

If Low-Income Blacks Are Given a Chance to Live in White Neighborhoods, Will They Stay? Examining Mobility Patterns in a Quasi-Experimental Program with Administrative Data

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Abstract

After describing the distinctive features of various policy models of residential mobility, we examine the long-term outcomes of the Gautreaux program. Administrative records provide baseline characteristics for all participants, and we located recent addresses for over 99 percent of a random sample of 1,506 participants an average of 14 years after original placement.

Although 84 percent of the families made subsequent moves, the racial composition of the current address is strongly related to program placement, even among movers, and after family attributes and premove neighborhood characteristics are controlled. Combined with our prior findings, these results suggest that residential mobility has an enduring, long-term impact on the residential locations of these families. Contrary to models that assume that families' enduring preferences will quickly erase these moves, these results suggest the need for further research to consider whether mobility alters preferences or structural barriers.

Keywords: Families and children; Mobility; Neighborhood

Given the many social problems associated with racial and economic segregation, residential mobility has attracted considerable interest among policy makers (Bobo 1989; Massey and Denton 1993; Wilson 1987), and research has suggested some processes by which neighborhoods might affect individual outcomes (Briggs 1997; Galster and Killen 1995; Kleit 2001). While traditional project-based housing assistance programs tend to cluster large numbers of poor families in the same location (Newman and Schnare 1997), residential mobility programs move families from areas of concentrated poverty to places where there is less poverty and where resources, role models, and opportunities may be better. Residential mobility has been seen as a valuable strategy for strengthening welfare policy and supporting working families (Sard and Waller 2002).

Research on the early outcomes of residential mobility programs has been very promising. However, the durability of residential mobility has been questioned. Critics contend that disadvantaged families would be uncomfortable in more integrated locations and would not remain there, that seeking to be with their own kind—other low-income blacks—they would move away from integrated areas, especially where they are a small minority (Clark 1991). Critics are not the only ones with such concerns. One of the authors has repeatedly heard high-level federal government administrators and top executives at public housing agencies voice concern that such outcomes would occur.

This study examines the long-term outcomes of a residential mobility program that began in 1976. Between 1976 and 1990, in Chicago's Gautreaux Assisted Housing Program, low-income black families were assigned to various neighborhoods in the city or suburbs by a quasi-random procedure. This study examines the long-term effects of these moves on families' residential location an average of 14 years after they were originally placed.

This study is also distinctive in using administrative records. Previous research on the Gautreaux program used mailed surveys and in-person interviews. While these surveys had response rates that are generally considered acceptable (67 percent), anything short of a perfect response raises potential ambiguities. By tracking down recent addresses of families through a variety of sources and merging Gautreaux program records with this information, we can examine more recent neighborhood locations with a better response rate than most surveys and with fewer risks of mistaken reports.

Prior research

Most research on neighborhoods and residential mobility to date focuses primarily on two topics: the neighborhood factors that affect where people *choose* to live and statistical analyses of the relationship between neighborhood attributes and many life outcomes (Brooks-Gunn et al. 1997; Crane 1991). However, even after extensive statistical controls, one cannot be certain what the direction of causality is or whether unmeasured factors might influence observed relationships. The best way to separate these effects is through social programs in which families are assigned to neighborhoods, such as the long-term Gautreaux program and the more recent multicity Moving to Opportunity (MTO) program. While housing mobility programs have been done in New York, North Carolina, Ohio, Tennessee, Texas, California, and many other places (Peterson and Williams 1995), few locations have

offered the possibility for appropriate comparison groups that approximate a social experiment.

As a result of a 1976 Supreme Court decision, the Gautreaux program allowed Chicago public housing residents (and those on the waiting list) to receive Section 8 housing certificates (or vouchers) and move to private-sector apartments either in mostly white suburbs or within the city of Chicago. Between 1976 and 1998, over 7,000 families participated, and more than half moved to the suburbs. Because of its design, the Gautreaux program presents an unusual opportunity to examine the outcomes associated with helping low-income families move to better neighborhoods with better labor markets and better schools. Socio-economic and racial integration of neighborhoods is rare in the United States, so we generally do not know about the experiences of low-income blacks in middle-income white neighborhoods. Even when such integration exists, we suspect that low-income families that move into middle-income neighborhoods are exceptional people, so their subsequent attainments reflect more about themselves than about the neighborhood effects.

Gautreaux participants circumvented the typical barriers to living in the suburbs, not by their jobs, personal finances, or values, but by their acceptance into the program and their quasi-random assignment to the suburbs. The program assigned them to neighborhoods in a quasi-random fashion and gave them rent subsidies that allowed them to live in suburban apartments for the same cost as public housing, but did not provide them with employment or transportation assistance. Moreover, unlike the usual case of black suburbanization—working-class blacks living in working-class suburbs—Gautreaux permitted low-income blacks to live in middle-income white suburbs. Participants moved to more than 115 suburbs throughout the six counties surrounding Chicago. Suburbs with a population that was more than 30 percent black were excluded by the consent decree, and a few very high rent suburbs were excluded by the funding limitations of Section 8 certificates.

Prior research on the Gautreaux program comparing outcomes for families moving to mostly white suburbs and outcomes for those moving to mostly black city neighborhoods has shown a significant relationship between placement neighborhoods and subsequent employment and educational attainment. A study of children found that by the time they were young adults, those children who moved to the suburbs were much more likely to graduate from high school, attend college, attend four-year versus two-year colleges, and (if they were not in college) to be employed and to have jobs with better pay and with benefits

(Rosenbaum 1995). Another study of 330 Gautreaux mothers found that suburban movers had higher employment rates than city movers and that the difference was especially large for adults who were unemployed before entering the program (Rosenbaum 1997).

According to a former high-level administrator at the U.S. Department of Housing and Urban Development (HUD), “The encouraging evidence from Gautreaux led to national legislation calling on HUD to test housing mobility strategies further” (Turner 1998, 376). This led to the MTO program, which randomly assigned low-income families to low-poverty areas, to an open-choice Section 8 group, or to a control group that remained in high-poverty areas. MTO was explicitly designed as an experiment, with random assignment and pre- and postmove data collection.

The long-term durability of such residential moves is not known. This article examines whether people placed in predominantly white suburbs stay there or move back to more racially homogenous areas similar to the ones they lived in before. Even though residents are initially placed in neighborhoods that are safer and provide more employment and educational opportunities, they may not stay if they experience transition difficulties. After initially being placed in mostly white suburbs, do families return to city neighborhoods similar to those from which they came?

In addition, we can ask whether the racial composition of the placement neighborhood has an effect on the later moves of these families. Prior studies have assumed that people have a set of endogenous preferences that make one neighborhood more desirable than another (Farley et al. 1978). For instance, Clark (1986, 1988, 1989, 1991) found that both blacks and whites wished to live in neighborhoods where they were the predominant race and concluded that residential segregation would remain high even if fair housing laws or other integrative housing policies were in effect. More recent work suggests that whites still prefer to live in neighborhoods with low minority concentrations (Emerson, Yancey, and Chai 2002).

