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Atlanta's Last Demolitions and Relocations: The Relationship Between Neighborhood Characteristics and Resident Satisfaction

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ABSTRACT *Using data from an Atlanta-based longitudinal study following 311 public housing residents relocated between 2009 and 2010 as the city's housing authority demolished its remaining public housing, the purpose of this paper is to examine the relationship between changes in relocated residents' satisfaction with home and neighborhood and the socioeconomic, racial composition, and crime characteristics of their destination neighborhood. Consistent with previous research, we find that residents moved to somewhat safer neighborhoods with less poverty than those of the public housing. In addition, we find that residents view their new homes and neighborhoods as improvements over public housing. However, subjective pre- to postmove changes in satisfaction are* not *driven by changes in neighborhood characteristics (i.e., reductions in poverty and crime), but rather by decreases in perceived social disorder and increases in community attachment. Thus, our findings challenge some of the assumptions of poverty deconcentration. Policy implications are discussed.*

KEY WORDS: Public housing demolition, housing choice vouchers, USA, relocation, Atlanta

Introduction

For almost two decades now, much of federal low-income housing policy has been framed around issues of concentrated poverty related to public housing (Goetz, 2010). Between 1993 and 2010, the Housing Opportunities for People Everywhere (HOPE VI) program sought to transform public housing by demolishing large, spatially concentrated—and in many cases deteriorating—developments and replacing them with mixed-income housing (Goetz, 2000, 2010; Popkin *et al.*, 2009; Smith, 2002). The objectives of these public housing–transformation efforts have been to improve the quality of former public housing neighborhoods, as well as former public housing residents' lives by deconcentrating

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poverty (Curley, 2010; Joseph, 2006; Vale, 2006). Since 1993, HUD has awarded more than $6 billion in HOPE VI grants to 190 housing authorities across the country (Castells, 2010).

Fundamental to the structure and aims of HOPE VI is the relocation of public housing residents, many of whom do not get the opportunity to return to the redevelopments because, on average, only about 20 per cent of the new units are set aside at the former residents' income levels (Clampet-Lundquist, 2004; Goetz, 2010; Kleit & Manzo, 2006; Oakley *et al.*, 2011). Therefore, of the more than 100 000 traditional public housing units demolished nationally under HOPE VI, only a fraction have been replaced (Goetz & Chapple, 2010). In other words, by the very definition of mixed income, the majority of the public housing units are not replaced (Keene & Geronimus, 2011). Instead, through the use of housing choice voucher subsidies (formerly Section 8), public housing residents are relocated to the private rental market (Oakley & Burchfield, 2009).

Destination neighborhood characteristics have led to policy debates. Although many former residents have been relocated to somewhat safer neighborhoods with moderately lower poverty levels, moves tend to be short distances and destinations just as racially segregated as public housing (see, for example, Fraser & Nelson, 2008; Goetz, 2010; Kleit & Galvez, 2011; Oakley *et al.*, 2011; Varady & Walker, 2000). In cities like Chicago with tight rental markets, many former public housing residents end up in other high-poverty neighborhoods (see, for example, Fischer, 2001, 2002; Goetz, 2003; Popkin, Katz, *et al.*, 2004; Popkin *et al.*, 2009; Popkin, Levy, *et al.*, 2004; Venkatesh & Celimli, 2004). Likewise, debate continues about whether relocated residents experience improvements in economic and educational opportunities (see, for example, Chaskin *et al.*, 2012; Goetz, 2003, 2010). There has also been an increased focus on the importance of public housing residents' social support networks and not only how do they impact moving decisions, but also how do the geographic proximity to such supports postrelocation may impact moved outcomes (see, for example, Clampet-Lundquist, 2004, 2010; Kleit & Galvez, 2011).

What has not been widely researched, however, is the relationship between levels of resident satisfaction with destination home and neighborhood and destination neighborhood characteristics. This relationship is relevant because an underlying assumption of poverty deconcentration is that a more balanced neighborhood-level income mix will, over time, lead to improved economic opportunities and improved quality of life for poor residents (Brenner & Elden, 2009). Implicit in the notion of improved quality of life is improved subjective satisfaction with home and neighborhood. If we view poverty deconcentration assumptions within Soja's (2000) framework of spatiality, the argument is that creating more mixed-income neighborhoods should yield a more positive reproduction of neighborhood social space.

Many researchers have debated these assumptions. For example, Schwartz & Tajbakhsh (1997) argue that they are at best only loosely supported and at worst open to challenges (*cf*. Keating & Flores, 2000, p. 385). In fact, a big weakness of poverty deconcentration assumptions is the notion that neighborhood-level change will directly affect individual outcomes. This is sometimes referred to as an ecological fallacy, in that neighborhood characteristics are assumed to predict individual outcomes within the neighborhood (Robinson, 1950). The relatively modest improvements found in the current research lend some support to this contention. However, frequently left out of quantitative examinations, in particular, are residents' perceptions of change in home and neighborhood satisfaction. Using data from an Atlanta-based longitudinal study following 311 public housing

residents relocated between 2009 and 2010, the purpose of this paper is to add these subjective dimensions to build on previous research.

Atlanta is an interesting case because, by 2011, all of its traditional public housing had been eliminated. In fact, about 10 000 residents have been relocated since 2007, bringing the total since 1994 to 50 000. Ironically, Atlanta was one of the first city to establish public housing in 1936, and one of the first to take advantage of HOPE VI in the early 1990s. In early 2007, the Atlanta Housing Authority (AHA) announced plans to demolish all remaining traditional public housing. This last round of demolitions was not done under HOPE VI; rather, it was completed under Section 18 of the 1937 Housing Act, which unlike HOPE VI requires no immediate replacement units. The only relocation option that residents were given was to move to private rental market housing with a voucher subsidy. Thus, our analyses take place within the context of Atlanta's last demolitions, not reviewed by previous studies of public housing relocation in this city. Previous studies are discussed in the 'Background' section.

We acknowledge that our examination is based on a sample of relocated public housing residents and therefore is not representative of *all* relocated Atlanta residents from this last round of demolitions or previous ones. However, our survey data have extensive information on residents' pre- and postrelocation perceptions of home and neighborhood—data that are not available from official administrative sources. In addition, since the AHA was designated as a Move to Work site in 2004, the agency has not been required to report voucher data at the census tract level to HUD. Therefore, these data are not available through HUD's *Picture of Subsidized Housing*.

The data we examine come from our prerelocation baseline and 6-month postrelocation surveys. Therefore, we focus on immediate or short-run environmental perceptions—i.e., residents' perceptions of their new home, neighborhood, and overall satisfaction—as well as on destination neighborhood characteristics at the census tract level. Although 6 months is too soon postmove to accurately assess other major outcomes such as improvements in employment opportunities and educational quality, it provides valuable information on residents' perceptions—ones that can be compared to long-term outcomes, which we plan to examine with our 24-month follow-up survey once completed.

We begin by providing some background on US low-income housing policy and reviewing the current research; we then focus on the Atlanta case. We describe our data and methods and summarize the residents' characteristics. We then present census tract-level profiles of socioeconomic, racial, and crime characteristics of the destination neighborhoods compared with citywide, nonreceiving, and public housing neighborhoods. We examine the degree of residents' perceived satisfaction with their new homes and neighborhoods using paired-sample *t*-tests and multivariate change modeling (first-difference regression). Finally, we discuss policy implications and conclude.

Background

The 1949 Housing Act declared that every American has the right to 'a decent home and a suitable living environment' (Lang & Sohmer, 2000, p. 291). While 'decent housing' may refer to the quality of the actual housing structure, 'suitable environment' refers to the surrounding neighborhood. Thus, the spatial arrangements of federally sponsored housing programs should provide access to neighborhoods where poverty, crime, and poor public education opportunities do not constrain children's opportunities for upward mobility

(Freeman, 2004; Newman & Schnare, 1997). The Act ushered in federal involvement on the local level (Goetz, 2003) linked the general wealth and overall health of the country to housing quality, and dictated remedies for the 'serious housing shortage, [and] the elimination of substandard and inadequate housing' (Lang & Sohmer, 2000, p. 293).

Most relevant to urban areas were the Act's Title I, financing slum clearance through urban renewal; Title II, expanding the Federal Housing Administration mortgage insurance program; and Title III, committing federal dollars to building 810 000 new public housing units (Bratt, 2004; Lang & Sohmer, 2000). Titles I through III had contradictory consequences. White flight from the cities, fueled in part by expanded federal mortgage insurance, caused rapid suburbanization and market disinvestment in the urban core. Discriminatory mortgage practices kept minority households out of the suburbs (Massey & Denton, 1993). Finally, urban renewal initiatives razed inner-city neighborhoods, displacing minority families and shrinking the supply of affordable housing in cities across the country (Teaford, 2000). Public housing became the only option for the urban poor (Freeman, 2004). Discriminatory siting led to concentrated development on land cleared through urban renewal in or near poor neighborhoods, often blocks from original residences (Bickford & Massey, 1991).

