that Dr. Rhodes and I would have some contact with each other in the future even without the support of the Scholars Award, the Scholars Award will help establish a concrete, well-defined mentoring alliance that promises to provide fertile grounds for my scholarly development.

Dr. Rhodes and I have outlined a mentoring plan that includes monthly virtual meetings over Skype throughout the first two years of the award. During these meetings we will discuss conceptualizations of my research projects, my plans for analyses, interpretations of my research findings, and the development of my proposed mixed methods study. We also will discuss venues for disseminating this research to academic and non-academic audiences and strategies for using research to inform practice and policy. By scheduling a regular monthly meeting time, we will ensure that busy schedules do not intrude on this protected time. Additionally, we have agreed to meet in person three times a year during the first two years of the award (I will go to Boston to deliver presentations and participate in meetings at The Center for Evidence Based Mentoring twice per year and I will meet with Dr. Rhodes at the National Mentoring Summit in Washington, DC annually). In addition, we have agreed to more frequent contact via e-mail or phone as needed and we expect that this form of contact will continue beyond the designated 2 year mentoring plan. Throughout the 2-year mentoring plan and beyond, we will seek actively opportunities for collaborations on manuscripts and conference presentations.

Dr. Patrick Tolan is a widely recognized expert in the study of issues of risk and resilience among economically disadvantaged, urban, youth of color. He has published extensively on contextual predictors of youth development including a focus on neighborhoods, families, and interactions between family and neighborhood settings. Furthermore, Dr. Tolan has successfully designed and implemented original data

collection projects aimed at evaluating neighborhood effects on the developmental outcomes of marginalized youth. Currently, he is involved in several projects that aim to develop and validate measures of particular relevance to the current proposal: neighborhood social processes and mentoring relationships. In light of Dr. Tolan's extensive experience researching the family and neighborhood contexts of urban, economically disadvantaged youth of color and his more recent focus on improved measurement of neighborhood processes and mentoring relationships, Dr. Tolan is well-positioned to significantly guide and support my academic growth in the study of settings and natural mentoring relationships. Moreover, Dr. Tolan has demonstrated an emphatic commitment to mentoring junior scholars of color. When I contacted Dr. Tolan to discuss my research plan and request his mentorship, he immediately made himself available to me and eagerly provided me with in-depth feedback on my research plan. He is fully committed to serving as my mentor for the proposed research. Through my affiliation with the Youth-Nex Center, Dr. Tolan and I have had a few interactions over the past year. Although I expect that Dr. Tolan and I will continue to have positive exchanges over the coming years, a firmly established mentoring relationship will ensure a much greater level of involvement and collaboration.

The formal mentoring arrangement through the Scholars Program will help us to set clear expectations for our relationship. To ensure that we do not allow busy schedules to interfere with our mentoring arrangement, Dr. Tolan and I have agreed to schedule regular monthly meetings during the first two years of the award. During these meetings we will discuss all aspects of my emerging research and my plans for securing grant funding as described in project #3. Dr. Tolan has agreed to play a critical role in the development of that proposal and to offer grantsmanship guidance to enhance my chances of receiving funding for the proposed research. More frequent correspondence via e-mail and phone will occur as needed. Additionally, as opportunities arise for relevant training opportunities, I fully expect that Dr. Tolan will facilitate access to those opportunities. Though we may meet less frequently after the first 2 years of the award, this mentoring relationship is likely to persist and contribute significantly to my professional development over the years.

In addition to the mentoring relationships that will be established through the Scholars Program, this award will contribute to my career development by affording me the time needed to invest in additional trainings and utilize support resources available at my institution. To build my skills in qualitative analysis, I will audit a graduate level qualitative course. In preparation for project #3, I will receive substantial training and support from the geographical information systems (GIS) specialists through the

Scholar's Lab at the University of Virginia Library, the Center for Survey Research at the University of Virginia, and my colleagues in the quantitative area of the psychology department.

In sum, the Scholars Program will provide me with a remarkable opportunity to substantially build my academic career. Through the support of the Scholars Program, I will enhance my ability to study settings as meaningful predictors of natural mentoring relationships and developmental outcomes among economically disadvantaged, African American adolescents. Specifically, I will develop skills in 1) the conceptualization of neighborhood and family effects on natural mentoring relationships and youth outcomes, 2) the measurement of resources and processes of family and neighborhood settings, 3) the design and implementation of multilevel and mixed methods studies to assess setting-level influences, and 4) the appropriate analytic procedures to evaluate these studies. During the latter years of the Scholars Award (years 3–5), I expect that I will benefit from continued mentorship and guidance regarding various strategies used to connect research to practice and policy. Similarly, mentorship in designing and implementing setting-level interventions will be of great value to my continued scholarly development and better position me to use my research to improve the lives of marginalized adolescents.

**Critical Contexts for the Formation of Natural Mentoring Relationships among Economically Disadvantaged African American Adolescents: A Focus on Families and Neighborhoods**  
submitted by Noelle Hurd

## **I. BACKGROUND & RESEARCH AIMS**

Adolescence is a time of increased biological, social, cognitive, and emotional changes.<sup>1</sup> During this developmental period, youth are struggling to balance a growing need for autonomy with their enduring need for relatedness.<sup>2</sup> For this reason, nonparental adults may begin to play an increasingly important role in adolescents' lives. Adolescents may elect to seek out nonparental adults for help and guidance rather than their parents because nonparental adults may be able to meet youths' attachment needs without threatening youths' sense of autonomy.<sup>3,4</sup> Mentors are nonparental adults who form caring and supportive relationships with adolescents.<sup>5</sup>

### **Mentoring**

Research on mentoring relationships suggests that these relationships may fill a void not filled by peer or parental relationships.<sup>6</sup> Specifically, mentors may be trusted adults who youth can turn to for advice, support and adult perspectives without the potential of negative consequences (e.g., punishment) that may come with disclosing intimate information to parents.<sup>7</sup> Further, youth may see mentors as wiser than peers and consequently, feel more comfortable seeking advice and guidance from these trusted adults.<sup>8</sup> Additionally, youth may allow themselves to be more vulnerable with their mentors than with their parents, teachers, or peers<sup>9</sup> leading them to discuss their true feelings with their mentors. These intimate conversations may foster mentees' personal growth. In light of the substantial changes youth experience during adolescence, they may benefit tremendously from the additional support provided by a mentor.

### **Natural Mentoring Relationships**

Mentors who emerge from youths' preexisting social networks and organically form mentoring relationships with youth are considered natural mentors (in contrast to formal mentors who are paired with youth through programs). Natural mentors may be relatives, neighbors, or other adults in youths' everyday lives. Natural mentoring relationships tend to be longer lasting than formal mentoring relationships.<sup>4</sup> This may be an advantage of natural mentoring relationships given that researchers have found connections between longer lasting mentoring relationships and more positive youth outcomes.<sup>10,11</sup> A recent study with a large nationally representative sample of adolescents found that more advantaged youth were more likely to possess natural mentors than their less-advantaged peers.<sup>12</sup> Yet this study found that less privileged adolescents displayed greater benefits associated with the presence of natural mentoring relationships in comparison to their more privileged peers. Thus, though natural mentoring relationships may be more prevalent among more privileged adolescents, marginalized adolescents may gain the most from these supportive ties. Moreover, a growing body of research points to the potential of natural mentors to help vulnerable adolescents display positive adaptation in the face of risk.

Specifically, natural mentoring relationships have been linked to improved psychological well-being, more positive connections with peers and parents, academic success, and fewer problem behaviors among at-risk youth.<sup>11, 13, 14, 15, 16, 17, 18, 19</sup> Of note, the potential long-term benefits of natural mentoring relationships have been found to exist above and beyond the benefits of parental support.<sup>13</sup> Further, the presence and supportiveness of natural mentoring relationships

among economically disadvantaged youth may be stronger predictors of adolescents' outcomes than the supportiveness of peer and parental relationships.<sup>20</sup>

### **Economically Disadvantaged African American Adolescents & Natural Mentoring**

Economically disadvantaged African American adolescents are exposed to a disproportionate share of contextual risk factors such as poverty, undesirable life events, chronic stressors, and experiences of discrimination<sup>21, 22, 23, 24, 25, 26</sup> that place them at greater risk of socioemotional problems and academic failure.<sup>27</sup> Nevertheless, economically disadvantaged African American adolescents have displayed incredible resilience in the face of risk.<sup>25, 28</sup> A focus on naturally occurring predictors of positive adaptation among economically disadvantaged African American adolescents allows for the identification of strengths that can be built upon or replicated as part of prevention or intervention efforts.<sup>25</sup> Consistent with this approach, a closer investigation of natural mentoring relationships among economically disadvantaged African American adolescents is an important area of continued research.

Natural mentoring relationships may be a long-standing tradition in the African American community. Historically, the extended kin network has been a central component of the African American family system with extended family members often living in close proximity and maintaining an active involvement in the lives of family members' children.<sup>29, 30, 31, 32, 33, 34</sup> In addition, fictive kin relationships (family-like bonds that are formed in the absence of blood or legal ties) are a common phenomenon within the African American family system and have been responsible for linking adolescents with adults.<sup>30, 35</sup> Furthermore, a number of studies have documented higher levels of communalism among African Americans<sup>36</sup> and a heightened emphasis on intergenerational relationships both within and outside of the family system.<sup>11, 30, 34</sup> A greater focus on extended family and community among African Americans may stem from both cultural norms originating in the West African villages of their ancestors and a necessary interdependence that facilitated their survival during slavery and Jim Crowe segregation in the U.S.<sup>31, 33</sup> Given the legacy of slavery and the continued injustices facing African Americans, a strong connection with extended family and community may continue to be imperative for survival, particularly among economically disadvantaged African Americans.<sup>37, 38, 39, 40</sup> These findings indicate that natural mentoring relationships may be a common occurrence among low-income African American adolescents. Yet studies with economically disadvantaged African American adolescents have demonstrated a roughly even split in the number of youth reporting natural mentoring relationships suggesting variability in factors associated with the onset of natural mentoring relationships among economically disadvantaged African American adolescents. Though broader cultural norms may dictate greater opportunities for the formation of natural mentoring relationships, *an examination of contextual factors is needed to better understand within-group variability in the presence of these valued relationships.*

### **Settings & Natural Mentoring Relationships**

Despite increasing research attention to the role of natural mentors in promoting resilience among economically disadvantaged African American adolescents, minimal research attention has been allotted to investigating factors that influence the formation of these relationships. As noted above, substantial variability exists in the presence of natural mentoring relationships among this subset of youth. When considering which factors likely shape the formation of

natural mentoring relationships, it is important to consider factors across multiple levels. Though person-specific factors are certainly relevant, natural mentoring relationships do not develop in a vacuum. *There is a need for research that improves our understanding of the settings within which natural mentoring relationships develop with a specific focus on the physical and human resources of those settings.*<sup>41, 42</sup> Focusing exclusively on the settings of economically disadvantaged African American adolescents allows for the identification of variability within a subset of settings and provides opportunities to identify setting-level factors that promote successful processes affecting a specific subset of marginalized youth.<sup>28</sup> Once researchers understand the role of setting-level factors in promoting successful processes affecting economically disadvantaged African American youth, this information can be used to inform intervention and policy efforts aimed at replicating these processes in similar settings.<sup>25, 38</sup> Given that economically disadvantaged African American adolescents overwhelmingly identify natural mentors from their extended families and communities and infrequently identify teachers or other school staff as natural mentors<sup>11, 15, 43</sup> *a focus on family and neighborhood settings* is fitting for the study of the formation of natural mentoring relationships among these youth.

Though researchers have speculated that changes in family structures, marital patterns, residential mobility, and reductions in community cohesiveness have reduced overall opportunities for the formation of supportive intergenerational relationships between adolescents and nonparental adults,<sup>26, 44, 45, 46</sup> associations between family and neighborhood structures and the development of natural mentoring relationships have received scant research attention.<sup>4</sup> Moreover, heterogeneity within the settings inhabited by low-income African American adolescents has been infrequently explored.<sup>47</sup> African American youth from low-income backgrounds who report natural mentoring relationships consistently identify natural mentors who are extended kin, fictive kin, or adults from their community such as neighbors, church members, and coaches.<sup>11, 13, 17, 43</sup> Yet little is known about the ways in which family or neighborhood settings may contribute to the formation of natural mentoring relationships. *Research that further explicates the role of family and neighborhood factors in shaping the formation of natural mentoring relationships between economically disadvantaged African American adolescents and the nonparental adults in their everyday lives is sorely needed. This research will foster a better understanding of the development of natural mentoring relationships in context and inform setting-level interventions to promote the formation of these relationships among youth who stand to benefit immensely from them.*

### **Research Aims**

The proposed 5-year research plan aims to substantially advance the field's understanding of contextual factors that influence the formation of natural mentoring relationships between economically disadvantaged African American adolescents and the nonparental adults in their families and neighborhoods. The proposed research plan will include a focus on the presence and distribution of physical and human resources in family and neighborhood settings wherein natural mentoring relationships develop. Natural mentoring relationships are conceptualized as social processes through which family and neighborhood settings influence adolescents' psychosocial outcomes (e.g., adolescents' developmental competencies, academic success, mental health, and health-risk behavior). *Specifically, the proposed research plan aims to 1) examine how family and neighborhood settings independently and interactively influence the*

*formation of natural mentoring relationships and 2) assess the potential of natural mentoring relationships to mediate associations between these settings and adolescents' outcomes.*

## **II. THEORETICAL & EMPIRICAL JUSTIFICATION**

Bronfenbrenner's ecological systems theory<sup>48</sup> emphasizes the role of multiple levels of social context and organization in youth development. Ecological systems theory is a valuable framework for the examination of the development of natural mentoring relationships because this theory 1) helps focus attention on the multiple contexts in which youth interact with others, 2) considers the ways in which those contexts may facilitate or constrain opportunities for healthy intergenerational interactions, 3) acknowledges that different contexts may interact to influence social processes and youth development, 4) directs attention to broader contexts where youth do not typically interact (e.g., land use, policy) but that nonetheless hold important implications for critical social processes affecting youth outcomes, and 5) points to the importance of culture and the notion that community norms may be critical predictors of intergenerational interactions.

García Coll and colleagues<sup>38</sup> noted the particular significance of ecological contexts and sociocultural factors in understanding differing developmental trajectories between white youth and ethnic minority youth. In response to a heavy reliance on deficit-oriented models to explain developmental differences between white youth and youth of color and a vacuum of theoretically-based research exploring contextual predictors of these developmental differences, García Coll et al.<sup>38</sup> proposed the integrative model for the study of developmental competencies among ethnic minority children. The integrative model applies to the study of contextual predictors of natural mentoring relationships among economically disadvantaged African American youth in several ways. First, the integrative model highlights the need for investigations of within-group variability. Second, it considers the potential of contexts such as neighborhoods to be promoting or inhibiting environments for youth development as a result of macrosystem forces such as racism. Third, it outlines the development of an adaptive culture that emanates from ancestral traditions and responds to contemporary stressors. Fourth, it frames a complex interplay between neighborhoods, families, and cultural values that interactively and indirectly influence youth outcomes. Lastly, the integrative model acknowledges youths' active role in contributing to their own development by shaping their own experiences and socialization opportunities. Applying the integrative model to the study of natural mentoring relationships among low-income African American youth suggests several priorities for investigation. Specifically, this model underscores the need to consider inhibiting and promoting aspects of youths' neighborhood environments as predictors of the formation of natural mentoring relationships. It also calls for an investigative focus on cultural values that may contribute or detract from adults' and adolescents' motivation to engage in supportive intergenerational relationships. Additionally, the integrative model highlights the significant role of the family setting in transmitting values and creating opportunities for adolescents. The integrative model also suggests the need to consider adolescents' roles in seeking out and developing natural mentoring relationships as active participants in their own development.

## **Hypotheses**

Based on the limited theoretical and empirical work that has focused on settings and natural mentoring relationships among economically disadvantaged African American adolescents, I advance several tentative hypotheses and will employ multiple study methods to begin to uncover the role of family and neighborhood settings in the development of natural mentoring relationships. Study hypotheses and the rationale driving these hypotheses are presented below.

***Hypothesis 1 (H1):*** Natural mentoring relationships between extended or fictive kin and adolescents will be more likely to develop if these nonparental adults have positive relationships with adolescents' primary caregivers, receive support or encouragement for the formation of these relationships from adolescents' primary caregivers, live with or in close proximity to adolescents, and do not primarily engage with adolescents as authority figures.

***Rationale for H1:*** Based in a family systems perspective, Keller<sup>49</sup> advanced a systemic model of mentoring where the role of parents in contributing to the success or failure of mentoring relationships is highlighted. Though the systemic model of mentoring was primarily advanced to explain the parental role in formal mentoring relationships, it also is a useful guiding model for the examination of parental factors that may shape natural mentoring relationships. According to this model, successful mentoring relationships can only be developed and maintained with the support of parental figures. For example, parents may play a key role in promoting the success of natural mentoring relationships by directing and encouraging mentors to engage with youth in activities that are consistent with their children's interests and helping to schedule time for mentors and mentees to engage in these activities.<sup>49, 50</sup> The systemic model of mentoring also posits that positive relations between mentors and parents may be critical for supporting the development and maintenance of successful mentoring ties. Though a strong alliance between parents and mentors may be a necessary ingredient for the formation of strong mentoring bonds, mentoring relationships may be more successful when adult mentors maintain a youth-centered orientation and see their role as being different from that of a parent or other authority figure.<sup>51</sup> Thus, natural mentors who strive to have a unique relationship with adolescents and respect the values, beliefs and authority of adolescents' parents may be most effective in developing and maintaining positive natural mentoring relationships.<sup>50</sup>

The proximity of adult kin to adolescents and the frequency of contact they share also likely influence the amount of support received by adolescents<sup>52</sup> and opportunities for natural mentoring relationships within the family system. Having adult extended or fictive kin in the household, neighborhood, or otherwise accessible with minimal transportation barriers facilitates more frequent contact and consequently, greater chances for the formation of natural mentoring relationships with kin. An important moderator of this association, however, may be the role the nonparental adult plays in the adolescent's family system.<sup>52</sup> In particular, nonparental adults who take on positions of authority or caretaking (e.g., responsible for monitoring or disciplining youth) may be less likely to form natural mentoring relationships with youth.<sup>49, 51</sup>

***Hypothesis 2 (H2):*** The way families structure adolescents' out-of-school time will be associated with the formation of natural mentoring relationships such that adolescents who are signed up for adult-led programs and activities or who are permitted more leisure time to interact with

nonparental adults in the home or neighborhood will be more likely to develop natural mentoring relationships in comparison to adolescents whose out-of-school time is heavily scheduled with household chores and caretaking responsibilities for younger family members.

**Rationale for H2:** The ways in which adolescents' out-of-school time is structured also may influence opportunities for natural mentoring relationships.<sup>53</sup> Adolescents with greater leisure time and adolescents who are involved in extracurricular activities or after-school programs may have more chances for positive intergenerational interactions that could lead to natural mentoring relationships.<sup>54, 55</sup> Conversely, out-of-school time that is heavily scheduled with household tasks and responsibilities (e.g., chores, caretaking for younger siblings) may prevent youth from developing natural mentoring relationships. Expectations for adolescents' involvement in household duties may be determined, at least in part, by the economic and human resources available in the family. Fewer of either of these resources may necessitate a greater burden on adolescents' out-of-school time. In addition, the number of children in the family, birth order, and adolescents' gender (with girls often bearing greater household responsibilities than boys) may influence natural mentoring opportunities via familial expectations for household duties.<sup>53</sup>

**Hypothesis 3 (H3):** Primary caregivers', nonparental adults', and adolescents' orientation toward collectivist and communalist cultural values will influence their motivation to form (or help form) natural mentoring relationships. Barring other constraints, these relationships will be more likely to form when primary caregivers, adolescents, and adults in extended or fictive kin networks hold stronger orientations toward collectivist and communalist cultural values.