Farley et al. (1994) explored residential segregation as a function of the preferences of both blacks and whites in the “hypersegregated” city of Detroit in 1976 and 1994. They found that in 1976, while most whites were uncomfortable in areas with more than a few black families, most blacks said they would *prefer* to live in racially mixed areas, specifically those in which there were at least 50 percent black residents. In fact, racially mixed neighborhoods appeared to be more popular with blacks than all-black areas. However, despite the fact that white racial

residential preferences became more liberal between 1976 and 1992, black racial preferences shifted away from integration. Farley et al.'s (1978) early findings implied that people could be characterized as having certain fixed preferences. His later findings (Farley et al. 1994) indicate that preferences gradually change over a very long period, but that even then, people can still be characterized as having certain durable preferences. This approach does not consider the possibility that if families are assigned to radically different neighborhoods, their preferences might change. While this study cannot explicitly examine preferences, it does examine whether subsequent moves are related to initial placements. Unlike research that focuses on self-expressed attitudes about locational preference (Emerson, Yancey, and Chai 2002; Farley et al. 1994), this study examines families' actual behavior.

Another consideration is whether families' suburban placement neighborhoods (and their more recent suburban locations) are actually comparable to inner-city neighborhoods, rather than the "idyllic escapes from the stresses of urban life" we usually imagine them to be (Harris 1999a, 2). Harris (1999a) contends that much of the academic rhetoric about the success of minorities moving to the suburbs should be taken with a grain of salt. His work shows that suburbs vary greatly with regard to socioeconomic status and that when minorities (specifically Hispanics and blacks) do live in the suburbs, more than 40 percent end up in suburbs with low socioeconomic status.¹ These areas are not only considerably less advantaged than the middle or high suburbs, but on many indicators, they are less advantaged than their central cities.

Besides focusing on racial preferences of blacks and whites, discussions of the causes of residential segregation have also focused on structural barriers, particularly racial discrimination against blacks in the housing market (Clark 1986; DeMarco and Galster 1993; Galster 1986, 1992; Galster and Kenney 1988). For instance, Massey and Denton (1993) argue that blacks often experience discrimination in the housing market and that this leads to structural barriers, so they end up in predominantly black locations (of course, anticipated discrimination may also alter preferences). Cronin and Rasmussen's (1981) study of the national voucher program shows that, when given a housing voucher allowing them to move to a wide variety of locations, low-income black families were more likely to move to places that closely resembled their previous disadvantaged, segregated neighborhoods, perhaps because of such structural barriers.

¹ Harris (1999a) uses several indicators of socioeconomic status to characterize suburbs, with "low suburbs" defined as areas where 25 percent of families are headed by a single female, 18.3 percent are poor, 65 percent are high school graduates, 9.7 percent are college graduates, and there is a mean family income of \$40,272 (1996 dollars).

The unique design of the Gautreaux program provides the opportunity to examine whether people's subsequent residential moves (and perhaps their preferences) differ as a function of quasi-randomly assigned placements. If people initially overcome structural barriers (and perhaps their own initial preferences), does that alter their subsequent mobility? We can explore whether these low-income black families make later moves reverting to their original types of neighborhoods or whether they end up in neighborhoods similar to those in which the program placed them. While we cannot study preferences, we can assume that if people become comfortable with the kind of neighborhood in which they grow up, they may develop segregated preferences; if these preferences are fixed attributes, then we would expect considerable "regression to the mean." Even after being quasi-randomly placed in new neighborhoods, families coming from mostly black urban neighborhoods may subsequently return to such areas, and structural constraints will also contribute to these outcomes. However, it is possible that once families are exposed to areas they would have previously avoided because of fear or prejudice, they might change their preferences and thus change their residential choices.

On the basis of the above considerations, we ask the following questions:

1. Where do Gautreaux program participants currently reside? Do suburban movers remain in suburban neighborhoods, or do they return to the city, as might be predicted by some prior research?
2. In terms of racial composition and other census characteristics, how do the areas in which participants currently live compare with pre-move and placement neighborhoods? Are these suburban areas really different from the inner-city neighborhoods they left?
3. To what extent do these families revert to areas with predominantly black residents?
4. Is the racial composition of placement neighborhoods related to that of their recent neighborhoods, after previous individual attributes and premove neighborhood characteristics are controlled?

Since this residential mobility program aimed to move families to the suburbs and to predominantly white areas, we will focus on whether their initial placements accomplished these goals in the long run or whether families' subsequent moves tended to reduce these efforts.

The Gautreaux program as a social experiment

Unlike MTO, the Gautreaux program was not designed as a social experiment, and it only approximates the required conditions for one. It has been criticized on three grounds.

First, families' neighborhood assignments were quasi-random, but not explicitly random. Apartment availability was determined by housing agents who did not deal with clients. Counselors offered clients units as they became available according to clients' position on a waiting list—regardless of location preference. Although clients could refuse an offer, only 5 percent did so, since they were unlikely to get another soon and had only six months of program eligibility. As a result, placements can be considered quasi-random. All studies have shown that families placed in suburbs and cities were very similar in initial attributes, although they were not identical (Mendenhall, Duncan, and DeLuca 2003; Rosenbaum 1995). While our analyses indicate a few statistically significant suburb-city differences, we cannot be sure that they are substantively important differences.²

Second, the program has been criticized as being selective. It tried to avoid overcrowding, late rent payments, and building damage by not admitting families with more than three children, large debts, or unacceptable housekeeping. We have estimated that these three criteria eliminated about one-third of housing project residents (Rosenbaum 1995).

² While Mendenhall, Duncan, and DeLuca (2003) find differences on three out of eight variables, they use a restricted sample. Our best description of the program, using all families for which we have geocoded census information (up to 1,472 families), allows comparison of families placed in city and suburbs on nine variables. The differences between the city and suburban movers are statistically significant on only two of the nine variables: premove violent crime and premove public housing. The differences on these variables are 2.4 percent and 5.9 percent, respectively. In addition, the year-of-move variable is statistically significant ($p = 0.043$), which indicates that the program shifted to emphasize suburban placements over time, but says nothing about assignment procedures in any given year. When we restrict our sample to the research subsample (the 1,171 cases that we can locate many years after placement and that remain in the Chicago vicinity), we get two more significant differences, but limiting our examination of program placement-related characteristics by what happens to families after placement is not the best test for whether the two groups were similar at placement. Such mixed findings make inferences ambiguous. Even MTO, which is explicitly random assignment, shows similar mixed differences across assignment groups. For instance, the well-implemented Boston MTO study compared the personal attributes of experimental and control groups and finds 8 of 11 differences of 3 percent or larger (the ratio is over 9 percent in 5 of 11 variables [24 percent for one variable]; see table 7.1 in Goering and Feins 2003). In sum, Gautreaux data indicate a few suburb-city differences. In case these attributes indicate meaningful departures from random assignment, we control for them in the multivariate analyses.

Some critics have mistakenly inferred that the program lost 80 percent of applicants through attrition. Although only about 20 percent of the eligible applicants ended up moving through the program, self-selection appears to have been a small part of the attrition (Peterson and Williams 1995).³ Rather than self-selecting themselves not to participate in the program, many families were not offered a housing unit and thus were not given a chance to participate. There is no evidence to indicate that housing counselors were selective in making offers among eligible families, and if they were, they would have violated the consent decree.

Third, research on this program has been criticized as studying small numbers of cases and lacking indicators of premove attributes (Turner 1998). That is true for the early studies before Turner's (1998) review. The earliest study followed 163 families and a later one examined 330 families, and neither had premove information (Rosenbaum 1995). Since then, one recent study merged Gautreaux program records with Illinois public aid administrative data. That study had premove family information and could analyze 1,500 families out of a random sample of 1,506 records (Rosenbaum and DeLuca 2000).⁴

The present study responds to this third criticism and adopts the same strategy of using administrative data. These data also allow us to control for baseline *neighborhood* data, in addition to family characteristics, and to analyze pre- and postmove information, with almost perfect response rates on large numbers of cases and little risk of nonresponse or response error.

