UC DAVIS, POVERTY RESEARCH CENTER
2011-2012 SMALL GRANTS COMPETITION

COVER SHEET

DEADLINE FOR RECEIPT OF PROPOSAL: Tuesday, January 31, 2012 - 5 PM PST

Principal Investigator Information [If the proposed research involves more than one investigator, a principal investigator (PI) must be identified. All correspondence will be with the PI. Please identify all investigators.]	
Name	Patrick Sharkey
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Project Title	Linked Lives and Linked Places: Using Data on Four Generations of Geographic Migration to Identify the Effects of Residential Segregation
Description of the Project's Link to Center's Core Research Themes (250 word limit)	Several recent studies have identified persistent racial gaps in levels of intergenerational economic mobility—a finding that Hertz (2005) refers to as the "racial mobility gap." The proposed project is designed to advance research on the causes of the racial mobility gap by focusing attention on the places that African Americans have lived over the past several generations, with a particular focus on exposure to residential segregation. In this way, the research is designed to advance knowledge on how children's residential environments may contribute to the intergenerational transmission of poverty, one of the core research themes of the Center for Poverty Research. However, my goal in this research is to move beyond the common approaches used to study the relationships between cities, neighborhoods, and the reproduction of economic inequality. In particular, I will draw on a unique source of data on four consecutive generations of black and white families in order to map and analyze the network structure of intergenerational migration of families over the past century. Building on this analysis, I will investigate the potential to use two characteristics of families' geographic histories—their links to highly segregated northern cities via railroad lines near families' origin counties, and the total flow of migrants from their origin counties to their destination counties—to instrument for the degree of residential segregation experienced by children in models predicting upward and downward economic mobility.
Total Funding Requested	$18,891

2. Project Narrative

Specific aims and significance. One of the more troubling findings in the recent literature on intergenerational economic mobility is the prevalence of downward mobility in the most recent generation of African Americans and the persistent racial gap in levels of economic mobility (Hertz 2005; Isaacs 2007). The proposed project is designed to advance research on the causes of the racial mobility gap by focusing attention on the places that African Americans have lived over the past several generations, with a particular focus on exposure to residential segregation. However, my goal is to move beyond the common approaches used in the literature on intergenerational economic mobility in two major ways. First, I will draw on unique data from four successive generations of white and black families that allows for a refined and long-term look at the network structure of intergenerational migration flows from a nationally representative sample of white and black families in the Panel Study of Income Dynamics (PSID). Second, I will use the results from this initial analysis in an attempt to develop more convincing methods to identify the effect of exposure to racial segregation on patterns of economic mobility.

The project is guided by three specific aims: 1) to describe and map the network structure of intergenerational geographic migration among African Americans and whites over the past four generations; 2) to assess the potential for using families' geographic location in prior generations and/or characteristics of intergenerational network ties to instrument for child exposure to racial segregation; 3) after assessing the validity of the proposed IV strategies, to estimate the effect of childhood exposure to racial segregation on intergenerational economic mobility among African Americans using an instrumental variables approach.

Relevant literature and hypotheses. Several recent studies have generated a set of stylized facts that characterize the relationship between race and economic mobility. First, the "expected mobility" of blacks (that is, the average difference between first and second generation family

income) is smaller than the expected mobility of whites at every level of parental income (Hertz 2005). Second, African American families appear less able than white families to preserve and transmit economic advantage across generations (Isaacs 2007; Sharkey 2009). Third, standard measures of family background do not explain racial gaps in economic mobility (Hertz 2006; Mazumder 2011). This project builds on a long line of research on urban poverty in hypothesizing that exposure to racially segregated residential areas may contribute to these gaps in economic mobility not only by making upward economic mobility less likely for African Americans, but also by placing blacks at a distinct disadvantage when it comes to protecting gains made in social and economic status in one generation and transmitting these gains to the next generation (Clark 1965; Pattillo 1999; Rainwater 1970). This hypothesis emerges not only in classic sociological research on urban poverty but also in several econometric models of human capital attainment and sorting in the presence of community-level spillovers (Durlauf 1996; Graham 2009; Loury 1977).