**Rationale for H3:** Though findings from previous research indicate that African American cultural values privilege collectivist over individualist orientations and assert shared responsibilities for socializing youth in the community,<sup>56</sup> African American families may vary in the extent to which they endorse these cultural beliefs.<sup>57, 58</sup> Greater endorsement of beliefs consistent with cultural values of collectivism and communalism should motivate parents to encourage the formation of natural mentoring relationships between their adolescent children and adults in their families and communities. Similarly, nonparental adults in adolescents' social networks who endorse beliefs consistent with these cultural values should be more motivated to seek out and establish these relationships with adolescents. Presumably, adolescents will also play an active role in the formation of natural mentoring relationships and their cultural values, beliefs, and goals will help drive the development of these relationships.<sup>38</sup>

**Hypothesis 4 (H4):** Natural mentoring relationships will be more likely to develop when there is greater availability and access to safe spaces and youth programming in the neighborhood. More violence in the neighborhood will restrict opportunities for the formation of natural mentoring relationships outside of the home by reducing utilization of community resources and limiting interactions with community adults.

**Rationale for H4:** Structural attributes of the neighborhood such as community centers, religious institutions, parks, and recreation facilities may have bearing on the development of natural mentoring relationships as physical structures create spaces where adults and youth can come together and get to know each other. For example, several researchers have found that green space is associated with more positive intergenerational interactions.<sup>59, 60</sup> Greater density of these types of indoor and outdoor spaces in adolescents' neighborhoods and proximity of these spaces to adolescents' homes should contribute positively to the formation of natural mentoring

relationships. Additionally, the presence of organizations such as Boys & Girls Clubs and the availability and accessibility of out-of-school youth programming in neighborhoods likely shape opportunities for the natural formation of supportive ties between community adults and adolescents.<sup>61</sup> In many ways the amount of youth-serving organizations and youth-oriented programming in the neighborhood indicate the extent to which marginalized adolescents may have opportunities to experience mentor-rich settings.<sup>46, 55, 62</sup> Mentor-rich settings are places where youth and positive adults in the community can have informal interactions and collaborate on shared goals.<sup>63</sup> Through these experiences, life-long bonds may develop that can foster healthier developmental trajectories among marginalized adolescents.<sup>54</sup> Previous research findings suggest that greater availability of youth-serving organizations is associated with greater use of these organizations, particularly among African American youth living in neighborhoods with greater disadvantage.<sup>64</sup>

Yet greater neighborhood violence may deter the formation of natural mentoring relationships in several ways. First, greater violence may lead residents to spend less time outside of their home and cause parents to restrict adolescents' participation in the community.<sup>24, 65, 66</sup> Second, neighborhood violence may destroy the moral fabric of neighborhoods, leading residents to mistrust their neighbors and limit their adolescent children's opportunities to engage with nonparental adults in the community.<sup>67</sup> Third, elevated neighborhood violence may result in reduced utilization of community spaces and youth-oriented organizations and programming among adolescents. Parks and recreation facilities may be perceived as unsafe or may become havens for criminal activity. Youth may struggle to access youth-serving organizations and programming if they do not have safe transportation routes to and from activities.<sup>68</sup>

**Hypothesis 5 (H5):** Natural mentoring relationships will be more prevalent in neighborhoods with greater collective efficacy and norms conducive to intergenerational relationships. Neighborhood assets may offset or reduce the potential negative effects of neighborhood violence on adolescents' opportunities to form natural mentoring relationships in the community.

**Rationale for H5:** Community norms are neighborhood-level social processes that reflect residents' shared values, attitudes, and beliefs.<sup>41</sup> Community norms of particular import to the formation of natural mentoring relationships include collective efficacy, adults' attitudes toward adolescents, and adolescents' attitudes toward adults. Collective efficacy is the combination of neighborhood residents' sense of social cohesion among their neighbors and their willingness to intervene on behalf of the common good.<sup>69</sup> Notably, previous research has found substantial variability in collective efficacy among economically disadvantaged neighborhoods.<sup>70</sup> Neighborhoods with greater collective efficacy will likely encourage the formation of supportive relationships between adolescents and nonparental adults. In addition, the normative attitudes that adolescents and adults hold toward each other have the potential to affect their decisions to enter into and maintain one-on-one relationships with each other. Recent research and anecdotal reports suggest that shifts have occurred in intergenerational closure over the past few decades.<sup>46</sup> A hypothesized breakdown in intergenerational connectedness may be occurring and may be fueled by adults' and adolescents' ideas about fundamental differences and disparate values. Normative neighborhood attitudes that encapsulate adolescents' and adults' mistrust, misunderstanding, and disinterest in each other will likely deter the development of positive one-on-one relationships between nonparental adults and adolescents; whereas normative

neighborhood attitudes that reflect greater trust, openness, and understanding among adults and adolescents will likely promote the formation of these one-on-one relationships.

**Hypothesis 6 (H6):** Neighborhood and family settings will interact in complex ways to shape the formation of natural mentoring relationships between adolescents and nonparental adults in their families and communities. Neighborhoods will influence natural mentoring relationships via their influence on family settings.

**Rationale for H6:** As stipulated in ecological systems theory,<sup>48</sup> interactions across settings are responsible for shaping adolescent development. Families and neighborhoods do not just co-exist; these settings interact and jointly predict social processes affecting youth outcomes. Leventhal and Brooks-Gunn<sup>71</sup> note the tendency for neighborhood effects on youth outcomes to be transmitted through family-level processes and a growing body of empirical evidence supports this assertion.<sup>72, 73, 74</sup> In addition to testing explicit hypotheses regarding neighborhood influences on family processes affecting natural mentoring relationships (e.g., **H4:** neighborhood violence leads parents to restrict adolescents' interactions with neighborhood adults), there is a need for exploratory research that evaluates bidirectional influences of family and neighborhood settings and further examines the complex ways in which these settings interact to shape the formation of natural mentoring relationships among economically disadvantaged African American adolescents and nonparental adults in their families and communities.

### III. RESEARCH DESIGN & METHODOLOGY

Just as research on formal mentoring has considered how mentoring programs are settings that shape the formation of healthy mentoring relationships,<sup>75</sup> attention to the settings within which natural mentoring relationships develop is warranted. Once identified, aspects of these settings that influence the formation of natural mentoring ties can be targeted in efforts to promote natural mentoring relationships among youth who may otherwise go without these resilience-promoting relationships. Most mentoring studies have focused on linking the presence of mentoring relationships to youth outcomes.<sup>76, 77</sup> Little attention has been paid to the role of the family in developing and sustaining mentoring relationships, and the little work that has been done in this arena has focused on formal rather than natural mentoring relationships.<sup>50</sup> Some research has explored neighborhood contexts and intergenerational interactions;<sup>78</sup> yet, this research has not focused on the development of supportive one-on-one mentoring relationships that have been directly linked to more positive youth outcomes. *The current research plan aims to address a major gap in the field's understanding of the contexts within which natural mentoring relationships develop.* Moreover, the current research plan builds on previous literature by examining heterogeneity in developmental contexts specific to economically disadvantaged African American adolescents. This approach allows for the identification of resilience-promoting factors specific to this population and thus, has direct implications for interventions.<sup>25, 28, 38</sup> *The proposed 5-year research plan includes the implementation of secondary data analyses, an original mixed-methods data collection project, and the development of a grant proposal aimed at uncovering the role of family and neighborhood settings in the formation of natural mentoring relationships. The proposed research also will examine the potential of natural mentoring relationships to mediate associations between these settings and adolescents' outcomes.*

**Project #1: Using the Project on Human Development in Chicago Neighborhoods Study Data to Examine Family and Neighborhood Predictors of Natural Mentoring Relationships**

*Participants and Procedure.* The Project on Human Development in Chicago Neighborhoods (PHDCN) is a multi-source, neighborhood-based, longitudinal study of youth development within Chicago neighborhoods.<sup>79, 80</sup> PHDCN was designed to study youth development in the context of neighborhoods. Accordingly, a multistage sampling strategy was employed to sample participants from neighborhoods. Three hundred and forty-three neighborhood clusters were created from cluster analyses of 1990 U.S. Census data, knowledge of Chicago neighborhoods, and geographic boundaries. Using stratified probability sampling, researchers selected a sample of 80 neighborhood clusters that were diverse in terms of race/ethnicity and socioeconomic composition. Roughly 35,000 households within the 80 neighborhood clusters were randomly selected and screened for the presence of youth of eligible ages. Youth who were within 6 months of 7 target cohort ages (0, 3, 6, 9, 12, 15, and 18 years) were invited to participate. A primary caregiver was enrolled for all participants through the 15-year cohort. The participation rate was 75% resulting in a sample of 6,234 children and adolescents for the first wave of data collection. Data were collected in three waves: the first wave of data collection occurred between 1994 and 1997, the second between 1997 and 1999, and the third between 2000 and 2001. Of the original sample, 86% enrolled at wave 2 and 77% enrolled at wave 3. At each wave, a trained interviewer visited the family at home and interviewed the primary caregiver and child (older children and adolescents only) and observed the home environment. Informed consent was obtained from participants prior to each interview. Participants were compensated between five and twenty dollars per interview depending on their age and the wave of data collection.

In addition to the longitudinal cohort study, PHDCN also included a community survey. The community survey included neighborhood residents who were not participants in the longitudinal cohort study. These data were collected between 1994 and 1995. To identify participants for the community survey, city blocks were randomly selected from the 343 neighborhood clusters. Households within blocks were randomly selected and an adult respondent from each household was randomly chosen to complete the survey. A total of 8,782 adults participated. The sample was representative of adult residents of all 343 Chicago neighborhood clusters. Adult respondents provided information via mailed surveys on the structural characteristics and social processes of their neighborhood. Variables were aggregated to neighborhood-level averages. PHDCN researchers also implemented a systematic social observation of 80 block groups sampled from the 343 neighborhood clusters. Additionally, PHDCN researchers linked data sources to the 1990 U.S. Census and to police reports of violent crime within census tracts in 1995.

Given the focus on economically disadvantaged African American adolescents in the proposed research plan, I will include data from participants and caregivers in the 9-, 12-, and 15-year cohorts. These dyads will only be included if youth self-identified as Black/African American and family-based indicators of economic disadvantage (i.e., per capita family income is at or below poverty level or family is receiving governmental assistance) are present. Of the 9-, 12-, and 15-year cohort, there are approximately 850 Black/African American youth.<sup>81</sup> Given the sampling frame, not all of these youth will be economically disadvantaged. Depending on power calculations, I may include all Black/African American participants from these cohorts in my analyses when assessing neighborhood effects. Though my preference is to focus exclusively on

economically disadvantaged youth in these analyses to better understand resilience-promoting factors specific to this group, it may be reasonable to include adolescents from middle-class families when I am assessing neighborhood effects. Though these adolescents may be better off than poor African American youth, middle-class African American youth tend to live in neighborhoods that are poorer than those of most White youth.<sup>82</sup> Further, there is some research to suggest that urban African American youth from poor to middle-class families may share similar neighborhood experiences despite differences in familial socioeconomic position.<sup>83</sup> For example, Richards et al.<sup>84</sup> found equivalent exposure to neighborhood violence among African American youth in poor to middle class Chicago neighborhoods.

*Measures.* **Appendix A** includes the primary measures to be used in the proposed analyses and indicates the source and wave in which measures were collected. Measures from the longitudinal cohort study were only included if there was an equivalent version administered to participants of all 3 cohorts simultaneously during at least one wave. Most central to all analyses with this data is the Provisions of Social Relations Scale (PSRS).<sup>85</sup> This scale asks participants to report on relationships and support from family and friends. Importantly, this scale also asks about relationships with and *support garnered from nonparental adults* including specific questions about support from adult extended family (i.e., aunt/uncle, grandparent) and adults outside of the family (i.e., a neighbor or religious or community member). Beyond specific questions about the extent to which youth receive emotional or instrumental support from these individuals, youth are asked to generate the names and relationship types (e.g., immediate family, extended family, neighbor, church member) of up to 3 individuals who they can go to for help if they need it. This provides the opportunity to derive count variables reflecting the number of nonparental adults inside and outside the family nominated. Other youth-reported variables that will be included in the proposed analyses include *participation in afterschool programs in the past year*, and the following youth psychosocial outcomes: *internalizing symptoms* (depression and anxiety), *sexual risk behavior*, *substance use*, and *externalizing symptoms* (violent and nonviolent delinquency). Primary caregiver-reported variables to be used include *household composition*, *family conflict*, *perceptions of child's temperament*, *child's participation in afterschool programs*, and demographic information regarding the child and primary caregiver (e.g., *gender*, *age*, *race*, *ethnicity*, *education*, *employment*, *income*, *length of residence at current address*). *Primary caregiver warmth* was assessed by the interviewer based on observed interactions between the primary caregiver and youth participant during the interview.

Variables from community survey responses will include *collective efficacy* (social cohesion and informal control), *reciprocal exchange* (favors exchanged among adults), *intergenerational closure* (how well neighbors know the parents of their children's friends), *availability of services for youth* (e.g., youth centers, recreational programs, afterschool programs), and *perceived neighborhood violence*. All data from the community surveys will be aggregated according to neighborhood cluster. Data from the systematic social observation will not be included as these observations were only completed for a subset of neighborhoods. The following variables will be derived from census data: *neighborhood disadvantage* (factor score based on poverty rate, unemployment rate, and proportion of families receiving public assistance), *residential stability* (percent of householders in the same residence for 5+ years) and *percentage of Black residents*.

*Data Analysis.* I will use the PHDCN data to begin to explore some of my research hypotheses. My first set of analyses will examine whether family structure and dynamics may influence the presence of supportive intergenerational ties within the family system (**H1**). I will create a variable based on household composition across the 3 study waves that reflects the presence of adult extended or fictive kin (does not include parents, step-parents, or romantic partners of parents; fictive kin must be identified as such by primary caregiver) in the household and accounts for the length of co-residence with the adolescent (cumulative indicator that represents quantity and duration: *exposure to nonparental adult kin in the household*). I will construct a manifest ordinal variable using items from the PSRS at wave 3 to approximate *familial natural mentoring relationships*. I will create latent factors using observed indicators for each of the following constructs: *family supportiveness* (from the PSRS; wave 1), *primary caregiver warmth* (wave 1), *family conflict* (wave 2), and youths' psychosocial outcomes (i.e., *internalizing symptoms*, *sexual risk behavior*, *substance use*, and *externalizing symptoms*; wave 3). After confirming appropriate fit of these latent factors to the data, I will test a structural model where *exposure to nonparental adult kin in the household*, *family supportiveness*, and *family conflict* predict *familial natural mentoring relationships* which, in turn predicts adolescents' *internalizing symptoms*, *sexual risk behavior*, *substance use*, and *externalizing symptoms*. The model will account for prior *familial natural mentoring relationships*, *internalizing symptoms*, *substance use*, and *externalizing symptoms* (wave 1) and include direct and indirect paths from predictor to outcome variables (see **Appendix B**). Indirect effects via *familial natural mentoring relationships* will be evaluated based on bootstrapped confidence intervals of standardized indirect effects. I will account for clustering of data in neighborhoods in these analyses.

A second set of analyses will employ a multilevel structural equation modeling<sup>86</sup> framework to examine pathways from neighborhood settings to nonfamilial natural mentoring relationships via family processes (**H6**). Specifically, these multilevel mediation analyses will test whether indicators of neighborhood assets (latent factor comprised of composite variables from each of the following aggregated community survey measures: *collective efficacy*, *reciprocal exchange*, *intergenerational closure*, and *availability of services for youth*) and indicators of neighborhood violence (latent factor comprised of a composite variable of aggregated *perceived neighborhood violence* from the community surveys and *police-reported violent crime rates per census tract*<sup>87</sup>) independently and interactively predict *nonfamilial natural mentoring relationships* via *adolescents' participation in afterschool programs* (**H2**, **H4**, **H5**). This model will account for *nonfamilial natural mentoring relationships* and *adolescents' participation in afterschool programs* from previous waves to strengthen the model's ability to evaluate potentially causal relationships (see **Appendix C**). Post-hoc analyses will decompose the neighborhood assets factor to learn more about each of the neighborhood assets' associations with adolescents' participation in afterschool programs. Identifying which neighborhood factors may influence caregivers' decisions regarding their children's involvement in afterschool programs and linking afterschool program participation to natural mentoring will be central aims of these analyses. In both sets of analyses, individual- (e.g., *gender*, *age*, *adolescent's temperament*) and family-level (e.g., *single-parent household*, *family size*, *socioeconomic position*) demographics will be included as predictors of intervening and outcome variables to further isolate the relationships being tested. *Neighborhood disadvantage*, *residential stability*, and *percentage of Black residents* will be included in the second set of analyses for the same purpose stated above (e.g., natural mentoring relationships may be more likely to develop in neighborhoods with greater residential

stability and a greater proportion of Black residents<sup>47</sup>). Participants' mobility also will be included as a control in the analyses exploring potential neighborhood influences to account for amount of exposure to neighborhood factors. All analyses will be conducted with Mplus software.<sup>88</sup> I will employ the full information maximum likelihood (FIML) estimator to include participants with data at any of the study waves.<sup>89, 90</sup>

*Protection of Human Participants.* PHDCN data are available through the National Archive of Criminal Justice Data (NACJD). I will apply and obtain access to this data in the Spring of 2014. Regarding the use of this data, I will comply with all requirements of NACJD and the University of Virginia's Institutional Review Board (IRB) to ensure the protection of study participants.

### **Project #2: Original Mixed Methods Study of the Role of Family Settings in Shaping Natural Mentoring Relationships**

*Participants and Procedure.* Project #2 will involve an in-depth, multi-method, multi-source investigation of family factors that shape the formation of natural mentoring relationships. This project will employ a mixed methods design in an attempt to more closely examine the roles of beliefs and behaviors in the formation and function of natural mentoring relationships.<sup>91</sup> Findings that emerge from the quantitative component will be queried in the qualitative component so that numeric findings can be coupled with participants' narratives to facilitate a more complete understanding of patterns that may surface. This approach will illuminate mechanisms of influence and help to clarify unexpected findings from the quantitative analyses.<sup>91, 92, 93</sup>

The first part of this project involves the collection of survey data. Through preexisting partnerships with Charlottesville City Schools and targeted recruitment efforts, I will obtain a sample of 300 economically disadvantaged (i.e., eligible for free or reduced price lunch) African American students in grades 6-9 residing in Charlottesville, VA. In the city schools serving grades 6-9, Black/African American students comprise between 45-50% of the student body. In addition, there is a 50% poverty rate among city school students. In Charlottesville (as in many other places across the country), race and income are highly correlated. Further, many of these economically disadvantaged African American students reside in neighborhoods that are geographically and socially isolated from the rest of the city. The concentration of poor Black families in these neighborhoods stems in part from an "urban renewal" effort by the city in the 1960's that destroyed most of the city's Black-owned businesses and displaced many of its African American families.<sup>94</sup> Most of these families were relocated to the abovementioned neighborhoods. In addition to mailing recruitment letters to participants' homes, I will seek permission to post recruitment flyers in the community centers, religious institutions, and businesses in closest proximity to these neighborhoods. Surveys will be administered on iPads by members of my research team and me. All participants will be compensated \$40 for their participation. Participants will be notified of the possibility of being selected for a subsequent interview and asked for permission to contact them in the future.