³ As Peterson and Williams (1995) state, "A household could reject two units without losing its certificate, but ninety-five percent of participating households accepted the first unit offered to them" (29). The major constraint contributing to this 20 percent was the limited number of housing units available. Between 1976 and 1990, the program promised that housing units would be provided, but the program had difficulty in finding enough units for all eligible families, and many eligible families were not offered units (Rubinowitz and Rosenbaum 2000).

⁴ According to this study, families that moved to neighborhoods with higher socioeconomic status were significantly less likely to be on public aid many years after moving—public-aid rates went from 26 percent to 39 percent for families placed in the highest- and lowest-quintile neighborhoods, with respect to the education level of the tract. Multivariate analyses find that the difference remains very strong and significant even after controlling for years in the program, age, and premove public aid. This analysis suggests that initial placement has a long-term effect on family outcome (public aid receipt) and that, at least for this outcome, the suburb/city distinction was not the influence, but the underlying social composition of suburban and city neighborhoods was (Rosenbaum and DeLuca 2000).

Distinctive features of the Gautreaux model: Distant moves, little choice, race mix

Until recently, the Gautreaux program provided the main source of evidence about the effects of residential mobility. The MTO program was created based on this research (Turner 1998). Because MTO is explicitly designed as a social experiment, recent research has rightly focused on this program. In fact, however, Gautreaux and MTO represent different models of residential mobility, which may have different outcomes, can operate by different processes, and may be affected by different historical influences (e.g., labor market cycles). An experiment with one form of residential mobility in one historical period is highly desirable, but its findings may not always generalize to other models or periods. Moreover, even though MTO is a superior social experiment, Gautreaux still offers some distinctive strengths for research. Distinguishing between the two programs is useful to understand the research and policy contributions of each.

These two programs represent different models of neighborhood effects, and we can learn from each of them. First, while the Gautreaux treatment group moved to distant suburbs that limit interaction with former neighbors, the MTO treatment group often moved to city neighborhoods, sometimes clustered together or near poor neighborhoods. Second, while Gautreaux assigned families to specific *addresses*, MTO assigned them to specific *census tracts*, and families could live anywhere in those tracts. Maps of MTO placements appear to suggest that some moves occur near tract boundaries, perhaps to get affordable rents or to be closer to low-income neighbors (Goering 1997). Third, while Gautreaux creates both racial and income integration (suburban movers went to areas averaging 90 percent white populations), MTO is a program for income, not race, integration: 32 percent of MTO movers to low-poverty areas went to areas with a black majority. If families are affected by attributes of places besides “low poverty” (e.g. race composition, job opportunities), MTO does not systematically test those effects.

Although these three factors—shorter moves, a family’s self-selection of addresses within tracts, and mixing of income, but not race—make MTO more feasible than Gautreaux, they may allow families to be affected by former or nearby low-income neighbors, possibly creating smaller neighborhood effects and underestimating the effects of other kinds of residential mobility. Other models are also possible. In Yonkers, NY, an explicit enclave model was implemented: Residents live in separate housing developments, but potentially benefit from their middle-class community (Briggs 1997, 1998). “Gautreaux II,” a new

program that has recently begun extending Gautreaux, provides another model that requires racial integration, but allows more choice and fewer distant moves. Each model has advantages and disadvantages (e.g., political feasibility, applicability, etc.), and researchers need to examine various models in order to understand the dynamics of neighborhood effects.

Gautreaux and MTO also have distinctive features in research design. First, MTO was designed as an experiment, with random assignment, a no-change control group, and pre- and postmove data collection. Evidence suggests that Gautreaux approximates random selection, but it may not be perfectly random, so it leaves uncertainties about the initial comparability of suburban and city-mover groups. Second, while MTO studies have focused on quantitative outcomes, not on mechanisms (Sampson, Morenoff, Gannon-Rowley 2002), Gautreaux research has included qualitative observations about the ways social context affects individual behaviors (Rosenbaum, DeLuca, and Tuck 2002; Rosenbaum, Reynolds, and DeLuca 2002). Third, while MTO is a newer program that allows the study of short-term outcomes, Gautreaux studies like ours can examine long-term effects 14 years after placement.

Despite these distinctions, research has found similar results in the two programs. As mentioned earlier, prior research comparing outcomes for Gautreaux families moving to mostly white suburbs versus those moving to mostly black city neighborhoods has shown significant and positive relationships between placement neighborhoods and subsequent employment and educational attainment (Rosenbaum 1995, 1997; Rubinowitz and Rosenbaum 2000). The early results of the MTO program suggest that moves to low-poverty neighborhoods have led to some important gains in some outcomes, including mother's and children's feelings of safety, mental and physical health, and children's behavior and education (e.g. Goering and Feins 2003; Hanratty, McLanahan, and Pettit 1997; Katz, Kling, and Liebman 1997; Ladd and Ludwig 1997). MTO did not begin until the 1990s, so only short-term outcomes are available.

The clearest conflicting findings are the absence of effects on employment and public aid receipt in most MTO studies. While the Gautreaux survey found significant effects of moves on employment rates five years after moving and on welfare receipt six years after moving, MTO research using control-group comparisons finds little difference between experimental and control groups in employment, earnings, or welfare receipt in three out of four cities (Goering and Feins 2003). It is hard to know whether the discrepancy is due to a different model of

residential mobility, a different economy, or a different time span.⁵ In any case, no studies of either program have looked at long-term patterns of mobility, which are the focus here.

Data and methods

Family and baseline measures

We use a random sample of all female-headed families that moved with the program between 1976 and 1990 ($N = 1,506$). We examine only families moving before 1990 because after that, program rules changed; families searched for their own units and could no longer be considered as allocated to their placement address in a quasi-random manner. All family background measures are taken directly from program intake records gathered by the Leadership Council for Open Metropolitan Communities. These include whether the head of household was receiving Aid to Families with Dependent Children (AFDC) at the time of program placement (dummy indicator), the number of family members in the household (continuous variable), the year of the move between 1976 and 1989 (continuous variable), the child's age at the move (continuous variable), and an indication of whether the family expressed a preference for a city or a suburban placement at program entry.⁶ Missing data for the age of the youngest child was recoded to the mean, and a dummy indicator is included in the analyses to adjust for these cases. In addition to the family-level measures, program records included pre-move and placement street address as described next.

⁵ Some unexpected trends were evident in the MTO results: very large reductions in welfare receipt and unemployment for *all* groups, including the control group (Baltimore, Boston, Los Angeles, and New York). One rarely sees low-income populations showing such dramatic improvements in employment, particularly in a “no-change” control group. These control group gains were probably the result of the extraordinarily strong labor market of the late 1990s and the new national welfare reform program Temporary Assistance to Needy Families (TANF). Since the labor market has cooled in recent years, control group gains may subside, and residential mobility effects may be more evident in later studies (unless TANF and labor market experience have an enduring impact).