The concentration of urban poverty and placement of public housing are interdependent, with housing consistently located in poor Black neighborhoods (Massey & Kanaiaupuni, 1993). Ongoing research supports the connection between location of public housing and concentrated poverty (see, for example, Bauman, 1974; Bickford & Massey, 1991; Freeman, 2004; Goering and Coulibably, 1989; Goering *et al.*, 1997; Goetz, 2003; Gray & Tursky, 1986; Hirsch, 1983; Jargowsky, 1997; Massey & Denton, 1993; Meyerson & Banfield, 1955; Newman & Schnare, 1997; Rossi & Dentler, 1961; Wilson, 1987). Investigators focused on indirect effects of public housing and concentrated disadvantage on tenant outcomes: participation in the labor force, failure to complete high school, and civic apathy (Currie & Yelowitz, 1998; Reingold *et al.*, 2001). Findings are mixed due to the difficulty of disentangling the impact of public housing from overall neighborhood disadvantage (Reingold *et al.*, 2001). Although there are ongoing debates in the literature, high levels of neighborhood poverty have been associated with lower educational attainment, joblessness, a disproportionately high share of single female-headed households, social isolation, and increased crime (Strait, 2006; Wilson, 1987).

The Brooke Amendments to the HUD Acts of 1969, 1970, and 1971 shifted federally sponsored low-income housing construction to rent supplements and capital cost subsidies to private market landlords. According to Hartman (1975), these amendments capped the amount of rent that residents could pay as a portion of their income (typically 30 per cent), and introduced an operating subsidy so that housing authorities could increase rental revenue. These amendments led to the passage of the Housing and Community Development Act in 1974. Including funding for a new program, Section 8, the Act subsidized private market initiatives to rehabilitate existing housing and limited privately sponsored new construction (Freeman, 2004). By the early 1980s, all construction of federally subsidized low-income housing ceased; Section 8 was recast as a demand-side subsidy for existing private market housing through vouchers to qualified tenants (Burchell & Listokin, 1995). Although existing public housing continued to be widely used for low-income housing along with voucher subsidies to private market housing,

federal devolution and funding cuts resulted in a rapidly deteriorating public housing stock (Goetz, 2003; Stone, 1993).

The HUD Reform Act of 1989 created the National Commission on Severely Distressed Public Housing to identify severely distressed public housing developments nationwide, assess strategies to address their problems, and formulate a plan of action (National Housing Law Project, 2002). The HOPE VI program was initiated several years later in response to the estimate that of the more than one million public housing units in the country, 86 000 of them were severely distressed (National Commission on Severely Distressed Public Housing, 1992; Turbov & Piper, 2005). One of the program's primary objectives was to reduce concentrations of poverty by encouraging the demolition of public housing and the redevelopment of mixed-income housing in its place (Pitcoff, 1999). In order to achieve these objectives, relocation to private market rental housing with the help of voucher subsidies became a key component of the program (Kingsley *et al.*, 2003; Kleit & Galvez, 2011; Popkin *et al.*, 2009).

The two existing multisite studies of HOPE VI relocations include the HOPE VI Panel Study and the HOPE VI Tracking Study, both commissioned by Congress and conducted by the Urban Institute (Buron *et al.*, 2002; Keene & Geronimus, 2011; Popkin, 2010; Popkin & Cunningham, 2002). While the Panel Study tracked relocated residents longitudinally, the Tracking Study provided a point-in-time snapshot of postmove living conditions. Popkin *et al.* (2009) summarize the major findings from these studies, concluding that for the most part results show significant improvements in the quality of life of relocated residents: they are living in neighborhoods that are safer and have lower poverty levels than public housing. But Popkin *et al.* (2009) also point out that many relocated residents struggle with the new challenges they face in private market rental housing, and that those who moved to other public housing developments experienced only a small improvement over the communities they were forced to leave (p. 485).

Case studies have captured some of the less positive nuances of relocation and place greater emphasis on the fact that destination neighborhoods are just as racially segregated as the public housing (see, for example, Buron *et al.*, 2007; Chaskin *et al.*, 2012; Comey, 2007; Crump, 2002; Devine *et al.*, 2003; Fischer, 2001, 2002; Fraser *et al.*, 2004; Goetz, 2002, 2003, 2010; Greenbaum, 2002, 2008; Johnson-Hart, 2007; Keene & Geronimus, 2011; Keller, 2011; Kingsley *et al.*, 2003; Kleit & Manzo, 2006; Oakley & Burchfield, 2009; Venkatesh, 2002; Wang *et al.*, 2008). Some of the less positive outcomes include loss of important social support networks; increases in residential instability; and little benefit in terms of better employment and education opportunities. In fact, Chaskin *et al.* (2012) found evidence of decreased earning postrelocation. Goetz (2010) also emphasizes that while destination neighborhood may be less poor than public housing neighborhoods, poverty rates are typically higher than citywide rates.

How community attachment, loss of social support, and proximity to existing networks affected moving decisions and outcomes has been the subject of a number of studies. As Briggs (1998) points out, social support is a type of social capital essential to low-income residents that typically involves having locally based, homogeneous social ties (*cf.* Boyd, 2008, p. 58). Clampet-Lundquist (2010) found that families relocated from public housing in Philadelphia under HOPE VI lost their neighborhood-based social capital, which they drew upon in public housing for safety. Therefore, residents felt more vulnerable in their new neighborhoods. Manzo *et al.* (2008) found that community attachment was important to relocated residents. Goetz (2010) and Kleit & Manzo (2006)

found that premove orientation towards the prospect of relocation played a role in subsequent postmove experiences or perceptions. In other words, residents who were more attached to their public housing communities were less likely to be satisfied with their relocated homes. Related to all of these findings is Kleit & Galvez's (2011) finding that relocation decisions were largely driven by the desire to remain close to existing and needed social supports and good public transportation. In an earlier study, Goetz (2003) found similar results.

Similarly, the Gautreaux Two study, examining the second relocation wave of residents out of Chicago's public housing communities into predominantly White, low-poverty neighborhoods, found that proximity to existing social networks was important to these residents, meaning that many residents were reluctant to move too far from the neighborhoods they knew (Pashup *et al.*, 2005). Also, those who did move far from existing networks were likely to move back within 5 years (Kling *et al.*, 2004; Pashup *et al.*, 2005). Boyd (2008) found that existing social networks also played a crucial role in terms of residential stability for those residents who did move to more advantaged neighborhoods if they were geographically proximate. In addition, Clampet-Lundquist (2004) found that public housing residents being relocated fell into different subgroups, with the subgroup more likely to move to more advantaged neighborhoods having greater access to the practical amenities of middle-class residents take for granted such as a car. These findings are similar to those of the Moving to Opportunity (MTO) program, an initiative modeled on Gautreaux (Briggs *et al.*, 2010; Rubinowitz & Rosenbaum, 2000).

Despite the finding that relocated public housing residents typically move to safer neighborhoods, there have been debates about the effect of relocation on destination neighborhood crime rates. Particularly controversial was Rosin's (2008) *Atlantic Monthly* article using analysis that showed crime increases in relocated public housing residents' destination neighborhoods in Memphis, TN. This prompted Briggs and Dreier to publish a statement in the July 2008 issue of *Shelterforce*, signed by many leading housing scholars criticizing Rosin for a misleading and oversimplified analysis (p. 1).

A subsequent study using far more rigorous methods than Rosin's by Gould *et al.* (2011) examined the relationship between census tract-level crime and subsidized housing location. They found that voucher households live in neighborhoods that are safer than public housing ones and about as safe as places where unsubsidized low-income renters live. However, this study did not specifically examine the effects of former public housing–resident voucher moves.

Most recently, the Urban Institute released a report examining the relationship between public housing relocation and neighborhood crime trends in Chicago (2000–2008) and Atlanta (2002–2009) using administrative data obtained from these cities' housing authorities and police departments (Popkin *et al.*, 2012). Findings indicate that crime rates declined in the neighborhoods where public housing was torn down, as well as in many of the neighborhoods where former public housing residents relocated. However, in a relatively small number of receiving neighborhoods in both cities, crime decreased *less* than it would have if no former public housing residents had moved in (p. 4). Specifically, moderate-receiving neighborhoods were more likely to have, on average, a violent crime rate of 11 per cent higher than a nonreceiving neighborhood in Atlanta and 13 per cent higher in Chicago. For violent crimes, it is the high-receiving neighborhoods that are more vulnerable to an increased rate compared to nonreceiving ones (21 per cent higher for both cities). The authors note that the relationship between crime trends and public housing

relocation is complex because poor neighborhoods with preexisting higher crime rates tend to be the most accessible to relocating public housing residents, and therefore establishing cause and effect is very difficult.

