The Relational Basis of Neighborhood Selection: How Social Ties Shape Residential Migration and Mobility Outcomes for Low-Income Families

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ABSTRACT

Why, when given the opportunity to move from high- to low-poverty neighborhoods, do some low-income families return to disadvantaged settings? Extant literature emphasizes low-income families' "reactive" migration to structural forces beyond their control. But social ties are in fact a component of social structure that may be a relevant resource for low-income families' residential migration decisions. Drawing on longitudinal geographic, interview, and social network data with 75 low-income mothers who survived Hurricane Katrina, I find the importance of social ties is magnified in situations of unplanned moves. Network peers from the origin neighborhood provide information or help that minimize the costs and increase the expected benefits of residential migration after initial displacement. In the absence of social ties, a family may evaluate the costs of settlement in the new environment to be too high and "re-optimize" by moving to a neighborhood that maximizes proximity to social resources. In some cases, this tradeoff is an undesirable but necessary reality for low-income families who feel pressured to be closer to their network peers. These findings suggest that scholars and policymakers should reconsider how social networks shape residential migration and mobility, as well as what it means to live in a disadvantaged neighborhood.

KEYWORDS

neighborhood selection, social networks, natural disasters, migration, mixed methodology

ACKNOWLDGEMENTS

The National Institutes of Health (R01HD046162 and RO1HD057599), the National Science Foundation, and the MacArthur Foundation generously provided funding for the data used in this article. For comments, I thank Monica C. Bell, Matthew Clair, Filiz Garip, Hope Harvey, Jackelyn Hwang, Anthony Abraham Jack, Katherine Morris, Robert Sampson, Mario Small, Mary C. Waters, and Alix S. Winter. I am grateful to Meghan DeNubila for research assistance. Previous versions of this article were presented at the Mixed-Methods and the Urban and Social Processes Workshops at Harvard University, as well as the 2015 Annual Meetings of the Eastern Sociological Society, the Population Association of America, and the American Sociological Association. All errors are authorial.

INTRODUCTION

Why, when given the opportunity to move from high- to low-poverty neighborhoods, do some low-income families return to economically-deprived contexts? For decades this question has puzzled scholars and policymakers interested in improving the life chances of some of the most economically-vulnerable populations in the United States (Sampson, Morenoff and Gannon-Rowley 2002). Though living in impoverished or otherwise disadvantaged neighborhoods is detrimental along various measures of economic, social, and developmental well-being (Acevedo-Garcia and Lochner 2003; Brooks-Gunn, Duncan and Aber 1997; Sampson 2012; Wilson 1987), low-income families are likely to exit low-poverty neighborhoods for high-poverty ones over time (Massey, Gross and Shibuya 1994; South, Crowder and Chavez 2005).

Much of the academic and policy conversation regarding low-income families' residential migration and mobility has adopted a normative definition of what constitutes a desirable neighborhood. If the urban poor live in neighborhoods characterized by high rates of racial and socioeconomic segregation, then facilitating these individuals' moves to neighborhoods that are less impoverished and more diverse should represent the plainest of cost-benefit calculations (De Jong and Fawcett 1981; Speare 1974; Wolpert 1966). This same logic underlay the development of several residential mobility interventions in which a number of low-income families with young children were moved to neighborhoods awash in structural opportunities when compared to origin: the *Gautreaux* program and the Moving to Opportunity experiment.[1] But in both cases, long-term residence in opportunity neighborhoods was the exception, not the norm (Boyd et al. 2010; Keels 2008; Orr et al. 2003), a result sometimes explained by low-income families moving "reactively" to forces outside their control, such as housing unit quality, landlord decisions, and housing policies (DeLuca, Wood and Rosenblatt 2014; Sampson 2012).

To the extent that social networks have been integrated into these explanations, they have been conceptualized as subordinate to social structure (Boyd 2008; Briggs 1998; Briggs, Popkin and Goering 2010; Sampson, Morenoff and Gannon-Rowley 2002). But social ties are in fact a component of social structure (Massey 1990), and they may be a particularly relevant resource for low-income families' reactive migration and mobility trajectories. Drawing on longitudinal data with 75 low-income mothers who survived Hurricane Katrina, I reevaluate how social networks shape low-income families' residential migration decisions after an unplanned move, as well as the implications of this migration for various residential mobility outcomes. While structural factors beyond individuals' control may prompt their "reactive" migration, the importance of social ties is magnified in these situations for the urban poor, who rely on their most proximate social ties to guide their residential migration after unexpected displacement.

Four social relationships—being a partner, a (grand)daughter, a friend, and a "refugee"—are associated with this sample's residential mobility outcomes. Which social tie is activated

[1] In the *Gautreaux* program, a class-action lawsuit against the Chicago Housing Authority moved more than 7,000 low-income families into subsidized private housing in neighborhoods that were less segregated and impoverished, on average, than in origin. In the latter, the federal government randomized low-income families with young children into one of three groups (experimental, Section 8, and control) in order to understand how moving to a low-poverty neighborhood can affect life chances. I do not review these programs in-depth here due to space constraints, but see Jackson et al (2009) for a thorough review.

depends on the composition of an individual's close social network immediately before the reactive move. Network peers from the origin neighborhood provide information or help that minimize the costs and increase the expected benefits of residential migration at the destination neighborhood after initial displacement. In the absence of social ties, a family may determine the costs of settlement in the new environment to be too high and "re-optimize" by moving to another neighborhood that maximizes their proximity to social resources even if such a decision entails moving away from neighborhoods characterized by low rates of poverty, unemployment, and violent crime, and high levels of racial diversity. In some cases, this tradeoff is an undesirable but necessary reality for low-income families who feel pressured to return to the origin neighborhood to be closer to their network peers. This analysis urges scholars and policymakers to reconsider how social networks shape residential migration and mobility, as well as what it means to live in a disadvantaged neighborhood.

THEORIES OF RESIDENTIAL MIGRATION

Scholars have developed a number of theories to explain the causes of residential migration, as well as the factors that enable or constrain residential mobility. In the former case, neoclassical models of migration are prominent, while the latter perspectives emphasize the roles structural discrimination and residential preferences play in maintaining patterns of segregation.

The neoclassical model conceptualizes migration as an individual-level choice by rational actors seeking to maximize utility (Sjaastad 1962; Speare 1974; Wolpert 1966). Migration is likely to whatever destination represents the greatest expected return to the movement, net of the total cost of the journey. Related theories view residential migration as a function of the value a person places on the pursuit of goals such as wealth or status, and the likelihood that moving will lead to their realization (De Jong and Fawcett 1981). Individuals are thought to consider factors such as wage rates and other measures of employment opportunity, as well as environmental factors that influence the desirability of a location (Greenwood et al. 1991; Wolpert 1966).

An impressive body of evidence, reviewed in greater depth elsewhere (Greenwood et al. 1991), has found consistent support for the neoclassical model. While individuals' housing needs vary across the life course (Rossi 1980), they generally attempt to maximize utility given limited financial resources (Cadwallader 1992; Clark and Flowerdew 1982). As Rossi (1980: 226-227) summarizes: "[F]amilies moving up the 'occupational ladder' are particularly sensitive to location and use residential mobility to bring their residences into line with their prestige needs."

Sociologists following in this tradition have analyzed racial and class differences in residential migration and mobility. In important research, Alba and Logan (1991; 1993) argue that racial disparities in neighborhood attainment are the result of sociodemographic differences across racial and class groups. As members of a particular racial group improve along educational, labor market, and income dimensions, these individuals are more likely to move out of racially segregated neighborhoods and "upgrad[e] from central-city slums to working-class neighborhoods to suburbs" (Logan and Alba 1993: 244; see also Massey and Denton 1985; Massey and Mullan 1984). These conclusions are in line with the predictions of the neoclassical model: after adjusting for socioeconomic status, black households are said to live in communities that are economically and demographically similar to their white peers' (Clark 2007; Frey 2001).

But substantial evidence suggests that current conceptualizations of the neoclassical model do not fully explain low-income black families' residential migration trajectories. Relative to other racial and ethnic groups, African-American families are the least likely to convert improvements in human capital into desirable neighborhood amenities (Alba, Logan and Bellair 1994; Crowder 2001; Massey and Denton 1987). Black families move more frequently than any other group (McAllister, Kaiser and Butler 1971), a phenomenon attributable to their disproportionate status as renters instead of homeowners. South and Crowder (1997) find support for this claim, and also note that age and public assistance receipt are inversely related to moving from a poor to a non-poor neighborhood. More recent analyses of nationally representative datasets reach similar conclusions: all else equal, African Americans are more likely to move into poor census tracts than non-poor ones (Crowder, Hall and Tolnay 2011; Lichter, Parisi and Taquino 2012; South and Crowder 1997). Family structure may compound this effect, as residential churning within poor neighborhoods is especially likely among "non-intact" (single-parent) households relative to "intact" (dual-parent) ones (Astone and McLanahan 1994), and increases the likelihood that adults who moved frequently as children continue to do so across the life course (Myers 1999). The legacy of such processes for neighborhood attainment persists across generations (Sharkey and Elwert 2011).

These findings beg the question of what constitutes a "desirable" neighborhood. The neoclassical theory is a perceptual model, ostensibly based on how individuals assess the potential costs and expected benefits to residential migration. But few have treated it as such. Instead, most have assumed that objective measures of locational attainment—e.g., tract-level household income, poverty, unemployment and violent crime rates, and racial diversity—are amenities that all individuals should and, indeed, do attempt to maximize. These assumptions underlay the development of the *Gautreaux* program and the MTO experiment. In the former case, an opportunity neighborhood is defined as a census tract in which fewer than 23.5% of residents are impoverished and fewer than 30% are black; in the latter, an opportunity neighborhood is defined as a census tract with a poverty rate of less than 10%. Such specifications necessarily entail a normative definition of what a suitable neighborhood should look like for low-income families, which may not fully reflect their own beliefs.

Such residential preferences have been identified as one culprit for persistent levels of racial and socioeconomic segregation across the United States (see Charles 2003 for a review). Thomas Schelling (1971) attributes high levels of segregation to African Americans' greater comfort in black neighborhoods. Following in this tradition, Thernstrom and Thernstrom (1999) conclude that black families would be unlikely to benefit in the long-term if they were moved with the assistance of programs such as *Gautreaux* and MTO because they would likely return to their predominantly-black neighborhoods over time. In examining this in-group preference hypothesis, however, Bruch and Mare (2006) reach different conclusions. They show that whites are more likely to move as greater numbers of African Americans enter a neighborhood. Sampson and Sharkey (2008: 26) interrogate this point more closely and, using longitudinal data on nearly 4,000 families in Chicago, find that, net of African Americans' preference for same-race neighbors, "it is…whites' and Latinos' eagerness to exit neighborhoods with growing populations of blacks" that explains persistent patterns of segregation (see also Krysan et al. 2009; Krysan and Farley 2002). While the authors take these findings to suggest evidence for

neighborhood selection as a social process, we still know very little about how social resources factor into low-income families' assessments of neighborhood quality (Sampson 2012).