⁶ Preference preferences are listed as dummy indicators interacting stated preference (city, suburb, or neither) and placement (city or suburb), with “no preference, city placement” as the reference group. Although program records indicate participants’ “preference for city or suburb,” this variable is difficult to interpret. Given the limited number of housing units available in certain locations, participants’ reported preferences might be distorted by their perceptions of what it takes to get a housing unit at a particular time (perhaps with a lag). We cannot know what preferences they would have stated in different circumstances. We include this variable as a control, but we would not know how much credibility to give to it if it turned out to be a significant influence, which mostly it did not.

Remove neighborhood characteristics

We supplement program data with three continuous variables to characterize the neighborhoods indicated by remove address (percent black in the census tract, mean family income in the census tract (per thousand dollars), and level of violent crime in the neighborhood⁷). For cases missing data on remove neighborhood characteristics, the values were recoded to the mean, and dummy indicators are included in the analyses to adjust for these cases. We also included data from the Chicago Housing Authority to indicate whether the remove address was in a public housing project or whether it was not clear whether the address represented a public housing unit (dummy indicators with the reference group as remove address not in public housing).⁸

Racial composition of the placement neighborhood

To characterize the placement neighborhood, we matched the address to its 1980 census tract and interpolated the racial composition of this area between the 1970 and 1980 and 1980 and 1990 censuses, depending on the year of the move (see appendix A).⁹ Although census tracts are

⁷ The crime data used to characterize remove and placement neighborhoods come from two sources, one for city neighborhoods and one for suburban neighborhoods, since these respective areas collect their data on different geographic units. Chicago crime data come from the Chicago Police Department yearly reports and include the total number of murders, aggravated assaults, and criminal sexual assaults/rapes reported in each year. These data are collected for “community areas,” which had to be coded to roughly match census tract boundaries (the authors thank Ruby Mendenhall, Micere Keels, and Greg Duncan for this work). Crime data for areas of Illinois outside of Chicago come from the Federal Bureau of Investigation’s Uniform Crime Reporting (UCR) records. UCR data are organized by reporting agencies and roughly correspond to towns and cities. We identified the names of the suburban towns and cities that participants lived in by using their ZIP codes.

⁸ The remove addresses were hand-coded to match the street address ranges for public housing projects in Chicago. A portion of these addresses (7 percent) fall just outside the unit range or appear very close to public housing addresses. It is possible that these families were on the waiting list for public housing or living in disadvantaged non-public housing units in the surrounding area. Either way, we coded them separately. The reference group for this variable is “not in public housing remove”; these families had to be on the list and eligible for public housing to be qualified for the program. Often, such families were staying with family or friends in the interim. The authors thank Brian Jacob for the public housing address data.

⁹ In the process of interpolating the data between 1980 and 1990, we lost many cases (10.7 percent) because some areas exist in one census period and not in another, a problem that was especially relevant for the quickly growing suburban areas into which many families were placed. To deal with this issue, we used the 1980 data for the 1990 tract boundaries of those areas and indicated these cases with a dummy flag in the analyses.

somewhat larger and potentially more heterogeneous than what most families might consider a neighborhood, they are a reasonable indicator for area characteristics and vary a great deal over the six-county area in and around Chicago. The analyses are presented with the continuous placement neighborhood black percent variable broken into six categories (with the corresponding approximate sample percentage in parentheses): 0 to 2 percent (28.3 percent, and used as the reference group in the multivariate analyses), 2.1 to 5 percent (17.9 percent), 5.1 to 15 percent (18.2 percent), 15.1 to 50 percent (15.9 percent), 50.1 to 97 percent (9.0 percent), and 97.1 to 100 percent (10.8 percent). These categories were selected to meet two criteria—one statistical, one substantive. The first four categories are close to quintiles, providing reasonable numbers of cases for analyses. The last quintile is split in half, to examine the differences that may result from placement in mostly black neighborhoods versus highly segregated black neighborhoods (mostly city placements). By design, the program placed families into highly white and highly black areas, thus yielding a bimodal distribution on this variable. These categories are sensitive to that distribution at both ends of the spectrum.

Most recent address and racial composition

Using a variety of sources, we located recent addresses on 1,504 of our 1,506 families (99.9 percent), an average of 14 years since the move; of these, we could geocode 97.8 percent (1,472/1,504) (see appendix B for details on data collection procedures). We coded these addresses for census tract and merged information from the 1990 census for 79.1 percent (1,165/1,472) of these. Thus, for most analyses, we were able to examine the current locations of 98 percent of the people placed originally. It should be noted that 72 percent of those addresses are 1996 to 1999, and 94 percent are 1993 or later (10 years after 1983, the average year of the move for the sample). This gives a broad period in which families could evidence residential change. Current neighborhood percent black is broken into five categories (with rounded relative sample distributions in parentheses): 0 to 30 percent (47.5 percent), 30.1 to 50 percent (8.1 percent), 50.1 to 70 percent (5.8 percent), 70.1 to 97 percent (12.5 percent), 97.1 to 100 percent (26.0 percent). Since the Gautreaux consent decree defined areas with less than 30 percent black composition as the integration goal, these breakdowns allow us to examine how well that outcome was preserved over a long period (with 70 percent chosen as the mirror image).¹⁰

¹⁰ While any distinction may seem arbitrary, there are few differences between less than 30 percent black and less than 50 percent black in our analyses, since only 8 percent of the sample ends up in the 30 to 50 percent range.

Results

Descriptive analyses¹¹

Where are they now? First, we examine where families currently reside and whether they returned to the city. Contrary to what most critics would have predicted, we find that of the families placed in the suburbs, less than 30 percent moved back to the city, over 57 percent remained in the Chicago suburbs, and the rest moved out of the Chicago metropolitan area (which could not be categorized as suburb or city; see table 1). Of the families placed in the city, over 78 percent stayed in the city, 12 percent moved into suburbs on their own, and 9 percent moved out of the area. Excluding the small portion of families that could not be categorized as city or suburb (because they moved out of state [10 percent],¹² 66 percent of suburban movers remained in the suburbs (N = 438/663).

Table 1. Current Location of Gautreaux Families by City/Suburb Placement

Placement Address		Current Address				Total
		City	Suburbs	Other Illinois ZIP Codes	Out-of-State ZIP Codes	
Suburb	Count	226	438	15	86	765
	Row %	29.45	57.33	1.96	11.26	100
	% of Total					50.86
City	Count	579	89	8	63	739
	Row %	78.35	12.04	1.08	8.53	100
	% of Total					49.14
Total	Count	805	527	23	149	1,504
	Row %	53.52	35.04	1.53	9.91	100

Source: Authors' calculations.

Table 2 shows that there is little difference in the rate of return to the city based on placement suburban region. The north suburbs have the highest retention rate (46.9 percent), while the western suburbs have the lowest (29.4 percent).

¹¹ Basic descriptives for the sample are included in appendix C.

¹² From this point forward, we remove those families that have moved out of state or county range, since it would be difficult to generalize interpretations about racial composition effects across states. The number of families for whom we have recent addresses is larger in the first few tables than the numbers in these analyses as a result.