The Case of Atlanta

In September 1990, Atlanta was informed that it had been chosen for the 1996 Summer Olympic Games, providing the city with the unprecedented opportunity for revitalization. City officials quickly moved into action designating the area where two public housing communities (Techwood and Clark Howell Homes) were located as the site for the Olympic Village. These communities were centrally located and adjacent to the campus of Georgia Institute of Technology, as well as Coca Cola's headquarters (Newman, 2002). However, according to Keating (2000a, 2000b), business and political leaders began to ask whether Atlanta could host athletes from all over the world in a high poverty area. Thus, one of the key actors involved in preparing the city for the Olympics was the AHA. During the early 1990s, a series of taskforces and planning committees were formed to determine how to redevelop the Techwood and Clark Howell Homes communities, but none of these plans were feasible (Keating & Flores, 2000). Then the AHA formed the Olympic Legacy Program with an eye toward demolishing and redeveloping these properties along with two others in the city (Newman, 2002).

During this period a new Executive Director, Renee Glover, took control of the AHA. Plans to raze and redevelop these properties in preparation for the Olympic Games coincided with the new HOPE VI legislation. This meant strong support for public housing demolition and redevelopment from both city officials and HUD. Therefore, despite opposition from advocacy and public housing resident groups, these plans were approved. The AHA successfully secured more than $200 million in HOPE VI funding to partner with private developers to build mixed-income replacement properties (Keating & Flores, 2000; Shalhoup, 2007; White, 1997). Under Glover's leadership, the AHA also leveraged what was seen among policy-makers as an innovative plan to reinvent public housing to get approval and additional funding from HUD to demolish and redevelop 10 more public housing complexes scattered across the city (Boston, 2005; Husock, 2010; Newman, 2002).

The initial redevelopment phase of Techwood and Clark Howell Homes in preparation for the Olympics was completed by 1995, and the area was subsequently fully redeveloped by 1997. Redevelopment was completed on East Lake Meadows in 1997 and on John Hope Homes in 1998. Demolition was completed on Carver, Harris, John Eagan, and Perry Homes, as well as Kimberly Courts between 1997 and 1998. Although relocation was completed at Capitol Homes by 1998, demolition and redevelopment did not begin until 2001. In the early 2000s, three more public housing communities, John O'Chiles, McDaniel Glenn, and University Homes, were demolished. Redevelopment was completed at these communities by 2006. Figure 1 shows the locations of the HOPE VI redevelopment sites, all of which were renamed, as well as the remaining public housing as of 2007.

As plans for demolition and redevelopment began in the early 1990s, about half of the tenants in the Techwood and Clark Howell Homes communities had either moved on their own or been evicted (Keating, 2000b). No attempt to track these residents was made,

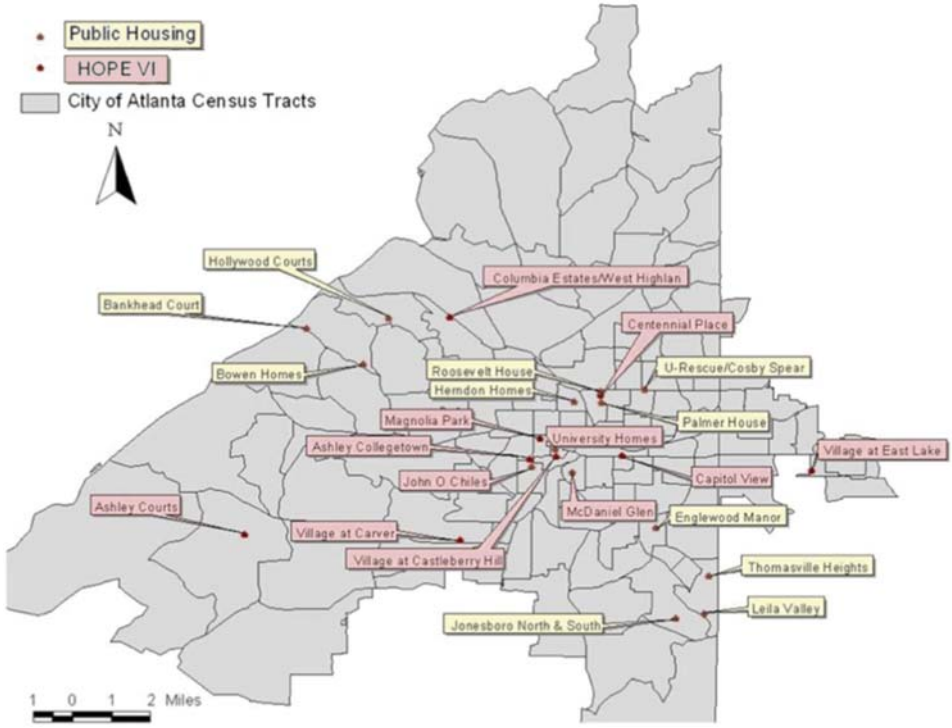

Figure 1. Public housing and HOPE VI redevelopments as of 2007.

although it is believed that most remained within the city limits in private unsubsidized rental housing (Creighton & Keating, 1999; Keating, 2000b; Newman, 2002).

Qualified public housing residents were given a choice to either move to one of the other public housing communities not slated for redevelopment or receive a voucher for private market rental housing. About one-third chose to move to another public housing community (Boston, 2005). Most of these residents, whether they moved with a voucher or to another public housing community, remained within the city limits (Newman, 2002). Residents who moved with assistance were initially given an option to return to the redevelopments. Yet, by the early 2000s, only 17 per cent of the original public housing residents were able to return to the new HOPE VI developments (Newman, 2002; Oakley *et al.*, 2008).

A Georgia Institute of Technology study conducted on the residential outcomes of residents who received a voucher compared with those who either relocated to or remained in other traditional public housing concluded that the voucher households experienced significant improvements in socioeconomic status and neighborhood quality (Boston, 2005). Bulent *et al.* (2010) found improvements in employment among Atlanta's relocated former public housing residents as well. Rich *et al.* (2010) found that residents relocated with vouchers from Atlanta's McDaniel Glen public housing community experienced improvements in education quality. None of these findings are consistent with the broader literature: *little* socioeconomic or educational improvements. In fact a subsequent examination of Boston's (2005) findings by other housing researchers concluded that *significant improvements* were overstated (Goetz, 2005). Still, what is now known as the

'Atlanta Model' for public housing transformation was deemed a success by local officials, as well as by those in national policy circles, leading to the 2007 decision to demolish the remaining public housing.

The Present Study

This study expands upon the previous research on public housing relocation by examining the relationship between changes in residents' satisfaction with home and neighborhood to the census tract-level characteristics of their destination neighborhoods. Here, we define neighborhoods as census tracts. Treating census tracts as neighborhoods resonates conceptually since the Census Bureau tries to draw tract boundaries that conform to local perceptions, and was designed to be homogeneous with respect to population characteristics, economic status, and living conditions (Quillian, 1999).

Similar to previous case studies, we examine destination neighborhood socioeconomic, racial, and crime characteristics as compared with those of the former public housing. We also investigate the dimensions of residents' postrelocation perceptions and how these relate to neighborhood characteristics. In other words, given resident perceptions and neighborhood characteristics, what are the specific dimensions driving levels of satisfaction (or dissatisfaction)?

This question is important because, as mentioned in our introduction, an underlying assumption of poverty deconcentration is that a more balanced neighborhood-level income mix will lead to an improved quality of life for former public housing residents, as well as an improved economic opportunity structure. Although we cannot shed light on improved economic opportunities as this perhaps takes more than 6-month postrelocation, our analyses allow us to tease out the specific dimensions of residents' change in housing and neighborhood satisfaction (whether decreasing or increasing). We examine whether these changes are driven by reductions in poverty and crime at the neighborhood level as previous research implies, or by more subjective dimensions? Such an investigation has yet to be fully executed. However, we contend that it is important in terms of gaining a more thorough understanding of how relocated residents perceive their new environs vis-a-vis overall neighborhood characteristic change.

In what follows, we first provide a more detailed explanation of our data and methods, as well as our sample characteristics, and then examine change in neighborhood level from pre- to postrelocation. Subsequently, we examine the relationship between neighborhood change and resident perceptions in terms of their postrelocation home and neighborhood satisfaction. Finally, we provide a discussion of the policy implications.

Data and Methods

About 6 months after the AHA's 2007 announcement, members of the Jurisdiction-wide Public Housing Resident Advisory Board (RAB) met with sociology department faculty to discuss conducting a survey of residents' views about relocation and how relocation ultimately impacts their lives and overall well-being. The Georgia State University (GSU) Urban Health Initiative was formed to conduct this study.

Of the public housing communities slated for demolition, five were almost vacant and one was inaccessible when we began developing the survey in early 2008. Thus, we targeted communities that would not begin relocation until September 2008. A sample

of 311 public housing residents was collected from six Atlanta public housing communities (four family developments and three senior/disability high rises).

We conducted a baseline (prerelocation) survey over the summer of 2008. We intended a disproportionate random sample of 426 participants with equal numbers from each housing community ($n = 71$). We initially achieved only 49 per cent of our goal ($n = 208$) due to constraints beyond our control, including constant interference from the housing authority, but not related to the characteristics of the public housing residents; thus, no systematic bias was introduced. We then opened the study up to volunteers to increase the sample size. An additional 103 volunteered. Our final sample size is 311, or 73 per cent of our desired sample size. This is a major limitation of our study. However, we tested the random and nonrandom portions of the sample on all variables included in the study and found no significant differences on any variables. We included the tests on constructs used in this paper in Table 4.