At a later date, a stratified random sample of participants who completed the survey will be identified and recruited to complete standardized, open-ended interviews.<sup>95</sup> Stratification will be implemented based on gender, age, natural mentor presence, and proximity to adult

extended/fictive kin. Twelve adolescents who report not having a natural mentor *and* living in close proximity (within 30-minute driving distance) to at least one adult kin member will be randomly selected from each stratum.<sup>96</sup> These adolescents' primary caregivers and one adult kin (of the family members who live in close proximity, the adult family member who has the closest relationships with the adolescent's primary caregiver) also will be recruited to complete interviews. In addition, a stratified random sample of 12 participants who reported the presence of a natural mentor *within the family system*, their primary caregivers, and familial natural mentors will be contacted and asked to complete interviews. If youth report multiple familial mentors, we will recruit the one to whom youth report feeling closest. If we are unsuccessful in recruiting any of these family units, a replacement family unit from the same stratum will be recruited. All interviews will be conducted by graduate students and me after extensive training in the administration of open-ended interviews (Dr. Nancy Deutsch, an expert in qualitative research, will provide this training to my research lab). Once the interview protocol has been developed, all interviewers will practice administering the interview with another member of the research team. Pilot interviews with adolescents and adults who are not part of the study also will be conducted to ensure dexterity with the protocol and to identify opportunities to improve the protocol. Standardized open-ended interviews are the preferable method for the current study because this method facilitates comparisons of responses across groups (i.e., youth with vs. without mentors).<sup>95</sup> Yet one of the limitations of this interviewing method is that the standardized approach may limit the naturalness of the exchange between the interviewer and participant. To address this limitation, the pilot interviews will be used to help the research team structure questions in an order that promotes a natural sequence with the goal of maintaining a conversational flow with the participant. Training also will include a discussion of the theoretical and empirical foundations of the research questions, methods, and plans for analyses. Regularly scheduled meetings will provide support to interviewers and encourage best practices throughout data collection and subsequent analyses. Interviews will be audio recorded using iPads. Each participant will be compensated \$80 for participation.

Acquiring the perspectives of adolescents who lack natural mentoring relationships and would-be mentors in their families has not been done previously and offers a strategy to more fully understand not just contributors to the formation of familial mentoring relationships but deterrents, as well. Selecting youth who report not having a natural mentor *and* living in close proximity to at least one nonparental adult family member allows for a closer examination of factors that may deter the formation of these relationships beyond distance barriers (though access issues such as transportation barriers will still be examined as conceivable predictors). In addition, this approach facilitates an opportunity to conduct an in-person interview with an adult who is in a position to serve as a mentor to the adolescent. Further, this adult provides an added perspective on family interactions and norms, thus permitting data triangulation.<sup>95</sup>

*Measures.* Quantitative measures will be used to assess family-level variables that may be associated with the presence and nature of familial mentoring relationships and qualitative measures will be used to probe these associations in an effort to explicate causal mechanisms driving these associations.<sup>92</sup> The quantitative survey will be informed by the findings of project #1. Additionally, the survey will collect a variety of demographic information from participants including their *gender, age, ethnicity, and household composition*. In addition to these

demographic questions, participants will be asked to report the *number of hours they spent in each of the past 7 days doing a variety of chores, homework, extracurricular activities, attending after-school programs, and hanging out* (e.g., watching television, texting).<sup>53</sup> Participants will also be asked to rate on a Likert scale *how much of their out-of-school time was spent at various locations* (e.g., their home, a family member's home, a friend's home, their neighborhood, a religious institution, a community center, etc.) and *whether they are interacting primarily with peers, adults, or a combination of peers and adults in each of the locations where they spend time*. They will also be asked to *list all of the adults who are at home with them during the afterschool hours and on the weekends* (in an average week). Though these measures are not as precise as ecological momentary assessments using mobile technology,<sup>97</sup> they will provide an initial assessment of participants' daily activities.

Also, participants will be asked to *list all of their adult family members including adults who they call family even if they are unsure how they are related* (i.e., fictive kin). For each adult listed, participants will be asked *how close the adult lives to the adolescent, how often the adolescent has contact with the adult, and through what methods, whether they are satisfied with the amount of contact they have, and how emotionally close they feel to each person*. Adolescents will also be asked to rate the *closeness of the relationship between each adult and adolescents' primary caregivers*. In addition, previously established measures will be used to assess family functioning (e.g., *family conflict, cohesion, shared family decision-making*), with a preference for measures that have demonstrated acceptable psychometric properties with African American adolescent samples (e.g., Multicultural Events Schedule for Adolescents). *Attachment to parents and peers*<sup>98</sup> will be assessed and participants will be asked to report *who they first turn to for support with a personal problem*.<sup>99</sup> Participants' *communalist and collectivist orientations* will be assessed.<sup>36</sup> I also will include measure of adolescents' *dispositional traits*<sup>100</sup> as these likely interact with familial factors to influence the development of mentoring relationships.

Participants will be asked about the *presence of a natural mentor* (i.e., adult other than a parent/person who is raising them who they can go to for support, guidance, and help making important decisions). Youth who respond affirmatively will be asked to *list the first names and ways they know each of the natural mentors*. Participants who identify formal mentors will not be included in study analyses. Next, youth will be asked to *rank the natural mentoring relationships based on the level of closeness they feel toward the mentor*. If any of the adults youth list are identified by youth as being family members, they will be asked a series of additional questions about each of those relationship. To better assess the function of each familial mentoring relationship, youth will be asked to report on a *variety of activities that they may engage in with their mentors*<sup>101</sup>, *types of social support they receive from their mentors*,<sup>102, 103, 104</sup> and the *quality of the relationship with their mentors*.<sup>105</sup> They will also be asked to briefly report on *the natural mentor's demographic information* (e.g., *gender, race, ethnicity, age, educational attainment*), *frequency of prosocial and antisocial behavior*,<sup>106, 107</sup> and *mental health*.<sup>106</sup> Given my interest in linking natural mentoring relationships to positive youth development, a variety of established measures of *academic functioning, psychological well-being, identity, and developmental competencies*<sup>108</sup> will be included in the survey. Surveys will be pilot tested with a small group of students who are not participating in the study and revisions will be made in accordance with their recommendations prior to data collection with the target sample.

The questions to be used in the standardized open-ended interview will be largely informed by associations that emerge from the quantitative analyses with the survey data. The embedded nature of this mixed methods study permits the use of open-ended questions to better understand potential causal mechanisms driving documented associations.<sup>93</sup> In addition, the open-ended surveys will be useful for investigating the beliefs, goals, values, and intentions that drive behavior. For example, adolescents and their primary caregivers will be asked *how they negotiate the way adolescents spend their time at home and adolescents' participation in extracurricular activities and afterschool programs*. Subsequently, adolescents and primary caregivers will be asked *how those decisions are informed by the individual's values, beliefs, and expectations*. If respondents do not mention *how these decisions may relate to opportunities for adolescents to develop natural mentoring relationships*, interviewers will include a follow-up question to probe this topic with participants. Primary caregivers will be asked to report on their *decisions to encourage or prevent adolescents' contact with adult family members and what drives those decisions*. Similarly, adult family members will be asked to report on the *intentions and values that drive their involvement (or lack of involvement) in adolescent relatives' lives*. For adult family members who report inconsistencies between values and behavior, follow-up questions will probe this mismatch. Adult family members who have been identified by adolescents as mentors will be asked more about their *interactions with adolescents and how their intentions, goals, and values drive those interactions*. Adolescents with familial mentors and their mentors will be asked to report on the *development of their relationship, whether the relationship is special (i.e., different from other types of relationships), and if so, what makes it special*. Attempts will be made to investigate processes unique to the role of each individual and to include overlap in topics covered among the three sources to facilitate data triangulation.<sup>95</sup>

Data Analysis. Quantitative data first will be examined by assessing bivariate correlations and employing logistic regression models. Following these preliminary analyses, structural equation models will be built to create latent factors and assess more complex associations between study variables (e.g., mediation, moderation, and moderated mediation models). A confirmatory factor analysis will be employed to evaluate measurement models. Adequate fit of the model to the data will be established prior to testing structural equation models. All quantitative analyses will be conducted with Mplus software.<sup>88</sup> Mplus software is optimal for the proposed analyses as it is equipped to handle many types of observed variables (e.g., continuous, categorical, count) using maximum likelihood or weighted least squares estimators. Further Mplus software is capable of handling missing continuous data using FIML or multiple imputation approaches. With 300 participants in the sample, I will have sufficient power for testing moderately complex models with reliable measures.<sup>109</sup> More specifically, 300 participants will permit power of .80 to test close fit of the model to the data in models with a minimum of 35 degrees of freedom.<sup>110</sup>

Audio recordings from the standardized open-ended interviews will be transcribed by the interviewers and entered into the NVivo software program.<sup>111</sup> NVivo software is ideal for these analyses because it may provide a more complex and detailed sorting of themes than a manual coding system and may facilitate more nuanced comparisons within and across cases using coded data.<sup>112</sup> Analyses will be conducted within cases across multiple sources (adolescent, primary caregiver, and adult family member) and across cases to identify patterns and themes. In these analyses, data will be examined initially through the lens of specific hypotheses.<sup>95</sup> Yet as

the data are being analyzed for themes and patterns that may support or disconfirm hypotheses (i.e., deductive analyses), members of my research team and I also will search for emergent patterns and themes (i.e., inductive analyses) that may yield critical insights. All members of my research team will be involved with both the quantitative and qualitative analyses to facilitate maximal integration of these methods and analyses.<sup>91</sup>

Study analyses will be driven primarily by theoretically-derived hypotheses, though it is expected that data from this mixed methods project will be used to generate new theories and hypotheses, as well. Two examples of potential study analyses are included. One set of analyses will explore how *access to nonparental adults in the family* (i.e., proximity of nonparental adult relatives, frequency of contact), *parental efforts to support these relationships*, and *the nature of familial adults' interactions with adolescents* independently and interactively influence familial natural mentoring relationships (**H1, H3**). This set of analyses will only include adolescents with a familial mentor and adolescents without a mentor. Adolescents who reported only nonfamilial natural mentors will be excluded from these analyses given that the presence of one or more mentors outside of the family system may reduce the perceived need for familial mentors. Another set of analyses will examine the *values, beliefs, and goals that inform adolescents and primary caregivers' decisions regarding how adolescents spend their out-of-school time and whether these decisions influence the formation of natural mentoring relationships within and outside of the family system* (**H2, H3**). When appropriate, multi-group analyses will be conducted to see if hypothesized pathways vary as a function of *participants' gender or age*.

*Protection of Human Participants.* All study procedures will be approved by the University of Virginia's IRB. Written consent and assent will be obtained from all participants prior to study participation. In the unlikely event that the surveys or interviews create psychological distress, participants will be provided information on local, affordable mental health resources.

### **Project #3: Grant Proposal for a Study Designed to Examine Diversity in Setting-Level Predictors of Natural Mentoring Relationships in High-Poverty, Predominantly African American Neighborhoods**

The results of projects #1 and #2 will inform the development of a grant proposal to be written and submitted during years 4 and 5 of the award. Through this grant proposal, I will seek funding for a longitudinal, neighborhood-based, multi-source data collection project that will be implemented with a sample of high-poverty, predominantly African American neighborhoods and the economically disadvantaged African American adolescent and adult residents of those neighborhoods in Richmond, VA. This project will include:

- geographical information systems data (e.g., locations of parks, recreation facilities, religious institutions, and youth-serving organizations; locations will be used to calculate *proximity of resources to adolescents' residences and density of resources in adolescents' neighborhoods*)
- the availability of youth programming (e.g., *the quantity of formal afterschool programs available within a .5 mile radius of adolescents' residences*)
- surveillance system indicators of *locations of violent incidents* (sources include emergency room, ambulance service, medical examiner, department of juvenile justice )

- community surveys (20 randomly selected adults per block group will be asked to complete items that will be aggregated to reflect community norms such as *collective efficacy*, *intergenerational closure*, and *attitudes toward adolescents*); adults also will report on their personal involvement with adolescents in the neighborhood including *how many youth (not including their own children) with whom they have a close relationship*, and open-ended questions will assess *perceived barriers and facilitators to forming close ties with adolescents in their neighborhoods*
- systematic social observations of community resources (e.g., parks, recreation facilities) in the block groups (will provide information on the *frequency, types, and amount of intergenerational interactions* occurring in those settings)
- a longitudinal cohort study of African American early adolescents and their primary caregivers residing in the study neighborhoods; in collaboration with the Richmond City Schools, all families with African American children between the ages of 10-14 in selected block groups will be contacted and recruited to participate; data will be collected annually over 4 years from early adolescents and their primary caregivers with a primary focus on thoroughly assessing the *quantity and quality of natural mentoring relationships, family structure, family dynamics, youths and primary caregivers' experiences of their neighborhood* (including perceptions and utilization of neighborhood resources), and *youths' psychosocial outcomes* (with a heavy emphasis on indicators of developmental competencies and positive youth development)

By collecting longitudinal data during a developmental period wherein these relationships are most likely to emerge (early adolescence) and employing propensity-score matching analyses to reduce selection bias based on individual factors, greater opportunities exist for 1) more precisely capturing environmental predictors of natural mentoring relationships and 2) appropriately assessing effects of these relationships on youth outcomes. This proposed project will combine individual strengths of the previous two projects and build on them through its combined focus on family and neighborhood settings, comprehensive assessment of familial and nonfamilial natural mentoring relationships (characteristics of mentors, quality of relationships, quantity of relationships), and heavy focus on developmental competencies among marginalized adolescents. This project will be designed to test hypotheses **H1-H6**; however, modifications of these hypotheses will be made as indicated from the findings of projects #1 and #2.

### **Schedule of Research Activities**

*The timing of research activities has been carefully planned to ensure an iterative and synergistic process* (see **Appendix D**). I will spend year 1 conducting the secondary data analyses described in project #1. I expect these analyses will yield a minimum of 2-3 manuscripts. *The findings from project #1 will inform project #2*. During year 2, I will submit to the IRB, recruit participants, and pilot test the surveys to be administered as a part of project #2. Survey data collection will be conducted during years 2 and 3. In year 3, my research team and I will clean the data and conduct quantitative analyses. *Findings from the quantitative analyses will inform the questions developed for the open-ended interviews*. In year 3, the research team and I will develop the open-ended interviews and refine them after feedback from pilot interviews. All open-ended interviews will be completed and transcribed in the end of year 3 and beginning of year 4. Qualitative analyses will be completed and integrated with

quantitative findings during year 4. Dissemination of findings from project #2 will occur during years 4 and 5. I plan to make these findings accessible to public audiences, practitioners, and policymakers. During years 1-4, I will be engaging in a variety of training and support activities [e.g., learning how to access and utilize geographical information systems (GIS) data, training in complex sample design, learning how to integrate multiple types and sources of data, connecting with the Richmond community and collaborators at Virginia Commonwealth University] that will better prepare me for project #3. I will write and submit the grant proposal during years 4 and 5. *Project #3 will be shaped largely by findings from projects #1 and #2.*

### **Significance for Theory, Policy, & Practice**

Collectively, these three projects will elucidate a multitude of setting-level factors that may shape the formation of natural mentoring relationships between economically disadvantaged African American adolescents and the nonparental adults in their families and communities. As one of the first research endeavors to properly assess family and neighborhood predictors of natural mentoring, *this proposal seeks to break new ground in the field's understanding of the formation of natural mentoring relationships within key settings.* Further, this set of synergistic studies seeks to explore heterogeneity in the settings of marginalized adolescents to both highlight the diversity that exists and leverage this diversity to identify points of intervention. Specifically, findings of the proposed studies may be used to inform setting-level interventions related to promoting natural mentoring relationships between marginalized adolescents and the non-parental adults in their families and neighborhoods. Findings of these studies, for example, may suggest ideal locations and distributions of community resources in high-poverty neighborhoods, indicate the potential of violence-reduction efforts to influence the utilization of resources, and inform community-level efforts to foster supportive adult-youth interactions. Furthermore, findings related to family structures and dynamics most conducive to natural mentoring relationship formation may have important implications for policies and services affecting poor African American families. This research may underscore the benefits of more comprehensive definitions of family and the ways in which greater interdependence among kin networks provides increased opportunities for supportive intergenerational connections. These findings may contradict current notions of personal responsibility and individual accountability that so fervently drive U.S. social policy.<sup>40, 113</sup>

*Moreover, the proposed research plan advocates a paradigm shift in scientific and public discourse regarding youth mentoring interventions.* To date, youth mentoring interventions have consisted almost exclusively of programs that are responsible for bringing youth and adults together in the hopes of fostering life-changing relationships. Often, youth and adults do not share backgrounds and more frequently than desired, these relationships fall victim to premature termination.<sup>10</sup> Though youth seem to benefit from formal mentoring relationships,<sup>76</sup> a complete reliance on these types of programmatic interventions to foster the intergenerational bonds critical for healthy development may be unrealistic. *Findings of the proposed research will help to redefine and expand the youth mentoring movement to include setting-level interventions aimed at nurturing the formation of mentoring relationships between adolescents and the adults in their everyday lives.* These intervention efforts may yield more sustainable results and hold immense promise for securing youths' safe passage through adolescence and beyond.

#### IV. CAREER DEVELOPMENT THROUGH MENTORING

Thus far, my burgeoning research career has aimed to facilitate a more comprehensive understanding of the presence and nature of natural mentoring relationships among economically disadvantaged African American youth and nonparental adults. Employing a resilience framework, I have assessed the potential of nonparental adults to serve as resources to these youth and I have investigated the processes through which these relationships affect a variety of youths' psychosocial outcomes over time. ***With support from the Scholars Program, I plan to expand this body of work to include a focus on setting-level factors that inform the formation of these natural mentoring relationships.*** To foster my desired growth in the skills needed to appropriately study these settings, I will rely on the mentorship of two highly-esteemed experts in their respective areas of study.

Dr. Jean Rhodes is the most renowned scholar in the youth mentoring field. Dr. Rhodes has devoted her career to building the knowledge base on youth mentoring. Moreover, Dr. Rhodes has extensive expertise in the implementation of qualitative and mixed methods research.<sup>114, 115</sup> In addition, Dr. Rhodes' more recent research has considered how youths' relationships with their parents may influence the effectiveness of formal mentoring relationships<sup>116</sup> and how youths' perceptions of their communities may be associated with mentoring relationships.<sup>117</sup> ***Dr. Rhodes' critical mass of mentoring knowledge and skills in qualitative and mixed methods research uniquely situate her to oversee and support my scholarly development in the study of familial and neighborhood influences on natural mentoring relationships and the implementation of mixed methods research.*** Furthermore, Dr. Rhodes has an excellent track record of mentoring junior scholars. Having been a William T. Grant Scholar herself and recently serving as a mentor for a former William T. Grant Scholar, ***Dr. Rhodes knows exactly what is expected of the proposed mentoring arrangement and she has made this commitment to me enthusiastically.*** Although it is likely that Dr. Rhodes and I would have some contact with each other in the future even without the support of the Scholars Award, ***the Scholars Award will facilitate the establishment of a concrete, well-defined mentoring alliance that promises to provide fertile grounds for my scholarly development.*** Dr. Rhodes and I have outlined a mentoring plan that includes monthly virtual meetings throughout the first two years of the award. During these meetings we will discuss conceptualizations of my research, plans for analyses, interpretations of my findings, and the development of my mixed methods study. We also will discuss venues for disseminating this research and strategies for using research to inform practice and policy. By scheduling a regular meeting time, we will ensure that busy schedules do not intrude on this protected time. Additionally, we have agreed to meet in person 3 times a year during the first 2 years of the award. We also have agreed to more frequent contact via e-mail or phone as needed and we expect that this form of contact will continue beyond the designated 2 year mentoring plan. We will seek actively opportunities for collaborations on manuscripts and conference presentations.