A number of studies have analyzed the relationship between exposure to segregated environments and adult outcomes at the individual-level (Datcher 1982; Sharkey 2009) or at the city-level (Card and Rothstein 2007; Cutler and Glaeser 1997). However, none of these studies adequately addresses the central methodological problem posed by non-random selection into cities with differential levels of racial segregation. Even the city-level studies that instrument for the level of segregation in the metropolitan area are not able to address the problem that unobserved factors may induce families to select into more or less segregated cities.[1] To confront this problem the proposed research builds on recent studies arguing that it is possible to exploit exogenous variation in African American families' geographic origins to instrument for characteristics of their geographic destinations (Black et al. 2011; Sacerdote 2005). These studies exploit two unique features of African Americans' geographic trajectories: 1) unlike other racial and ethnic groups in

[1] This point is acknowledged in Card and Rothstein (2007).

America, African Americans' original geographic locations were determined in large part by forces outside of their own choosing, and thus can plausibly be considered exogenous; 2) migration patterns of African Americans over time have been remarkably structured and are driven, at least in part, by factors that can plausibly be considered exogenous.

As an example, Black et al. (2011) use proximity to a major railroad line as a means to identify the effect of migration northward on mortality among African American families originating in the South. I will use a similar approach in this project, except that instead of using proximity to any given railroad line, I will use measures of families' origin locations available in the PSID to measure the relative proximity to specific railroad lines linking counties in the South to highly segregated cities of the Midwest and the Northeast. Exploiting the multigenerational nature of the data, families' proximity to railroad lines linked to highly segregated cities will then be used to instrument for children's exposure to residential segregation after migration northward. A second instrument will also be tested. The second instrument involves measuring the total flow of migrants linking specific counties in the South to counties in the Northeast and Midwest and using the total flow of migration between origin and destination counties as an instrument for exposure to racial segregation in the destination county. This idea builds on theory and evidence from the literature on migration networks (Massey 1990) and from the literature on the response of northern cities to in-migration of African Americans (Tolnay, Crowder, and Adelman 2000). Both strands of research argue that the northern cities which absorbed the most African American migrants *from specific origin locations* generated the most rigid boundaries separating neighborhoods by race. This result was driven not only by whites' desires to maintain racial segregation in their communities, but also by the reliance of black migrants on familial and friendship networks to find housing and employment, which led to more concentrated movement into specific sections of northern cities, and thus greater levels of racial segregation.

The analysis is guided by three hypotheses: 1) the network of intergenerational migration flows of African Americans can be characterized as a highly structured, "dense" network of places linked together by large-scale migration; 2) proximity to specific railroad lines will be shown to be strongly predictive of *where* African American families locate outside of the South; 3) using proximity to specific railroad lines and the total size of migration flows as instruments, instrumental variables analyses will show that exposure to racial segregation in individuals' childhood neighborhoods has limited upward mobility and increased downward mobility in the most recent generation of African Americans.

Research design and analytic plan. The research will proceed in several steps. First, I will geocode and map the network structure of families' migration over four successive generations of families in the Panel Study of Income Dynamics. Data on the geographic locations in which successive generations of family members were raised are available through a restricted-use contract with the PSID;[2] counties will be geocoded and the linked network and geocode data will be imported into Pajek to map and analyze flows of migration over the consecutive generations. The initial analysis will describe the network structure of intergenerational migration flows for blacks and whites. In addition to providing statistics on the structure of intergenerational networks of blacks and whites, such as the density of the networks, I will also map the networks and generate descriptive statistics on the most common directional flows of migration in each generation.