The Relational Basis of Neighborhood Selection

While low-income African-American families prefer to live in more racially integrated and less economically disadvantaged neighborhoods, they are less likely to enter these areas, and more likely to leave them, than white families (Massey, Gross and Shibuya 1994; Sampson 2012; South and Crowder 1997). One common explanation for this sorting is social structure: though redlining or racial covenants no longer prevent African-American families from accessing new neighborhoods, landlords and other institutional actors may direct black families into segregated neighborhoods (Massey and Lundy 2001; Rosen 2014). Subject to eviction (Desmond 2012b) and housing policies that maintain economic segregation (Varady 2006), low-income families experience "reactive mobility" (DeLuca, Wood and Rosenblatt 2014), whereby they churn within disadvantaged neighborhood contexts. This notion is rooted in an abundant scholarship demonstrating that structural conditions beyond an individual's control drive residential migration, including economic and environmental considerations (Lansing and Mueller 1973; Rossi 1955; Sell 1983; Speare 1974; Wolpert 1966).

But prospective migrants' social networks also constitute a core element of social structure (Massey 1990). Though they have been sidelined in discussions of residential migration and mobility, migrant networks—social ties that connect migrants, former migrants, and non-migrants in origin and destination neighborhoods through kinship, friendship, and shared community origin—may be a resource that pushes or pulls migrants to particular neighborhoods. Scholars across disciplines have recognized that individuals with access to social ties from origin in a destination neighborhood are more likely to settle there (Boyd 2008; Boyd et al. 2010; Brisson and Usher 2005; Clark and Onaka 1983; Fischer 2002; Greenwood 1997; Greenwood et al. 1991; Katz, Kling and Liebman 2000; Ludwig et al. 2008; Tolnay 2003) since migrant networks work through the cost side of the neoclassical model to lower the costs and increase the expected net returns to migration (DiMaggio and Garip 2012; Garip and Asad Forthcoming).

Potential costs to migrants in the context of residential mobility are similar to those faced by all migrants (Massey 1990). These include direct moving expenses such as lodging, transportation, or gas; information and search costs such as the time, money, and effort required to find and obtain employment; opportunity costs, or the income a family loses while traveling or searching for work; and, finally, the psychological costs of leaving a familiar environment and moving to a strange setting. While these costs are present in all moves, they increase with distance (Zax 1994). However, having personal connections to people with experience in a particular destination area reduces all of these costs for migrants (Boyd 2008; Sampson, Morenoff and Earls 1999). In the absence of these connections, individuals may feel compelled to move closer to their social ties, even if this decision entails moving away from neighborhoods characterized by high levels of racial diversity and low rates of poverty, unemployment, and violent crime.

Research spanning disciplines and subfields suggests that social ties matter greatly for how people make moving decisions, as well as the implications of this movement for socioeconomic mobility. Recognizing social ties as part of social structure that alters the cost-benefit calculation

of residential migration sheds light on the social processes impacting low-income families' residential mobility outcomes.

DATA AND METHODOLOGY

Data

The study of residential migration and mobility has been hindered by the selection problem (Mayer and Jencks 1989; Moffitt 2005), or whether neighborhood differences in outcomes are the result of neighborhood-level factors or the differential sorting of families into neighborhoods (Sampson, Morenoff and Gannon-Rowley 2002). For example, studies based on the Gautreaux program compare subgroups of families who moved with the program and miss those who did not comply (Duncan and Zuberi 2006). Attempts to overcome this obstacle during a second wave of data collection led to studies of families who both did and did not use the housing voucher to move, but voucher uptake was voluntary. MTO was similarly hampered by concerns about selection since only 47% of the experimental group complied with the treatment (Clampet-Lundquist and Massey 2008; Ludwig et al. 2008). In both cases, questions remain about who did (not) move, and why. Absent a scenario in which all participants are required to move, the relationship between residential migration and socioeconomic mobility is likely to remain a black box (Diez Roux 2001; Duncan, Connell and Klebanov 1997).

Natural hazards represent one such scenario. Defined as an extreme natural event or process (e.g., a hurricane or drought), a natural hazard often begets a social disaster because of "the various ways in which social systems operate to…mak[e] people vulnerable" (Wisner et al. 2004: 11). Increasingly, neighborhood effects scholars have utilized natural hazards as a source of exogenous variation. As Kirk (2009: 485) notes in his study of ex-prisoners' recidivism rates:

> In the absence of complete data on why a given parolee moves from one geographic area to another, to estimate the causal effect of residential migration (i.e., the treatment), it is advantageous to have an exogenous source of variation that substantially influences this treatment.

Utilizing Hurricane Katrina as such, Kirk finds that exiting the geographic area in which a parolee initially committed a crime significantly reduces the likelihood of recidivism and re-incarceration. Others have employed similar designs to assess how forced residential location yields short-term improvements in African Americans' poverty rates (Price 2013), to identify peer effects in evacuees' educational outcomes (Imberman, Kugler and Sacerdote 2012), and to determine what predicts locals' reactions to Katrina migrants (Hopkins 2011).

Inspired by this literature, as well as a nascent body of work that examines the relationship between disaster-induced displacement and residential mobility (Elliott 2014), I use data from the Resilience in the Survivors of Katrina (RISK) Project and leverage high rates of unplanned residential migration after the storm to explore the relationship between individuals' social ties and their residential migration and mobility outcomes.

Table 1 summarizes data collection procedures for the full study. Respondents were initially part of a randomized-controlled evaluation of Opening Doors Louisiana, a scholarship and counseling

program designed to increase the educational attainment of students at three community colleges (see Richburg Hayes et al. 2009). Eligible participants were between 18- and 34-years-old; the parent of at least one dependent child; had family incomes below 200-percent of the federal poverty line; earned no prior college-level credits; and were willing to attend college at least halftime. Between November 2003 and February 2005 (Wave 1), the project surveyed 1,019 low-income parents who intended to enroll in community college.[2] Given study requirements and the colleges' catchment area, 92% of respondents were low-income mothers receiving public assistance.

[**Table 1 about here.**]

In late August 2005, Hurricane Katrina disrupted the community college intervention, giving way to a longitudinal study of how vulnerable families recover after a natural disaster. The research team located and surveyed 711 of the original respondents in 2006-2007 (Wave 2) and 752 respondents in 2009-2010 (Wave 3). The 70% and 74% response rates, respectively, are impressive given the difficulty in collecting pre- and post-event data in the context of natural hazards (Norris 2006).[3] Each survey included questions regarding residential location, child wellbeing, and health and social resources.

[Table 2 about here.]

Two rounds of qualitative interviews were conducted shortly after the Wave 2 and Wave 3 surveys. Using purposive sampling, the sample was designed to provide variation on residential locations (New Orleans versus Houston, Dallas, and Baton Rouge) and mental health outcomes (depression or post-traumatic stress symptoms versus none). In late 2006 and early 2007, a diverse research team[4] purposively selected 57 respondents who had completed Wave 2 of the survey for the first round of qualitative life history interviews. Round 2 of the interviews was conducted at the same time as Wave 3 of the survey—approximately 5 years after the hurricane—with 48 additional respondents. 20 respondents from the first round of qualitative data collection were also re-interviewed at Wave 3. In all, the RISK Project includes 125 interviews with 105 women. I focus on a final sample of 95 interviews with 75 women for whom complete residential histories are available. By design, the qualitative sample lacks any male

[2] Though all respondents in the study have earned a high school diploma or G.E.D., approximately 70% of all individuals living in New Orleans before Hurricane Katrina had less than a college degree (Fussell et al. 2010). Low-income and minority individuals are increasingly likely to graduate from high school or attain a G.E.D. (Chapman et al. 2011). The educated and highly-motivated sample used in this study is thus in-line with these educational trends. Regardless, given their educational credentialing, we would expect individuals in the study sample to select into low-poverty neighborhoods since education and locational attainment are positively associated (Alba and Logan 1991; 1993). However, the differential selection into neighborhoods of varying poverty rates after Hurricane Katrina is even more puzzling and suggests the importance of scrutinizing the social processes underlying this selective migration.

[3] No differences between responders and non-responders were detected. These results are available upon request.

[4] Interviewers included 1 African American, 1 Asian American, and 5 whites. While respondents may have discussed topics such as discrimination differently because of the interviewer's race, no evidence suggests respondents bypassed these conversations altogether (Lowe, Lustig, and Marrow 2011).

respondents and it exhibits slightly higher rates of psychological distress[5] at Wave 2 than the analytic survey sample ($p < .10$).[6] The qualitative subsample is representative of the full survey sample in all other respects (Table 2).[7] The semi-structured interviews lasted one to two hours and addressed topics similar to the survey.

I supplement formal interviews with geographic information about the qualitative sample's Wave 1, Wave 2, and Wave 3 census tracts.[8] In order to speak to the residential mobility outcomes most prominently highlighted in extant literature (Sampson, Morenoff and Gannon-Rowley 2002), I focus on six specific objective measures of locational attainment: at the tract level, poverty, unemployment, percent white, percent black, and percent Hispanic; and, at the county level, violent crime rate (logged).[9] Data on the former measures were collected from the 2000 U.S. Census (Wave 1) and 2006-2009 American Community Surveys (Waves 2 and 3).[10] Violent crime statistics are provided by the Uniform Crime Reports of the Federal Bureau of Investigation and are similarly matched to respondents' addresses across each survey wave.

Finally, I rely on data regarding the location of the sample's network ties in order to evaluate whether proximity to social resources is associated with residential mobility outcomes. Respondents in the qualitative sample were asked about the people with whom they discuss important matters, similar to the question posed by the General Social Survey (Marsden 1987; McPherson, Smith-Lovin and Brashears 2006). Theorized to be a major source of social support, the core discussion network benefits individuals' well-being in urban environments (Fischer 1977; Fischer 1982). Each individual ("ego") in the qualitative sample listed at least one person ("alter") with whom she discusses important matters and also provided the city and state in which each alter lived at the final wave of the study. The locations of the ego and network alters were geocoded by retrieving coordinates for the city centroid using Google Geocoding API Version 3 (Bernhard 2013; Ozimek and Miles 2011).[11] Vicenty-style distances were then calculated with the "VINCENTY" Stata module, which uses the 1984 World Geodetic System ellipsoidal model of the Earth to calculate the geodesic distance between two longitude and latitude coordinates (Nichols 2007).

Despite the apparent uniqueness of the study design, it is advantageous in three respects. First, homogeneity in the sample reduces the potential for structural confounding (Messer, Oakes and Mason 2010). Second, respondents experienced considerable variation in neighborhood environments over the course of follow-up because Hurricane Katrina prompted high mobility

[5] This is measured by the K6 score, a general measure of psychological distress that is standard in the psychological literature and shown to have good psychometric properties (Kessler et al. 2003).