Table 2. Region of Most Recent Address as a Function of Placement Region

Placement Address	Most Recent Address							Total
	Chicago	North Suburbs	West Suburbs	South Suburbs	Other Illinois ZIP Codes	Out-of-State ZIP Codes		
Chicago	Count	573	33	6	49	6	62	729
	Row %	78.60	4.53	0.82	6.72	0.82	8.50	100
North suburbs	Count	132	218	21	34	9	51	465
	Row %	28.39	46.88	4.52	7.31	1.94	10.97	100
West suburbs	Count	44	11	37	24	0	10	126
	Row %	34.92	8.73	29.37	19.05	0	7.94	100
South suburbs	Count	48	11	7	65	4	17	152
	Row %	31.58	7.24	4.61	42.76	2.63	11.18	100
Total	Count	797	273	71	172	19	140	1,472
	Row %	54.14	18.55	4.82	11.68	1.29	9.51	100

Source: Authors' calculations. Percentages may not total 100 because of rounding.

Table 3 gives a broader perspective on the program in general and compares premove, placement, and current addresses on a number of socioeconomic census characteristics. Comparing columns 1 and 2, we see that program participants were placed in areas with much lower poverty rates, percent black, and male unemployment, and they had higher education rates and mean family income than their original addresses. Looking at columns 2 and 3, it is clear that families are still living in areas very similar to their placement neighborhoods an average of 14 years later. Current addresses are strikingly comparable to placement neighborhoods in terms of percent in poverty (17 vs. 19 percent), educational level as measured by the percentage of neighborhood residents with a college degree (21 vs. 20 percent), male joblessness (32 vs. 36 percent), and mean family income (which is actually higher—\$56,057 at placement and \$68,550 at current, both in 1999 dollars).

Table 3. Neighborhood (Tract) Characteristics of Premove, Initial Placement, and Most Recent Addresses (for Female Heads)

	Premove	Placement	Recent
% in poverty (Nonelderly)			
Less than 10%	5.8	47.6	41
10 to 20%	17.5	16.9	22.1
21 to 30%	14.8	14.5	14.7
31 to 40%	13.2	10.1	10
41 to 50%	11.2	6.3	4.1
51 to 59%	9.4	3.3	3.8
60% or higher	28.1	1.4	4.4
Mean	42%	17%	19%
Nonmissing N	1,171	1,328	1,165
Missing N	301	144	307
Total N	1,472	1,472	1,472
% black			
Less than 10%	3.7	50.9	31.4
10 to 20%	3.4	11.8	9.4
21 to 30%	2.6	7.4	9.2
31 to 50%	4.6	5.7	8.3
51 to 70%	6.5	1.3	5.7
71 to 89%	6.3	1.9	5
90% or higher	72.8	21.0	31
Mean	83%	30%	46%
Nonmissing N	1,209	1,307	1,165
Missing N	263	165	3.7
Total N	1,472	1,472	1,472

Table 3. Neighborhood (Tract) Characteristics of Premove, Initial Placement, and Most Recent Addresses (for Female Heads) (continued)

	Premove	Placement	Recent
% of adults with college degrees			
Less than 10%	78.8	31.1	36.1
10 to 20%	8.2	17.8	23.4
21 to 30%	4.6	26.2	17
31 to 40%	2.8	13.8	14.3
41 to 50%	1.3	4.6	4.1
51 to 59%	1.9	3.5	2.8
60% or higher	2.3	3.0	2.2
Mean	10%	21%	20%
Nonmissing N	1,206	1,330	1,165
Missing N	266	142	307
Total N	1,472	1,472	1,472
Joblessness (% of males employed less than 6 months in past year)			
Less than 20%	0.8	25.9	20.2
20 to 30%	4.4	24.5	22.1
31 to 40%	20.2	25.2	21.5
41 to 50%	19.8	9.2	16.3
51 to 59%	16.1	8.2	11.2
60% or higher	38.5	7.0	8.8
Mean	54%	32%	36%
Nonmissing N	1,196	1,330	1,165
Missing N	276	142	307
Total N	1,472	1,472	1,472
Mean family income*			
Mean	\$26,765	\$56,057	\$68,550
Standard deviation	\$15,424	\$34,045	\$31,023
Nonmissing N	1,253	1,329	1,165
Missing N	219	143	307
Total N	1,472	1,472	1,472

Source: Authors' calculations. Percentages may not total 100 because of rounding.

*Numbers reflect 1999 dollars.

The only characteristic that differs substantially between the placement and current addresses is the mean percent black of each neighborhood. Given the program's consent decree, families that were placed in suburban neighborhoods had to be placed in areas with no more than 30 percent black residents (mean percent black was actually 10 percent in suburban placements). City movers went to places with a much higher percent black (mean city percent black 56 percent). In the current period, although the mean percent black of neighborhoods increases from placement, it is still only about *half* what it was at the

original address. So while there is some evidence that postplacement families moved to areas that had a slightly higher black composition, these areas are still far more integrated than their premove areas.

A suburb is a suburb. In addition, we test the hypothesis that most of the families that moved to or remained in the suburbs would end up in areas classified as “low” according to Harris’s (1999a) typology of all suburbs in the nation. We used selected census characteristics to compare with those Harris used (1999a).¹³ As noted earlier, he cautions against the city/suburb distinction, since over the past few decades, many suburbs have come to resemble central cities with regard to socioeconomic disadvantage. Therefore, we examined the suburban neighborhoods into which families were placed, as well as the addresses for those currently living in the suburbs, according to an adaptation of the typology. This analysis tests Harris’s (1999a) claim that many minorities who end up in suburban neighborhoods reside in the least advantaged ones.

Table 4 shows census characteristics for both the initial suburban placement neighborhood and the current suburban neighborhood.¹⁴ Alongside each of these are the corresponding neighborhood characteristic means from Harris (1999a). We compare our estimates for placement neighborhood with his estimates for the 1980 census period, and our estimates for current neighborhood with his estimates from the 1990 census period. At placement, suburban families were overwhelmingly assigned to suburban neighborhoods that would be classified as high to middle according to the typology, with most characteristics actually closer to high suburb values than middle. For example, Harris (1999a) classifies high suburbs as those with a poverty rate of 3.6 percent (low suburbs with 15.4 percent); on average, our sample was placed into suburban neighborhoods with 5.3 percent of the residents in poverty. With regard to the percentage of female-headed families, his high suburbs have only 9.2 percent, and our sample was placed into suburban neighborhoods with 11.5 percent female-headed families.

¹³ We chose four out of the seven variables in the Harris (1999a) paper because those were variables for which we were confident we had comparable census measures. The paper does not include an appendix documenting which census variables he chose by number, so we used those that were the least ambiguous and the clearest indicators of socioeconomic status.

¹⁴ To obtain the means for placement neighborhood census characteristics, we interpolated data across the 1980 and 1990 censuses, according to the year of the move. See appendix A for more details.

Table 4. Selected Suburban Neighborhood (Tract) Characteristics of Initial Placement and Most Recent Addresses Compared with the Harris Typology^a

	Initial Placement Suburb (1980 Census)	Harris Typology ^a (1980 Census)			Most Recent Address Suburb (1990 Census)	Harris Typology ^a (1990 Census)		
		Low	Middle	High		Low	Middle	High
Percent in poverty (nonelderly) mean	5.3	15.37	7.42	3.63	7.11	18.26	7.20	3.25
Percent of adults with college degrees mean	24	8.73	15.31	33.99	22.19	9.72	19.09	40.63
Mean family income ^b mean	\$71,545	\$42,018	\$54,073	\$83,775	\$62,367	\$42,842	\$60,330	\$104,443
Female-headed families mean	11.5	20.03	13.48	9.17	17.34	25.18	15.25	9.14
Percent black mean	10				20.4			

^a 1999a.