Dr. Patrick Tolan is a widely recognized expert in the study of issues of risk and resilience among economically disadvantaged, urban, youth of color.<sup>118</sup> He has published extensively on contextual predictors of youth development including a focus on neighborhoods,<sup>119</sup> families,<sup>120, 121</sup> and interactions between family and neighborhood settings.<sup>122</sup> Furthermore, Dr. Tolan has successfully designed and implemented original data collection projects aimed at evaluating

neighborhood effects on the developmental outcomes of marginalized youth.<sup>123</sup> Currently, he is involved in several projects that aim to develop and validate measures of particular relevance to the current proposal: neighborhood social processes and mentoring relationships. In light of *Dr. Tolan's extensive experience researching the family and neighborhood contexts of urban, economically disadvantaged youth of color and his more recent focus on improved measurement of neighborhood processes and mentoring relationships, Dr. Tolan is well-positioned to significantly guide and support my academic growth in the study of settings and natural mentoring relationships.* Moreover, Dr. Tolan has demonstrated an emphatic commitment to mentoring junior scholars of color. When I contacted Dr. Tolan to discuss my research plan and request his mentorship, he immediately made himself available to me and eagerly provided me with in-depth feedback on my research plan. *He is fully committed to serving as my mentor for the proposed research.* Through my affiliation with the Youth-Nex Center, Dr. Tolan and I have had a few interactions over the past year. Although I expect that Dr. Tolan and I will continue to have positive exchanges over the coming years, *a firmly established mentoring relationship will ensure a much greater level of involvement and collaboration.* To ensure that we do not allow busy schedules to interfere with our mentoring arrangement, Dr. Tolan and I have agreed to regular monthly meetings during the first two years of the award. During these meetings we will discuss all aspects of my emerging research and my plans for securing grant funding as described in project #3. Dr. Tolan has agreed to play a critical role in the development of that proposal and to offer grantsmanship guidance to enhance my chances of receiving funding for the proposed research. Additionally, as opportunities arise for relevant training opportunities, Dr. Tolan will facilitate access to those opportunities. Though we may meet less frequently after the first 2 years of the award, this mentoring relationship is likely to persist and contribute significantly to my professional development over the years.

In addition to the mentoring relationships that will be established through the Scholars Program, this award will contribute to my career development by affording me the time needed to invest in additional trainings and utilize support resources available at my institution. To build my skills in qualitative analysis, I will audit a graduate level qualitative course. I also will benefit from training sessions in mixed methods research from Dr. Deutsch. In preparation for project #3, I will receive substantial training and support from the GIS specialists through the Scholar's Lab at the University of Virginia Library, the Center for Survey Research at the University of Virginia, and my colleagues in the quantitative area of the psychology department. *Through the support of the Scholars Program, I will enhance my ability to study settings as meaningful predictors of natural mentoring relationships and developmental outcomes among economically disadvantaged, African American adolescents.* Specifically, I will develop skills in 1) the conceptualization of neighborhood and family effects on natural mentoring relationships and youth outcomes, 2) the measurement of resources and processes of family and neighborhood settings, 3) the design and implementation of multilevel and mixed methods studies to assess setting-level influences, and 4) the appropriate analytic procedures to evaluate these studies. Through mentorship, I will also begin to learn how to better link research with practice and policy. During the latter years of the Scholars Award, I expect that I will benefit from continued mentorship and guidance regarding various strategies used to connect research to practice and policy. Similarly, mentorship in designing and implementing setting-level interventions will be of great value to my continued scholarly development and better position me to use my research to improve the lives of marginalized adolescents.

## Bibliography

1. Amett JJ. Adolescent storm and stress, reconsidered. *American Psychologist*. 1999; 54: 317-326.
2. Marcia JE. Identity in adolescence. In: Adeison J, ed. *Handbook of adolescent psychology*. New York, NY: John Wiley & Sons; 1980: 109–137.
3. Allen JP, Land D. Attachment in adolescence. In: Cassidy J, Shaver PR, eds. *Handbook of attachment theory and research*. New York, NY: Guilford Press; 1999: 319-335.
4. Zimmerman MA, Bingenheimer JB, Behrendt DE. Natural mentoring relationships. In: DuBois DL, Karcher MJ, eds. *Handbook of youth mentoring*. Thousand Oaks, CA: Sage; 2005:143-157.
5. Rhodes JE, Spencer R, Keller TE, Liang B, Noam, G. A model for the influence of mentoring relationships on youth development. *Journal of Community Psychology*. 2006; 34: 691–707.
6. Spencer R. Naturally occurring mentoring relationships involving youth. In: Allen TD, Eby, LT, eds. *The Blackwell handbook of mentoring: A multiple perspectives approach*. West Sussex, UK: John Wiley & Sons; 2007: 99-117.
7. Rhodes JE. *Stand by me: The risks and rewards of mentoring today's youth*. Cambridge, MA: Harvard University Press; 2002.
8. Beam MR, Chen C, Greenberger E. The nature of adolescents' relationships with their "very important" nonparental adults. *American Journal of Community Psychology*. 2002; 30: 305–325.
9. Darling N, Hamilton S, Toyokawa T, Matsuda S. Naturally occurring mentoring in Japan and the United States: Social roles and correlates. *American Journal of Community Psychology*. 2002; 30: 245–270.
10. Grossman JB, Rhodes JE. The test of time: Predictors and effects of duration in youth mentoring relationships. *American Journal of Community Psychology*. 2002; 30: 199–219.
11. Klaw EL, Rhodes JE, Fitzgerald LF. Natural mentors in the lives of African American adolescent mothers: Tracking relationships over time. *Journal of Youth and Adolescence*. 2003; 32: 223–232.
12. Erickson LD, McDonald S, Elder GH. Informal mentors and education: Complementary or compensatory resources? *Sociology of Education*. 2009; 82: 344–367.
13. Hurd NM, Zimmerman, MA. Natural mentors, mental health, and risk behaviors: A longitudinal analysis of African American adolescents transitioning into adulthood. *American Journal of Community Psychology*. 2010; 46: 36–48.

14. DuBois DL, Silverthorn N. Natural mentoring relationships and adolescent health: Evidence from a national study. *American Journal of Public Health*. 2005; 95: 518–524.
15. Hurd NM, Sánchez B, Zimmerman MA, Caldwell CH. Natural mentors, racial identity, and educational attainment among African American adolescents: Exploring pathways to success. *Child Development*. 2012; 83: 1196–1212.
16. Hurd NM, Zimmerman MA. An analysis of natural mentoring relationship profiles and their association with mentees' mental health: Considering links via support from important others. *American Journal of Community Psychology*. invited resubmission.
17. Kogan SM, Brody GH, Chen Y. Natural mentoring processes deter externalizing problems among rural African American emerging adults: A prospective analysis. *American Journal of Community Psychology*. 2011; 48: 272–283.
18. Sánchez B, Esparza P, Colón, Y. Natural mentoring under the microscope: An investigation of mentoring relationships and Latino adolescents' academic performance. *Journal of Community Psychology*. 2008; 36: 468–482.
19. Sterrett EM, Jones DJ, McKee LG, Kincaid, C. Supportive non-parental adults and adolescent psychosocial functioning: Using social support as a theoretical framework. *American Journal of Community Psychology*. 2011; 48: 284–295.
20. Farruggia SP, Bullen P, Davidson J. Important nonparental adults as an academic resource for youth. *The Journal of Early Adolescence*. 2013; 33: 498–522.
21. Brody GH, Chen YF, Murry VM, Ge X, Simons RL, et al. Perceived discrimination and the adjustment of African American youths: A five-year longitudinal analysis with contextual moderation effects. *Child Development*. 2006; 77: 1170–1189.
22. Cooper SM, McLoyd VC, Wood D, Hardaway CR. Racial discrimination and the mental health of African American adolescents. In: Quintana SM, McKown C, eds. *Handbook of race, racism, and the developing child*. Hoboken, NJ: John Wiley & Sons; 2007: 278–312.
23. Huston AC, McLoyd VC, García Coll C. Poverty and behavior: The case for multiple methods and levels of analysis. *Developmental Review*. 1997; 17: 376–393.
24. McLoyd VC. The impact of economic hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Development*. 1990; 61: 311–346.
25. McLoyd VC. Changing demographics in the American population: Implications for research on minority children and adolescents. In: McLoyd VC, Steinberg LC, eds. *Studying minority adolescents: Conceptual, methodological, and theoretical issues*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc; 1998: 3-28.

26. Wilson WJ. *More than just race: Being Black and poor in the inner city*. New York, NY: Norton & Company; 2009.
27. McLoyd VC. Socioeconomic disadvantage and child development. *American Psychologist*. 1998; 53: 185.
28. Arrington EG, Wilson MN. A re-examination of risk and resilience during adolescence: Incorporating culture and diversity. *Journal of Child and Family Studies*. 2000; 9: 221–230.
29. Billingsley A, Billingsley AT. *Black families in White America*. Englewood Cliffs, NJ: Prentice-Hall; 1968.
30. Stack CB. *All our kin: Strategies for survival in a Black community*. New York, NY: Harper & Row; 1974.
31. Stewart P. Who is kin? Family definition and African American families. *Journal of Human Behavior in the Social Environment*. 2007; 15: 163–181.
32. Wilson MN. The Black extended family: An analytical consideration. *Developmental Psychology*. 1986; 22: 246- 258.
33. Wilson MN (1989). Child development in the context of the Black extended family. *American Psychologist*. 1989; 44: 380–385.
34. Wilson MN, Kohn LP, Curry-El, Hinton ID. The influence of family structure Characteristics on the child-rearing behaviors of African American mothers. *Journal of Black Psychology*. 1995; 21: 450–462.
35. Chatters LM, Taylor RJ, Jayakody R. Fictive kinship relations in Black extended families. *Journal of Comparative Family Studies*. 1994; 25: 297–312.
36. Boykin AW, Jagers RJ, Ellison CM, Albury A. Communalism: Conceptualization and measurement of an Afrocultural social orientation. *Journal of Black Studies*. 1997; 27: 409-418.
37. Burton LM, Stack CB. Conscripting kin: Reflections on family, generation, and culture. In: Lawson A, Rhode DL, eds. *The politics of pregnancy: Adolescent sexuality and public policy*. New Haven, CT: Yale University Press; 1993: 174–185.
38. García Coll C, Crnic K, Lamberty G, Wasik BH, Jenkins R, et al. An integrative model for the study of developmental competencies in minority children. *Child Development*. 1996; 67: 1891–1914.
39. Geronimus AT. Teenage childbearing and social disadvantage: Unprotected discourse. *Family Relations*. 1992; 41: 244- 248.

40. Geronimus AT. Damned if you do: Culture, identity, privilege, and teenage childbearing in the United States. *Social Science & Medicine*. 2003; 57: 881–893.
41. Tseng V, Seidman E. A systems framework for understanding social settings. *American Journal of Community Psychology*. 2007; 39: 217–228.
42. Weisner TS. Ecocultural understanding of children's developmental pathways. *Human Development*. 2002; 45: 275–281.
43. Rhodes JE, Ebert L, Fischer K. Natural mentors: An overlooked resource in the social networks of young, African American mothers. *American Journal of Community Psychology*. 1992; 20: 445–461.
44. Furstenberg FF. History and current status of divorce in the United States. *The Future of Children*. 1994; 4: 29-43.
45. Putnam RD. *Bowling alone: Civic disengagement in America*. New York, NY: Simon & Schuster, Inc; 2000.
46. Scales P. *Other people's kids: Social expectations and American adults' involvement with children and adolescents*. New York, NY: Kluwer Academic/Plenum Publishers; 2003.
47. Hurd NM, Stoddard SA, Zimmerman MA. Neighborhoods, social support, and African American adolescents' mental health outcomes: A multilevel path analysis. *Child Development*. 2013; 84: 858–874.
48. Bronfenbrenner U. *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press; 1979.
49. Keller TE. A systemic model of the youth mentoring intervention. *Journal of Primary Prevention*. 2005; 26: 169–188.
50. Spencer R, Basualdo-Delmonico A, Lewis TO. Working to make it work: the role of parents in the youth mentoring process. *Journal of Community Psychology*. 2011; 39: 51–59.
51. Styles MB, Morrow KV. *Understanding how youth and elders form relationships: A study of four linking lifetimes programs*. Philadelphia, PA: Public/Private Ventures; 1992.
52. Wilson MN, Tolson TFJ. Familial support in the Black community. *Journal of Clinical Child Psychology*. 1990; 19: 347–355.
53. Larson RW, Richards MH, Sims B, Dworkin J. How urban African American young adolescents spend their time: Time budgets for locations, activities, and companionship. *American Journal of Community Psychology*. 2001; 29: 565–597.

54. Hirsch BJ. *A place to call home: After-school programs for urban youth*. New York, NY: Teachers College Press; 2005.
55. Hirsch BJ, Deutsch NL, DuBois DL. *After-school centers and youth development: Case studies of success and failure*. Cambridge, MA: Cambridge University Press; 2011.
56. Harrison AO, Wilson MN, Pine CJ, Chan SQ, Buriel R. Family ecologies of ethnic minority children. *Child Development*. 1990; 61: 347–362.
57. García Coll C, Akerman A, Cicchetti D. Cultural influences on developmental processes and outcomes: Implications for the study of development and psychopathology. *Development and Psychopathology*. 2000; 12: 333–356.
58. McLoyd VC. The legacy of Child Development's 1990 special issue on minority children: An editorial retrospective. *Child Development*. 2006; 77: 1142–1148.
59. Coley RL, Sullivan WC, Kuo FE. Where does community grow? The social context created by nature in urban public housing. *Environment and Behavior*. 1997; 29: 468–494.
60. Taylor AF, Wiley A, Kuo FE, Sullivan WC. Growing up in the inner city: Green spaces as places to grow. *Environment and Behavior*. 1998; 30: 3–27.
61. Pedersen S, Seidman E. Contexts and correlates of out-of-school activity participation among low-income urban adolescents. In: Mahoney JL, Larson RW, Eccles JS, eds. *Organized activities as contexts of development: Extracurricular activities, after-school and community programs*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc; 2005: 85-109.
62. Jarrett RL, Sullivan PJ, Watkins ND. Developing social capital through participation in organized youth programs: Qualitative insights from three programs. *Journal of Community Psychology*. 2005; 33: 41–55.
63. Freedman M. *The kindness of strangers: Adult mentors, urban youth, and the new volunteerism*. San Francisco, CA: Jossey-Bass; 1993.
64. Quane JM, Rankin BH. Does it pay to participate? Neighborhood-based organizations and the social development of urban adolescents. *Children and Youth Services Review*. 2006; 28: 1229–1250.
65. Jarrett RL. Resilience among low-income African American youth: An ethnographic perspective. *Ethos*. 1997; 25: 218–229.
66. Small ML. Racial differences in networks: Do neighborhood conditions matter? *Social Science Quarterly*. 2007; 88: 320–343.
67. Massey DS, Denton NA. *American apartheid: Segregation and the making of the underclass*. Cambridge, MA: Harvard University Press; 1993.

68. Molnar BE, Roberts AL, Browne A, Gardener H, Buka SL. What girls need: recommendations for preventing violence among urban girls in the US. *Social Science & Medicine*. 2005; 60: 2191–2204.
69. Sampson RJ, Raudenbush SW, Earls F. Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*. 1997; 277: 918–924.
70. Odgers C L, Moffitt T E, Tach LM, Sampson R J, Taylor A, et al. The protective effects of neighborhood collective efficacy on British children growing up in deprivation: A developmental analysis. *Developmental Psychology*. 2009; 45: 942-957.
71. Leventhal T, Brooks-Gunn J. The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*. 2000; 126: 309–337.
72. Gorman-Smith D, Tolan P H, Henry D. The relation of community and family to risk among urban-poor adolescents. In: Cohen P, Slomkowski C, Robins LN, eds. *Historical and geographical influences on psychopathology*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc; 1999: 349-367.
73. Gutman L, McLoyd VC, Tokoyawa T. Financial strain, neighborhood stress, parenting behaviors, and adolescent adjustment in urban African American families. *Journal of Research on Adolescence*. 2005; 15: 425–449.
74. Rankin BH, Quane JM. Social contexts and urban adolescent outcomes: The interrelated effects of neighborhoods, families, and peers on African-American youth. *Social Problems*. 2002; 49: 79-100.
75. Deutsch NL, Spencer R. Capturing the magic: Assessing the quality of youth mentoring relationships. *New Directions for Youth Development*. 2009; 121: 47–70.
76. DuBois DL, Portillo N, Rhodes JE, Silverthorn N, Valentine JC. How effective are mentoring programs for youth? A systematic assessment of the evidence. *Psychological Science in the Public Interest*. 2011; 12: 57–91.
77. Hurd NM, Sellers RM. Black adolescents' relationships with natural mentors: Associations with academic engagement via social and emotional development. *Cultural Diversity and Ethnic Minority Psychology*. 2013; 19: 76–85.
78. Moore M. Socially isolated? How parents and neighbourhood adults influence youth behaviour in disadvantaged communities. *Ethnic and Racial Studies*. 2003; 26: 988–1005.
79. Earls F, Visher CA. *Project on human development in Chicago neighborhoods: a research update*. Washington, DC: US Department of Justice, Office of Justice Programs, National Institute of Justice; 1997.

80. Sampson RJ. *Great American city: Chicago and the enduring neighborhood effect*. Chicago, IL: University of Chicago Press; 2012.
81. Dupéré V, Leventhal T, Vitaro F. Neighborhood processes, self-efficacy, and adolescent mental health. *Journal of Health and Social Behavior*. 2012; 53: 183–198.
82. Pattillo M. Black middle-class neighborhoods. *Annual Review of Sociology*. 2005; 31: 305–329.
83. Riina EM, Martin A, Gardner M, Brooks-Gunn J. Context matters: Links between neighborhood discrimination, neighborhood cohesion and African American adolescents' adjustment. *Journal of Youth and Adolescence*. 2013; 42: 136–146.
84. Richards MH, Larson R, Miller BV, Luo Z, Sims B, et al. Risky and protective contexts and exposure to violence in urban African American young adolescents. *Journal of Clinical Child & Adolescent Psychology*. 2004; 33: 138–148.
85. Turner RJ, Frankel GB, & Levin DM. Social support: Conceptualization, measurement, and implications for mental health. *Research in Community & Mental Health*. 1983; 3: 67–111.
86. Preacher KJ, Zyphur MJ, Zhang Z. A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*. 2010; 15: 209–233.
87. Gardner M, Brooks-Gunn J. Adolescents' exposure to community violence: are neighborhood youth organizations protective? *Journal of Community Psychology*. 2009; 37: 505–525.
88. Muthén L, Muthén B. Mplus. *The comprehensive modeling program for applied researchers: user's guide*; 2012.
89. Bollen KA, Curran PJ. *Latent curve models: A structural equation perspective*. Hoboken, NJ: John Wiley & Sons; 2006.
90. Raykov T. Analysis of longitudinal studies with missing data using covariance structure modeling with Full-Information Maximum Likelihood. *Structural Equation Modeling: A Multidisciplinary Journal*. 2005; 12: 493–505.
91. Yoshikawa H, Weisner TS, Kalil A, Way N. Mixing qualitative and quantitative research in developmental science: Uses and methodological choices. *Developmental Psychology*. 2008; 44: 344–354.
92. Axinn WG, Pearce LD. *Mixed method data collection strategies*. Cambridge, MA: Cambridge University Press; 2006.
93. Creswell JW, Clark VLP. *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications; 2007.