[6] Removing all respondents with a probable diagnosis of post-traumatic stress disorder or depression in the qualitative sample ($n = 15$) does not substantively alter the results. These analyses are available upon request.

[7] Similar comparisons of demographic characteristics were conducted for respondents inside and outside of New Orleans, as well as those who are and are not in their Wave 1 census tracts by the final wave of the study. No significant differences were found. These analyses are available upon request.

[8] I thank Mariana Arcaya for compiling this information and make it available for these analyses.

[9] Violent crimes include murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault.

[10] In order to account for the theoretical possibility that neighborhood attributes pre-Katrina may have changed in a way that rendered them similar to the neighborhoods in which respondents eventually found themselves, I calculated all descriptive statistics presented in the article using data from the 2000 U.S. Census and saw consistent results.

[11] I thank Katherine Morris for calculating these distance measures and making them available for these analyses.

among survivors, as well as changes in New Orleans' demographic composition (Fussell 2009). Finally, and in contrast to extant literature (Clampet- Lundquist and Massey 2008; Ludwig et al. 2008; Sampson 2008), since all individuals moved in response to an exogenous shock, I can explore neighborhood selection processes among low-income, predominantly African-American families net of unmeasured differences in propensity to move.

Methodology

This article adopts an inductive and mixed-method strategy to understand why, when given the opportunity to move from poor to non-poor neighborhoods, some low-income families return to poor settings. While past work has examined variants of this question through stayer-mover (Speare 1974; Wolpert 1966) or mover-returner comparisons (Asad Forthcoming), I document families' moves within and between census tracts over the course of the study.[12] Respondents in the qualitative sample were displaced to 68 census tracts in 3 states (Arkansas, Louisiana, and Texas) immediately after Hurricane Katrina and 70 census tracts in 3 states (Louisiana, Oklahoma, and Texas) by the final wave of the study.

I began by analyzing the geographic data. My outcomes of interest were the various indicators of objective locational attainment—at the tract level, poverty rate, unemployment rate, percent white, percent black, and percent Hispanic; and, at the county level, the violent crime rate (logged)—at Wave 3 (2009-2010). Table 3 presents the sample mean, minimum, and maximum for each of these indicators across the study waves. To investigate whether respondents saw improvements in these objective measures of neighborhood attainment from Wave 1 to Wave 3, I tested for differences in means for all indicators across the two waves. Significant differences would suggest that residential migration has much to do with residential mobility after unplanned displacement, at least along the measures of greatest interest to scholars and policymakers.

[**Table 3 about here.**]

Following this analysis of the survey data, I relied on qualitative data to understand the processes underlying the sample's selective migration. Although respondents were first interviewed approximately one, three, or five years after the hurricane, many were still highly mobile at the time of their first qualitative interview (Fussell and Lowe 2014). Individuals in the qualitative sample have lived in an average of 2.40 (SD: 1.22) homes since the storm, accounting for 143.1 (SD: 118.4) days of interim housing after Hurricane Katrina. This reality allows me to observe, almost in real time, how selection processes shape neighborhood attainment.

Despite my interest in uncovering the processes through which individuals sorted into neighborhoods, I only explored themes that emerged organically from my analysis (Glaser and Strauss 2009). I first read all interviews to acquaint myself with the data and then, following Miles and Huberman (1994), generated a list of themes related to neighborhood selection. Since

[12] While this can represent a between-city move, past work shows that individuals often "telescope" their neighborhoods and define them according to the block on which they live (see Rosenblatt and DeLuca 2012). As such, I would expect respondents' decision-making calculus to be based on between-neighborhood—not between-city—comparisons. Analysis of the qualitative data in my sample reflects this assessment.

respondents were not always asked about their neighborhood migration decisions, this analysis encompasses their responses to questions regarding family structure, neighborhood quality, social networks, and health care, among others.[13]

I did not initially set out to analyze how social ties influenced residential migration and mobility. Rather, I had intended to study how health enabled or constrained individuals' selection into neighborhoods. During the first round of coding, however, I realized that individuals' social ties played a part in neighborhood selection. I reanalyzed the data with this framework in mind and noted how different social ties—being a partner, a (grand)daughter, a friend, and/or a "refugee"—related to residential migration. Since none of the categories were unidirectionally associated with individuals' locational attainment outcomes, I wrote analytic memos to summarize the different ways respondents' social networks influenced migration trajectories.

A research assistant reviewed my qualitative coding at the end of the process to ensure its accuracy and consistency. We resolved disagreements together before calculating an inter-rater reliability score (i.e., the total number of agreements in coding divided by the total number of comparisons) to be approximately 91% (Miles and Huberman 1994). This type of inductive coding is especially important for researchers interested in the discovery of causal processes leading to an outcome (in this study, neighborhood attainment) (Maxwell 2004). These results are presented as a traditional qualitative analysis below.

Finally, after analysis of the geographic and qualitative data, I used the social network measures in order to assess how proximity to social ties influenced residential mobility outcomes. I divided the qualitative sample into two groups: respondents within 100 kilometers of their network alters (n = 42) and those beyond this cutoff (n = 33).[14] This distance represents roughly one hour of driving time, which approximates the casual visiting distance (Fischer 1982: 158). For each grouping, I tested for differences in means for all indicators of residential mobility discussed above between Waves 1 and 3. As above, significant differences between the waves and distance to alters would suggest that proximity to network peers influence residential mobility outcomes.

FINDINGS

Stuck in Place, Forced to Push

An abundant literature finds that low-income families are the least likely to enter economically advantaged and racially diverse neighborhoods, and more likely to leave them. African Americans are particularly likely to do so (Massey, Gross and Shibuya 1994; Sampson 2012; South and Crowder 1997). There is a striking durability to the consequences of such moves across time: churning within poor neighborhoods continues across generations (Myers 1999) and is associated with significant gaps in income and educational attainment (Sharkey 2013), among other outcomes (Sampson 2012).

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[13] Since respondents were not always asked directly about the reasons underlying their moves, these results are likely conservative and understate the importance of social relationships for neighborhood selection and attainment.

[14] I also divided respondents' average distance from their network alters into quartiles and quintiles and saw substantively similar results.

Respondents in the qualitative sample reflect this "stuck in place" dynamic. While most recognized that leaving their neighborhoods for ones characterized by greater racial diversity and lower rates of poverty, unemployment, and violent crime was a possibility, few did so before Hurricane Katrina. Uncertainty about finding employment and childcare in a new neighborhood abounded. For example, a 20-year-old mother of one named Leila admitted to thinking about moving several times before Hurricane Katrina, though a number of factors held her back:

> *[Interviewer: Had you thought about moving before Katrina?]* A lot times, honestly. I wanted to leave because I knew there were better opportunities in other places, but it was always something stopping me—like the fact that I'm not going to know anybody. I don't know how am I going to transition. Do I go out and get a job? Who's going to take care of my daughter while I try to get established? It was just a number of factors that held me back.

Similar to the type of reactive migration described by DeLuca, Wood and Rosenblatt (2014) and others (Lansing and Mueller 1973; Rossi 1955; Sell 1983; Speare 1974; Wolpert 1966), whereby residential moves are undertaken in response to an unforeseen and unpredictable event, respondents in the qualitative sample were forced to move in anticipation of Hurricane Katrina. Leila described the storm as the catalyst for her move, without which she would have stayed in New Orleans:

> And when the storm came, we were just like forced, you know, to push. You're going to have to figure it out. I always dreamed of going to Atlanta. *[Interviewer: Why didn't you go there?]* Because we were here in Texas already.

Most respondents would have preferred to remain in their New Orleans neighborhoods. For instance, a 20-year-old mother of one named Shana only evacuated the city in response to the mayor's mandatory evacuation order:

> *[Interviewer: When did you decide to evacuate New Orleans?]* That night. We didn't want to leave. We said, "Oh, no, it's just going to pass." We decided in the last minute when [Mayor] Nagin was giving the mandatory evacuation, and we saw it strengthened to a four. It went up to a five by the time we went to Memphis. When it went up to a four, and they all were telling us this report that the whole New Orleans going to go under on a three, and the levee might not be strong enough, I said, "OK, maybe we should leave." But we left with the expectation of coming back.

The desire to remain in New Orleans pervades the qualitative sample. All respondents reported that they had not initially planned to evacuate the city when they first heard of the approaching hurricane. Sharon, a 22-year-old Hispanic mother of one, recalled that her family "was not really worried when we left [New Orleans]. Same as always, we didn't think anything was going to happen. We just left to be cautious and would go back and everything would be fine." She packed just three pairs of clothes for herself and her children.

A 24-year-old mother of three named Sheila admitted to similarly scant preparations. Though she had learned about the impending storm more than 24 hours prior to her evacuation, she had initially planned on staying because she "didn't think it was going to hit." She continued:

> [*Interviewer: What did you bring with you when you evacuated?*] Really nothing. We had some snacks 'cause we thought we were coming home but we didn't. We brought one outfit and some snacks to have while we were driving. That was it. I thought we'd be back home like some of the storms that come but

> didn't do much damage. Then we would return back to our homes. But this one, the next morning we woke up. We went to Baton Rouge and we woke up thinking we were going home. One of the State Troopers turned us around when we were going to the interstate. He said nobody could go back to New Orleans because it was under water.

Unable to return to their housing units in New Orleans immediately after Hurricane Katrina, respondents often depended on their social networks to guide their subsequent residential migration. Before illuminating how social ties facilitated this process, I first turn to the geographic data in order to establish the impact of such moves for residential mobility outcomes.

Moving to Opportunity After Hurricane Katrina?

As is expected in a geographically concentrated and demographically homogenous sample, Table 4 shows that individuals in the qualitative sample lived in neighborhoods with many of the markers of concentrated disadvantage (Wilson 1987) immediately prior to Hurricane Katrina. On average, respondents' neighborhoods were characterized by high rates of poverty, unemployment, violent crime, and racial segregation. [15] Mean tract-level poverty and unemployment rates hovered around 26% and 11%, respectively, while most neighborhoods in which respondents lived were predominantly black (68%). The county-level violent crime rate averaged 6.71 per 1,000 residents. Cutter and Emrich (2006) attribute such statistics to a long-term process of race- and class-based residential segregation in pre-Katrina New Orleans, which is reflective of national trends (Massey and Denton 1993).

[**Table 4 about here.**]

By the final wave of the study, however, respondents were, on average, living in census tracts with improved measures along most of these dimensions.[16] Mean poverty (21.5%) and violent crime (6.45) rates fell significantly, and respondents found themselves in more racially balanced neighborhoods comprised of white (30.8%), black (46.6%), and Hispanic (16.1%) residents. Although these differences persisted when accounting for residence outside the New Orleans metropolitan area, these gains are not simply driven by changing metropolitan contexts. Indeed, respondents who were still living in New Orleans at Wave 3 but who were not in their Wave 1 census tracts also saw significant improvements in neighborhood conditions by Wave 3. Meanwhile, those back in their Wave 1 census tracts by the final wave of the study were living in

[15] The Wave 1 figures reported in Table 5 are reflective of New Orleans immediately prior to Hurricane Katrina. In 2004, the city's unemployment rate stood at nearly 12%, more than twice the national rate, while the city's 23-percent poverty rate was 10% higher than the national average. See Holzer (2006) for more information.