All respondents were age 18 or older, more than 90 per cent were the leaseholders, and only one member per household participated. Given that we knew which units were occupied in each of the housing community prior to sampling, we created postsurvey sampling weights to make the sample representative of the six public housing communities. Nonetheless, caution should be applied when making generalized inferences from this sample.

We reinterviewed our respondents 6–8-month postrelocation from November 2009 to September 2010. The survey was essentially the same as the baseline in order to assess pre- to postrelocation change. As of September 2010, when we ended the 6-month follow-up window, we had achieved a 78 per cent response rate.

For this paper, we limited the analyses to respondents who completed both the prerelocation and 6-month postrelocation surveys ($n = 248$). We then geocoded the addresses of the original public housing sample and the addresses of residents lived in 6-month postrelocation. Using the geocodes, we attached census tract identifiers for each participant and merged the survey data with 2005–2009 American Community Survey, and with crime statistics from the Atlanta Police Department 2009 *Crime Incident Reports*. In this process, we limited the sample to those who moved within the Atlanta metro area (dropping five out-of-state cases), giving us a final sample size of 243. Given the face-to-face nature of the survey interview, there was very little item nonresponse. In order to maintain as large a sample as possible, we mean imputed the few item nonresponses, and sensitivity analyses show no bias from the procedure.

Survey Constructs

The baseline and postrelocation surveys covered a number of aspects of the residents' lives while living in public housing and in their new homes. Many questions were adopted from the HOPE VI Panel Study (Popkin, 2010) as well as from the MTO study (Briggs *et al.*, 2010) for comparison purposes. We investigated current neighborhood, home, and fear of crime characteristics, as well as household composition, social support, transportation, demographic, income, and other socioeconomic measures. The present analysis focuses on changes in home and neighborhood conditions and satisfaction postrelocation.

Our dependent variables are two attitudinal Likert items asked exactly the same pre- and postrelocation. First, we asked about perceived quality of the home: 'Overall how would you describe the condition of your current home? Would you say it was excellent (1), good

(2), fair (3), or poor (4)?' Second, we asked, 'How satisfied are you with your neighborhood? Would you say, very satisfied (1), somewhat satisfied (2), in the middle (3), somewhat dissatisfied (4), or very dissatisfied (5)?'

To predict to what degree perceived quality of home is a function of problems in the home, we asked a series of yes/no questions about whether the following conditions existed in their home (1) a leaky roof, (2) plumbing that does not work, (3) broken windows, (4) exposed electrical wires, (5) pests, (6) smoke detector, (7) uncorrected water damage to floors, (8) appliances that do not work, (9) peeling paint, and (10) furnace or heater that does not work. At last, we created a measure of housing strain, defined as the portion of monthly income spent on rent and utility bills.

To predict neighborhood satisfaction, we included several self-reported neighborhood scales (see Appendix). Community attachment is measured as a scale created by summing six Likert scale items together. The six items are based on early work by Fried (1963) and adapted from Reitzes's research findings regarding identification with community (see Tester *et al.*, 2011). The Cronbach's α for this scale is 0.92. The scale ranges from 6 (low community attachment) to 30 (high community attachment), with a mean of 17.66. The fear of crime scale was a summation of seven items and has a Cronbach's α of 0.94. It ranges from 7 (no fear) to 35 (very afraid), with a mean of 23.46. The last three scales are social cohesion (ranges from 5 to 25), social disorder (ranges from 7 to 35), and collective efficacy (ranges from 5 to 25) (see Sampson *et al.*, 1997). The Cronbach's α for these three scales are 0.65, 0.73, and 0.83, respectively. This is a fairly comprehensive set of neighborhood measures, yet we did not include measures of stigma, access to structural supports and amenities, and we acknowledge that this is a limitation.

The first difference or change variables for each of the above items were calculated by subtracting Time 1 variables from Time 2 variables. The last three columns of Table 4 present the means, standard deviations, and ranges of the change scores. Although we leave our dependent variables as change variables, for ease of interpretation, we create dummy variables from the first-difference variables that indicate improvement in the postrelocation home or neighborhood over the public housing home or neighborhood.

We control for three baseline characteristics. First, we control for whether the respondent lived in a family versus a senior housing and how long they lived in public housing in years. We also control for whether the respondent preferred renovation over relocation by creating a dummy variable out of the following question: 'Which would you prefer: to fix up your public housing community (1) or to relocate (0)?'

We control for two postrelocation characteristics of our survey sample. First, we determined whether they moved into the city of Atlanta (1) or into the suburbs (0). Second, we created two dummy variables from calculations of neighborhood density for each former public housing resident. Our receivership categorization is similar to that of Popkin *et al.* (2012). High-receiving neighborhoods had more than 12 former public housing residents move in, whereas medium-receiving neighborhoods had 5–12 former public housing families move in. Low-receiving neighborhoods had fewer than five former public housing families move in and are treated as the reference category. It is important to note here that for the analysis of the survey data, we cannot include the neighborhood-level crime rate data for residents moving to the suburbs. This is because, first, few moved outside the city, and second, at present, we only have crime incident data for the City of Atlanta. In the USA, crime incident data is either provided by municipal jurisdictions or at the county level by rate. To obtain each municipality's crime incident data requires a

Federal Freedom of Information Act request, which can take years. Likewise, the county rates are too high an aggregate level for our analyses. In addition, we do not include the percentage homeowners, because there are disproportionately in the suburbs compared to how many residents relocated outside the city limits.

Our analysis begins with a descriptive examination of destination neighborhood characteristics at the census tract level using American Community Survey 2005–2009 estimates, and crime statistics from the Atlanta Police Department 2009 *Crime Incident Reports*. The second component compared pre- and postmove means for a number of items. Paired-sample *t*-tests were used to compare averages before and after relocation as this test accounts for the autocorrelation found in repeated measures; therefore, we can assess whether any postrelocation change is statistically significant (Warner, 2008). The final component uses multilevel modeling to predict change in housing conditions and change in neighborhood satisfaction as functions of housing problems and neighborhood conditions, respectively. This analysis allows us to identify the specific subjective (resident perceptions) and objective (neighborhood) characteristics, driving residents' overall views of their new homes and neighborhoods.

The survey data violate the assumptions of least squares regression, in that respondents are clustered at Time 1 within six locations. Additionally, we have repeated measures on the same respondents. We address the autocorrelation in the repeated measures by modeling change (Time 2–Time 1) in both the dependent and independent variables. We run generalized estimating Equations (GEE) for these analyses using the GENMOD procedure in SAS v9.2. GEE models allow us to adjust standard errors to account for the autocorrelation due to the clustering of participants (Liang & Zeger, 1986). In this case, we use the public housing community as our cluster; as a period 6 months is not a sufficient time period to diminish the autocorrelation of living in a specific public housing community.

Sample Characteristics and Findings

Baseline Characteristics

Table 1 shows the population, household composition, number of years living in public housing, socioeconomic, and baseline moving preferences for our initial sample matched to our 6-month postmove follow-up sample. Though we were unsuccessful in locating about 13 per cent of those who participated in the baseline survey, and another 6 per cent passed away, the population characteristics between the two survey periods are very similar. However, comparing those who participated in the baseline survey only with those who participated in both, age is significantly different, meaning younger people were less likely to participate in the 6-month follow-up.

The vast majority of our sample is Black (96 per cent) and female (85 per cent). Forty-six per cent of the sample are between 18 and 44 years of age; another 39 per cent are between 45 and 64 years, and 15 per cent are 65 years or older. Almost three-quarters reported living in public housing for between 2 and 8 years. Only 5 per cent reported being married, and the average number of children under 18 in the household was two. Only 55 per cent reported having a high school degree or passing the General Education Development (GED) test, and the average monthly income is below $1000, putting these households, regardless of size, well below the federally established poverty line.

Table 1. Weighted sample demographics.

	Baseline sample		Analysis data set[b]	
	n	%	*n*	%
Number of cases weighted	311[a]		243[b]	80
Female	263	85	212	87
Black	298	96	234	96
Age				
18–44	142	46	111	46
45–64	122	39	98	40
65 +	47	15	34	14
Years living in public housing				
2 years or less	106	33	81	33
2–4 years	58	19	43	18
4–8 years	66	21	56	23
8 or more years	81	26	62	25
Have high school degree or GED	170	55	126	52
Married	15	5	12	5
Monthly income	$832.41		$828.98	
Prefer to fix up rather than relocate	121	40	94	39
Wanted to move	171	57	140	58

[a] Does not include the nonrelocating control group.
[b] Twenty-four respondents died prior to the 6-month interview, we were unable to locate 31 respondents for the 6-month interview and 5 moved out of state, giving us a 78 per cent response rate based on eligibility ($n = 243$).