94. Saunders JR, Shackelford RN. *Urban renewal and the end of Black Culture in Charlottesville, Virginia*. Jefferson, NC: McFarland & Company, Inc; 1998.
95. Patton MQ. *Qualitative research and evaluation methods, 3<sup>rd</sup> edition*. Thousand Oaks, CA: Sage; 2002.
96. Lieber E. Mixing qualitative and quantitative methods: Insights into design and analysis issues. *Journal of Ethnographic & Qualitative Research*. 2009; 3: 218-227.
97. Shiffman S, Stone AA, Hufford MR. Ecological momentary assessment. *Annual Review of Clinical Psychology*. 2008; 4, 1–32.
98. Armsden GC, Greenberg MT. *The inventory of parent and peer attachment: Preliminary test manual*. Seattle, WA: Department of Community Health Care Systems; 1989.
99. Nomaguchi KM. Gender, family structure, and adolescents' primary confidants. *Journal of Marriage and Family*. 2008; 70, 1213–1227.
100. John OP, Srivastava S. The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In: Pervin LA, John OP, eds. *Handbook of personality: Theory and research*. New York, NY: Guilford Press; 1999: 102-138.
101. Harris JT, Nakkula MJ. *Youth Mentoring Survey*: Unpublished measure. Harvard Graduate School of Education; 2003.
102. Cavell TA, Elledge LC, Malcolm KT, Faith MA, Hughes JN. Relationship quality and the mentoring of aggressive, high-risk children. *Journal of Clinical Child & Adolescent Psychology*. 2009; 38: 185–198.
103. Furman W, Buhrmester D. Children's perceptions of the personal relationships in their social networks. *Developmental psychology*. 1985; 21: 1016-1024.
104. Malecki CK, Demary MK. Measuring perceived social support: Development of the child and adolescent social support scale (CASSS). *Psychology in the Schools*. 2002; 39: 1–18.
105. Jucovy L. *The Youth Survey: Measuring the Quality of Mentor/Youth Relationships*. Public/Private Ventures. [http://educationnorthwest.org/webfm\\_send/212](http://educationnorthwest.org/webfm_send/212)
106. Beam MR, Gil-Rivas V, Greenberger E, Chen C. Adolescent problem behavior and depressed mood: Risk and protection within and across social contexts. *Journal of Youth and Adolescence*. 2002; 31: 343–357.
107. Hurd NM, Zimmerman MA, Reischl TM. Role model behavior and youth violence: A study of positive and negative effects. *The Journal of Early Adolescence*. 2011; 31: 323–354.

108. Lerner RM, Lerner JV, Almerigi JB, Theokas C, Phelps E, et al. Positive youth development, participation in community youth development programs, and community contributions of fifth-grade adolescents findings from the first wave of the 4-H study of positive youth development. *The Journal of Early Adolescence*. 2005; 25: 17–71.
109. Weston R, Gore PA. A brief guide to structural equation modeling. *The Counseling Psychologist*. 2006; 34: 719–751.
110. MacCallum RC, Browne MW, Sugawara HM. Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*. 1996; 1: 130-149.
111. QSR International. NVivo 10 software. [http://www.qsrinternational.com/products\\_nvivo.aspx](http://www.qsrinternational.com/products_nvivo.aspx)
112. Bazeley P. Editorial: Integrating data analyses in mixed methods research. *Journal of Mixed Methods Research*. 2009; 3: 203–207.
113. Geronimus AT. To mitigate, resist, or undo: addressing structural influences on the health of urban populations. *American Journal of Public Health*. 2000; 90: 867–872.
114. Camic PM, Rhodes JE, Yardley L. *Qualitative research in psychology: Expanding perspectives in methodology and design*. Washington, DC: American Psychological Association; 2003.
115. Rhodes JE, Reddy R, Grossman JB, Lee JM. Volunteer mentoring relationships with minority youth: An analysis of same-versus cross-race matches. *Journal of Applied Social Psychology*. 2002; 32: 2114-2133.
116. Schwartz SEO, Rhodes JE, Chan CS, Herrera C. The impact of school-based mentoring on youths with different relational profiles. *Developmental Psychology*. 2011; 47: 450–462.
117. Schwartz SEO, Chan CS, Rhodes JE, Scales PC. Community developmental assets and positive youth development: The role of natural mentors. *Research in Human Development*. 2013; 10: 141–162.
118. Tolan PH, Guerra NG, Kendall PC. A developmental-ecological perspective on antisocial behavior in children and adolescents: toward a unified risk and intervention framework : Prediction and prevention of child and adolescent antisocial behavior. *Journal of Consulting and Clinical Psychology*. 1995; 63: 579–584.
119. Gorman-Smith D, Tolan P. The role of exposure to community violence and developmental problems among inner-city youth. *Development and Psychopathology*. 1998; 10: 101–116.
120. Florsheintn P, Tolan P, Gorman-Smith D. Family relationships, parenting practices, the availability of male family members, and the behavior of inner-city boys in single-mother and two-parent families. *Child Development*. 1998; 69: 1437–1447.

121. Tolan P, Gorman-Smith D, Henry D. Family violence. *Annual Review of Psychology*. 2006; 57: 557–583.
122. Sheidow AJ, Gorman-Smith D, Tolan PH, Henry D. Family and community characteristics: Risk factors for violence exposure in inner-city youth. *Journal of Community Psychology*. 2001; 29: 345-360.
123. Tolan PH, Gorman-Smith D, Henry, D. The developmental ecology of urban males' youth violence. *Developmental Psychology*. 2003; 39: 274-290.

NOT FOR DISTRIBUTION

**APPENDIX A. Project #1: Primary Study Variables from Project on Human Development in Chicago Neighborhoods (PHDCN) Study by Wave and Source**

	Wave 1 '94 - '97	Wave 2 '97 - '99	Wave 3 '00 - '01
<b>LONGITUDINAL COHORT STUDY (1994-2001)</b>			
Provision of Social Relations (Youth)	YP		YP
Depressive Symptoms (Youth)	PC	YP	YP
Anxiety Symptoms (Youth)	PC	YP	YP
Sexual Risk Behavior (Youth)			YP
Substance Use (Youth)	YP	YP	YP
Violence (Youth)	YP	YP	YP
Nonviolent Delinquency (Youth)	YP	YP	YP
Household Composition	PC	PC	PC
Family Conflict		PC	
Temperament (Youth)	PC		
Participation in Afterschool Programs (Youth)	PC	YP	
Warmth of Primary Caregiver toward Youth		AD	
<b>COMMUNITY SURVEY (1994-1995)</b>			
Collective Efficacy	CSP		
Reciprocal Exchange	CSP		
Intergenerational Closure	CSP		
Availability of Services for Youth	CSP		
Perceived Neighborhood Violence	CSP		
<b>U.S. CENSUS DATA (1990)</b>			
Neighborhood Disadvantage (poverty rate, unemployment rate, % receiving public assistance)	CD		
Residential Stability	CD		
Percentage of Black Residents	CD		
<b>1995 CHICAGO POLICE DATA (1995)</b>			
Violent Crime Rate	CPD		

YP = Youth Participant

PC = Primary Caregiver

AD = Administrator

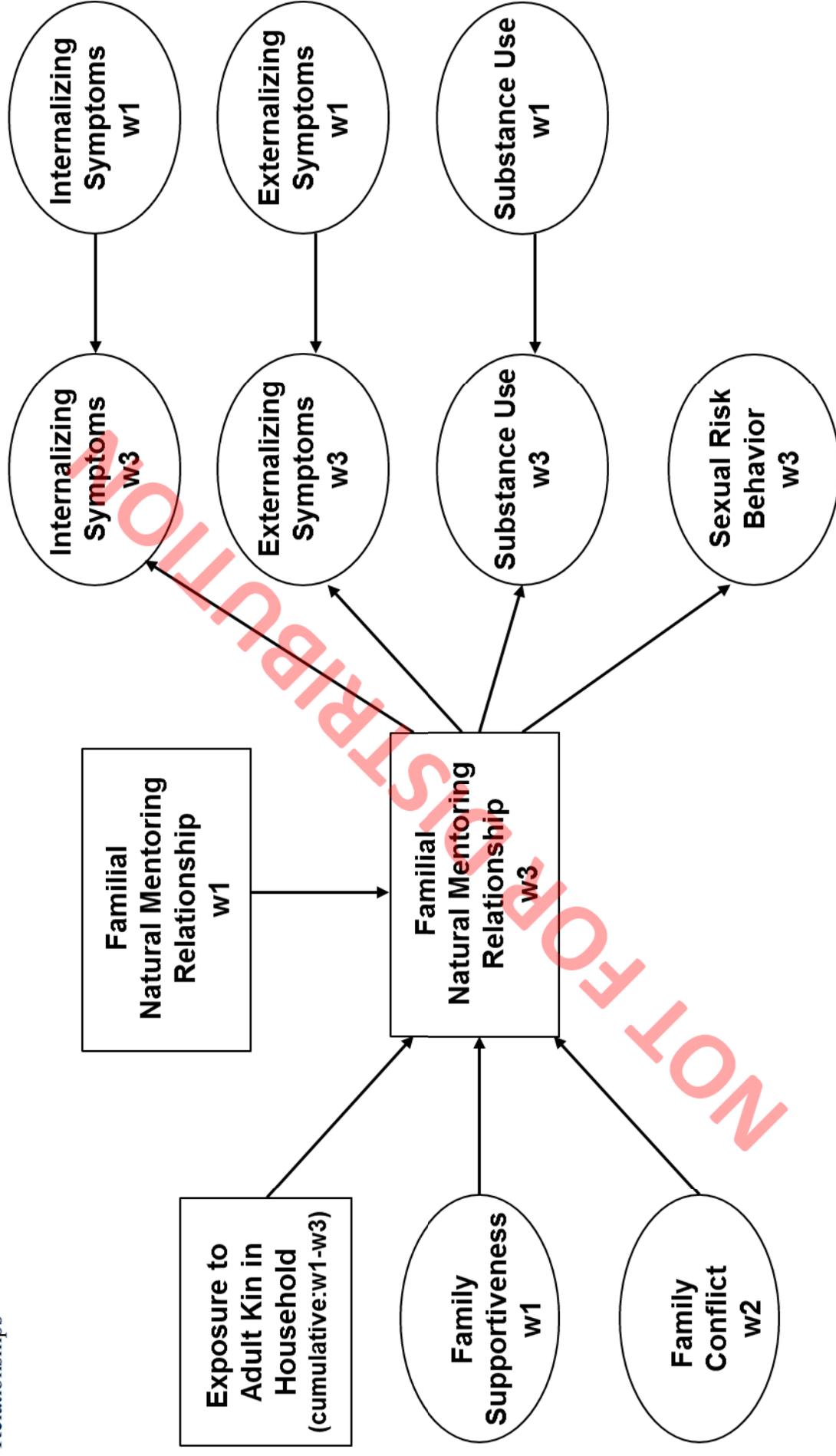
CSP = Community Survey Participant

CD = Census Data

CPD = Chicago Police Data

\*Note: Measures from the longitudinal cohort study were only included if there was an equivalent version administered to participants of the 9-, 12-, and 15-year cohorts simultaneously during at least one wave.

**APPENDIX B. Project #1:** Model of Indirect Paths from Familial Factors to Youth Outcomes via Familial Natural Mentoring Relationships



Note: Model will account for effects of adolescents' gender, age, temperament, single-parent household, family size, and socioeconomic position on familial natural mentoring relationship at wave 3 and on wave 3 internalizing symptoms, externalizing symptoms, substance use, and sexual risk behavior. Correlations among exogenous predictor variables and among endogenous outcome variables will be estimated.

All content is the property of the author, Noelle Hurd, and should not be distributed or cited in any form without the express written permission of the author.



**APPENDIX D. Schedule of Research Activities**

	Year 1 2014- 2015	Year 2 2015- 2016	Year 3 2016- 2017	Year 4 2017- 2018	Year 5 2018- 2019
<b>Project #1: Secondary Data Analyses with PHDCN Study Data</b>					
Analyses	X				
Manuscript Preparation, Submission, & Revisions	X	X			
Prepare & Deliver Conference Presentations	X	X			
Dissemination to Practice & Policy Audiences		X			
<b>Project #2: Mixed Methods Original Data Collection Project</b>					
Qualitative & Mixed Methods Training	X	X	X		
IRB Submission and Completion of Schools' Research Request Forms		X			
Participant Recruitment		X			
Pilot Test & Refine Surveys		X			
Collection of Survey Data		X	X		
Cleaning & Analyses of Survey Data			X		
Design Open-ended Interview Questions			X		
Pilot Test & Refine Interviews			X		
Transcribe & Code Interview Data			X	X	
Integration of Quantitative and Qualitative Data				X	
Dissemination of Findings to Local Audiences (e.g., schools)				X	X
Manuscript Preparation, Submission, & Revisions				X	X
Prepare & Deliver Conference Presentations				X	X
Dissemination to Practice & Policy Audiences					X
<b>Project #3: Grant Proposal for Neighborhood-Based Study in Richmond, VA</b>					
Training in Accessing & Utilizing Geographical Information Systems Data	X	X			
Training in Complex Sample Design			X		
Establishing Connections with Richmond Community & VCU Collaborators	X	X	X	X	X
Write & Submit Grant Proposal				X	X

**Principal Investigator:** Nikki Jones

**Institution:** University of California, Santa Barbara

**Project Title:** Pathways to Freedom: How Young People Create A Life After Incarceration

## ABSTRACT

### Introduction

There is a serious need for research that highlights the various settings that young people return to after incarceration and the strategies that young people use to stay free within these settings. Currently, over two million individuals are incarcerated in our nation's jails and prisons, and more than six million individuals are under some form of federal, state, or local correctional supervision (Harrison and Beck 2005). Each year, between 650,000-700,000 men and women are released from prisons, while nearly 7 million individuals are released from jails across the country (Re-Entry Policy Council 2004). Two hundred thousand young people (aged 24 and younger) return from incarceration or detention each year (Mears and Travis 2004, see also, Snyder 2004). For young Black men, the experience of imprisonment has become a "common life event" that affects their life course trajectories in dramatic ways (Pettit and Western 2004). In recent years, the experience of young Black women with the criminal justice system has begun to mirror that of their male peers (Harrison and Beck 2005; Snyder and Sickmund 2006). Upon release from incarceration, most people, and especially young adults, are likely to return to the same neighborhoods, families, and peer networks that they left. These neighborhoods are likely to have high rates of concentrated poverty and to be predominantly non-white (Snyder 2004, Mears and Travis 2004, Sullivan 2004). Over two-thirds of adults and up to one-third of young adults who are freed will return to jail or prison within several years of their release (Re-Entry Policy Council 2004, Mears and Travis 2004). Much of the current "re-entry" research is concerned with understanding why adults return to incarceration and tells us little about the settings that young people return to in general and how particular contextual circumstances—social, cultural, and economic—mediate a person's attempts to transition from incarceration to freedom successfully.

This award will allow me to systematically examine how inner-city young men and women aged 18-25 accomplish successful transitions from incarceration in the predominantly Black and low-income Fillmore neighborhood of San Francisco. This neighborhood-based, multi-year ethnographic study will: 1) describe the various settings that young people return to post-incarceration, 2) explain the strategies young people use to negotiate these settings after a period of incarceration, and 3) conceptually map how formerly incarcerated young people and neighborhood residents, resources, and institutions interact to accomplish successful transitions from incarceration. This project is guided by the following research questions:

- How do young people negotiate the neighborhood setting prior to and after a period of incarceration?
- How do young people's experiences of incarceration influence how they negotiate the neighborhood setting after they are released?
- How do the circumstances of neighborhood life shape the social meaning of incarceration for young people?
  - What sort of social stigma, if any, is attached to incarceration?
  - If a stigma is attached to incarceration, what strategies do young people use to manage this stigma as they work to maintain their freedom?

- How are formerly incarcerated young people's strategies shaped by intersections of race, gender, and class?
  - What experiences do formerly incarcerated young Black men and women share?
  - How does gender work with race and class to make these experiences different?

If current trends continue, an estimated one million young people will be released from detention and correctional facilities over the next five years. In addition to responding to a compelling set of sociological and criminological questions, this research will also be a resource for those individuals and organizations that are actively working to help young people make successful transitions from incarceration to freedom.

### Background and Significance

Over the next five years, hundreds of thousands of young people will cycle into detention or correctional facilities and back into their communities, families, and peer networks. Yet, as the authors of a recent report of a national Youth Reentry Roundtable write, "little is known about the transition of young people from prisons to communities or how best to increase the likelihood that the transitions are successful" (Mears and Travis 2003, 1). In this project, I continue my theoretical and methodological interest in uncovering the situated strategies that young people use to "survive," as I examine how formerly incarcerated young people and neighborhood-based resources work together to accomplish successful transitions to freedom. This study, which is grounded in the predominantly Black and low-income Fillmore neighborhood in San Francisco, will illuminate the physical, symbolic, social, and economic contexts in which young people work to stay free after a period of detention or incarceration.

### *Overview*

This is a neighborhood-based, ethnographic project that will examine how formerly incarcerated young people interact with neighborhood-based resources to accomplish successful transitions from incarceration to freedom. During the past year of pilot research, I have used direct observation, participation observation, background historical research, and ethnographic interviews with neighborhood residents, including respondents with direct contact with the criminal justice system, business owners, and activists to develop an understanding of the circumstances of daily life in the Fillmore. I have collected over 350 pages of handwritten field notes, nearly two hundred items of print materials, including brochures, flyers, newsletters, announcements, etc., and over 500 digital photographs of the neighborhood, which document the various sorts of changes and interactions that shape the social life in the Fillmore (I provide a description of this setting in the following section). My research assistant and I will convert all handwritten fieldnotes into electronic form, and will use a qualitative software program to systematically code and analyze all data collected during this time for key themes and patterns from July 2006-August 2006. I am currently using relationships with key respondents that I developed over the past year to create a purposive sample of formerly incarcerated young people (aged 18-25) in the neighborhood. This award will allow me to develop and follow this sample for three years (2007-10), which will allow me to complete a total of five-years of ethnographic

research in this setting. During these years, I will supplement my observational and interaction-based research with the content analysis of print and web-based media, archival research on urban renewal in the Western Addition, GIS-mapping and spatial analysis, and interactional and visual ethnography.

### *Setting and Method*

The selection of the Fillmore neighborhood specifically, and San Francisco generally, as the setting in which to ground this study was based on preliminary fieldwork conducted during extended visits to the neighborhood over the last several years, including over four months of extended residence in the area (January 2004, July-September 2005, and June 18-24, 2006). Through this field research, which included walks through the neighborhood, participation in neighborhood events, informal and formal interviews with business owners, community members, and community activists, the collection and coding of print materials and digital images, and the review of limited archival materials, I learned that the social history of the area has followed a trajectory similar to many distressed inner-city neighborhoods across the country. In the mid-1900s, the area was home to a vibrant African American community and was often referred to by locals as “the Harlem of the West.” After World War II, as the shipping industry and many of its African American workers moved away, city government officials declared the area a “slum” and large portions of the neighborhood were razed and replaced by housing projects. As inner-city conditions worsened across the country, the predominantly Black Fillmore also experienced the various consequences of the increased concentration of poverty including increased crime, rapidly deteriorating schools, and an increase in drug trafficking and the violence associated with the drug trade (Wilson 1980, 1987, & 1996; Massey and Denton 1993; Anderson 1999). For many who are familiar with the city, including the residents of the nearby and gentrifying Lower Pacific Heights and Alamo Square neighborhoods, and the smaller Japantown neighborhood, the Fillmore is largely defined as a “bad neighborhood” marked by crime and violence. Newspaper reports of shootings and gang activity reinforce such assumptions (Van Derbeken and Lagos, 2006; Martin 2006; Van Derbeken 2005).

Currently, the Fillmore is experiencing a new phase of “renewal,” which is symbolized by the Fillmore Heritage Center, a condominium and jazz club complex that is scheduled to open for business in 2007. The center will include a jazz history museum, a jazz club, and eighty condominium units, twelve of which will be for sale at under market rates. The new center is slowly pushing the boundaries of the Lower Pacific Heights area into the “old Fillmore” and the boundaries around what is commonly considered to be the most troubled parts of the neighborhood—the Lower Fillmore—are becoming harder. These types of neighborhood changes have direct and indirect consequences for neighborhood residents in general, and I suspect that these changes will shape the possible pathways to freedom for formerly incarcerated young people in unique ways.