[16] A source of concern is whether these differences are driven by age effects (i.e., do these indicators change because individuals are moving across the life course?) or period effects (i.e., are these indicators also changing in the census tracts around respondents' neighborhoods?). In separate analyses, I evaluate what is happening to respondents' final census tracts across time (from 2003-2010) and compare them to city-level trends in these same indicators. In each case, the sample and the cities' observed changes move in opposite directions. I also matched all indicators to data observed in 2000 from the U.S. Census and the Uniform Crime Reports in order to account for the theoretical possibility that neighborhood attributes pre-hurricane have changed in a way that might have rendered them similar to the neighborhoods in which respondents eventually find themselves. The results remained substantively similar. I then performed a similar analysis to evaluate whether individuals aged 18-34 in these same census tracts and cities are experiencing comparable changes with respect to these indicators. I find that they are not, making it likely that age effects are not driving these results. These analyses are available upon request.

relatively more impoverished neighborhoods characterized by higher rates of unemployment, violent crime, and racial imbalance than at Wave 1.

These results provide preliminary evidence that reactive migration after Hurricane Katrina influenced respondents' residential mobility outcomes.[17] The qualitative data reveal how social ties pushed or pulled respondents to their respective neighborhoods over time.

The Relational Basis of Neighborhood Selection: How Social Ties Matter

Many studies about residential migration and mobility remind us of the importance of social networks for the urban poor today. It is through social ties that financial and social resources are shared, a feat that makes survival in the face of economic deprivation possible (Edin and Lein 1997; Stack 1975). Similar resources are channeled through even the most fleeting or disposable of connections during reactive moves such as after eviction (Desmond 2012a). While social ties are not always beneficial (Smith 2007; Stack 1975), understanding how they matter—for better or for worse—is an important consideration for scholars of residential migration and mobility.

While recognizing that the social processes identified below are the result of long-standing structural disadvantages (Massey and Denton 1993; Wilson 1987), we are reminded by Mills (1940: 130) that "the formulation of problems…should include explicit attention to the range of public issues and of personal troubles; and they should open up for inquiry the causal connections between milieu and social structure." In this tradition, I demonstrate how respondents' social networks constitute a core element of social structure (Massey 1990) and push or pull migrants to different neighborhoods after unplanned migration. Specifically, I document how four social relationships—being a partner, a (grand)daughter, a friend, and/or a "refugee"—influence divergent residential migration and mobility trajectories.

Being a Partner: "We Can Live Off My Husband's Income."

For young, low-income women, being a mother and taking proper care of one's children in the face of limited material resources requires substantial social support (Edin and Kefalas 2011). The women in this sample are no different. The storm interrupted daily routines, led families to new homes in new neighborhoods, and increased the geographic dispersion of social ties. Though relationship status was variable over time (Lowe, Rhodes and Scoglio 2012), the 36 respondents who were married or cohabiting in the qualitative sample by the final wave of the study were more likely to depend on their mate for financial support, themselves opting out of the labor market in order to reduce the potential costs of migration for children's well-being. Respondents without a partner, given limited resources and a lack of social support in the post-Katrina neighborhood, were likely to feel pressure to move closer to their social ties, even if it meant sacrificing some neighborhood amenities.

Low-income mothers with a cohabiting partner were able to work together to maintain a semblance of normalcy for their children after their unplanned move. Take the case of Gena, a

[17] The sample's reduction in tract-level poverty is robust to controlling for respondents' non-specific psychological distress. These analyses are available upon request.

21-year-old black mother of one. Prior to Hurricane Katrina, Gena lived in a mostly-black (94%; +0.88 standard deviations [SD] from sample mean at Wave 1) neighborhood with a high rate of poverty (37%; +0.78 SD) and violent crime (6.51; -0.89 SD). When the storm pushed her family to a Houston neighborhood, Gena and her husband strategized to minimize the disruption their daughter would face as a result of the storm:

> *[Interviewer: Tell me about moving after Hurricane Katrina.]* It was hard. You know when children are so used to one thing and then you're used to one thing and then you have to switch, and then you have to switch them? It's kind of hard to switch them when you don't know what you're switching to. So that aspect of it was hard. But [my husband and I] tried to keep everything normal, and then once we got to know the new environment, then we kind of started changing, you know, weaning [our daughter] to it.

Normalcy came in the form of respondents opting to become "stay-at-home moms," an increasingly prevalent trend among low-income families (Cohn, Livingston and Wang 2014). Opting out of the labor market was only possible because respondents' cohabiting partners usually found gainful employment in their post-Katrina neighborhoods, which allowed respondents like Gena to devote their attention to their children. This works to minimize the potential emotional costs children face as a result of multiple moves and increased distance from important relatives such as grandparents (Briggs, Comey and Weismann 2010; Stack 1975). In Gena's case, the opportunity to stay at home with her children helped to facilitate the family's move to a low-poverty (8.6%; -1.02 SD from sample mean at Wave 3) neighborhood with roughly balanced concentrations of black (27%; -0.44 SD), white (38%; +0.29 SD), and Hispanic (31%; +0.01 SD) families.

Penelope, a married mother of two, also opted out of the labor market after her reactive move. From her predominantly black (95%; +0.93 SD) neighborhood in New Orleans characterized by high levels of poverty (33%; +0.51 SD) and violent crime (6.86; +0.67 SD), her family evacuated to Houston where "we heard they were offering [housing] vouchers" for evacuees. Penelope used the voucher to settle in a suburban neighborhood, staying at home to care for her children while her husband worked to cover the family's expenses. For Penelope, this was particularly crucial when she learned about the opportunities available in her new neighborhood:

> [T]he first thing me and my husband decided [was that] we could have lost our kids. We all could have just died. To go back there [to our New Orleans neighborhood] now would be for our own selfish reasons and we have kids to think about. The schools are not ready for kids. They get a better education here. The area that we are in [is] safer. To be honest with you, if I didn't have kids, I'd probably be right back in New Orleans. But I have kids and I have to think about them first before me.

Indeed, low levels of poverty (12%; -0.75 SD) and violent crime (5.86; -1.43 SD), coupled with white (33%; +0.94 SD), black (3%; -1.40 SD), and Hispanic (52%; +2.01 SD) residents, amounted to a "really nice" neighborhood for Penelope:

> We're in North Houston. It's really nice and the majority of the people who came from New Orleans are on the southern side of Houston, so it's not as packed and doesn't have as much violence. It's really not like that on this side. This side is much more laid back. It's quiet. On the southern side of Houston, every Wal-Mart you go to, you'll see somebody from New Orleans. All of them stopped on that side of Houston.

Though her social ties do not live in her immediate neighborhood, Penelope does have a brother who lives in Dallas and another two brothers who live on the south side of Houston. She

described this arrangement as "like a dream for me because, in New Orleans, I didn't have a problem with my family, but they are the type of family that they are so close they are too close. And I needed some space. So it's real good for me." In particular, Penelope enjoys that her daughter gets "time for herself or time to be with her daddy or me." Having social ties that are close by—but not in the immediate neighborhood—may thus facilitate residential stability.

A cohabiting partner may also help to root families in new neighborhoods even when other important social ties are inaccessible. For example, a 25-year-old African-American mother of two named Missy made four moves in the time after Hurricane Katrina: from her impoverished (30%; +0.29 SD), violent (6.85; +0.63 SD), and predominantly black (83%; +0.53 SD) neighborhood, she evacuated with her family to a motel in Galveston, Texas for a beach vacation after learning that her boss had done the same:

> We went to Galveston because we thought we were going to have a little vacation. My boss was in Galveston, and he called everyone who worked for him to make sure everybody was leaving. And I asked him where he was. He was like, "I brought the kids to Galveston and it's nice out here." I said, "Well, we coming to Galveston too so we can bring the kids." That's why we ended up there. It was our first time ever being in Texas. We thought we'd go on the beach for two or three days and go back home. That's why we went to Galveston first. Usually we go to Baton Rouge first and visit family. But we figured we would take the kids to the beach for vacation.

When she and her husband learned that Hurricane Katrina had decimated New Orleans, the family moved into a hotel in Houston, Texas for three weeks. But hotel costs accrued. Receiving a housing voucher, Missy and her husband found an apartment in Houston, where she signed a 6-month lease. Though she was satisfied with the arrangement—the neighborhood had an 18% (-0.31 SD) poverty rate, a lower violent crime rate (6.77; +0.77 SD) than her previous area, and a diverse mix of white (29%; -0.08 SD) and black (38%; -0.29 SD) families—Missy's landlord elected not to renew the lease. Missy and her husband ultimately decided, "Instead of going from apartment-to-apartment, because they were kicking everybody out, we just looked for a place in a nice area that had a real nice school district and everything."

Landing in a nearby neighborhood close to her husband's place of employment, Missy saw even greater reductions in rates of poverty (6.2%; -1.21 SD) and violent crime (5.86; -1.42 SD) while also maintaining the racial balance of her previous neighborhood. Like other respondents, Missy focused on taking care of her children in the face of so many "stressful" unplanned moves:

> I felt [moving] was stressful sometimes, and then sometimes I found it as my comfort. I found it stressful because [my kids] didn't realize what was going on. And sometimes they were ready to go home. They wanted to go play with their friends. [My daughter] wanted to go play with her Wiggles guitar. She was like, "I wish we could back home so I could go get my toy." I said, "We can't go back home." And then when I would be down, I would always have them to take my mind off of it.

The family's settlement in the Houston neighborhood also entailed a social cost: whereas Missy was within walking distance of her extended family in her New Orleans neighborhood, this was no longer the case: "Before, you could just get up and go to someone's house. Now, everybody is all scattered out. We can't just go visit." Even so, Missy viewed her residence in Houston as home and declared, "I wouldn't go back to New Orleans, especially not with my kids. It's not safe. This is safe. They can go outside. We don't have to worry about anything."

Respondents without a partner, given limited resources and a lack of social support in the post-Katrina neighborhood, were likely to feel pressure to move closer to their social ties, however, even if it meant forsaking gains in neighborhood amenities. Auriel, a 26-year-old African-American mother of one, grew up in New Orleans' Ninth Ward. With high rates of poverty (34%; +0.57 SD) and violent crime (6.86; +0.67 SD), and predominantly black (96%; +0.96 SD) neighbors, Auriel described her neighborhood as "bad. It was real bad." She perceived the neighborhood to be so dangerous that she could not grant her son the freedom to play outside:

> I would never let my son go on that playground and play because it's too wide open. If they start shooting or something like that, anything could happen. I would never let him go to the nice playground in our old neighborhood. I didn't trust my son to be out there playing like that.