When asked during baseline whether they would prefer to have their public housing homes fixed up rather than relocate, 40 per cent said they preferred this option. At the same time, 57 per cent stated they wanted to move and viewed relocation as a positive opportunity. It should be noted that these preferences varied by age, with the older residents (regardless of being in a family community or a senior high rise) preferring that their public housing homes be repaired.

Destination Neighborhood Characteristics

Findings from our 6-month postrelocation study reveal that of the 660 census tracts in the Metro-Atlanta region, former public housing residents moved to 84, with 64 within the city limits. Figure 2 shows the census tracts where the residents in our study moved based on our receivership categorization. Less than 10 per cent moved outside the city limits and those who did typically relocated to tracts adjacent to the city boundaries with relatively similar neighborhood characteristics of those who relocated within the city. The average moved distance is only 3 miles. Thus, the vast majority are not far from the former public housing locations.

About 88 per cent of the residents in our sample received a voucher. Those that did not receive a voucher moved to unsubsidized rental market housing, but there is no difference between the voucher and nonvoucher destination neighborhood characteristics. However, it is important to note that since the majority of residents in our study received a voucher, our findings represent a best-case scenario. Voucher subsidies and requirements are

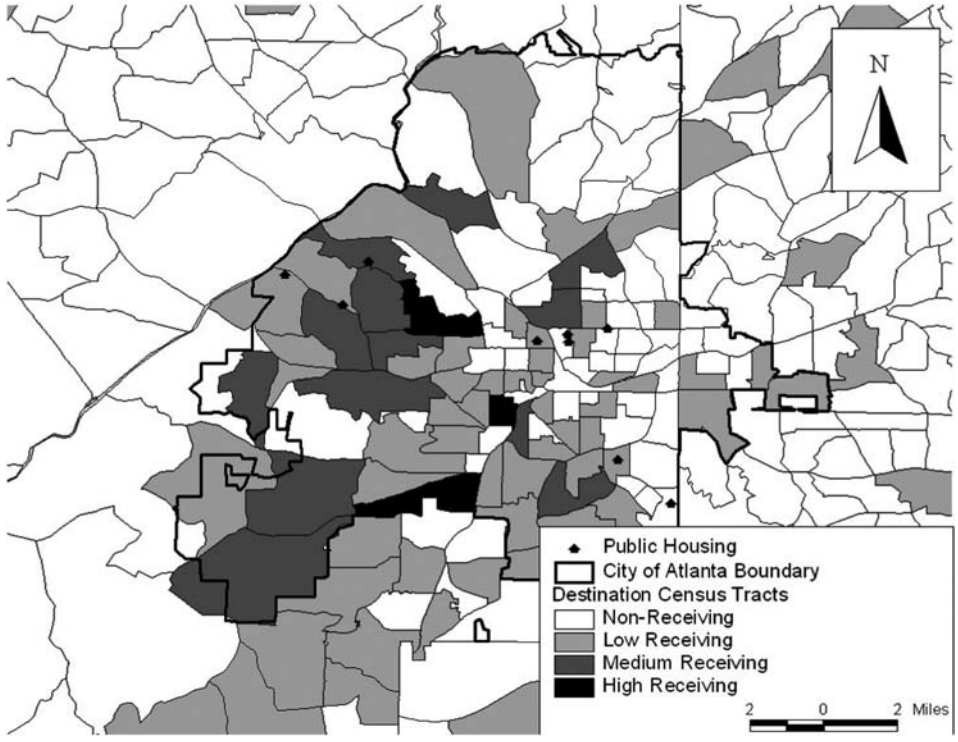

Figure 2. Public housing relocation density by census tract.

regulated by HUD, and eligibility is based on federal guidelines concerning income levels, as well as drug-related and sexual-offender criminal history (US Department of Housing & Urban Development, 2001). Those in our study who did not receive a voucher either had income levels above 50 per cent of the area's median household income or had a member of the household (on the lease) with a drug-related felony conviction.

One structural factor that may be driving these relocation patterns is access to public transportation. In the survey, over 85 per cent of the participants reported that they neither owned nor had access to a car. Public transportation in the Atlanta region is sparse. In many suburban areas, it is nonexistent. Within the city and in adjacent municipalities, public transportation is available (although less so to the north). This includes north–south and east–west train lines and connecting bus routes. Figure 3 shows the proximity of residents' destinations in relation to the public transportation lines. The map clearly shows that almost all the respondents are on or very close to a bus line and in some cases to one of the train lines.

On average all of the receiving tracts differ substantially from the nonreceiving tracts. Table 2 shows the citywide population, socioeconomic, and crime characteristics compared with the averages for the three levels of receiving tracts, as well as for the average across all receiving, nonreceiving, and public housing tracts.

In terms of racial composition, low- and medium-receiving, as well as public housing census, tracts range from 71 to 75 per cent Black. High-receiving tracts average 95 per

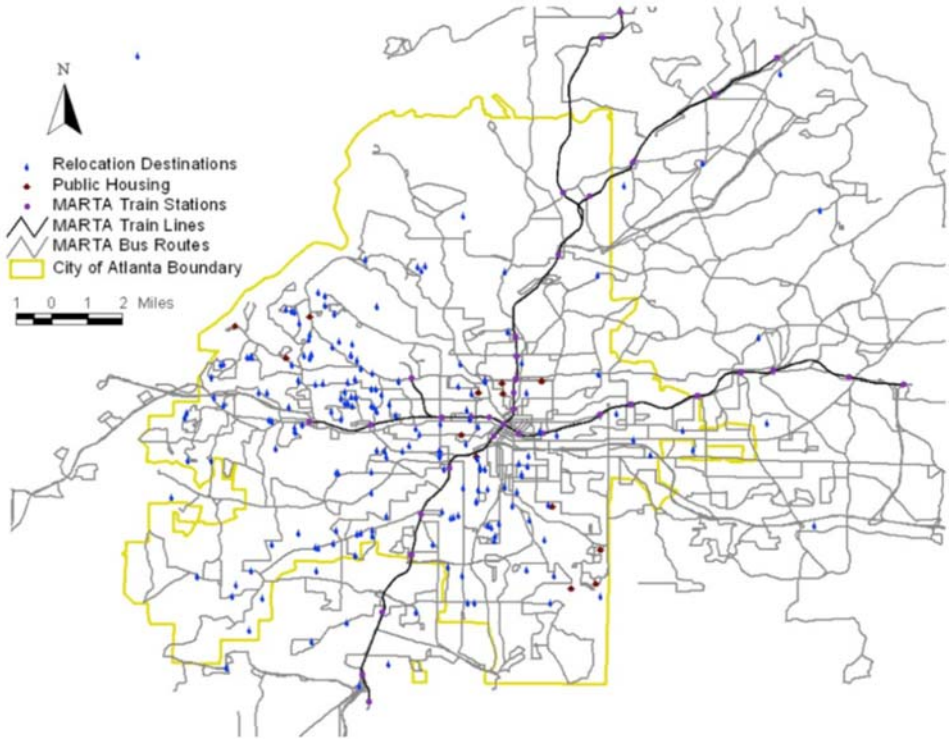

Figure 3. Relocation destinations and public transportation.

cent Black, and the average per cent Black across all levels of receiving is just over 80. In contrast, nonreceiving tracts are 46 per cent Black and the citywide per cent is 60. Thus, a clear pattern of racial segregation is apparent: former public housing residents are not moving to more racially integrated neighborhoods, and, in fact, the level of racial segregation is much higher in high-receiving tracts than in the public housing census tracts.

Nonreceiving neighborhoods have the lowest vacancy and medium-receiving neighborhoods have the lowest renter household percentages. However, across the other receiving categories, as well as citywide, there is not much difference with the exception of the high-receiving tracts, where the proportion of rental households is about 20 percentage points higher. Homeownership percentages are lower in high- and low-receiving tracts as well as the public housing tracts as compared with nonreceiving and citywide. However, medium-receiving tracts have a homeownership percentage equal to that of the city. The average across all receiving tracts is just under 29 per cent, compared to the citywide average of 37 and the nonreceiving of just over 41.

Poverty percentages across all receiving and public housing tracts are higher than the citywide and nonreceiving percentages. While the citywide poverty rate is 22.4, and nonreceiving about the same, the per cent for the low-receiving tracts is 33.5, for medium receiving 26, and for high receiving 29, with an average across all receiving of 29.6. At the same time, for the receiving tracts, this is between 7.5 and 12 percentage points lower than

Table 2. Average characteristics of destination census tracts within the city limits.