The ethnographic approach is particularly useful in discovering the various meanings that young people attach to their experiences, and is especially useful when conducting research with young people who live in “high risk” neighborhoods (Burton 1997). Field research and ethnography that “brings the neighborhood back in” (Kasinitz 1992) also help us to better understand the role that settings and communities play in reproducing or resisting various social forces, including poverty, crime, and violence. In this research project I use field research

methods that I developed under the guidance of Elijah Anderson and have used in previous research projects. These methods include participant observation, direct observation, and in-depth interviewing (Anderson, et al., 2004, Anderson 2001, Becker 1998, Emerson, et al., 1995). I will also develop new field research and analytical skills over the next five years, including the content analysis of print and digital media, archival research, GIS-mapping and spatial analysis, interactional ethnography, and visual ethnography.

### Role of Award

#### *Research Support and Career Development*

I began exploratory fieldwork on this project in 2004 and began a pilot field research project in the summer of 2005. The funding for this pilot year of research was awarded through a competitive intramural funding competition. This award expires on June 30, 2005. The second year of preliminary research (2006-2007) will be used to develop a purposive sample of formerly incarcerated young people in the Fillmore. This final year of preliminary research will be funded entirely by the research fund that I received upon my arrival at UCSB. This fund expires in July 2007. The five years of funding provided by the award will allow me to complete three years of data collection for this project (July 2007—July 2010). The award will also allow me to dedicate a substantial amount of time to data analysis and manuscript preparation during the fourth and fifth study year (July 2010-June 2012). My pre-tenure evaluation is scheduled to take place in the fall of 2007, and my tenure review is planned to take place in the beginning of the 2009-2010 academic year. An important criterion in evaluation for tenure at UCSB is the candidate's progress on a second substantive project beyond their dissertation research. The five-year award schedule will allow me to make substantial progress on this research project and will allow me to have a book-manuscript and several journal articles prepared for publication prior to and shortly after my tenure review.

#### *Mentorship*

This award will also allow me to develop an important mentoring relationship with Jeremy Travis, who was the director of the National Institute of Justice from 1994-2000 and is currently the President of John Jay College of Criminal Justice. He has also served as a Senior Fellow with the Justice Policy Center at the Urban Institute, a nonpartisan research and policy organization in Washington, D.C. While at the Urban Institute, President Travis led a national research program on prisoner reentry and encouraged research agendas that considered crime in a community context. His recent book, *But They All Come Back: Facing the Challenges of Prisoner Reentry* (Travis 2005) combines informed theoretical work and practical policy recommendations that encourage us to think about and respond to issues of reentry in new ways. President Travis has eagerly agreed to provide mentorship for me on this project. This award will support travel to New York City to meet with President Travis at John Jay to discuss conceptual and methodological issues related to this project. I have also asked President Travis to meet with me during annual professional meetings that we both attend. In addition to his ongoing feedback on my project, Jeremy Travis's scholarly background and professional experience will assist me in bringing my research to intellectual, methodological, and policy-oriented discussions on youth reentry.

### *Development of New Methodological and Analytical Skills*

In addition to further developing research skills I have used in previous projects (participant observation, direct observation, and in-depth interviewing), this award will also allow develop new methodological and analytical skills. The research methods that I will use in this project content analysis of newspaper articles, print materials, and Internet-based media, archival research, GIS-based mapping and spatial analysis, interactional ethnography, and visual ethnography.

### **Implications**

This award will allow me to further develop and strengthen my previous training in field research. The award will also support a mentoring relationship that will assist me in bringing this work to relevant policy discussions in the criminology and criminal justice, social services, and urban and neighborhood planning realms. My on-going engagement with community residents in the Fillmore will open the possibility for future collaborative projects with community-based organizations. Finally, the articles and book that I will develop from this project will provide a distinctive and important addition to contemporary urban ethnography in general and youth reentry literature in particular. This research project will help us to better understand how we can both improve the settings in which formerly incarcerated young people live and encourage their successful transitions from incarceration.

**Principal Investigator: Nikki Jones**

**Institution: University of California, Santa Barbara**

**Project Title: Pathways to Freedom: How Young People Create A Life After Incarceration**

## **Introduction**

There is a serious need for research that highlights the strategies that young people use to stay free after a period of incarceration. Over the next five years, an estimated one million young people will be released from juvenile detention and adult correctional facilities in the United States (Mears and Travis 2004). These young people are likely to return to the same neighborhoods, families, and social networks that they left prior to their incarceration. It is estimated that up to two-thirds of these young people will be re-arrested and about one-third will likely return to incarceration within several years of their release date (Mears and Travis 2004, 4). Low-income, urban areas are most likely to feel the impact of the mass incarceration policies that have encouraged this “revolving door” between distressed inner-city neighborhoods and local, state, and federal detention and correctional facilities (Re-Entry Policy Council 2004, Mears and Travis 2004, Sullivan 2004). Researchers and policymakers have documented the individual characteristics that may hasten a young person’s entrance into youth detention or adult correctional facilities. However, we know very little about young people’s experiences after they return home and how these experiences are mediated by social, cultural, and economic contexts.

The ethnographic research program that I began as a graduate student at the University of Pennsylvania (2000–2004) and that I am continuing to develop as an Assistant Professor at the University of California—Santa Barbara (2004–present) is committed to describing and analyzing the various strategies that poor, African-American inner-city youth use to negotiate and overcome the challenges they confront in inner-city settings. In my dissertation research, which was supervised by urban ethnographer Elijah Anderson, I collected three years of field research data through participant observation, direct observation, and in-depth interviews with young people aged 12–24 who were injured in intentional violent incidents. I used this research to demonstrate how inner-city girls negotiate conflict and violence in their neighborhoods, in their interpersonal relationships, and in their intimate relationships. I dedicated my analytical attention to representing how young women used physical aggression strategically and the various implications of their actions for their self-esteem, safety, and survival (Jones 2004, Jones 2004a, Jones 2004b).

My current research project extends my theoretical and methodological interests in mapping the strategies that young people use to negotiate the most challenging circumstances of inner-city life. In my newly developed multi-year, neighborhood-based field research project (grounded in the predominantly Black and low-income Fillmore neighborhood in San Francisco), I examine how formerly incarcerated young people and neighborhood residents, resources, and institutions interact to accomplish successful transitions from incarceration. In addition to methods I have used in previous projects (participant observation, direct observation, and in-depth interviewing), I will also use new forms of data collection and analysis over the next several years, including content analysis of newspaper articles, print materials, and Internet-based media, archival research, GIS-based mapping and spatial analysis, interactional ethnography, and visual ethnography.

Rigorous ethnographic work is labor intensive and requires researchers to spend a substantial amount of time in the field collecting data and an equally substantial amount of time writing up their analysis after leaving the field. The five-year funding schedule provided by the William T. Grant Award will significantly increase the amount of time I can spend conducting field research and developing my methodological and analytical skills over the next five years. This translates into additional years of field research and analysis that would not be possible without this award. This additional time spent on research and analysis is crucial to my success at the University of California—Santa Barbara, where I expect to be reviewed for tenure in the fall of 2009. The award will also facilitate the development of a new mentoring relationship that will deepen my involvement in theoretical and policy discussions on youth reentry.

### Specific Aims

Over two million individuals are incarcerated in our nation's jails and prisons, and more than six million individuals are under some form of federal, state, or local correctional supervision (Harrison and Beck 2005). Each year, between 650,000-700,000 men and women are released from prisons, while nearly 7 million individuals are released from jails across the country (Re-Entry Policy Council 2004). Two hundred thousand young people (aged 24 and younger) return from some form of secure confinement each year (Mears and Travis 2004, Snyder 2004). For young Black men, the experience of imprisonment has become a "common life event" that affects their life course trajectories in dramatic ways (Pettit and Western 2004). In recent years, the experience of young Black girls with the criminal justice system has begun to mirror that of their male peers (Harrison and Beck 2005; Snyder and Sickmund 2006). Upon release from incarceration, most people, and especially young adults, are likely to return to the same neighborhoods, families, and peer networks that they left. These neighborhoods are likely to have high rates of concentrated poverty and to be predominantly non-white (Snyder 2004, Mears and Travis 2004, Sullivan 2004). Over two-thirds of adults and up to one-third of young adults who are freed will return to jail or prison within several years of their release (Re-Entry Policy Council 2004, Mears and Travis 2004). Much of the current reentry research is concerned with understanding why adults return to incarceration. This research tells us little about the settings that young people return to in general and how particular contextual circumstances—social, cultural, and economic—mediate a person's attempts to transition from incarceration to freedom successfully.

There is a significant and as yet unmet need for research that highlights the various settings that young people return to after incarceration and the particular strategies that young people use to stay free within these settings. This award will allow me to systematically examine how inner-city young men and women aged 18-25 accomplish successful transitions from incarceration in the predominantly African-American and low-income Fillmore neighborhood of San Francisco. This neighborhood-based, multi-year ethnographic study will: 1) describe the various settings that young people return to post-incarceration, 2) explain the strategies young people use to negotiate these settings after a period of incarceration, and 3) conceptually map how formerly incarcerated young people and neighborhood residents, resources, and institutions interact to accomplish successful transitions from incarceration. This project is guided by the following research questions:

- How do young people negotiate the neighborhood setting prior to and after a period of incarceration?
- How do young people's experiences of incarceration influence how they negotiate the neighborhood setting after they are released?
- How do the circumstances of neighborhood life shape the social meaning of incarceration for young people? What sort of social stigma, if any, is attached to incarceration? If a stigma is attached to incarceration, what strategies do young people use to manage this stigma as they work to maintain their freedom?
- How are young people's strategies shaped by intersections of race, gender, and class? What experiences do poor, young Black men and women share? How does gender work with race and class to make these experiences different?

### **Background and Significance**

In a recent report from the Re-Entry Policy Council (2004), a bipartisan coalition of one hundred policy makers and practitioners funded in part by the U.S. Department of Justice, the U.S. Department of Labor, the U.S. Department of Health and Human Services, and a number of private organizations, the council observed a significant yet often overlooked fact: "Nearly all of the 2.1 million people incarcerated in the United States will eventually be released." Reentry expert Jeremy Travis also emphasizes that "they all come home" in his recent book on the "challenges of prisoner reentry" (Travis 2005). Both the council's report and Travis's book emphasize that reentry, "the process of transition that these individuals – predominantly male and disproportionately nonwhite – make from prison or jail to the community" is a serious consideration for policy makers, legislatures, scholars, and community members. The significance of reentry is magnified in light of current economic constraints on state and federal budgets that restrict the building of more jails and prisons. As the "Report of the Re-Entry Policy Council" warns: "to control the soaring costs of corrections in their respective jurisdictions, policy makers and elected officials must find ways to ensure that the transition people make from prison or jail to the community is safe and successful" (Re-Entry Policy Council 2004: 1). As I have encountered in my previous field research in Philadelphia and in my on-going field research in San Francisco, residents of distressed urban neighborhoods most affected by mass incarceration policies are acutely aware of the need to ensure individuals' "safe and successful" reentry into their home communities.

Over the next five years, hundreds of thousands of young people will cycle into detention or correctional facilities and back into their communities, families, and peer networks. Yet, as the authors of a recent report of a national Youth Reentry Roundtable write, "little is known about the transition of young people from prisons to communities or how best to increase the likelihood that the transitions are successful" (Mears and Travis 2003, 1). In this project, I continue my theoretical and methodological interest in uncovering the situated strategies that young people develop and use to "survive," as I examine how formerly incarcerated young people and neighborhood-based resources work together to accomplish successful transitions to freedom. This study, which is grounded in the Fillmore neighborhood in San Francisco, will illuminate the physical, symbolic, social, and economic contexts in which young people work to stay free after a period of detention or incarceration.

## Theoretical Concerns and Key Concepts

### *Desistance Theory*

In contrast to the wealth of sociological and criminological scholarship on “criminal careers” and patterns of delinquent or criminal offending, relatively few studies in the United States examine when and why individuals cease their involvement in criminal activities. These studies, which are rooted in the criminological literature on desistance, are often concerned with explaining why adult men and women “give up” on crime. For example, in *Crime in the Making: Pathways and Turning Points Through Life* (1993) Robert Sampson and John Laub advance a theory of desistance that is rooted in informal social control. Based on a life-course analysis of a cohort of white, male “previously criminal youths” from Boston, the authors argue that external events, such as job stability and marital attachment (often referred to as the “good marriage effect”) are “trigger events” that redirect the men in their study toward desistance (see also, Laub and Sampson 2003, Maruna 2001, Bushway, et al. 2001). In a recent article in the *American Journal of Sociology*, Peggy Giordano and her co-authors complicate Sampson and Laub’s argument for “the marriage effect” (Giordano, et al. 2002). In their analysis of the life history narratives of 210 women and men who were incarcerated in Ohio in 1982, the authors identified various “hooks for change,” such as church involvement or a good quality marriage as key factors in cases of successful desistance. The authors also found that “cognitive shifts” significantly influenced the desistance process and that explanations for desistance varied by gender: “Many of the women who were more successful as desisters crafted highly traditional replacement selves (e.g., child of God, the good wife, involved mother) that they associated with their successful exits from criminal activities” (Giordano 2002: 1053, see also Runggay 2004). While the longitudinal, mixed-method approaches used by Sampson and Laub (1993) and Giordano et al. (2002) help to reveal some potential events and social factors that may influence one’s desistance from a criminal career, neither is able to provide the type of detailed, in-depth representation of the situated process of change as it is accomplished in the everyday lives of formerly incarcerated men and women in general and young people who live in poor, Black communities at the beginning of the twenty-first century in particular.

My field research to date reveals an additional theoretical gap in the current desistance literature and its focus on why people stop offending. What about those people, for example, who are committed to “change,” but are still not “free” because their past experience of incarceration directly or indirectly interferes with their ability to get a good job, to attract a good partner, and to establish other sorts of pro-social networks? Desistance theory does not tell us much about how the experience of incarceration—an experience that has become increasingly common for poor, African American youth—influences their ability to participate as full citizens in their communities or in mainstream American society. In contrast to the rather narrow focus on desistance, I am concerned with how young people manage to create meaningful lives for themselves after a period of incarceration. This approach takes seriously the settings that young people leave and return to after incarceration, and shifts our focus from the problematic behavior of young people to the types of strategies that young people develop to overcome the challenging set of circumstances they encounter as a formerly incarcerated young person who lives in a distressed urban area. My focus on how a young person stays free after a period of incarceration is quite different from the question of why a criminal “gives up” on criminal offending. The

“how” question that I ask allows us to consider the various ways that young people manage to create a life under a difficult set of circumstances, and the role of neighborhoods in this process. In contrast, the “why” question at the heart of the desistance literature does little to help us think about young people who have been incarcerated as anything more than active or inactive criminals or delinquents. This study then pushes the desistance literature into the twenty-first century, as it takes seriously the experience of incarceration and the physical, symbolic, economic, and cultural contexts within which young people work to stay free.

### *Beyond Desistance: Freedom as an On-Going Accomplishment*

The intersecting structural, cultural, and personal challenges facing young people who are released from detention facilities, jails, or prisons complicate pathways to freedom in ways that are not reflected in traditional desistance models. Such models tend to overemphasize criminal or delinquent behavior and encourage us to consider young people as “problems” without seriously considering the structural and cultural contexts in which young people live and act. In this study, I move beyond desistance and imagine “freedom” not as a static outcome but rather, as a dynamic, on-going accomplishment that occurs within a particular structural, cultural, and historical context: an American inner-city neighborhood at the beginning of the twenty-first century. My preliminary fieldwork and analysis for this project strongly suggest that freedom is *work*, and I pay special attention to the multi-layered context in which this work is done.

One type of “freedom work” that formerly incarcerated young people engage in is status work. In my preliminary fieldwork and analysis, I have found that the concept of status passages provides a useful way to examine the process of identity transformation and change that young people must engage in as they work to stay free in a distressed urban neighborhood (Strauss 1959; Strauss 1968). Typically, we recognize status passages as they occur in the context of family, education and employment. For example, a single woman becomes a married woman, a graduate student becomes a professor, and an organization’s assistant director becomes the director. In each of these cases, it is clear that movement or a change has occurred; others acknowledge the change and may begin to treat you accordingly, even if the change has not been entirely achieved internally (Strauss 1968: 266). Becoming and remaining free after a period of incarceration, however, is a unique and quite complicated type of status passage for young people to manage. While most of life’s status passages are considered positive progressions, the transition from incarcerated to free, or more accurately, from prisoner to ex-convict, is likely to come attached to a negative “stigma” that some groups of people—most notably those who control access to the types of resources necessary to accomplish a successful transition from incarceration—must manage on an everyday basis (Goffman 1963, Garfinkel 1956). This stigma is exacerbated by patterns of racial and economic inequality and discrimination, which present a unique set of dilemmas for young people of color who are trying to successfully manage their post-incarceration lives in distressed urban areas (Anderson 2001 & 1999).

*How does public knowledge of a “criminal past” influence perceptions of young people in the Fillmore?*

Public reaction to a recent violent death in the Fillmore illustrates how public knowledge of a “criminal past” may influence others’ perceptions of young people and their attempts to stay free

after a period of incarceration. On April 26, 2006 Dante White, a 22-year-old, young Black man, was shot dead on a basketball court of a Fillmore community center. The neighborhood children who were playing basketball at the time witnessed his murder. Dante's death was the third homicide in the Fillmore since the beginning of the year. The reporter for a local paper, *The San Francisco Examiner*, writes that the community center where Dante was shot was considered by some to be a "safe space" from the violence that characterizes much of neighborhood life. The reporter writes that the center is also a place that "gives a second chance to people with a criminal past" (Martin 2006). Dante recently completed a period of incarceration and was working at the center for two weeks before he was murdered. Several days after his murder the following headline appears in *The San Francisco Examiner*: "Slain community center worker had criminal record." The center director's response reflects the complicated feelings of guilt, shame, and mourning that were reported in the weekend edition of the paper: "I had no idea he was on probation," Smith [the center director] said. "He didn't do anything wrong. He got shot in the gym. He's a victim of violence." Additional newspaper reports revealed that Dante's contact with the criminal justice system "stretched back more than a decade," beginning when he was just twelve years old. The contradictory messages embedded in the center director's statement are typical of the complicated perceptions of young people with a "criminal past." For some, it matters that Smith was on probation and that he had a criminal record that included previous periods of incarceration. Yet, the center director also expresses some hesitation toward allowing the stigma of Dante's troubled past to overshadow the good work he was doing at the center. Formerly incarcerated young people must actively negotiate these multiple perceptions of them as they work toward freedom.

*How do social networks influence pathways to freedom?*

In addition to highlighting the challenges of breaking free from the stigma of a criminal past even after one's death, Dante's homicide illuminates another dimension of the pathway to freedom for formerly incarcerated young people who live in distressed urban areas. By all accounts, Dante was doing the "right" thing. He was doing those things that encourage "desistance": he had a job, he was involved with pro-social members of the community, and he was meeting the terms of his probation, including attending classes and keeping court dates. Yet, as is illustrated dramatically in Dante's death, and the complicated response to his death, his desistance was not enough. Even though Dante was no longer incarcerated and was not actively "offending," he was still not entirely free. Dante's short life and violent death illustrate that it is not only the stigma associated with a criminal record that one has to break free from—one also has to break free from at least some of the social networks that were developed during an adolescence marked by crime, violence, and incarceration. A major concern of this study, then, is to understand and represent the various strategies that young people use to break free from the types of social networks that can potentially complicate their transition from incarceration to freedom.