As Hurricane Katrina approached the Gulf Coast, Auriel and her husband were forced to move. Auriel's sister encouraged the couple to move to Dallas, but the move brought high levels of stress to the family. Though Auriel was able to live near her sister, Auriel's husband wanted to be closer to his family. This brought friction to the relationship:

> *[Interviewer: Tell me what happened between you and your husband.]* I think it was pretty much the stress from the storm because, from the time we met, we used to be together every day. We never went a day without seeing each other. We always did stuff, and it was just fun. It was like almost the perfect relationship. But after the hurricane, it went downhill. Because he was saying that I treat him bad because we in Texas, and that he left his family to be with me. And I felt like, "You left your family? But you have a family!" I didn't know where my family was. I done lost everything. The place where I grew up at—that's gone. I can't never bring my kids and show them where I come from. You know? And he didn't realize that that was something serious. He just didn't understand that and that's the main thing we used to argue about. We broke up when I was seven months pregnant.

While Auriel described her separation as a "relief," it is important to note that this marital dissolution did not impede her neighborhood attainment. Having her sister in the area provided Auriel with the social resources to remain in her low-poverty (14%; -0.56 SD) and less violent (6.45; +0.00 SD) neighborhood. When asked how her Dallas neighborhood compared to her New Orleans context, Auriel explained, "Oh, man. It's a big change. This is the type of neighborhood where I want to raise my family. I could see my kids graduating from high school from this house. It's just a real good neighborhood."

Although her husband exerted pressure on her to move closer to his social networks, Auriel resisted this pressure and remained in her Dallas neighborhood near her sister. Taking advantage of her newfound structural opportunities, Auriel discovered a "neighborhood where I would want to raise my family. This is like going from poor to middle-class."

Being a (Grand)Daughter: "I'm Needed Here."

In addition to requirements that study subjects be the parent of at least one dependent child, all respondents were required to be low-income and between the ages of 18 and 34. These requirements produced a "sandwiched generation" (Miller 1981) of women who are wedged in a unique moment in the transition to adulthood. While mothers themselves, each respondent also maintains strong ties to her parents and/or grandparents. At Wave 1 (Wave 3), 21 (11) respondents in the qualitative sample resided with either her own parent(s) or those of her partner. 4 (15) were living with other adult relatives.

Many studies on the residential mobility of low-income families take this "sandwiched" moment in the transition to adulthood for granted (see Arcaya et al. 2014; Sharkey 2012 for exceptions). However, in the absence of a partner, the qualitative data suggest that respondents' relationships with their (grand)parent(s) are important for residential migration and mobility trajectories. Specifically, respondents who depended on a (grand)parent for financial assistance or childcare were less likely to move to neighborhoods awash in structural opportunities, while those who rejected the expectation that they live with a (grand)parent were likely to settle in their new neighborhood environments.

Respondents who found themselves living with a (grand)parent by the final wave of the study often recognized that they did so at the expense of neighborhood amenities. Such was Nancy's view, a 27-year-old African-American mother of three. Prior to Katrina, Nancy lived in an impoverished (21%; -0.37 SD) and violent (6.86; +0.67 SD) neighborhood in New Orleans with a high proportion of African-American residents (72%; +0.15 SD). When the storm prompted Nancy's evacuation, she was directed by the National Guard to a shelter in the Dallas area. Receiving a housing voucher to locate a new apartment, Nancy moved into a low-poverty (4%; -1.39 SD) and lower-crime (6.66; +0.51 SD) neighborhood that was "full of opportunity."

Shortly after her settlement in her Dallas neighborhood, Nancy's daughter fell ill and was hospitalized. Having not yet formed social ties in her new neighborhood, Nancy called her mother, who was still living in her original New Orleans neighborhood: "My daughter got sick, and they thought she had multiple sclerosis or something. She had been hospitalized and I went through something new because, when they took her in, they had to admit her into the hospital and do these different things to her and I was by myself. I had to call my mom." Nancy ultimately decided to return to New Orleans and live with her mother, though she recognized that she did so at the expense of potential gains in neighborhood amenities in Dallas:

> It's not the same down here. We've been down here [in this New Orleans neighborhood] for three years and it's getting worse. There's nothing for my children to do. When we were out there [in Dallas], we really enjoyed ourselves. My children were able to go everywhere. For me now here there's nothing for them to do. There are no after school activities and nothing for them to spark their interests and I just feel like it's better for them if we get away now. I feel like the system down here is booby-trapped or something. It's not a good place to be. It's not a good place to raise kids. I wouldn't advise anybody to come to live here to raise a family, and I can say this now because of what we experienced in [Dallas].

Moving in with her mother provided Nancy with some much-needed stability for her family, though it also entailed substantial increases in poverty (27%; +0.40 SD) and violent crime (7.37; +2.23 SD). Remaining in a neighborhood that is structurally advantageous, despite the obvious benefits to Nancy, was not possible for her without her mother: "I still feel like, today, if my mom would have stayed [in Dallas], we would still be in that neighborhood."

Lenora, a 25-year-old black mother of two, recounted a similar experience. Immediately before the storm, her neighborhood exhibited high rates of poverty (37%; +0.81 SD) and violent crime (6.51; -0.89 SD). Though she evacuated to Houston, Texas, Lenora never settled in the area. Rather than describing how much *she depended* on her parents or grandparents, Lenora explained that *these relatives needed her help* and she could not, in good conscience, move away

from them. Such feelings appear to be common for Lenora, who even before the hurricane had attempted to live independently:

> I tried moving away once, and I came right back home. I stayed away a year in Marietta, Georgia. It was good but I was depressed. I missed my family. Long distance calls were costing. I came back for my family. I told [my son] we might as well move back home. We'll do so much better home. But I lied to him. We did better out there. They had more money out there. But I wanted to be around my family. I'm the one that does everything for everybody, like my aunt and my grandmother. I'm their transportation going to doctors' appointments. And with my mom and sister, I'm the middleman all the time with the arguments and things. I'm the peacemaker. With my dad, he comes to me for advice on different things. I'm needed here. And I felt bad being away.

For Lenora, the costs of moving away from her social ties were too great to justify a move to her suburban Houston neighborhood, and she preferred to maximize her proximity to her social resources by living in her baseline census tract after the hurricane.

Low-income mothers without cohabiting partners note (grand)parents' important purpose as role models for their young children. Indeed, motherhood made salient the realities of living in a poor neighborhood. Respondents recognized disproportionately high rates of crime and violence (Leventhal and Brooks-Gunn 2003; Sampson, Raudenbush and Earls 1997) and their potentially deleterious effects on their children's educational outcomes (Sharkey 2010). Such was the case for Mona, a 25-year-old African-American mother of one. Living in a neighborhood with high levels of poverty (40%; +1.03 SD) and violent crime (6.86; +0.63 SD) before the storm, Hurricane Katrina pushed Mona to Memphis, Tennessee:

> [*Interviewer: Tell me why you went to Memphis.*] I did my first year of college up there, and I kept in contact with one of my dorm mates and her family. They all invited us up there, and I felt like, by me being self-employed, I would have a better chance of getting a job there than staying in some small town. So I just was like I need to provide for my child, and I went.

Mona stayed with her friend for several weeks. When she received a housing voucher, she began searching for an apartment but faced difficulty in finding a landlord who would accept the voucher (Rosen 2014): "At first they'd say we'll take you, but then you'd say, 'Oh, I have a voucher.' 'No, we're not accepting the housing vouchers.'" Mona and her son ultimately found an apartment in a predominantly black (38%; -0.26 SD) and white (41%; +0.41 SD) neighborhood that was less impoverished (23.7%; +0.17 SD) and less violent (6.61; +0.39 SD) than her previous one.

Though satisfied with her Memphis neighborhood, Mona wanted a "positive male figure" for her son, especially given the trouble she believed he might face without one as he grew up. She thus felt pressured to move closer to her father in a predominantly black (93%; +1.50), impoverished (43%; +1.71 SD), and violent (6.66; +0.51 SD) New Orleans neighborhood:

> I came back from Memphis because I was missing my family. I'm not saying that I cannot survive without my family, but like I said, I'm a single parent and I have a boy, and he needs to be around a positive male figure. *[Interviewer: Who is that figure?]* My father. He's around my father like every other day, just about. My family, my mom helps me with him while I work and [while I'm] in school and studying.

Contrast Lenora, Nancy, and Mona's experiences with those of Reina. At Wave 1, Reina lived in a five-member household with her child, at least one of her parents, and her grandmother in a house that belonged to her grandmother. The impoverished (34%; +0.99 SD) neighborhood grappled with a high violent crime (6.86; +0.67 SD) rate before the storm, though Reina described it as a "very safe neighborhood" because much of her family lived in the area. After Hurricane Katrina displaced Reina to Natchez and Hazlehurst, MS, one of Reina's friends in Dallas lured her to the city for a visit. Reina was pleasantly surprised by the city's structural opportunities:

> A good friend of mine from high school had been trying to get me to Dallas to visit. When she called, I was like, "Well, Mississippi isn't the place I want to be." I had nowhere else to go, so I packed the little stuff that me and my son had and went to Dallas. *[Interviewer: Why didn't you want to stay there in Mississippi?]* The economy is poor there and everywhere you walk there there's babies. It's like teen pregnancy. You have these little kids having kids, and that's depressing to me and I only have one—and I'm 28. I don't want any more kids. And he's 10.

Having liked Dallas, Reina settled in a suburban neighborhood in a rented home that she shared only with her son. Though the neighborhood exhibited lower rates of poverty (14%; -0.60 SD) and violent crime (6.45; +0.00 SD), Reina explained that her grandmother was not pleased that Reina lived so far away:

> When I told her [I was staying here]…I could just tell she got sad. I could call every day and she's going to sound jolly every day versus me sounding like a bill collector calling every day. She was like, "Oh, hey, Reina!" Every time I call, she just sounds jolly. And when my friends go home [to visit my grandmother], they tell me, "I stopped over by Grandma house and she was like, 'You need to just go on back home, because she just misses you.'"

Although Reina appreciated this sentiment, and recognized that hers was not the most cost-effective living situation since she could not split the costs of the home with her relatives, she preferred to live independently. Indeed, having lived with her grandmother prior to the hurricane, Reina remembered "feeling like I'm eight years old instead of 28." This posed problems for childrearing: "[My grandmother] contradicted me on how I was trying to raise [my son]. If I tell him no, he'd go, 'Well, I'm going to grandma,' who said, 'Yeah,' so that was my main [problem]." Resisting her grandmother's normative pressures allowed Reina to take advantage of the amenities available to her in the Dallas neighborhood. The material benefit of living with a parent may thus not always be worth the psychological cost.

Being a Friend: "Everybody's Split Up."

Not all respondents had a partner or a (grand)parent in their social network immediately before Hurricane Katrina. Instead, the 20 respondents without these particular social ties initially relied on friendship ties to provide information or other help to guide their residential migration and mobility trajectories. In most cases, even when such moves entailed a move to violent neighborhoods characterized by high levels of poverty and racial segregation, respondents expressed satisfaction with their neighborhoods given their proximity to social resources. In a minority of cases, however, some mothers lamented having forsaken neighborhood amenities because of pressure from friendship ties to move closer to their core social network.