	Citywide	Nonreceiving	Low receiving	Medium receiving	High receiving	Average receiving	Public housing
Nonviolent crime rate	96.97	106.22	95.83	67.88	94.69	81.13	97.76
Violent crime rate	20.83	18.96	23.79	16.96	25.71	22.15	26.93
Total population	4511	4467	3841	6115	5278	5078	3001
Per cent non-Hispanic Black	60.00	46.00	71.10	75.14	95.21	80.48	73.40
Per cent non-Hispanic White	31.00	44.00	21.00	17.00	3.00	13.70	16.15
Per cent Hispanic	5.20	6.01	5.22	4.18	1.41	3.60	6.00
Per cent vacancy	22.00	19.00	25.00	24.08	21.27	22.70	25.13
Per cent rental household	41.24	40.00	43.50	39.02	61.58	48.03	54.15
Per cent homeowner household	37.00	41.46	32.00	37.00	17.14	28.71	21.00
Per cent poverty	22.40	21.00	33.54	26.10	29.00	29.55	41.11
Number of census tracts	121	58	48	13	3	64	12

Sources: American Community Survey 2005–2009 Estimates; Atlanta Police Department Crime Incident Reports, 2009.

the public housing tracts. Similar to previous studies, our findings reveal that residents are moving to neighborhoods with less poverty than public housing. However, the widely accepted definition of low-poverty neighborhoods is 20 per cent or less (Goetz, 2003). All levels of receivership neighborhoods in our study exceed this threshold by between 6 and 13.5 per cent, as do the citywide and nonreceiving figures.

Crime trends (shown in Table 2) indicate some interesting patterns. Specifically, the nonviolent crime rate per 1000 is highest (106.22) in the nonreceiving tracts and lowest in the medium-receiving tracts (68). In contrast, citywide, low- and high-receiving rates are almost equivalent (95–97), with the average across all receiving at 81. The nonviolent crime rate for public housing is higher than all of the receiving and citywide tracts at almost 98. Similarly, the violent crime rate is lowest (17) in the medium-receiving neighborhoods even compared to the citywide (21) and the nonreceiving tracts (19). Low-receiving neighborhoods have a rate of 24 and high-receiving neighborhood a rate of 26, with the average across all receiving at 22. The rate in the public housing tracts is the highest at 27.

Although this analysis is only descriptive, focused on one point in time, with a relatively small sample, the crime trends are not consistent with those of the recent Popkin *et al.*'s (2012) study. In that study both moderate- and high-receiving neighborhoods appeared more vulnerable to increases in nonviolent and violent crime rates compared with neighborhoods that received no former public housing residents. In contrast, our findings show that medium-receiving neighborhoods appear to have the lowest levels of nonviolent and violent crimes across the other receiving neighborhoods, citywide, and nonreceiving. Likewise, there is not much difference in crime rates for the low- and high-receiving areas, although nonviolent crimes for citywide and nonreceiving are slightly higher.[1] However, while the violent crime rate is lowest in the medium receiving tracts, low- and high-receiving rates are higher than the citywide and nonreceiving rates, and not much lower than the public housing rate. Part of the reason our findings depart from the Popkin *et al.* (2012) study may be that we are not looking at crime rates across time. However, the fact that the medium-receiving tracts have the lowest nonviolent and violent crime rates is perplexing. One partial explanation might be that unlike low- and high-receiving tracts, percentages of homeownership and poverty of medium-receiving tracts are far more similar to the citywide and nonreceiving percentages. However, this does not explain why crime levels would be lowest in the medium-receiving census tracts.

Table 3 shows the suburban wide population and socioeconomic characteristics compared with the averages for the receiving and nonreceiving census tracts. Because the majority of residents stayed within the city limits, there was little variation in terms of the number of households per suburban census tract, with the average being three. Therefore, we simply categorize the suburban tracts as receiving or nonreceiving. In addition, we do not yet have crime data for all of the jurisdictions outside the city. Because the Atlanta Metropolitan Statistical Area (MSA) is composed of 28 counties, we chose to wait until we knew where our participants moved to secure data outside the city limits and are currently collecting those data.

Findings indicate that while on average the receiving tracts are more disadvantaged and racially segregated than both the nonreceiving and metrowide tracts, they are less disadvantaged than public housing. In addition, residents who moved to the suburbs are living in far less disadvantaged and racially segregated tracts than those residents that moved within the city. In large part, this reflects disparities that have long existed between

Table 3. Average characteristics of relocation census tracts—Suburban Atlanta, GA.

	Metrowide	Suburb nonreceiving	Suburb receiving
Total population	7702	8455	7408
Per cent non-Hispanic Black	35.58	29.16	49.00
Per cent non-Hispanic White	49.52	55.00	31.16
Per cent Hispanic	9.35	10.03	14.56
Per cent vacancy	13.00	10.46	16.09
Per cent rental household	29.53	26.57	35.00
Per cent homeowner household	58.00	63.00	49.01
Per cent poverty	15.00	12.00	16.00
Number of census tracts	660	549	20

Source: American Community Survey 2005–2009 Estimates.

city and suburban regions of metropolitan areas around the country since suburbanization began in the 1950s. The fact that so few of the residents in our study (10 per cent) left the city proper is suggestive of both structural barriers (such as lack of public transportation) and individual choices (reluctance to move too far away from existing social supports).

Taken together, trends concerning poverty are consistent with previous studies, in that residents across all levels of receivership are moving to neighborhoods with less poverty (about 10 per cent less on average) than their former public housing neighborhoods—and in the case of suburban relocations, more racially integrated neighborhoods as well. However, in both cases, the destination neighborhoods have more poverty than the nonreceiving tracts. Specifically, focusing on the city where the majority of residents relocated, the average poverty level across all receiving neighborhoods is higher than in nonreceiving neighborhoods and the citywide level. In other words, residents are not moving to *low-poverty* areas, but they are moving to neighborhoods with *less poverty* than their former public housing ones. At the same time, destination neighborhoods across all receiving categories (versus nonreceiving and citywide) are racially segregated. Low- and medium-receiving neighborhoods have about the same percentage of Blacks as do the former public housing ones (71–75), but high-receiving areas are substantially more segregated at 95 per cent Black residents. This is in stark contrast to the citywide average of 60 per cent and the nonreceiving of 46 per cent. Thus, it is clear that residents are not relocating to more racially integrated neighborhoods. Other socioeconomic indicators have less variation, although percentages of renter households are highest and homeownership the lowest in the high-receiving areas.

Overall, the average crime indicators across all levels of receivership also tell a consistent story with previous research: former public housing residents have relocated to somewhat safer neighborhoods—but in the case of violent crimes, not as safe as the citywide or nonreceiving averages. However, we find some interesting variation across levels of receivership with medium receiving having lower nonviolent and violent crime rate than not only other receiving and public housing tracts, but citywide and nonreceiving as well. Given the limitations of our data and the fact that we do not examine crime data over time, this is a very difficult finding to interpret. As we noted earlier, the medium-receiving neighborhoods have similar homeownership and poverty percentages to the nonreceiving and citywide averages. However, this certainly does not explain why the

medium-receiving neighborhoods would have lower crime rates than nonreceiving and citywide.

Resident Perceptions

But what do the residents think of their new homes and neighborhoods and how do their perceptions relate to the destination neighborhood characteristics discussed above? Resident views are typically left out of policy decisions and formations even though they are the most directly affected.

Table 4 provides two pieces of information. First, it compares the random and nonrandom samples at baseline to the full sample using independent-samples *t*-tests to assess sample quality. Although one or two items are verging on significant differences between the random and nonrandom portions of the sample, there is no discernible pattern. Thus, there are no differences between the two. Second, it shows what residents said about the condition of their public housing homes compared to their destination homes using paired-samples *t*-tests, and provides descriptive statistics of the first difference between prerelocation and postrelocation. On the first difference, a score close to zero means little change, while a score far from zero signifies more change. Negative scores, unless specifically marked, indicate improvement, whereas positive scores indicate worse postrelocation conditions.

Overall, we find significant improvement. Translated into percentages, we find that 56.4% reported an improvement in the perceived condition of their home, 14.4% reporting a decline in the perceived condition of their home, and 29.2% reporting no change in the perceived condition of their home. A similar pattern is observed across a number of specific housing conditions. For example, there is significant improvement in experiencing leaks, uncorrected water damage, nonworking plumbing or furnace, peeling paint, and pest infestations. In terms of neighborhood satisfaction, 48.5% reported an increase, 16% reported a decline, and 35.4% reported no change in neighborhood satisfaction. Although housing strain increased slightly postrelocation, the change is not statistically significant.

The bottom portion of Table 4 presents characteristics of the neighborhood. Residents reported significantly greater satisfaction with their new neighborhoods compared to their public housing neighborhoods. In addition, on scales of self-reported social disorder, collective efficacy, social cohesion (see Sampson *et al.*, 1997), fear of crime, and community attachment, we also see significant postrelocation improvements. For example, translated into percentages concerning community attachment, 62% reported an increase, 28.8% reported a decline, and 9% reported no change. Lastly, there are significant improvements on postrelocation objective measures of neighborhood characteristics (census tract level), particularly in terms of reduction in per cent poverty and vacancy rates. These improvements are larger than the average characteristics across all destination tracts shown in Tables 2 and 3.