Next, I will construct the two instrumental variables and assess their validity as instruments for exposure to racial segregation during childhood. The first instrumental variable measures the degree to which families' origin counties are linked with highly segregated urban areas through proximity to connecting railroad lines. The second instrumental variable is the size of the migration

[2] Heads of households were asked in the early years of the survey to identify the state and county in which their own parents were raised, and the parents of their parents. Because the children in these families were subsequently followed into adulthood, it is possible to use these questions to track the geographic locations of families over four successive generations.

flow linking families' origin and destination counties. In other words, this measure will consider how many other African American families had the same origin and destination counties and will assess whether this measure serves as a valid instrument for the level of racial segregation in children's urban areas, a generation later. In both cases, evidence can be brought to bear to bolster (or else weaken) support for the validity of each of the proposed instrumental variables.

Connection between analyses and research/policy questions. The proposed analyses are designed to advance the literature linking aspects of urban areas, such as the degree of residential segregation by race, with the level of intergenerational economic mobility among African Americans. Although the research is non-traditional, I feel this type of approach is necessary to move beyond the current literature on cities, neighborhoods, and the reproduction of economic inequality. At a minimum, this project will provide a descriptive account of the network structure of intergenerational geographic mobility for African Americans and whites over the prior four generations—no other study of which I am aware has examined more than two generations of family members, and few studies incorporate data below the state level. By considering how black and white families have migrated over the past four generations, the proposed research will provide a more comprehensive look at how flows of migration have changed across generations and how cities in the North and South are linked by flows of migration. The second and more ambitious goal of the proposed research is to assess whether it is possible to use families' origin geographic locations, or the larger networks of migration of which they are a part, as an exogenous source of variation in children's exposure to residential segregation. While the success of this strategy will be determined as the research is carried out, my hope is that this approach will ultimately push forward the literature by providing more convincing estimates of how exposure to segregated urban areas affects children's chances for economic mobility.

References

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3. Budget and Narrative

I seek a total of $18,891 in direct costs, to be paid with a personal services contract to the PI (no indirect costs are included in the budget).

Research Assistant: Virtually all of the funding will go toward a research assistant that will work exclusively on this project from March, 2012 through December 2012 (excluding one month in the summer), and assisting with all aspects of the project. The research assistant will assist with: a) collection of historical data on counties across the US and locating/creating shapefiles with geocodes for each county location; b) obtaining or collecting historical geocode data on railroad lines across the US; c) assisting with programming and working with PAJEK to analyze the network structure of intergenerational geographic mobility; d) assisting with applications for IRB updates and updates of application for sensitive data from the PSID; e) assisting with literature review; f) if appropriate, assisting with the writing of final reports and academic papers.

Travel. The budget includes funds totaling $1,200 for one trip to a conference to present results from the analysis.

Expense	**Detail**	**Cost**
Research Assistant, March-December 2012, excluding August	37 weeks * 15 hrs/wk * $25/hr	$13,875
Fringe = 27.5%	$13,875 * .275	$3,816
Travel to report results	~$700 airfare, ~$500 hotel	$1,200
	Total:	$18,891 Direct costs

4. Timeline

March 1, 2012:	Start of project
March 5, 2012:	Start of research assistant paid work on the project
March-July, 2012:	Enter PSID data into PAJEK and map networks of migration; Collect/map geocoded data on county locations and railroad lines; conduct thorough literature review on migration patterns/segregation/economic mobility
July-September 2012:	Analyze networks of intergenerational migration; assess potential for using geographic origins and size of network flows to instrument for childhood exposure to residential segregation; estimate effect of residential segregation on upward and downward mobility among African Americans
September-February 2013:	Finalize all analyses; write final report; write policy brief; write academic journal articles and submit
February 28, 2013:	End of project
March 31, 2013:	Final report and policy brief

6. IRB Approval

I have already obtained approval from NYU's University Committee on Activities Involving Human Subjects for research using the restricted-use data from the Panel Study of Income Dynamics. If awarded this grant my approval would have to be amended to include the new plan of research—I will submit this revision as I receive word of the decision on the grant if the proposal is funded.