Belinda is a 28-year-old black mother of one who lived in a predominantly black (63%; -0.17 SD) and impoverished (40%; +1.02 SD) neighborhood with only her child prior to Hurricane Katrina. As is characteristic of such economically and racially segregated neighborhoods (Sampson, Raudenbush and Earls 1997), Belinda described her neighborhood as "unsafe," a sentiment reflected in the violent crime rate (6.51; -0.89 SD). However, even after returning home from work one day to discover that her patio had become a murder scene, Belinda never anticipated moving because "you were always going to know somebody" in her neighborhood.

As the hurricane approached the Gulf Coast, Belinda initially evacuated to a friend's home in Atlanta, Georgia for 4 days before moving to Burleigh, California to spend a month in another friend's home. When Belinda decided California would not be a suitable place to raise her child ("It was too liberal."), she got in touch with a high school friend who had relocated to Dallas: "I was supposed to go to Dallas to be by [my friends]. […] But my ride who came to pick us up from California was headed toward Houston, so we never made it to Dallas."

With "everybody split up," Belinda reported missing her friends. But, given that her friends are "out in Dallas, and I'm out here in Houston," Belinda described them as "close enough that if we invite them to something they will drive here." Such proximity helps to reduce the psychological toll associated with living in a new neighborhood setting, which can facilitate residential stability. In Belinda's case, the information she received from her friend about life in Texas proved to be advantageous for her mobility outcomes. By the final wave of the study, Belinda secured a new apartment in a suburban Houston neighborhood with a lower poverty rate (18%; -0.32 SD) than her Wave 1 environment and in a predominantly Hispanic (79%; +3.5 SD) neighborhood. Though this neighborhood exhibits a higher rate of violent crime (6.77; +0.77 SD) than her baseline location, Belinda reported that the presence of a neighborhood police station made her "not afraid to get around the neighborhood."

Other respondents reported similar dependence on friendship ties after their unplanned moves. Niecy is a 26-year-old African-American mother of two. Prior to the storm, she lived in an impoverished (35%; +0.64 SD) and mostly-black (97%; +0.97 SD) neighborhood in New Orleans that exhibited a high rate of violent crime (6.86; +0.68 SD). When Niecy first heard about the storm, she thought, "We weren't going to evacuate at all. We were just going to wait it out." After learning from news reports that Katrina would render New Orleans "like Armageddon," Niecy evacuated to Fayetteville, Georgia just 16 hours before the storm made landfall. She described Fayetteville as her only evacuation option because her "friend gave me a place to stay because she had housing. I didn't have that."

After about 6 months in Fayetteville, Georgia, Belinda determined that she was not satisfied with the environment. Despite what several of her friends had described as a receptive environment for evacuees, Niecy faced difficulty in accessing public assistance and relief aid. Ultimately concluding "Georgia was not what they said it would be for us [evacuees]," Niecy contacted a friend from New Orleans who had settled in a suburban neighborhood in Houston, Texas. When he informed Niecy about new apartments in his complex, she decided to move there:

> I was talking to [my friend] on the phone, and he told me about the apartments. That was how I was able to come from Georgia to Houston. He said, "Well, my apartments are leasing, and I'll see what I can do to get you an apartment. You come and live here." I said, "OK," and I moved and found an apartment here.

Relative to baseline, Niecy's new neighborhood exhibited substantially lower rates of poverty (12%; -0.77 SD) and violent crime (5.57; -2.13 SD) and was located in a predominantly white (96%; +2.64 SD) neighborhood. Although Niecy is "kind of up in the air about this neighborhood," believing that her "last neighborhood was safer than this one because the police were always round," she is satisfied enough because "my very best friend lives nearby."

In 12 cases, however, respondents recognized that pressure from friendship ties to move closer to their network peers had led them to forsake gains in neighborhood amenities. Reacting to Hurricane Katrina, Sheila, the 24-year-old African-American mother of three from above, evacuated from her high-poverty (40%; +1.02 SD) and predominantly black (93%; +0.83 SD) neighborhood to a friend's home in Baton Rouge, Louisiana for 21 days. Sheila was not satisfied with this living arrangement, however; with more than 15 people in-and-out of the house, she "really felt uncomfortable because I didn't know all of [those people]." When she learned that one of her friends had settled in Dallas, Texas, Sheila decided to follow her there.

Sheila felt that her new Dallas neighborhood was "better for me [than my New Orleans neighborhood]. It was a different environment. Better schools and better jobs. You have a better chance of getting a career." Indeed, Sheila's new Dallas neighborhood exhibited lower rates of poverty (33%; + 0.87 SD) and violent crime (6.62; +0.41 SD) than her New Orleans neighborhood, and also included a more diverse mix of black (29%; -0.58 SD), white (18%; -0.52 SD), and Hispanic (40%; +1.33 SD) residents.

Her access to such desirable neighborhood amenities (Alba, Logan and Bellair 1994; Crowder 2001; Massey and Denton 1987) notwithstanding, the social cost of living in her Dallas neighborhood proved too high for Sheila. After the death of her best friend in New Orleans, and the general havoc wrought by Hurricane Katrina, another of Sheila's friends pressured Sheila to move to a neighborhood closer to her:

> *[Interviewer: What do you remember about the time after Katrina?]* Everything. My friend died. My baby's grandpa died; so did her uncle and her cousin. Everybody was calling me every day saying somebody [was] gone—it was really getting to me. Then my friend wanted me to come home. *[Interviewer: Everybody had drowned in the city?]* Yeah, in the Ninth Ward. It was hard.

Sheila now views her current, mostly-black (82%; +1.12 SD) neighborhood as "horrible" given the presence of drugs and violence (6.66; +0.51 SD) her neighbors bring to it. Though Sheila reported that she does not "feel that it is appropriate for me and my kids to live here" and would like to move her family back to Dallas, she had no clear path for doing so without additional financial resources.

Being a Refugee: "I Wasn't Even Considered A Citizen."

It is impossible to discuss how social networks underlie this sample's residential migration and mobility outcomes without also addressing the stigmatization these women faced as environmentally-displaced persons. By the final wave of the study, 30 respondents in the qualitative sample were living outside of the New Orleans metropolitan area. Commonly referred to as "refugees" by the media and their new neighbors (see Masquelier 2006), respondents'

outsider status resulting from the hurricane is not a unique phenomenon. Indeed, low-income families who have been moved to opportunity through other means have also confronted stereotypes cast upon them (Arthurson 2010; Tach 2009). This type of social exclusion may contribute to low-income families' detachment from a new neighborhood, increasing the social costs of settling in that environment. Specifically, neighbors and coworkers may have stigmatized those respondents who most heavily depended on public assistance in their new neighborhoods, while those who explicitly rejected the stereotypes thrust upon them were likely to settle in the destination neighborhood.

Most individuals in the sample reported some kind of discrimination in the aftermath of Hurricane Katrina. Althea is a 32-year-old black mother of two. Prior to the storm, she lived in a predominantly black (72%; +0.82 SD) neighborhood with high rates of poverty (21%; +0.00 SD) and violent crime (7.37; +2.96 SD). Though she evacuated to a low-poverty (5%; -1.31 SD) and lower-crime (6.86; +0.99 SD) neighborhood in Lafayette, Louisiana, Althea did not feel comfortable there. Returning to her baseline census tract by the final wave of the study, Althea explained that her neighbors in Lafayette were unreceptive to her family after the storm:

> I know nobody couldn't do nothin' durin' the storm because that's nature—you can't tell it to stop. But as far as the treatment afterwards, a lot of my family members were treated horrible tryin' to get out of that Super Dome. The Army [was] treatin' them like refugees. That was a big thing. People were just called refugees. And, you know, when we were in Lafayette, I can remember a neighbor sayin', "I know you have a lot refugees." I'm like, "They're not from another country—they're from USA."

For low-income mothers dependent upon public assistance, the refugee label was especially stigmatizing. At Wave 1, Phyllis lived in a high-poverty (30%; +0.29 SD), violent (6.88; +0.76 SD), and predominantly black (83%; +0.51 SD) neighborhood. A 30-year-old African-American mother of two, Phyllis initially evacuated to Houston, where she saw reductions in poverty (15%; -0.52 SD) and violent crime (6.13; -0.77 SD). In spite of these gains in neighborhood amenities, Phyllis expressed her anger in her new neighborhood that stemmed from her label as a refugee:

> And I know for a fact I was considered a refugee, and I was born in America. I've never seen Africa. I'm an African American. I'm black. I was born here. I'm an American citizen, and I wasn't even considered a citizen. I was a refugee. I was not treated fairly. They would look at me and say, "Here, take this money to shut up for a few minutes."

Growing tired of such stigmatization, Phyllis decided to forego these neighborhood gains in an attempt to maximize her social integration and return to her baseline census tract:

> *[Interviewer: What help did you receive after Katrina?]* You know what? There was help, but I just didn't feel like going through the hassle of standing in the lines, waiting on the phones, and getting to the front to find out there's no more funds. I was just sick of this. I was tired of feeling like I'm begging people for something or, you know, like a so-called refugee. I decided to go back to work. I really didn't have time to keep traveling different places and trying to find food and water—that was just disgusting and aggravating. I decided to go back to work [at my old job in New Orleans] and just buy what we need.

Stigmatization as a refugee also exerted negative effects on the well-being of respondents' children. For example, Mona, whom we met previously, recounted how her son had difficulties at school because he was teased for his New Orleans accent. Such social alienation played a part in their return to their baseline census tract:

> He would be in class sometimes, and I would have to go to the school because he would have this little crying spell because the kids would tease him. He didn't have any friends, so he just felt left out. It was just he and I up there, no family, you know. His support system was gone, so he was lonely—and so was I. So, I was like, "OK, we're going to deal with it for a while. I'll let you finish this year in school, and then at the end of the year, we're going to see what's up and then we will return." And then we returned.

But not all respondents who reported stigmatizing experiences would leave their new neighborhoods. Indeed, the 18 respondents who reported explicitly rejecting the stereotypes thrust upon them were more likely to settle in their new neighborhoods than those who did not. Take Lissette, a 22-year-old African-American mother of two, as an example. Before the storm, she lived in a neighborhood characterized by high rates of poverty (35%; +0.64 SD) and violent crime (6.77; +0.27 SD). After Hurricane Katrina, however, she settled in a suburban Houston neighborhood with relatively low rates of poverty (13%; -0.67 SD) and violent crime (5.02; -3.46 SD). She described herself as "comfortable" in her new neighborhood. Having found a job at a call center, Lissette recalled an experience with her employer who would "badmouth" New Orleans evacuees in front of her:

> My supervisor was badmouthing New Orleans evacuees and, my coworker sat next to me and looked at me, shaking her head, like, "He just don't know. He just don't know." I told him I was from New Orleans, and he told me, "You don't talk like it." I'm like, "How am I supposed to sound?" He was like, "Oh, I'm sorry. They just showed the other side of New Orleans on TV."