^b All numbers are in 1999 dollars; the numbers for placement address were inflated from 1983 dollars to 1999 dollars; Harris's (1999a) estimates were given in 1996 dollars; we inflated them to 1999 dollars. Numbers for current address were inflated from 1990 dollars to 1999 dollars. Estimates are based on the Inflation Calculator in U.S. Bureau of Labor Statistics (2003).

Although 84 percent of families had made some move since being placed, they are currently still in areas that fall above middle suburbs on some attributes and much closer to the middle category than low on others. Current suburban addresses have a mean of 7.11 percent for percent poor, as compared with Harris's (1999a) middle suburb value of 7.20 percent (low is 18.26 percent). Mean family income at current address (\$62,367) and percent college degrees (22.19 percent) also fall just above the typology value of \$60,330 and 19.09 percent, respectively, for a mean middle suburb. Current address mean percent on female-headed families (17.34 percent) falls just above but close to the cut-off for middle suburbs (15.25 percent). Overall, it appears that families were placed in suburbs that closely resemble "high" to "middle" suburbs according to the typology, although there has been more movement into the middle suburbs over time.

Most recent neighborhoods. Next, we examine whether the black composition of placement neighborhoods predicts whether families will return to city neighborhoods (table 5). Among those placed in the suburbs and excluding the two highest categories (which have few cases and presumably violate program rules), we find a weak U-shaped relationship. Just as previous research (Clark 1991) suggests, families that move to areas with the lowest percentage of blacks are somewhat more likely to return to the city than the families placed in the next two categories, but then the rate increases for the next higher category (15.1 to 50 percent black). However, analyses of variance contrasting these categories indicate that these are not significant differences. Overall, relative to their city counterparts, the suburban movers appear much less likely to have a recent address in the city at any placement racial composition level. Among those placed in the city and excluding the lowest category (which has few cases), we again find a weak U-shaped relationship, but again, contrast analyses of variance do not suggest significant differences according to composition level.

The following analyses examine the relationship between the racial composition of the placement address and the recent address. We eliminate families that remained in the same location; this choice may merely reflect inertia. This provides a conservative test, since including nonmovers would strengthen the relationship between placement and recent neighborhood. Among movers, the black composition of the placement address is strongly related to the black composition of the recent address (table 6; chi square = 135.96; $p < 0.001$). For example, while over 60 percent of the families placed in neighborhoods within the two lowest black composition categories ended up in low (0 to 30 percent) black neighborhoods an average of 14 years later, over 67 percent of families placed in mostly black neighborhoods (the top two categories) ended up in over 70 percent black areas much later.

Table 5. Proportion in City Neighborhoods as a Function of the Black Composition of Initial Placement and City/Suburb Placement

Placement Address	% Black at Placement	Mean	N	Standard Deviation
Suburb	0 to 2%	0.31	332	0.46
	2.1 to 5%	0.26	185	0.44
	5.1 to 15%	0.28	134	0.45
	15.1 to 50%	0.36	61	0.48
	50.1 to 97%	<i>0.24</i>	<i>21</i>	0.44
	97.1 to 100%	<i>1.00</i>	<i>2</i>	0.00
	Total	0.30	735	0.46
City	0 to 2%	<i>0.71</i>	<i>35</i>	0.46
	2.1 to 5%	0.84	67	0.37
	5.1 to 15%	0.78	140	0.42
	15.1 to 50%	0.77	189	0.42
	50.1 to 97%	0.81	125	0.40
	97.1 to 100%	0.80	171	0.40
	Total	0.79	727	0.41
Total	0 to 2%	0.35	367	0.48
	2.1 to 5%	0.42	252	0.49
	5.1 to 15%	0.54	274	0.50
	15.1 to 50%	0.67	250	0.47
	50.1 to 97%	0.73	146	0.45
	97.1 to 100%	0.80	173	0.40
	Total	0.54	1,462	0.50

Source: Authors' calculations.

Note: Numbers in italics indicate cells with small sample sizes; the results should therefore be interpreted with caution. This occurs for the very high percent black suburbs and the low percent black city placement neighborhoods, which were statistically rare placements with Gautreaux.

Although most families move to areas similar to those in which they were placed, high-black areas remain a risk. Even for those families placed in mostly or moderately white neighborhoods (0 to 2 percent, 2.1 to 5 percent, 5.1 to 15 percent, and 15.1 to 50 percent), we see that highly black areas remain a significant risk for a sizable minority of families (18 to 24 percent of their recent addresses are in the high-concentration-black neighborhoods (97 to 100 percent). (See also table 3.)

These descriptive analyses indicate vastly more suburban persistence than critics would have predicted. They also show that after being given the experience of living in mostly white areas, black families often continue to live in such areas. Critics are correct that people in areas with mostly white residents are somewhat less likely to persist, but this is a small, nonsignificant difference. However, what is most noteworthy is the low proportion of families that return to the city and the small difference between the types of suburbs in rates of return to

Table 6. Black Composition: Placement Address by Most Recent Address (Movers Only)

% Black of Placement Neighborhood	% Black of Most Recent Neighborhood						Total
	0 to 30%	30.1 to 50%	50.1 to 70%	70.1 to 97%	97.1 to 100%		
0 to 2%	N 162	12	19	24	50	267	
	Row % 60.67	4.49	7.12	8.99	18.73	100	
2.1 to 5%	N 104	9	7	17	32	169	
	Row % 61.54	5.33	4.14	10.06	18.93	100	
5.1 to 15%	N 70	17	17	17	40	161	
	Row % 43.48	10.56	10.56	10.56	24.84	100	
15.1 to 50%	N 61	18	4	20	33	136	
	Row % 44.85	13.24	2.94	14.71	24.26	100	
50.1 to 97%	N 16	8	3	24	31	82	
	Row % 19.51	9.76	3.66	29.27	37.80	100	
97.1 to 100%	N 15	9	3	12	48	87	
	Row % 17.24	10.34	3.45	13.79	55.17	100	
Total	N 428	73	53	114	234	902	
	Row % 47.45	8.09	5.88	12.64	25.94	100	

Source: Authors' calculations. Percentages may not total 100 because of rounding.
Notes: Chi square = 135.96; $p < 0.001$.

the city. The dominant conclusion is that most moves persist and that they have long-term effects on whether families are in integrated neighborhoods many years after their initial moves.

Multivariate analyses. This section uses multivariate analyses that control for baseline individual and premove neighborhood attributes to test the relationships described earlier (examining only the 84 percent of families that moved from their placement address). Given the program's quasi-random design, we can be relatively confident that families assigned to different areas are similar; this is corroborated by empirical analyses (Mendenhall, Duncan, and DeLuca 2003). However, these multivariate analyses allow us to control for several important attributes and adjust for the possibility of nonrandom differences among families.

The following models examine whether the racial composition of the current neighborhood is related to the racial composition of the placement neighborhood, controlling for many factors: premove neighborhood violent crime, mean family income, percent black, and public housing residence; placement preferences; placement in a city neighborhood; years since placement; AFDC use by the household head at program entry; the youngest child's age at the most recent period; and the number of people in the family. Table 7, columns 1 and 2, show logistic regression analyses with the dependent variable as current neighborhood containing 30 percent or less black residents, while columns 3 and 4 show analyses predicting current neighborhood as containing 70 percent or more black residents.¹⁵ Columns 1 and 3 show estimates without controlling for city placements, while columns 2 and 4 show estimates including the indicator for city placement.¹⁶ Placement neighborhood percent black dummy variables allow the model to show nonlinear influences, with the lowest percent black (0 to 2 percent) left out as the reference category.