*How does the experience of incarceration influence pathways to freedom?*

Very little of the desistance and reintegration literature tells us about how the experience of incarceration influences the reentry process. For formerly incarcerated young people, it is not always obvious how their interaction with the system influences their lives after incarceration

(Sullivan 2004, Anderson 2001). In some cases, the system may operate in the background by reinforcing cultural codes that are dangerous to the lives of young people. It is possible that Dante's experience with incarceration kept him connected in some way to a network of others who are committed to living by "the code of the street" that governs violence on the street and in institutional life (Anderson 2001). For young people who are trying to stay free, a "decent" job making a little "cheese" (money) may not be enough to overcome the heavy burden of their past. However, I have also encountered incarcerated and formerly incarcerated young people for whom the incarceration experience provides a rare opportunity to think critically about the direction they want their lives to take once they are released. A special concern of this study, then, is to better understand how young people's experiences while incarcerated, including the circumstances surrounding their confinement, their perceptions of how they were treated while incarcerated, and the activities or programs that they were involved with while incarcerated, influence their "freedom work" once they are released.

#### *How does gender influence pathways to freedom?*

In my previous research, I paid special attention to how shared circumstances of life engender shared cultural codes, which are enacted in similar and distinct ways across gender lines. In "Working 'the Code': On Girls, Gender, and Inner City Violence," a sole-authored article that is currently under review at *Gender & Society*, I demonstrate that inner city girls are not isolated by virtue of their gender from much of the violence experienced by poor and urban boys and men. Over time, both young men and young women in distressed inner city neighborhoods come to realize how reputation, respect, and retaliation organize their social world. However, gender also works to shape teen-aged girls' and boys' experiences with violence in distinct ways. I found that the demonstration of strength and dominance through physical aggression is intimately connected with young men's sense of manhood; however, the young women I interviewed typically considered the use of physical aggression as a means to an end and not a fundamental element of their "womanhood." In this project, I will work to highlight those sets of experiences that are shared by formerly incarcerated young men and women by virtue of sharing similar space in the inner-city, as well as where those experiences diverge. My previous research on violence in the lives of incarcerated women (Jones 2004b), and my research on how young women negotiate gender-specific violence encourages me to pay special attention to how intimate violence influences the types of freedom work engaged in on the part of formerly incarcerated young women (see also Chesney-Lind and Pasko 2004, Chesney-Lind 1997, Chesney-Lind and Shelden 1992).

#### *How do social settings influence pathways to freedom?*

Finally, I will pay special attention to the social settings within which young people work for their freedom. My preliminary research over the last year suggests that young people's pathways to freedom are becoming further complicated in the Fillmore by the gentrification that is occurring in adjacent neighborhoods. In the most recent phase of urban redevelopment in the Fillmore, which I have documented in fieldnotes and digital images, neighborhood boundaries are hardening and the places where the predominantly poor and Black residents of the Fillmore "belong" is shrinking. As a consequence of these boundary shifts, the space within which formerly incarcerated young people must work to stay free becomes smaller, and the amount of

distance they are able to gain from troubled social relationships or networks becomes smaller as well. A major concern of this study, then, is to understand and represent how social forces within the neighborhood—gentrification and urban renewal, in particular—influence a young person’s ability to access the types of occupational resources and social networks that can facilitate a their attempt to stay free after a period of incarceration.

### **Role of Faculty Mentor**

My training and collaboration with urban ethnographer Elijah Anderson (Anderson, Brooks, Gunn, and Jones 2004) has introduced me to a network of ethnographers and field researchers who have provided guidance and feedback on previous projects. I anticipate that my involvement with this network of field researchers will deepen as my scholarly career progresses. I have also received written feedback and professional mentoring from several colleagues in my department, including the anthropological field researcher and race scholar France Winddance Twine, prominent sociology of race scholar Howard Winant and the well-respected theorist and expert on women and work, family violence, and gender, race, and class, Sarah Fenstermaker. I am also a participant in the “Racial Democracy, Crime, and Justice Network” that is co-sponsored by National Science Foundation and the Criminal Justice Research Center at the Ohio State University. Along with these contacts, I am in contact with experts in the field of gender and juvenile offending and juvenile justice. This diverse and interdisciplinary network of colleagues will continue to provide guidance and feedback on my work throughout the award period.

I highlight my current mentorship network to illustrate how seriously I take the foundation’s guidelines to develop and strengthen a new mentoring relationship that would develop only with the support of this award. A gap in my current mentorship network is an on-going relationship with a criminal justice scholar who is an expert in reentry and reintegration. Jeremy Travis was the director of the National Institute of Justice from 1994-2000 and is currently the President of John Jay College of Criminal Justice. He has also served as a Senior Fellow with the Justice Policy Center at the Urban Institute, a nonpartisan research and policy organization in Washington, D.C. While at the Urban Institute, President Travis led a national research program on prisoner reentry and encouraged research agendas that considered crime in a community context. His recent book, *But They All Come Back: Facing the Challenges of Prisoner Reentry* (Travis 2005) combines informed theoretical work and practical policy recommendations that encourage us to think about and respond to issues of reentry in new ways. President Travis has eagerly agreed to provide mentorship for me on this project. I will travel to New York City to meet with President Travis at John Jay to discuss conceptual and methodological issues related to this project. I have also asked President Travis to meet with me during annual professional meetings that we both attend. In addition to his on-going feedback on my project, Jeremy Travis’s scholarly background and experience will assist me in bringing my academic research and findings to academic, professional, and policy-oriented discussions on youth reentry.

## Research Design and Methods

### *Overview*

This is a neighborhood-based, ethnographic project that will examine how formerly incarcerated young people interact with neighborhood-based resources to accomplish successful transitions from incarceration to freedom. During the past year of pilot research, I have used direct observation, participation observation, background historical research, and ethnographic interviews with neighborhood residents, including respondents with direct contact with the criminal justice system, business owners, and activists to develop an understanding of the circumstances of daily life in the Fillmore. I have collected over 350 pages of handwritten field notes, nearly two hundred items of print materials, including brochures, flyers, newsletters, announcements, etc., and over 500 digital photographs of the neighborhood, which document the various sorts of changes and interactions that shape the social context of life in the Fillmore (I provide a description of this setting in the following section). My research assistant and I will convert all handwritten fieldnotes into electronic form, and will use a qualitative software program to systematically code and analyze all data collected during this time for key themes and patterns from July 2006-August 2006. I am currently using relationships with key respondents that I developed over the past year to develop a purposive sample of formerly incarcerated young people in the neighborhood. This award will allow me to follow this sample for three years (2007-10), which will allow me to complete a total of five-years of ethnographic research in this setting. During these years, I will supplement my observational and interaction-based research with the content analysis of print and web-based media, archival research on urban renewal in the Western Addition, GIS-mapping and spatial analysis, and interactional and visual ethnography.

### *Setting and Methods*

The selection of the Fillmore area specifically, and San Francisco generally, as the setting in which to ground this study was based on preliminary fieldwork conducted during extended visits to the neighborhood over the last several years, including over four months of extended residence in the area (January 2004, July-September 2005, and June 18-24, 2006). Through this field research, which included walks through the neighborhood, participation in neighborhood events, informal and formal interviews with business owners, community members, and community activists, the collection and coding of print materials and digital images, and the review of limited archival materials, I learned that the social history of the area has followed a trajectory similar to many distressed inner-city neighborhoods across the country. In the mid-1900s, the area was home to a vibrant African American community and was often referred to by locals as “the Harlem of the West.” After World War II, as the shipping industry and many of its African American workers moved away, city government officials declared the area a “slum” and large portions of the neighborhood were razed and replaced by housing projects. As inner-city conditions worsened across the country, the predominantly Black Fillmore also experienced the various consequences of the increased concentration of poverty, including increased crime, rapidly deteriorating schools, and an increase in drug trafficking and the violence associated with the drug trade (Wilson 1980, 1987, 1996; Anderson 1999; Massey and Denton 1993). For many who are familiar with the city, including the residents of the nearby and gentrifying Lower Pacific Heights and Alamo Square neighborhoods, and the smaller Japantown neighborhood, the

Fillmore is largely defined as a “bad neighborhood” marked by crime and violence. Newspaper reports of shootings and gang activity reinforce such assumptions (Van Derbeken and Lagos, 2006; Martin 2006; Van Derbeken 2005).

Currently, the Fillmore is experiencing a new phase of “renewal,” which is symbolized by the Fillmore Heritage Center, a condominium and jazz club complex that is scheduled to open for business in 2007. The center will include a jazz history museum, a jazz club, and eighty condominium units, twelve of which will be for sale at under market rates. The new center is slowly pushing the boundaries of the Lower Pacific Heights area into the “old Fillmore” and the boundaries around what is commonly considered to be the most troubled parts of the neighborhood—the Lower Fillmore—are becoming harder. These types of neighborhood changes have direct and indirect consequences for neighborhood residents in general, and I suspect that these changes will shape the possible pathways to freedom for formerly incarcerated young people in unique ways.

The ethnographic approach is particularly useful in discovering the various meanings that young people attach to their experiences, and is especially useful when conducting research with young people who live in “high risk” neighborhoods (Burton 1997). Field research and ethnography that “brings the neighborhood back in” (Kasinitz 1992) also help us to better understand the role that settings and communities play in reproducing or resisting various social forces, including poverty, crime, and violence. In this research project, I use field research methods that I developed under the guidance of Elijah Anderson and have used in previous research projects. These methods include participant observation, direct observation, and in-depth interviewing (Anderson, et al., 2004, Anderson 2001, Becker 1998, Emerson, et al., 1995). I will also acquire new field research skills over the next five years, including the content analysis of print and digital media, archival research, GIS-mapping and spatial analysis, interactional ethnography, and visual ethnography.

### Content Analysis

Much of what city residents know about the Fillmore neighborhood is learned from media coverage. Over the past preliminary research year, I subscribed to SFGate.com, which provides on-line access to the San Francisco Chronicle and includes selected articles from the city paper, as well as additional video and photographic links. Each day, I save those articles that reference the Fillmore neighborhood or its surrounding areas. In collaboration with a graduate research assistant, I will systematically code and analyze this data set. I will continue to collect this type of data throughout the project. During my field research, I also collect various print materials, including brochures, flyers, and other handouts. My research assistant is currently scanning and descriptively coding these materials into a computer database. We will continue to code these images, which will both inform and supplement on-going analysis, throughout the project.

### Archival Research

Periods of urban renewal have dramatically changed the Fillmore neighborhood over the last century. I would like to better understand and represent in particular the various changes that have occurred over the last fifty years. I will work with my current graduate research assistant,

an African-American woman who grew up in San Francisco and is studying race and neighborhood-based activism, to review material from the urban renewal archives. I have also been referred to several neighborhood archivists and will interview them and review their materials in upcoming project years. A historian in the Women's Studies department at UCSB has already provided guidance on how to collect and analyze archival materials. I will continue to seek her guidance throughout the study.

### GIS-mapping and Geospatial Analysis

I am currently in the preliminary stages of learning to use geographical information system mapping (GIS). GIS-mapping and spatial analysis will allow me to represent my findings to various audiences in an interesting and compelling way. For example, I am interested in how wealth disparities tied to home ownership have influenced the the Fillmore and its surrounding neighborhoods. During early phases of redevelopment, nearly all the Victorian homes in the Fillmore were torn down to make way for housing projects. This did not happen in adjacent neighborhoods, and residents and business owners are now able to trade on this housing wealth in a number of ways (Oliver and Shapiro 1997). GIS-mapping and geospatial analysis will also help me to represent patterns of crime, violence, and incarceration along with other significant social and demographic characteristics of the neighborhood. The University of California, Santa Barbara's National Center for Geographic Information and Analysis has excellent resources in this area, and I will draw on these resources in upcoming project years.

### Interactional/Video Ethnography and Visual Ethnography

The Department of Sociology at the University of California—Santa Barbara is home to several of the most-respected conversation analysis scholars in the world. Since my arrival at UCSB, we have discussed the possibility of integrating the department's strengths in field research and interactional analysis into an "interactional/video ethnography program." Typically, video ethnography uses the recordings of everyday settings and fieldwork to explore how people accomplish certain activities through interaction (Heath and Hindmarsh 2002). Our department is uniquely positioned to combine the rigorous study of interactional processes and the lived experiences of people through the in-depth study of everyday life, which is often not revealed through interviews alone. This award would allow me to collect video data while in the field that I could then analyze with my colleagues and graduate students. This training would set me apart as an urban ethnographer and would deepen my analysis of how social interactions influence young people's accomplishment of freedom. The collection of video data will also supplement the collection of digital photographs that I have taken during the pilot study year. The collection and analysis of this video and photographic data will develop my skills in visual ethnography, which combines photographs or video with ethnographic analysis (Pink 2001).

### *Respondents*

My interest in studying the experiences of young people aged 18-25 grows out of my previous ethnographic research on young women and violence. During my field research in Philadelphia, I repeatedly encountered young people in their late teens who seemed eager to remove themselves from the problematic contexts or networks that defined much of their earlier

adolescence. Crime statistics consistently report dramatic decreases in criminal offending as people enter their twenties. Yet, despite this general downward trend in offending, age-specific incarceration rates show increased rates of incarceration for young Black men and women as they enter their mid-to-late twenties (Harrison and Beck 2005). Thus, formerly incarcerated Fillmore youth aged 18-25 provide an important window into understanding the strategies that formerly incarcerated young people use to stay free. I am currently developing a purposive sample of formerly incarcerated young people aged 18-25. I have asked key respondents (points of contact) to refer me to young people in the neighborhood who have experienced incarceration or are trying to get out of “the game.” I provide a brief description of the key points of contact that I am using to develop this purposive sample below (all names are pseudonyms). These points of contact intentionally cover a wide age range. The diversity of these contacts in age and relationship to the neighborhood will help me to develop a sample of young people who are working toward freedom in different ways. Programs within the neighborhood that are designed for formerly incarcerated people and at-risk youth will also be used to develop this sample. I suspect from preliminary research, however, that the experience of a young person who is enrolled in a program for formerly incarcerated people or at-risk youth may be quite different from the experience of someone who is working toward freedom without the assistance of a program. This diverse set of points of contact will allow me to explore these different sets of experience in greater depth.

### Kathy

I first met Kathy in 2004, when I spent a month living in the Lower Pacific Heights neighborhood that is adjacent to the Fillmore. Kathy works at a Black-owned bookstore on Fillmore Street. The bookstore was opened several decades ago by her father and is now a neighborhood institution. The banner hanging above the storefront window announces that the bookstore sells “Books By And About Black People Everywhere.” Kathy tells me that the store is housed in the same building that used to house a historic Fillmore jazz club: the Boom Boom Room. Charlie Parker and other jazz greats used to play in this building, she says with pride. Kathy’s college-aged daughter also works in the bookstore. Kathy’s son was killed in the type of neighborhood violence that has taken the lives of numbers of young people in the neighborhood. For many residents, the bookstore is a refuge of sorts. It is a place where people who are looking to start or maintain some sort of change can find some support; it becomes a bridge for those people who are engaged in some type of personal transformation. During visits to the bookstore I observed Kathy’s interactions with young Black men whose dress—baggy blue jeans and long white t-shirts—and demeanor would intimidate many of the people on this part of Fillmore Street. She directed young men to certain books and when she received a sign of interest, she would use this opportunity to provide some instruction on how to think about themselves in a positive way. Kathy agrees that her shop provides a potential space for people in the neighborhood to raise their consciousness or to acquire forms of knowledge that make them feel better about who they are; however, she is adamant that the bookstore only facilitates that sort of change—people have to have gotten “a clue” before they come in. During this second year of preliminary field research, I will continue to visit the bookstore and I will ask Kathy and her daughter to introduce me and my project to young people whom they have met who are actively trying to “raise their consciousness” or make a change, as well as to any young people in their networks who may have been incarcerated at some point in their lives.

## Rev. Johnson

Rev. Johnson leads a program for formerly incarcerated people with “chemical” addictions. “It’s all chemicals,” he says over lunch one day. Rev. Johnson runs his program out of a small storefront on Fillmore Street. He’s been doing this type of work for more than two decades, and has run this program for the last twelve. For most of those years, he didn’t receive any outside financial support. The recent interest in reentry has brought him some funding. He recently received \$25,000.00 from the city for his program, which he thinks is better than nothing but still not as much as he really needs. He has developed a close relationship with the public defender’s office. He claims responsibility for getting the public defender to bring the “clean slate” program to the Western Addition. The program helps formerly incarcerated men and women expunge their criminal records, which makes it easier for them to get work after they have “served their time.” He tells me that he has helped over one hundred people who have gone through his program get jobs—men and women. When I sit in on one of the lectures that Rev. Johnson holds each morning, I witness the range of people that he helps: men and women, young and old, healthy and frail. Rev. Johnson also preaches at a church in the neighborhood and he lives in a neighborhood housing project that is owned by the church. Rev. Johnson grew up in the Fillmore and got into this work after undergoing a serious personal transformation himself. A former neighborhood activist, he got hooked on drugs and spent some time in prison. He is a paragon of change for many of his program’s participants and for city officials as well. Rev. Johnson has managed to stay free, in part, by committing himself to the most troubled and vulnerable members of his neighborhood. Much of his identity—who he is to himself and others—is defined by this freedom work. When I ask Rev. Johnson how he is able to get folks with records and addiction problems linked up to jobs when so many people in the neighborhood have trouble finding decent jobs, he tells me that he uses his connections with neighborhood folks that he grew up with and who are now doing well. One guy who is also in recovery owns a security company, Rev. Johnson tells me, and another guy owns a construction company. Both men will take on others that are recommended by Rev. Johnson. During this second and final preliminary study year (2006-2007), I will continue to visit Rev. Johnson and his program and I will ask him to refer me to people in his program who are between the ages of eighteen and twenty-five.

## Henry

Like Rev. Johnson, Henry also grew up in the Fillmore. Henry is very familiar with the context of violence in the neighborhood. Two months before Henry and I met, his nephew was killed. He was one of three young people killed on the same day during one of the deadliest periods of violence in the Fillmore. Henry tells me that a group of neighborhood folks were selling t-shirts with names of one hundred and six people who were killed in the Fillmore in recent years. He knew 96 out of the 106 on the t-shirt. For much of his life, Henry was a big time hustler in the neighborhood. He was “caught up in the [drug] game,” he tells me. “It was the easiest thing to get into out here.” He got out of the game after losing all of his money in a bad investment—his cousin’s rap career. Broke and, it seems, somewhat embarrassed, Henry stayed off the street and in the house for about a year. He then thought about returning to the game and asked his old partner to set him up with some money, but his partner refused, which shocked Henry. When he had money, he says, he used to take care of everybody. Henry decided to trade in his illegitimate

hustle for a “legit” hustle. He began to take seriously the informal mentoring he was receiving from a guy who owned a limousine service. He says that it wasn’t that difficult to transition his skills from the street to his new line of work: “On the street it was a hustle and this business is a hustle—just a different type of hustle.” Henry now owns a small fleet of limousines and town cars. He is, by all appearances, a respectable and still respected man in the community. He says that he donates his services to people in the neighborhood who cannot afford a limousine for a funeral service. In his new “respectable” role, Henry is now called on by the police to “talk to” young people in the neighborhood. He resists doing so on behalf of the police. Instead, he talks to them in his own way when he can. He has also worked to get more African-Americans on the police force. Henry has already offered to introduce me to others in the neighborhood, including neighborhood-based activists, and I recently asked him to introduce me to the young people that he mentors in the community and to connect me to young people in his network who have been “locked up” or are trying to get out of “the game.”