Perhaps due to class-based differentiation such as not having heavily accented English (Massey and Lundy 2001) or some other unobserved factor that pushes individuals to respond to stigmatization (Lamont, Beljean and Clair 2014; Lamont and Mizrachi 2012), Lissette settled in her new neighborhood and achieved substantial improvements in neighborhood mobility.

DISCUSSION

Why, when given the opportunity to move from high- to low-poverty neighborhoods, do some low-income families return to economically-deprived contexts? Extant literature suggests that low-income families often move "reactively" to factors outside of their control (DeLuca, Wood and Rosenblatt 2014; Rossi 1955). Rooted in scholarship that examines how structural conditions drive families to move, this literature tells us very little about how social networks operate to shape residential migration and mobility trajectories for vulnerable populations. Drawing on longitudinal data from a sample of low-income mothers who survived Hurricane Katrina, I re-integrate social networks into the discussion: while housing unit quality, landlord decisions, and housing policies are all important drivers of residential migration, social ties are also a relevant component of social structure (Massey 1990) that push and pull families into divergent residential migration and mobility trajectories.

All initial moves in this study were unplanned, precipitated by an environmental push that has long factored into discussions of neighborhood migration (Wolpert 1966). With most respondents having fewer than 24 hours to evacuate their New Orleans neighborhoods, social connections represented the most efficient conduit through which respondents received information or help to find a new place to live. Once settled in this location, a family may evaluate the utility of residence in the new neighborhood along various dimensions: while

objective measures of neighborhood amenities—such as low rates of poverty, violent crime, and unemployment, as well as racial balance—are important, social resources also factor into the cost-benefit calculation. Such a reality helps to explain the persistence of neighborhood segregation in two ways.

First, most individuals receive information or help through their network peers that minimize the costs and maximize the expected benefits of residential migration. Known as social facilitation (DiMaggio and Garip 2012), this process depends on the availability of social resources from the origin neighborhood at the destination, which act to reduce the costs—financial, informational, temporal, and psychological—of settling in a new neighborhood (Boyd 2008; Sampson, Morenoff and Earls 1999). Absent these social ties, a family may evaluate the costs of settlement in the new environment to be too high and "re-optimize" by moving to another neighborhood that maximizes their proximity to social resources. While such a decision may entail moving away from areas of low poverty, unemployment, and violent crime rates, and high levels of racial diversity, proximity to social resources justifies the tradeoff for many families.

Sometimes this tradeoff is an undesirable but necessary reality for low-income families, however. This is especially the case when social resources from origin are absent in the destination neighborhood. Through a second process known as normative influence (DiMaggio and Garip 2012), network peers offer direct or indirect social rewards to encourage, or impose sanctions to discourage, residential migration. While this process does not alter the cost-benefit calculation associated with migration, it may lead some families to react to structural constraints—a lack of finances or childcare, for example—in the new neighborhood and result in their moves closer to their social ties. Such movements are likely to reproduce patterns of racial and economic segregation (Sampson 2008; Sampson 2012).

[**Table 5 about here.**]

Indeed, proximity to social peers appears to explain some of the observed differences in the sample's residential mobility outcomes. Table 5 evaluates the association between proximity to network peers and the six indicators of locational attainment. Reductions in county-level violent crime rate are detected for all respondents regardless of average ego-alter distance.[18] For respondents within 100 kilometers of their alters, such proximity is associated with reductions in poverty, unemployment, and the percentage of black residents living in the census tract, as well as increases in the share of white and Hispanic neighbors. Being "close enough" to one's social ties may thus promote long-term residence in neighborhoods with traditionally "desirable" neighborhood amenities. No such reductions in poverty or increases in the share of white residents manifest for respondents whose alters are 100 kilometers or more away from them. These results are consistent with the idea that proximity to social ties after a reactive move influences residential migration and mobility trajectories.

[18] This is likely due to measuring the violent crime rate at the county level, a unit of analysis too high to capture tract-level differences in violent crime that may manifest for individuals in different neighborhoods within the same city and county.

This analysis thus urges scholars and policymakers to reconsider what living in a "desirable" neighborhood means for low-income families. While living in racially segregated and economically-deprived neighborhoods influences low-income families' life chances in a number of ways (Acevedo-Garcia and Lochner 2003; Brooks-Gunn, Duncan and Aber 1997; Sampson 2012; Wilson 1987), we should be careful of imposing a normative definition of what constitutes a quality neighborhood. Take the case of the Moving to Opportunity experiment: though often viewed as the "gold standard" in residential migration studies (Sampson 2008), it assumes that, by randomizing low-income families into low-poverty neighborhoods, endogenous neighborhood selection is no longer a source of concern (Kling, Liebman and Katz 2007). But the location of individuals' social resources mattered greatly for whether a family settled in the low-poverty neighborhood in the long-term (Briggs, Popkin and Goering 2010). Conceptualizing social resources as a component of social structure that alters families' cost-benefit evaluations of a neighborhood context thus helps to explain why low-income families are likely to exit low-poverty neighborhoods for higher-poverty ones across time (Massey, Gross and Shibuya 1994; South, Crowder and Chavez 2005). Future work that explores in greater depth the multifaceted meaning of "desirable" neighborhood resources for low-income families would be invaluable.

Natural Disasters and Residential Mobility

Natural disasters are likely to grow in frequency in the near future (Van Aalst 2006), and they have the potential to illuminate important social processes impacting locational attainment in non-experimental frameworks (Klinenberg 2003). While it may seem unorthodox to compare disaster-induced migration to other types of residential migration, there is much overlap in research across both fields that renders this comparison productive. First, both types of migration are class-based phenomena (Fischer 2002; Landry et al. 2007; Schachter 2004), with high-income families more likely to migrate voluntarily. Meanwhile, low-income families in both settings are likely to migrate because of less agentic circumstances. In the same way that natural hazards compel families to move within a short timeframe and with limited planning, so too do processes of eviction or near-eviction (Desmond 2012b), city redevelopment (Smith 1996; Wyly and Hammel 1999), and public housing demolition (Bennett, Smith and Wright 2006; Goetz 1993), as well as zoning laws and discriminatory housing practices (Massey and Denton 1993). Low-income black mothers are disproportionately disadvantaged in both settings (Desmond 2012b; Enarson 1999; Hunter and David 2011; Hurlbert, Haines and Beggs 2000), relying on kinship ties to facilitate their recovery.

There is also much overlap in the discourse utilized by neighborhood and disaster scholars. For example, the "refugee" label that the low-income families confronted in their opportunity neighborhoods is reflective of respondents' larger "outsider" status. But this situation is not unique to survivors of natural disasters. While the terminology may be different, low-income families moved to opportunity neighborhoods are also likely to confront stereotypes cast upon them by their new neighbors (Arthurson 2010; Asad Forthcoming; Tach 2009). A robust literature on residential preferences underscores the importance of neighbors' attitudes for low-income families' mobility outcomes (Charles 2003). This study's findings suggest that broader patterns of social alienation may diminish individuals' sense of belonging and citizenship (Sykes et al. 2014) and undermine moves to opportunity neighborhoods. Future work is needed to scrutinize this assessment. Nationally-representative evidence suggests disaster-induced

migration has much to do with locational attainment (Elliott 2014), and accumulating evidence on this question would be invaluable to scholars in both subfields.

On the Utility of Mixed Methods

My inductive and mixed-method approach is a major strength of this study on how social ties matter for low-income families' residential migration and mobility trajectories. While the geographic data initially demonstrated that some respondents moved to opportunity after their unplanned moves, the qualitative data revealed the social processes underlying the selective migration. The social network data later allowed me to validate the inductively-derived themes from the qualitative data; that is, proximity to social resources influences residential migration and mobility trajectories. Combining these multiple methods into a single study, an increasingly prevalent trend in the social sciences (Lieberman 2005; Pearce 2012; Small 2011) allows me to determine the social processes underlying neighborhood selection, which has eluded past work (Boyd 2008; Kan 2007). Sociological research would greatly benefit from such an approach going forward. This study only represents one step in that direction.

Limitations

Race, Gender, Class, and Migration

A homogenous sample design reduces the risk of structural confounding (Messer, Oakes and Mason 2010), allowing me to study how social ties generate divergent residential migration and mobility outcomes; however, it also limits the generalizability of the study. Respondents in the qualitative sample are entirely female, predominantly black, and have household incomes below 200% of the federal poverty line. A growing body of work in various fields suggests that the reasons why women migrate may differ from those of men (Curran et al. 2005; Curran et al. 2006), and this may be especially true in the context of residential migration. Future work that is capable of directly scrutinizing racial and gender differences—paying close attention to the relationship between multiple dimensions of individuals' social relationships and subject formations (Crenshaw 1991; McCall 2005)—in neighborhood selection is sorely needed.

Inter-City Migration

Approximately 41% of Louisiana's population was affected by flooding in the wake of Hurricane Katrina, with most originating from the New Orleans metropolitan area (Gabe et al. 2005). More than 60% of New Orleans' housing stock was leveled (Davis and Bali 2008), and due to a century-long process of race- and class-based segregation in New Orleans (Berube and Katz 2005; Cutter and Emrich 2006), African Americans were more likely to live in neighborhoods that experienced serious flooding (Brazile 2006) and housing damage (Paxson and Rouse 2008) relative to comparable whites. The sheer scale of the disaster thus precipitated evacuees' long-distance moves (Fussell, Sastry and VanLandingham 2010) since the storm rendered within-city or within-county relocation difficult (Graif 2014). This is an important consideration given past work linking stagnant or downward residential mobility to geographic (im)mobility over short distances (DeLuca, Wood and Rosenblatt 2014; Sampson 2008; Sampson 2012), especially since segregation and other forms of disadvantage cluster within

cities (Peterson and Krivo 2010). In contrast, longer-distance residential moves—either across metropolitan or state lines—may produce significant reductions in neighborhood-level poverty (Sampson and Sharkey 2008; Sharkey 2013; South and Crowder 1997).

This study has taken great care to address these concerns. Since the financial costs to migration increase with distance (Zax 1994), and low-income families generally lack the resources to invest in such moves (Landry et al. 2007), we would not have expected the qualitative sample to exhibit such high levels of return migration to New Orleans after Hurricane Katrina. This phenomenon could be explained by the magnified importance of social networks in post-disaster contexts. However, the findings are robust to individuals' residence in the New Orleans metropolitan area, as well as residence in baseline census tracts. This suggests that the social processes identified here are also applicable to within-city moves.

Understanding the social processes through which individuals sort into neighborhoods is important for scholars and policymakers interested in improving the socioeconomic standing of society's most vulnerable populations. Policies aimed at facilitating low-income families' moves to less poor and more racially integrated neighborhoods assume that all individuals should want to live in such neighborhoods. However, my findings illuminate the importance of individuals' established social networks for residential migration and mobility decisions. Investments targeted at structurally improving the conditions of poor or otherwise disadvantaged neighborhoods thus appear to be necessary.