¹⁵ We ran the same analyses with "current address in city" as the dependent outcome in a logistic regression and found no significant results. It seems that the major outcome for which percent black at placement has an effect is not city versus suburb, but rather the racial composition of the current address.

¹⁶ The interpretation of the city placement variable is unavoidably ambiguous. It may reflect structural, political, or geographic differences between the city and suburban placement neighborhoods, or it may reflect only variations in black composition within the ranges in our dummy variables.

Table 7. Logistic Regression of Percent Black at Current Neighborhood by Percent Black of Placement Neighborhood (with and without Indicators for City Neighborhood Placement)

	1		2		3		4	
	0 to 30% Black	Exp(B) Pr	0 to 30% Black	Exp(B) Pr	70 to 100% Black	Exp(B) Pr	70 to 100% Black	Exp(B) Pr
<i>Family characteristics</i>								
AFDC at placement	0.314 (0.183)	1.369	0.283 (0.187)	1.327	-0.007 (0.187)	0.993	0.034 (0.189)	1.034
Age of youngest child (in 1997)	-0.024 (0.015)	0.977	-0.024 (0.016)	0.977	0.024 (0.015)	1.024	0.024 (0.015)	1.024
Age of youngest child missing	0.167 (0.207)	1.182	0.155 (0.210)	1.167	-0.222 (0.213)	0.801	-0.212 (0.216)	0.809
Number in family	0.131 (0.078)	1.139	0.068 (0.080)	1.070	-0.065 (0.080)	0.937	-0.010 (0.082)	0.990
City placement, city preference	-0.088 (0.514)	0.916	-0.109 (0.505)	0.897	0.556 (0.502)	1.744	0.569 (0.493)	1.766
City placement, suburban preference	-0.583 (0.676)	0.558	-0.587 (0.667)	0.556	0.618 (0.623)	1.855	0.616 (0.614)	1.852
Suburban placement, no preference	0.300 (0.612)	1.350	-0.528 (0.629)	0.590	0.169 (0.635)	1.184	0.880 (0.650)	2.412
Suburban placement, city preference	1.079 (0.704)	2.943	0.141 (0.724)	1.151	-1.015 (0.883)	0.363	-0.211 (0.898)	0.810
Suburban placement, suburban preference	0.408 (0.515)	1.504	-0.458 (0.538)	0.633	0.490 (0.515)	1.632	1.227* (0.536)	3.409
Other preferences	0.048 (0.479)	1.049	-0.459 (0.485)	0.632	0.460 (0.475)	1.584	0.834 (0.474)	2.303
Lived in public housing before placement	0.023 (0.206)	1.024	0.031 (0.210)	1.031	-0.277 (0.215)	0.758	-0.299 (0.219)	0.742
Not sure if lived in public housing before placement	0.132 (0.398)	1.141	0.172 (0.404)	1.188	-0.358 (0.413)	0.699	-0.382 (0.417)	0.682

Table 7. Logistic Regression of Percent Black at Current Neighborhood by Percent Black of Placement Neighborhood (with and without Indicators for City Neighborhood Placement) (continued)

	1		2		3		4	
	0 to 30% Black	Exp(B) Pr	0 to 30% Black	Exp(B) Pr	70 to 100% Black	Exp(B) Pr	70 to 100% Black	Exp(B) Pr
Years since move (in 1997)	0.016 (0.033)	1.016	0.030 (0.034)	1.031	-0.031 (0.034)	0.969	-0.044 (0.034)	0.957
<i>Remove neighborhood characteristics</i>								
Origin neighborhood violent crime	-0.003 (0.004)	0.997	-0.003 (0.004)	0.997	0.006 (0.004)	1.006	0.006 (0.004)	1.006
Origin neighborhood mean family income/1,000	-0.002 (0.006)	0.998	-0.004 (0.006)	0.994	-0.007 (0.006)	0.993	-0.006 (0.007)	0.994
Origin neighborhood % black	-0.009** (0.003)	0.991	-0.010** (0.003)	0.990	0.012** (0.004)	1.012	0.012** (0.004)	1.013
Missing 1+ origin neighborhood characteristics	0.030 (0.285)	1.030	0.025 (0.289)	1.025	-0.090 (0.294)	0.914	-0.099 (0.298)	0.906
<i>Placement neighborhood characteristics</i>								
Percent black at placement ⁺⁺	0.079 (0.221)	1.083	0.225 (0.227)	1.252	0.046 (0.239)	1.047	-0.089 (0.245)	0.915
Very low (2.1 to 5%)	0.869 (0.221)	0.869	0.138 (0.227)	0.138	0.307 (0.239)	0.307	0.307 (0.245)	0.908
Moderately low (5.1 to 15%)	-0.771** (0.222)	0.462	-0.430 (0.236)	0.650	0.422 (0.235)	1.525	0.086 (0.251)	1.089

Table 7. Logistic Regression of Percent Black at Current Neighborhood by Percent Black of Placement Neighborhood (with and without Indicators for City Neighborhood Placement) (continued)

	1		2		3		4	
	0 to 30% Black	Exp(B) Pr	0 to 30% Black	Exp(B) Pr	70 to 100% Black	Exp(B) Pr	70 to 100% Black	Exp(B) Pr
Moderate (15.1 to 50%)	-0.662** (0.245)	0.516 0.760	-0.172 (0.269)	0.842 0.097	0.637* (0.255)	1.890 0.445	0.168 (0.279)	1.183 0.928
High (50.1 to 97%)	-1.729** (0.333)	0.178 0.521	-1.157** (0.358)	0.314 0.038	1.630** (0.301)	5.103 0.684	1.083** (0.330)	2.952 0.970
Hypersegregated (97.1 to 100%)	-1.726** (0.350)	0.178 0.522	-1.038** (0.380)	0.354 0.043	1.637** (0.315)	5.140 0.685	1.005** (0.347)	2.732 0.967
City placement			-1.206** (0.244)	0.299			1.096** (0.249)	2.993
Dummy for noninterpolated data at placement	-0.057 (0.278)	0.945	-0.321 (0.284)	0.726	0.084 (0.291)	1.087	0.333 (0.301)	1.396
Constant	0.629 (0.886)	1.876	1.529 (0.913)	4.612	-1.905* (0.907)	0.149	-2.655** (0.929)	
N	831		831		831		831	
-2 log-likelihood	1,025.344		1,000.079		993.158		973.279	
Chi square	122.059		147.323		108.815		128.693	
Significance	0.000		0.000		0.000		0.000	

Source: Authors' calculations.
 Note: ++ Reference category is 0 to 2%; therefore, column "Pr" denotes the probability that most recent address in the neighborhood will correspond to that dependent variable, relative to this reference group.
 * $p < 0.05$. ** $p < 0.01$.