### Kiara

I recently met twenty-two year old Kiara at the Fillmore Street Café, a small Black-owned coffee shop across from the Fillmore Heritage Center construction site. Locals from the neighborhood come here to hang out, play chess, or surf the internet on the desktop computers in the back. Kiara and two other Black women are meeting with Markese, a local activist who is recruiting members of the Fillmore neighborhood to challenge a new redevelopment project in the Bayview-Hunter’s Point area of San Francisco. Like the Fillmore, Bayview-Hunter’s Point is predominantly Black and considered “the ghetto” by city residents. The two neighborhoods have always been linked by the 22-bus line, which transported Black workers from the Fillmore neighborhood to the Hunter’s Point shipyard during World War II. Inside one of the brochures that activists are handing out around the city is the following question in bold letters: “Remember the Fillmore District?”

After she is finished meeting with this group, Kiara, who was “born and raised” in the Fillmore, takes me on a tour of the neighborhood. She explains to me that she gets respect on the street because she has survived so much while living in this neighborhood. Her father used to be a respected drug dealer in the neighborhood before going to prison. He was convicted of murdering Kiara’s mother, whom he shot in the face when Kiara was still a young girl. Her grandmother, who is one of a few Fillmore residents who actually owns her own home, raised Kiara. “Yuppies” sometimes knock on her door to ask her if she’s selling her house, which angers Kiara. She asks me if I think they knock on white people’s doors to ask them if they’re selling their homes. She answers the question before I do with an adamant no. Kiara’s twenty-six year old fiancé was once a drug dealer, but has gotten out of the game. On our hour-long tour through the Fillmore, Kiara takes me through two project complexes, points out the “modern day hieroglyphics” on the streets—simple graffiti that mark the places on the block where young folks were killed—and introduces me to the friends that she meets as her “auntie.” I notice that when she asks young men to sign her anti-Redevelopment petition, including young men who are “hustlin’” on the corner, she often asks “are you registered to vote” and then, depending on their response, “could you vote?” That is, are you able to vote, or does something, like a “criminal past,” prevent you from doing so? Each time Kiara greets a group of young people, she announces the poetry reading that will be taking place that night at a Black woman-owned

café off of Fillmore and Haight. In the upcoming year, I will ask Kiara to help me connect with her friends from the neighborhood who have been incarcerated and are trying to do something else with their lives.

In addition to relying on these key points of contact, I am also developing a connection with the neighborhood community center, which offers a number of services for “at-risk” young people in the neighborhood. In the following year, I will also follow up on earlier conversations with the San Francisco-based Center for Young Women’s Development and with a formerly incarcerated man from San Francisco who has worked with All of Us or None, a group of formerly incarcerated men and women who are working to challenge the disenfranchisement of formerly incarcerated persons, and is now working specifically with young people in the Bay Area to help them achieve successful transitions from incarceration.

### **Plan of Work**

I began exploratory fieldwork on this project in 2004 and began a pilot field research project in the summer of 2005. The funding for this pilot year of research was gained through a competitive intramural funding competition. The project received extremely positive reviews and was awarded the largest award amount of the grant competition. The second and final year of preliminary research, which will be used to develop a purposive sample of formerly incarcerated young people in the Fillmore, will be funded entirely by the research fund that I received upon my arrival at UCSB. This fund expires in July 2007. The five years of funding provided by this award will allow me to complete three years of field research and data collection for this project (July 2007—July 2010) and to dedicate two years to analysis and manuscript preparation (2010-2012). My tenure review is planned to take place in the beginning of the 2009-2010 academic year. An important criterion in evaluation for tenure is the candidate’s progress on a second substantive project beyond their dissertation research. The five-year award schedule would allow me to fully develop and complete this research project during the award period.

#### 2005-07: Preliminary Fieldwork Identification of Key Themes and Concepts, and Development of Respondent Population

Over the last year of field research in the Fillmore neighborhood of San Francisco, I developed relationships with community residents and activists, including men and women who mentor youth in the neighborhood, as well as those who are directly involved with organizations that are serving adult and youth reentry populations. From July—September 2006, I will systematically open code data collected during the past year, which includes over 350 pages of hand-written fieldnotes, over 500 digital images of the area, and over 150 scanned images of brochures, flyers, newspaper articles, neighborhood announcements, and other print material that I collected while conducting field work during the first study year. Open coding is typically used at the beginning of field research projects to identify general categories, themes, and patterns of interaction. “Selective coding,” is used after open coding a significant portion of data and is focused on discovering “‘key,’ ‘rich,’ or ‘revealing’” interactions or incidents (Emerson, et al., 1995:155). After open coding data collected during the past preliminary study year (2005-2006), I will selectively code data collected during field research.

Research and analysis completed during the initial preliminary study year has provided a strong foundation for the second and final preliminary study year, which will include: direct and participant-observation in public places and community-based reentry meetings; the development and testing of working hypotheses on how individuals and neighborhood organizations work together to accomplish freedom; and in-depth interviews with respondents identified during the first study year, including community residents and activists concerned with reentry issues and people who have successfully managed to stay free. The primary research objective of this second and final year of preliminary research (2006-2007) is to use my network of respondents to develop a purposive sample of young women and men who are trying to make a life after incarceration. I will also continue to collect fieldnotes on the neighborhood context by engaging in participant and direct observation at various sites, including a Black-owned bookstore on the “edge” of Lower Pacific Heights and the Fillmore; neighborhood coffee shops; city public transportation systems; the Fillmore Farmer’s Market (sponsored by the Fillmore Jazz Association); the neighborhood community center; neighborhood corner stores; and neighborhood and school-based events that are open to the public.

#### 2007-10: Data Collection, Coding, Hypotheses Testing, and Theoretical Development

The first two years of preliminary field research will have been funded by intramural grants (ending June 30, 2006) and my research “start-up” fund, which expires July 2007. The William T. Grant Scholar award for early-career researchers will allow me to continue to develop this field research project after these funds have expired. If I receive the award, I will continue to systematically develop, observe, and interview a purposive sample of formerly incarcerated Fillmore youth aged 18-25. I will continue to develop this sample for three years (2007-10). I will enroll between sixteen and twenty-four young people in this study over the study period and I will follow each young person for the duration of the study. I intend to create a sample that is approximately half young men and half young women.

During this three-year-period, I will also 1) continue to engage in participant observation and direct observation in the Western Addition area 2) collect digital images of the area and archival data on urban redevelopment in San Francisco and 3) interview neighborhood residents and family members of formerly incarcerated young people on perceptions of their neighborhood setting, perceptions of justice, and beliefs about young people who have been incarcerated. Once a year during the study period, I will have one research assistant collect observational data and complete interviews in San Francisco (over a four day period). I will also work with a graduate research assistant to complete the content analysis of media and print materials and archival research portions of this study. I will begin to use video data collected during fieldwork for interactional ethnography analysis and training. I will also continue to collect video and photographic data for the visual ethnography portion of this study.

#### 2010-11: Coding, Analysis, and Theoretical Development

In ethnographic research, data collection and analysis is an ongoing, recursive project. I have already begun to code and analyze the data I have collected using a grounded theory approach and the tools of analytical induction (Emerson, et al., 1995, Becker 1998: 195). At some point, however, it is important for the ethnographer to leave the field and to focus their attention on the

data set that they have assembled during a period of field research. I will leave the field during this year (which is the year following my tenure review) and will dedicate my attention to analyzing the data set that I compiled during the previous five years of field research (2005-2010). I will continue to work with research assistants to finalize the content analysis portion of this study and the analysis of archival materials. I will also continue to develop articles presented at conferences over the last several years and will outline a book-length manuscript based on this research during this year.

### 2011-12: Manuscript Preparation

During this year, I will complete a book-length manuscript based on this research. This book will provide a model for researchers and students who would like to conduct rigorous, innovative, and informed ethnographic work. This book will also provide a contemporary ethnographic portrait of how young people in one distressed urban neighborhood manage their freedom, which will be useful for scholars and practitioners concerned with youth reentry. Such research is necessary in order to encourage successful transitions from incarceration for the hundreds of thousands of young people who will return from detention and correctional facilities over the next five years. During this study year, I will also connect with local business people that I have met during the previous years of research to arrange for local readings of manuscript drafts. I will also attempt to arrange for presentations and readings at the African American Cultural Center, currently housed in the Fillmore neighborhood, and the Ella Hill Hutch Community Center, where Dante White was murdered.

### **Plan for Skill Development and Analysis**

#### Fieldnotes and Interview Data

Over the three years of data collection (2007-2010), I will keep copious field notes in field journals. During the first preliminary year of field research, I created over 350 pages of field notes. I also digitally recorded two in-depth interviews with neighborhood residents. My research assistant and I will transcribe and convert these field notes and transcripts to electronic form over the summer (July-August 2006). After reviewing and “polishing” these notes, we will insert them into a HyperResearch qualitative software program. I used a similar type of qualitative research program for my graduate research and am currently training my graduate student to use the program. This program allows researchers to assign descriptive codes to fieldnotes and interview transcripts. This program also allows the researcher to develop and test working hypotheses. We will continue to convert and code all written fieldnotes and interview transcripts during the second and final year of preliminary research (2006-2007).

#### Print Materials, Media, and Digital Images

The HyperResearch qualitative software program can also be used to conduct a content analysis of web-based materials, scanned images, photographs, and video recordings. A researcher can use the program to code these images in the same way that she would code fieldnotes or interview transcripts. My research assistant is currently converting all collected print materials into scanned images with general descriptive codes. I will insert these images into the qualitative

software program, review the assigned codes, and re-code these images as necessary. This is a recursive process that will continue throughout the data collection period. It is possible to apply multiple codes to the same set of images, which facilitates ongoing coding and analysis.

### Archival Research

My research assistant and I will begin preliminary archival research during the second and final pilot year of this study (2006-07). My current research assistant and I will spend three days in San Francisco during this upcoming year reviewing materials in the city's redevelopment archives. After reviewing these materials, we will develop a detailed plan for further collection of archival data and analysis.

### GIS-mapping and Geospatial Analysis

GIS-mapping and geospatial analysis are powerful tools for representing important social patterns and trends. I will develop this new skill over the five-year study period. I will begin to develop this skill this year with an introductory text in GIS and geospatial analysis. The text is connected to a website that provides tutorials and classes in GIS-mapping and analysis. UCSB's National Center for Geographic Information and Analysis also has resources in this area. I will access these resources in the second and third year of data collection. I plan to be able to use GIS-mapping and geospatial analysis in the fourth year of this study, when I am out of the field and am dedicating the majority of my time to data analysis.

### Interactional/Video Ethnography

My colleagues and I will continue our efforts to develop a program in interactional and video ethnography over the second preliminary research year. This program, which will be designed around a three course graduate series, should begin in year one or year two of the award period. I will begin to collect video data during these years. I will use my grounding in the Fillmore neighborhood, the expertise of my colleagues, and the engagement with graduate students to develop my skill in this area. The development of this new methodological and analytical skill will be ongoing throughout the award period.

### Visual Ethnography

I will continue to take digital photographs of the area during the entire period of data collection (2007-2010). This year, I am using my start up funds to purchase Aperture, a photographic software program (\$299.00) that facilitates the storage and review of a large number of digital photographic images. I will use HyperResearch to code these images. I will also seek the guidance of my colleague, France Winddnace Twine, who uses visual ethnography in her field research. The development of this new methodological and analytical skill will also be ongoing throughout the award period. By the end of the award period, I expect that this new set of skills will distinguish me as an innovative field researcher and multi-skilled urban ethnographer.

## Plan for Dissemination of Research

Data collection and analysis is an ongoing process in field research. During the entire award period, I will present findings from this project at one or more academic conferences each year. I will also require my graduate research assistants to submit co-authored or sole-authored articles developed from their work on this project. I will begin to prepare article outlines during the first three years of the award period and will prepare these articles for submission to academic journals during the fourth and fifth year of the award period. I will develop an outline for a book-length manuscript during the third award year and will prepare chapter drafts during the fourth year of this study. I will draft and submit a book proposal to editors in the beginning of the fifth year of this study, and will complete a book-length manuscript by the end of the fifth year of this study. Throughout data collection and especially during the last two years of this study, I will work to bring my research findings back to the neighborhood residents, events, businesses, and organizations that informed this work. I expect that my newly developed skills in GIS-mapping and geospatial analysis, interactional/video ethnography, and visual ethnography will be especially useful in representing my research findings to a diverse audience.

### **Implications**

This award will allow me to further develop and strengthen my previous training in field research. The award will also support a mentoring relationship that will assist me in bringing this work to relevant theoretical policy discussions in the juvenile justice, social services, and urban and neighborhood planning realms. My on-going engagement with community residents in the Fillmore will open the possibility for future collaborative projects with community-based organizations. Finally, the articles and book that I will develop from this project will provide a distinctive and important addition to contemporary urban ethnography in general and youth reentry literature in particular. This research project will help us to better understand how we can both improve the settings in which formerly incarcerated young people live and encourage their successful transitions from incarceration.

## Works Cited

Anderson, E. 1999. *Code of the Street: Decency, Violence, and the Moral Life of the Inner City*. New York, W.W Norton.

---. 2001. Going Straight: The Story of a Young Inner-City Ex-Convict. *Punishment & Society*, Vol. 3, No. 1, 135-152

----. 2001. Urban Ethnography. *International Encyclopedia of the Social and Behavioral Sciences*, edited by Neil J. Smelser and Paul B. Baltes. Pergamon Press: Oxford

Anderson, E., Brooks, S., Gunn, R., and Jones, N., editors. 2004. "Being Here and Being There: Fieldwork Encounters and Ethnographic Discoveries." *The ANNALS of the American Academy of Political and Social Science*. Vol. 595. Sept.

Becker, H. 1998. *Tricks of the Trade: How to Think About Your Research While You're Doing It*. University of Chicago Press.

----. 1996. The Epistemology of Qualitative Research. In *Essays on Ethnography and Human Development*, edited by Richard Jessor, Anne Colby, and Richard Schweder University of Chicago Press

Chesney-Lind, M. and Pasko, L. 2004. *The Female Offender: Girls, Women, and Crime*. Thousand Oaks, Calif.: Sage Publications.

Chesney-Lind, M. 1997. *The Female Offender: Girls, Women, and Crime*. Thousand Oaks, Calif.: Sage Publications.

Chesney-Lind, M. and Sheldon, R. G. 1992. *Girls, Delinquency, and Juvenile Justice*. Pacific Grove, Calif.: Brooks/Cole Pub. Co.

Bushway, S. D., Piquero, A. P., Broidy, L. M., Cauffman, E., Mazerolle, P. 2001. An Empirical Framework for Studying Desistance as a Process. *Criminology*. Vol. 39 No. 2

Emerson, R. M., Fretz, R. I., Shaw, L. L. 1995. *Writing Ethnographic Fieldnotes*. University of Chicago Press.

Garfinkel, Harold. 1956. Conditions of Successful Degradation Ceremonies. *The American Journal of Sociology* Vol. 61 No. 5

Giordano, P. C., S. A. Cernkovich, et al. 2002. "Gender, Crime and Desistance: Toward a Theory of Cognitive Transformation." *American Journal of Sociology* v107.

Goffman, E. 1986. *Stigma: Notes on the Management of Spoiled Identity*. New York, Simon & Schuster.

Harrison, P. M. and A. J. Beck. 2005. Prisoners in 2004. Bureau of Justice. Statistics, U.S. Department of Justice, Office of Justice Programs.

----. 2004. Prisoners in 2003. Bureau of Justice. Statistics, U.S. Department of Justice, Office of Justice Programs.

Heath, C., and Hindmarsh, J. 2002. Analysing Interaction: Video, Ethnography and Situated Conduct. *Qualitative Research in Action*

Jones, N. 2004. *Girls Fight: Negotiating Conflict and Violence in Distressed Inner-City Neighborhoods*. Dissertation Abstracts International, A: The Humanities and Social Sciences. 65, 6, Dec, 2370-A

----. 2004a. "It's Not Where You Live, It's How You Live": How Young Women Negotiate Conflict and Violence in the Inner City. *The ANNALS of the American Academy of Political and Social Science*. Vol. 595. Sept. 49-62

----. 2004b. A Bad Relationship: Violence in the Lives of Incarcerated Black Women. *Souls: A Critical Journal of Black Political and Social Thought*. Edited by Manning Marable. Vol. 595, No. 1, 49-62

----. 2006. Working "the Code": On Girls, Gender, and Inner City Violence. Unpublished manuscript.

Kasinitz, P. 1992. Review Essay. Bringing the Neighborhood Back In: The New Urban Ethnography. *Sociological Forum*, Vol. 7, No. 2.

Laub, J. and Sampson, R. 2003. *Shared Beginnings, Divergent Lives: Delinquent Boys at Age 70*. Harvard University Press.

Martin, A. "Slain community center worker had criminal record" Weekend Edition Saturday-Sunday April 29-30, 2006. The San Francisco Examiner

Maruna, S. 2001. *Making Good: How Ex-Convicts Reform and Rebuild Their Lives*. American Psychological Association

Massey, D. and Denton, N. 1993. *American Apartheid: Segregation and the Making of the Underclass*. Harvard University Press.

Mears, D. P., and Travis J. 2004. Youth Development and Reentry. *Youth Violence and Juvenile Justice* Vol. 2 (3-20)

----. 2003. Research Report. *The Dimensions, Pathways, and Consequences of Youth Reentry*. Urban Institute Justice Policy Center

Oliver, M. T., and Shapiro, T. M. 1997. *Black Wealth/White Wealth: A New Perspective on Racial Inequality*. Routledge.

Pettit, B. and Western, B. 2004. "Mass Imprisonment and the Life Course: Race and Class Inequality in U.S. Incarceration." *American Sociological Review*, Vol. 69 (April: 151-169)

Pink, S. 2001. *Doing Visual Ethnography: Images, Media, and Representation in Research*. Sage Publications.

Re-Entry Policy Council. 2004. Report Preview, Report of the Re-Entry Policy Council: Charting the Safe and Successful Return of Prisoners to the Community, A public/private partnership funded in part by the U.S. Department of Justice, U.S. Department of Labor, and the U.S. Department of Health and Human Services.

Rungay, J., 2004. Scripts for Safer Survival: Pathways Out of Female Crime. *The Howard Journal*. Vol. 43 No. 4.

Sampson, R. J. and Laub, J. H. 1993. *Crime in the Making: Pathways and Turning Points Through Life*. Cambridge, Mass., Harvard University Press.

Snyder, Howard N. 2004. An Empirical Portrait of the Youth Reentry Population. *Youth Violence and Juvenile Justice*. Vol. 2 No. 1 (39-55)

Snyder, Howard N., and Sickmund, Melissa. 2006. Juvenile Offenders and Victims: 2006 National Report. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Strauss, A. L. 1959. *Mirrors and Masks: The Search for Identity*. Glencoe, Ill., Free Press.

---- 1968. "Some Neglected Properties of Status Passage." *Institutions and the Person*. H. Becker, B. Geer, D. Riesman and R. S. Weiss. Chicago, Aldine Publishing Company.

Sullivan, M. L. 2004. Youth Perspectives on the Experience of Reentry. *Youth Violence and Juvenile Justice*. Vol. 2 (56-71)

Travis, J. 2005. *But They All Come Back: Facing the Challenges of Prisoner Reentry*. The Urban Institute Press

Van Derbeken, J., Lagos, M., "Gym shooting victim was on probation; Hired to work with kids, he had a felony assault conviction" Saturday, April 29, 2006 San Francisco Chronicle

Van Derbeken, J. "MORE DELAYS, MORE KILLINGS" December 21, 2005 San Francisco Chronicle

Wilson, W. J. 1980. *The Declining Significance of Race: Blacks and Changing American Institutions*. Chicago, University of Chicago Press.

----. 1987. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago. University of Chicago

----. 1996. *When Work Disappears: The World of the New Urban Poor*. New York: Knopf.

NOT FOR DISTRIBUTION