Table 1. Summary of Data Collection for the Resilience in the Survivors of Karina Project, 2003-2011

				05/2007 – 10/2007 **Wave 1 Interviews** (N = 57)		05/2010-08/2012 **Wave 2 Interviews** (N = 68)	
11/2003 – 08/2005 **Wave 1 Survey** (N = 1,019)	08/29/05 **Hurricane Katrina**	09/24/05 **Hurricane Rita**	03/2006 – 02/2007 **Wave 2 Survey** (N = 711)		03/2009 – 06/2010 **Wave 3 Survey** (N = 752)		
November 2003-August 2005 **Opening Doors Study**			March 2006 – October 2011 **Resilience in the Survivors of Katrina Project**				

Table 2. Selected Sample Characteristics at Wave 1 (2003-2005) for Full Survey Sample and Qualitative Subsample

	Full Survey Sample (N = 1,019)		Qualitative Subsample (N = 75)		
	N	*Mean (SD) or Percent*	*N*	*Mean (SD) or Percent*	
Demographics					
Female (%)	942	92.4	75	100	*
Race/Ethnicity (%)					
Non-Hispanic White	103	10.1	4	5.33	
Non-Hispanic Black	838	82.2	65	86.7	
Hispanic	26	2.55	4	5.33	
Other	18	1.77	0	0.00	
Missing	34	3.334	2	2.67	
Age	1,019	25.3 (4.48)	75	24.7 (4.13)	
Household Characteristics at Wave 1					
Marital Status (%)					
Married, Cohabiting	82	8.05	5	6.67	
Married, Not Cohabiting	108	10.6	9	12.0	
Unmarried, Cohabiting	64	6.28	3	4.00	
Unmarried, Not Cohabiting	749	73.5	58	77.3	
Missing	16	1.57	0	0.00	
Number of Children (%)					
1	516	50.6	39	52.0	
2	276	27.1	21	28.0	
3 or more	222	21.8	15	20.0	
Missing	5	0.49	0	0.00	
Household Size (%)					
1	12	1.18	0	0.00	
2	209	20.5	13	17.3	
3	308	30.2	31	41.3	
4	222	21.8	13	17.3	
5 or more	233	22.9	15	20.0	
Missing	35	3.43	3	4.00	
Income/Resources at Wave 1					
Monthly Income (Logged)	893	993.2 (536.5)	66	969.4 (564.3)	
Receives Any Public Assistance (%)					
Yes	692	67.9	58	77.3	
No	304	29.8	16	22.7	
Missing	23	2.26	0	0.00	
Currently Employed (%)					
Yes	523	51.3	31	41.3	
No	494	48.5	43	57.3	
Missing	2	0.20	1	1.33	
Psychological Distress					
Wave 1 (2003-2005)	971	4.93 (4.13)	75	4.95 (4.14)	
Wave 2 (2006-2007)	707	6.31 (4.92)	75	7.21 (5.73)	†
Wave 3 (2009-2010)	746	5.65 (4.88)	75	6.33 (5.36)	
Social Network Measure					
Distance between Respondent and Alters at Wave 3 (km)	607	107.8 (225.7)	75	101.6 (148.1)	

Note: † $p < .10$, * $p < .05$. Pearson's Chi-Square test for distributions and *t*-test for difference in means. No significant differences detected between responders and non-responders. Some cells may not sum to 100 due to rounding.
Source: RISK Project data.

Table 3. Neighborhood Characteristics for Qualitative Subsample for Waves 1 (2003-2005), 2 (2006-2007), and 3 (2009-2010)

	Qualitative Sample (SD) (N = 75)	Minimum, Maximum
Poverty Rate		
Wave 1	26.3 (13.7)	5.87, 69.2
Wave 2	24.9 (13.4)	1.94, 52.9
Wave 3	21.5 (12.6)	4.35, 50.3
Unemployment Rate		
Wave 1	10.7 (5.59)	2.53, 27.7
Wave 2	11.4 (7.21)	0.00, 36.9
Wave 3	10.7 (8.30)	1.24, 52.8
Violent Crime Rate (logged)		
Wave 1	6.71 (0.22)	5.76, 6.89
Wave 2	6.53 (0.34)	5.42, 7.37
Wave 3	6.45 (0.41)	5.02, 6.77
Percent White		
Wave 1	24.1 (25.1)	0.00, 76.9
Wave 2	27.8 (23.3)	0.00, 96.0
Wave 3	30.8 (24.7)	0.00, 96.0
Percent Black		
Wave 1	67.7 (30.1)	5.47, 99.2
Wave 2	49.8 (23.9)	2.17, 99.7
Wave 3	46.6 (31.1)	2.17, 100
Percent Hispanic		
Wave 1	4.17 (4.25)	0.00, 18.2
Wave 2	15.8 (17.1)	0.00, 79.1
Wave 3	16.1 (17.9)	0.00, 79.1

Source: Author's calculations of the 2000 U.S. Census, the 2006-2010 American Community Survey, and RISK Project data.

Table 4. Neighborhood Characteristics for Qualitative Sample for Waves 1 (2003-2005), 2 (2006-2007), and 3 (2009-2010), with *t*-Tests for Difference in Means with Unequal Variances between Waves 1 and 3

	Qualitative Sample (N = 75)	Respondents in New Orleans MSA (N = 45)	Respondents in New Orleans MSA & Wave 1 Tract (N =17)	Respondents in New Orleans MSA & Not Wave 1 Tract (N = 28)	Respondents Outside New Orleans MSA (N = 30)
Poverty Rate					
Wave 1	26.3 (13.7)	25.1 (14.5)	21.0 (16.6)	27.6 (12.7)	28.2 (12.4)
Wave 2	24.9 (13.4)	25.1 (14.1)	25.0 (11.3)	25.2 (15.7)	24.6 (12.7)
Wave 3	21.5 (12.6) **	24.3 (13.1)	27.1 (12.9) *	22.5 (13.1) †	17.4 (10.8) ***
Unemployment Rate					
Wave 1	10.7 (5.59)	10.2 (5.45)	10.3 (6.27)	10.2 (5.01)	11.4 (5.81)
Wave 2	11.4 (7.21)	11.4 (8.14)	10.5 (4.22)	12.0 (9.83)	11.5 (5.57)
Wave 3	10.7 (8.30)	12.4 (9.53) †	14.1 (11.3) *	11.3 (8.32)	8.20 (5.20) *
Violent Crime Rate (logged)					
Wave 1	6.71 (0.22)	6.70 (0.23)	6.67 (0.18)	6.72 (0.25)	6.74 (0.22)
Wave 2	6.53 (0.34)	6.53 (0.30)	6.56 (0.28)	6.51 (0.32)	6.54 (0.40)
Wave 3	6.45 (0.41) ***	6.49 (0.32) ***	6.55 (0.11) ***	6.45 (0.40) ***	6.40 (0.52) **
Percent White					
Wave 1	24.1 (25.1)	26.6 (27.1)	25.6 (26.6)	27.2 (27.8)	20.3 (21.7)
Wave 2	27.8 (23.3)	30.8 (24.6)	28.3 (23.5)	32.2 (25.5)	23.3 (20.8)
Wave 3	30.8 (24.7) *	29.1 (27.1)	19.4 (23.9) ***	34.9 (27.6)	33.4 (20.8) **
Percent Black					
Wave 1	67.7 (30.1)	65.2 (32.5)	64.4 (33.1)	65.7 (32.7)	71.4 (26.3)
Wave 2	49.8 (23.9)	53.6 (29.2)	58.6 (30.3)	50.6 (28.6)	44.2 (30.6)
Wave 3	46.6 (31.1) ***	59.2 (31.6) ***	69.7 (31.7) ***	52.9 (30.4) †	27.5 (18.0) ***
Percent Hispanic					
Wave 1	4.17 (4.25)	4.60 (4.77)	5.61 (6.12)	3.99 (3.68)	3.52 (3.28)
Wave 2	15.8 (17.1)	9.89 (10.8)	8.39 (7.92)	10.8 (12.3)	24.6 (20.7)
Wave 3	16.1 (17.9) ***	6.23 (6.51) †	6.51 (7.97)	6.06 (5.61) †	31.0 (19.4) ***

Note: † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. No Wave 1 differences detected for any grouping of respondents displayed above.
Source: Author's calculations of the 2000 U.S. Census, the 2006-2010 American Community Survey, and RISK Project data.

Table 5. Neighborhood Characteristics for Qualitative Sample for Waves 1 (2003-2005), 2 (2006-2007), and 3 (2009-2010) by Distance between Respondent and Named Alters at Wave 3, with *t*-Tests for Difference in Means with Unequal Variances between Waves 1 and 3

	Qualitative Sample (N = 75)	< 100 Kilometers (N = 42)	≥ 100 Kilometers (N = 33)
Poverty Rate			
Wave 1	26.3 (13.7)	28.2 (13.9)	23.9 (13.1)
Wave 2	24.9 (13.4)	26.6 (15.0)	22.8 (11.0)
Wave 3	21.5 (12.6) **	22.9 (13.2) *	19.7 (11.8)
Unemployment Rate			
Wave 1	10.7 (5.59)	11.4 (5.36)	9.80 (5.82)
Wave 2	11.4 (7.21)	13.0 (8.35)	9.53 (4.91)
Wave 3	10.7 (8.30)	11.2 (7.71)	10.1 (9.06)
Violent Crime Rate (logged)			
Wave 1	6.71 (0.22)	6.74 (0.17)	6.68 (0.28)
Wave 2	6.53 (0.34)	6.56 (0.33)	6.50 (0.35)
Wave 3	6.45 (0.41) ***	6.45 (0.37) ***	6.45 (0.47) **
Percent White			
Wave 1	24.1 (25.1)	20.4 (25.0)	28.8 (24.8)
Wave 2	27.8 (23.3)	25.6 (20.8)	30.6 (26.1)
Wave 3	30.8 (24.7) *	28.4 (22.9) *	33.8 (26.9)
Percent Black			
Wave 1	67.7 (30.1)	72.3 (29.8)	61.8 (29.9)
Wave 2	49.8 (23.9)	55.2 (29.3)	43.0 (29.6)
Wave 3	46.6 (31.1) ***	52.8 (31.1) ***	38.6 (29.6) ***
Percent Hispanic			
Wave 1	4.17 (4.25)	3.60 (3.90)	4.90 (4.61)
Wave 2	15.8 (17.1)	13.1 (15.3)	19.1 (18.8)
Wave 3	16.1 (17.9) ***	12.1 (13.7) ***	21.2 (21.3) ***

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. No Wave 1 differences detected between groupings of respondents displayed above.
Source: Author's calculations of the 2000 U.S. Census, the 2006-2010 American Community Survey, and RISK Project data.

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