First-Difference Regression Models

Table 5 presents regressions of change in perceived housing conditions on housing characteristics to determine what is driving the improvement in respondents' ratings of their homes. Positive values on the outcome indicate ratings of better housing postrelocation. The first model regresses change in perceived housing conditions pre- and

Table 4. Condition of home and neighborhood pre- and postrelocation.

	t-Test[a]		Baseline[b]		6-month postrelocation[b]		First difference[c]		
	Value	(Sig.)	Value	(SD)	*M*	(SD)	Value	(SD)	Range
Perceived condition of home (range 1–4, *higher is worse*)[d]	−0.461	(0.546)	2.47	(0.91)	1.84	(0.86)***	0.74	(1.09)	−3 to 3
In last 12 months have you (1 = yes/0 = no)									
Had a leaky roof	1.784	(0.075)	15%		7%**		−0.09	(0.43)	
Had uncorrected water damage[e]	0.50	(0.615)	12%		7%***		−0.06	(0.41)	
Had plumbing not work[e]	1.150	(0.379)	22%		7%***		−0.14	(0.50)	
Had furnace not work[e]	−1.889	(0.06)	25%		5%***		−0.19	(0.47)	
Had appliances not work[e]	0.004	(0.997)	6%		4%		−0.02	(0.31)	
Had electrical problems[e]	−0.294	(0.769)	11%		6%		−0.04	(0.38)	
Had broken windows[e]	−0.707	(0.480)	6%		2%		−0.04	(0.28)	
Had peeling paint[e]	−0.092	(0.927)	32%		8%***		−0.24	(0.53)	
Pests: roaches, mice[e]	−1.378	(0.169)	63%		34%***		−0.29	(0.63)	
Working smoke detector[e]	−1.888	(0.06)	98%		97%		−0.02	(0.20)	
Housing strain (monthly rent and utilities/monthly income)[f]	−0.479	(0.632)	0.382	(0.32)	0.416	(1.07)	−0.20	(0.64)	
Average levels of neighborhood characteristics (standardized scales)									
Satisfaction with neighborhood (range 1 (very satisfied)–5 (very unsatisfied), *lower is better*)[d]	−1.585	(0.114)	2.82	(1.39)	2.09	(1.29)***	0.90	(1.63)	−4 to 4
Social cohesiveness (range 7–25, *higher is better*)[d]	−0.240	(0.811)	13.48	(3.98)	16.89	(3.50)***	3.712	(4.95)	
Social disorder (range 7–35, *lower is better*)	1.363	(0.174)	23.37	(5.11)	18.18	(5.33)***	−5.17	(6.35)	
Collective efficacy (range 5–25, *higher is better*)[d]	0.987	(0.324)	15.38	(6.02)	18.63	(4.93)***	3.36	(6.82)	
Community attachment (range 6–30, *higher is better*)[d]	1.450	(0.148)	17.65	(7.06)	22.30	(5.55)***	4.70	(7.6)	
Fear of crime in neighborhood (range 7–35, *lower is better*)	1.272	(0.204)	27.89	(9.98)	24.717	(11.19)***	−3.03	(12.58)	
Census tract neighborhood measures									
Per cent living in poverty	–		45.4	(10.12)	23.95	(13.82)***	−24.10	(15.92)	
Per cent Black in tract	–		79.37	(18.82)	64.57	(38.06)***	−17.45	(38.83)	
Per cent vacancy rates	–		27.45	(5.77)	20.40	(10.56)***	−5.78	(10.83)	
N	382		243		243		243		

Notes: Means or per cents, and standard deviations are in parentheses. $^{***}p < 0.001$; $^{**}p < 0.01$; paired samples *t*-test.

[a] *t*-Test of differences between random and nonrandom at baseline; assumes equal variances.

[b] Weighted sample limited to those who answered both pre- and postrelocation surveys.

[c] First difference is the 6-month score less the prerelocation score. Negative values signify improvement unless otherwise noted.

[d] The first difference on this item was reverse coded, so that the positive difference means improvement postrelocation.

[e] Dummy variable for improved at wave 2 included in regressions.

[f] Paying 30 per cent of income toward housing is considered standard; those paying more than 30 per cent like most of our sample need housing assistant. Reduction in housing strain used as dummy variable in regressions.

Table 5. First-difference regression model of change in perceived condition of home[a]: regression coefficients and (standard errors)[b].

	Model 1		Model 2		Model 3	
	Coeff.	(SE)	Coeff.	(SE)	Coeff.	(SE)
Constant	0.277	(0.19)	0.382	(0.19)	0.491	(0.31)
Postrelocation improvement in uncorrected water damage	0.033	(0.23)	0.016	(0.25)	0.014	(0.25)
Postrelocation improvement in leaks	0.511	(0.22)*	0.522	(0.22)*	0.539	(0.21)*
Postrelocation improvement in plumbing	0.245	(0.17)	0.185	(0.19)	0.175	(0.19)
Postrelocation improvement in furnace not working	0.286	(0.12)*	0.32	(0.11)*	0.308	(0.13)*
Postrelocation improvement in peeling paint	0.400	(0.26)	0.356	(0.23)	0.363	(0.21)
Postrelocation improvement in pests: roaches, mice	0.212	(0.24)	0.263	(0.23)	0.267	(0.22)
Postrelocation reduction in housing strain	0.113	(0.14)	0.084	(0.14)	0.067	(0.15)
From a family project (vs. a senior high rise)			0.128	(0.08)	−0.066	(0.14)
Number of years living in public housing			−0.013	(0.00)*	−0.012	(0.01)*
Preferred to renovate public housing over relocate			−0.277	(0.10)*	−0.292	(0.09)*
Moved into the city of Atlanta (vs. suburbs)					−0.056	(0.25)
Living in neighborhood that received more than 12 public housing households[c]					−0.167	(0.24)
Living in neighborhood that received 5–12 public housing households[c]					0.062	(0.18)

*$p < 0.05$.

[a] Higher scores on dependent variable mean respondent-rated postrelocation home as higher quality than public housing home.

[b] Weighted sample limited to those who answered both pre- and postrelocation surveys.

[c] Reference category is moving into neighborhood where four or fewer public housing residents relocated.

postrelocation on dummy indicators for improvement in the postrelocation home in terms of leaks, water damage, plumbing and furnace not working, peeling paint, pests, and housing strain.

Those who reported improvements in housing conditions such as leaks ($b = 0.511$) and working furnace or heater ($b = 0.286$) in their new home compared to their public housing home were significantly more likely to perceive their new home as better than their old home. Improvements noted in terms of pests, uncorrected water damage, plumbing, and peeling paint were not significantly associated with better perceptions of the postrelocation home despite the significant change found in Table 4. Reduction in housing strain was not significantly associated with perceiving the postrelocation home as better than the public housing home. This could be because, like public housing, residents receiving voucher subsidies pay 30 per cent of their monthly income toward rent. Thus, relocation did not result in rent increases. Another factor that may be driving the specific housing condition findings is the mandatory annual HUD inspections of voucher housing. Specifically, any landlord renting to a voucher tenant is required to keep properties in good condition, making all necessary repairs. Once a year, HUD inspects these properties. If a property fails inspection, the landlord has 30 days to fix the problems. Hence, landlords may be motivated to take care of housing problems as they come up.

In Model 2, we add a dummy variable control for whether participants lived in family versus senior high-rise housing, a dummy control for years lived in public housing, and a dummy variable for whether participants preferred to renovate public housing versus relocate. They do not mediate the associations between the noted improvements in housing conditions and perceptions of new housing. Years lived in public housing is inversely associated with perceptions of the postrelocation home as better than the public housing home. For each additional year lived in public housing, the first difference in housing quality decreases by 0.013. Net of housing problems and years lived in public housing, the first difference in housing quality is significantly lower ($b = -0.277$) for those who preferred to renovate public housing compared to those who wanted to relocate.

Model 3 adds a control for whether the participant stayed in the City of Atlanta or moved into the suburbs, and two dummy variables for moved into a high-receiving or medium-receiving neighborhood. Controlling for these structural-level variables does not attenuate associations found in either Model 1 or 2, nor are these variables significantly associated with change in perceptions of housing. Thus, level of receivership or living in the city versus the suburb do not appear to be significantly associated with resident perceptions, even though the tract-level analysis indicated variation in neighborhood characteristics.

Table 6 presents regressions of change in neighborhood satisfaction on both subjective and objective neighborhood characteristics to determine what is driving reported satisfaction levels. Higher values on the outcome indicate greater satisfaction with the postrelocation home compared to the public housing home. The first model regresses change in neighborhood satisfaction pre- and postrelocation on improvement in social disorder, social cohesion, collective efficacy, community attachment, and fear of crime between prerelocation and postrelocation. Only reductions in social disorder and improvement in community attachment are significantly associated with greater postrelocation neighborhood satisfaction. A reduction in social disorder postrelocation is associated with a 0.669 increase in satisfaction with the postrelocation neighborhood. Those whose community attachment has increased postrelocation reported a neighbor-

Table 6. First-difference regression model of change in satisfaction with neighborhood[a]: regression coefficients and (standard errors)[b,c].

	Model 1		Model 2		Model 3	
	b	(SE)	*b*	(SE)	*b*	(SE)
Constant	−0.874	(0.11)***	−0.611	(0.11)	−0.223	(0.28)
Postrelocation reduction in perceived social disorder	0.669	(0.16)**	0.674	(0.17)***	0.571	(0.14)***
Postrelocation improvement in perceived social cohesiveness	0.225	(0.21)	0.226	(0.21)	0.248	(0.24)
Postrelocation improvement in perceived collective efficacy	0.114	(0.16)	−0.118	(0.17)	−0.001	(0.17)
Postrelocation improvement in community attachment	1.562	(0.13)***	1.569	(0.13)***	1.493	(0.19)***
Postrelocation reduction in perceived fear of crime	0.25	(0.18)	0.256	(0.18)	0.369	(0.18)*
Census neighborhood measures						
Postrelocation reduction in neighborhood per cent poverty *(higher is worse postrelocation)*			−0.22	(0.13)	−0.337	(0.19)
Postrelocation reduction in neighborhood per cent non-Hispanic Black *(higher is worse postrelocation)*			0.11	(0.07)	−0.063	(0.18)
Postrelocation reduction in neighborhood per cent vacancy rate *(higher is worse postrelocation)*			−0.201	(0.13)	−0.286	(0.14)*
Controls						
Came from a family project (vs. a senior high rise)					0.241	(0.18)
Number of years living in public housing					0.017	(0.01)
Preferred to renovate public housing over relocate					−0.61	(0.19)**
Moved into the city of Atlanta (vs. suburbs)					−0.22	(0.18)
Living in neighborhood that received more than 12 public housing households[d]					0.397	(0.19)*
Living in neighborhood that received 5–12 public housing households[d]					−0.341	(0.22)

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$.

[a] Positive scores on dependent variable mean respondents rated satisfaction of postrelocation neighborhood higher than that of public housing neighborhood.

[b] Weighted sample limited to those who answered both pre- and postrelocation surveys.

[c] Crime rates not included because limited to city boundaries.

[d] Reference category is moving into neighborhood where four or fewer public housing residents relocated.

hood satisfaction change score 1.56 higher than those who experienced no increase in community attachment.

Model 2 adds improvement in three census tract measures of the neighborhood: lower per cent living in poverty, lower per cent Black (form of segregation), and lower neighborhood vacancy rates in the postrelocation home. None are significantly associated with change in neighborhood satisfaction. In addition, including these measures does not attenuate the effects of reduction in social disorder or increase in community attachment.

Model 3 adds controls for living in family housing versus senior/disabled high-rise housing, number of years lived in public housing, preferring to renovate public housing prerelocation, moving to the city of Atlanta versus the suburbs, and two dummy variables for moved into a high- or medium-receiving area. Net of these controls, reduction in social disorder, and increases in community attachment are attenuated slightly, but remain significantly and positively associated with the neighborhood satisfaction. Net of the controls and reduction in fear of crime are now significantly associated with increased neighborhood satisfaction postrelocation, as is lower neighborhood vacancy. Those who preferred to renovate prerelocation are significantly less satisfied with their postrelocation neighborhood ($b = -0.610$). Finally, moving into a high-receiving neighborhood is associated with greater postrelocation neighborhood satisfaction.

Overall, residents clearly view their new homes and neighborhoods as improvements over public housing. However, our findings also clearly demonstrate that neighborhood-level characteristics are not driving increased satisfaction among the residents. In fact, our findings suggest that *how* residents perceive their new neighborhoods, particularly in terms of decreases in social disorder and fear of crime, as well as increases in community attachment, really matter. These findings hold regardless of levels of receivership or city or suburban location. In addition, related is the fact that residents who were more attached to their public housing communities (as measured by wanting to relocate or not) were less likely to be satisfied with their relocated home and neighborhood.

It is also interesting that high receivership is significantly associated with greater postrelocation neighborhood satisfaction even though these neighborhoods have the highest violent crime rates and are the most segregated. Again, this finding reinforces that subjective pre- to postmove changes in satisfaction are not driven by changes in neighborhood characteristics (i.e., reductions in poverty, crime, and segregation) as previous research has implied. Thus, our findings challenge some of the assumptions of poverty deconcentration and point to the importance of residents' views.

Conclusion and Policy Implications

In summary, our goal has been to further inform the larger policy conversation concerning public housing transformation initiatives by examining the immediate postrelocation resident and neighborhood outcomes. We have paid particular attention to the relationships between changes in relocated residents' satisfaction with home and neighborhood and the socioeconomic, racial composition, and crime characteristics of their destination neighborhoods to ascertain whether neighborhood-level improvements lead to an increased satisfaction.

Although many of our findings are consistent with previous research—residents view their new homes and neighborhoods as improvements over public housing and have moved to somewhat safer places with less poverty (although not low poverty)—resident

satisfaction is not related to neighborhood-level characteristics. More specifically, postrelocation neighborhood satisfaction is not related to key neighborhood characteristics that undergird the policy assumptions of public housing transformation, such as poverty reduction and more racially integrated neighborhoods. Though we use a different analytic approach, our findings are in line with work by Manzo *et al.* (2008) concerning the importance of community attachment.

So, what are the policy implications of our findings? We argue that there are several salient findings. First, as a growing number of studies have already acknowledged, residents' perceptions matter in terms of postrelocation quality of life. Second, somewhat related to Kleit & Galvez's (2011) finding that broader rental market constraints do not dictate moving decisions, but proximity to social supports do, we find that destination neighborhood characteristics do not dictate postmove satisfaction, but community attachment does. This again emphasizes the need for those in policy circles to more fully acknowledge that neighborhood poverty deconcentration in and of itself does not create healthy communities or improved quality of life.

Third, the last demolitions have happened in Atlanta, so it is important to acknowledge that there may be place-based counter-factuals present in our findings. And, quite apparent is the fact that we cannot adequately answer what specifically drives the postrelocation community attachment we find in our present analyses. However, what our analysis does show is that it is not positive changes in neighborhood characteristics.

That being said, traditional public housing elimination and forced resident relocation continue in other cities. Although debates continue about the efficacy of such efforts, given HUD's continued budget cuts to local housing authorities, it is likely that these efforts will continue. Therefore, housing authorities could better ensure improved postrelocation quality of life by more fully incorporating residents' voices and perceptions during the relocation process. Lastly, more research is needed about residents' moving preferences prior to relocation.

We fully acknowledge that the implications of our findings for former public housing residents in the long term are unclear. For one thing, will residents' level of satisfaction fade over time? Six-month postrelocation only captures short-term impressions; perhaps this is a 'honeymoon' effect. We also cannot address, with our current data, questions concerning the stability of voucher rental housing, or whether relocation yields improved employment and education opportunities over time. However, we hope to address these questions upon completion of our 24-month postmove interviews. This interview includes a number of additional questions about employment, education, landlords, HUD inspections, and how residents' views of their new homes and neighborhoods may have changed since our 6-month postmove interviews.

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Note

[1] Descriptive analyses identified no outliers or distributional issues for medium-receiving tracts.

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Appendix: Scale components

Construct	Items included	Cronbach's α
Community attachment	I'm in a place that is my home (strongly disagree to strongly agree)	0.92
Community attachment	I'm in a place that holds a lot of meaning to me	
Community attachment	I'm in a place where I belong	
Community attachment	I'm in a place I'd miss if I had to leave	
Community attachment	I'm in a place I am proud of	
Community attachment	I'm in a place that's important to me	
Fear of crime	Someone would break into their home while at home (not at all afraid to very afraid)	0.94
Fear of crime	Break in while away	
Fear of crime	Have something taken from them by force	
Fear of crime	Threaten with a weapon	
Fear of crime	Beaten by a stranger	
Fear of crime	Finding out that someone was robbed near their home	
Fear of crime	Being robbed or mugged	
Social cohesion	This neighborhood is a good place to raise kids (strongly disagree to strongly agree)	0.65
Social cohesion	People around here are willing to help neighbors	
Social cohesion	People in this neighborhood generally do not get along with each other	
Social cohesion	People in this neighborhood can be trusted	
Social cohesion	People in this neighborhood do not share the same values	
Social disorder	People do not respect rules or the law here (strongly disagree to strongly agree)	0.73
Social disorder	There is too much crime and violence in this neighborhood	
Social disorder	Too many abandoned or run-down buildings here	
Social disorder	The police are usually not available around here when you need them.	
Social disorder	There is not enough public transportation in this area	
Social disorder	Parents do not supervise their children around here	
Social disorder	Too many people cannot find jobs	
Collective efficacy	How likely is it your neighbors would do something if:	0.83
Collective efficacy	Local children were skipping school and hanging out on a nearby street corner? (very unlikely to very likely)	
Collective efficacy	Children were spray-painting on a local building?	
Collective efficacy	Children were showing disrespect to an adult?	
Collective efficacy	A fight broke out in front of their home?	
Collective efficacy	The fire station closest to your home was threatened with budget cuts?	