Family-level effects. Since families that begin on AFDC are more likely to continue to receive benefits after placement, we expected that these families would be more likely to move back to high-black urban areas, where the welfare infrastructure is better articulated and more common. We also expected that the age of the youngest child (at the most recent address) might be important, since mothers might choose to stay in certain neighborhoods that are better suited for their children until they are grown, at which time they might choose to live in the city with other friends and relatives. Families with several children might also make differential mobility decisions. We expected that years since placement might have a positive effect on the percent black of the recent neighborhood, especially if regression to higher-black neighborhoods or city neighborhoods is expected to occur. Finally, we expected families with addresses in public housing before placement (even more than those on the waiting list) would be more likely to end up in higher percent black neighborhoods, perhaps to reconnect disrupted social networks and families. There does not appear to be any evidence to support these hypotheses across any of the model specifications, so we omit a discussion of these factors from this point on. We also hypothesized that the preferences families report as to their placement destinations before their move might represent some unobserved factors that are likely to affect the racial composition of their recent neighborhood. However, there is only one significant baseline result, which appears in column 4. It appears as though those families that evidenced a preference for suburban placements and were granted one were more likely to end up in highly concentrated black neighborhoods (70 to 100 percent) compared with families that were placed in the city and evidenced no preference (reference group), a finding we cannot explain.¹⁷

Baseline neighborhood

The next set of variables represents the conditions in premove neighborhoods. We include these as a control against the possibility of non-random differences among the city and suburban movers (these are in essence differences between families placed in primarily white versus

¹⁷ Although program records indicate participants' "preference for city or suburb," this variable is difficult to interpret. Given the limited number of housing units available in certain locations, participants' stated preferences might be distorted by their perceptions of what it takes to get a housing unit at a particular time (perhaps with a lag). We cannot know what preferences they would have stated under different circumstances. We include this variable as a control, but we do not know how much credibility to give to it. In any case, it is significant only once in these analyses, and that finding is difficult to explain.

primarily black neighborhoods). The only premove neighborhood characteristic that reaches significance across the models is premove neighborhood percent black. This indicates that those families living in the highest percent black neighborhoods before placement are less likely to be in primarily white neighborhoods (0 to 30 percent) at the most recent period (columns 1 and 2) and more likely to be in neighborhoods with high concentrations of black residents (70 to 100 percent) (columns 3 and 4).

Placement neighborhood effects

However, despite these family and premove neighborhood controls, the racial composition of the placement neighborhood significantly predicts the racial composition of the most recent neighborhood. Table 7, column 1, shows the effect of placement neighborhood percent black on the likelihood that families will end up in neighborhoods that are relatively integrated, at 30 percent black or less.

It is interesting to note that the results show a step pattern, with the first two successive levels at the same magnitude, the next two at a significantly higher plateau, and the next two at an even higher plateau. Relative to those families placed in the lowest percent black neighborhoods (0 to 2 percent, the reference group), families placed in areas 2.1 to 5 percent black are no more likely to be in integrated neighborhoods, but those families placed in neighborhoods above 5.1 percent black are all less likely to reside in integrated neighborhoods at the most recent address. However, the effects are not linear with each categorical increase in placement percent black. Rather, there appear to be threshold effects resembling steps. After the initial plateau, the shift from placement in neighborhoods from 2.1 to 5 percent to 5.1 to 15 percent black leads to a significant increase in the odds that the current address is in 30 percent black or less areas ($\text{Exp}(B) = 1.083$ to 0.462), but the shift from 5.1 to 15 percent to 15.1 to 50 percent yields another plateau (odds that are similar in magnitude). This suggests that there is little difference in the likelihood of ending up in relatively integrated neighborhoods for families placed in these two categories.¹⁸

However, the next shift (between 15.1 to 50 percent black and 50.1 to 97 percent black placement in neighborhoods), increases the odds that the current address will be in an area that is 30 percent black or less by

¹⁸ Coefficient comparisons within the model were done by alternating reference groups and find that the “plateau” coefficients are not significantly different from each other and that the “step gaps” were significantly different from the level before them.

a factor of almost three ($\text{Exp}(B) = 0.516$ and 0.178 , respectively). Another plateau occurs in the change from placement neighborhoods with 50.1 to 97 percent to 97.1 to 100 percent black, given the almost identical coefficients for these categories. The higher the percent black of the placement neighborhood, the less likely a family is to be in a recent neighborhood that is integrated, but the increases occur in steps and only at certain points. These findings are captured in the estimated probabilities for each placement percent black category, relative to the reference group, with other variables at the mean (columns labeled “Pr”). We see that the probability that the current address will be in a 30 percent or less black neighborhood, relative to the reference group at 0 to 2 percent black, is closer in magnitude for the very low black (2.1 to 5 percent) and moderate black (5.1 to 15 percent) placement neighborhoods than it is for the predominantly black placement neighborhoods.

Column 2 shows the same estimates, but controls for city placements. The pattern of results is similar, but there is only one threshold effect (in the shift to majority black neighborhoods [50.1 percent or more]). This indicates that even after controlling for city placements, the variation in placement neighborhood percent black still affects where people end up. Even holding city placement constant, we see that the probability of ending up in a relatively integrated neighborhood is higher for those families placed in low percent black (2.1 to 5 percent) neighborhoods than it is for all others, but that placement in the highest percent black neighborhoods (50 percent or more) still significantly lowers that probability.

Table 7, column 3, shows results predicting the likelihood that families will end up in highly segregated black neighborhoods, which we characterize as 70 percent black or more at the most recent period. The results suggest that after adjusting for premove neighborhood and family characteristics, percent black at placement significantly predicts whether families will reside in highly segregated neighborhoods in the long run. The effect sizes are similar to those for the previous models, except that they are in the expected opposite direction. Again, we see the same step shape, except that moderately low black composition placements (5.1 to 15 percent) are not quite significant. However, at the next step (once the placement black composition shifts to 15.1 to 50 percent), we see that the odds of families ending up in primarily black recent neighborhoods increases by 89 percent compared with the reference category. For families placed in neighborhoods containing 50.1 to 97 percent black residents, the odds are 2.7 times higher than those for the previous category ($\text{Exp}B = 5.103$ vs. 1.890). As we saw in

the previous models, there is another plateau at the next highest category, indicating that families placed into neighborhoods above 97 percent black are no more likely to end up in highly segregated neighborhoods than those placed in neighborhoods at 50.1 to 97 percent black ($\text{Exp}(B) = 5.103$ vs. 5.140). The corresponding probabilities show that those placed in predominantly black neighborhoods are much more likely to end up in such neighborhoods than those placed in mostly white areas.

Controlling for city neighborhood placement in column 4 has an effect similar to that seen in column 2, creating a single step, reducing the effect of moderate (15.1 to 50 percent) percent black placement neighborhoods to insignificance, and reducing the size of the coefficients at higher levels. The relative probabilities reflect the smaller differences after adjusting for city placement, but show the higher probabilities of ending up in a segregated black neighborhood for those placed into similar areas.

Overall, these multivariate logistic regressions indicate that initial residential placement strongly predicts recent neighborhood composition, even after extensive controls. Even though most families move after placement, their later address is significantly related to the kind of neighborhood into which they were placed by the program. Families placed in neighborhoods with higher black percentages were more likely to currently reside in similar neighborhoods, and inversely, those placed in less black areas were more likely to currently live in such areas.

Conclusions

One critique from a conservative viewpoint holds that many social programs are trying to achieve social engineering, but the changes they implement are likely to disappear over time as human nature overcomes their influence. In other words, racially integrated moves may have appeal, but people will soon move back to areas where they are more comfortable. Even if residential mobility programs managed to move families and have positive early effects on life outcomes, they ultimately will have little importance if families do not remain in these areas and move back to segregated low-income neighborhoods where they feel more comfortable.

The present findings clearly refute those expectations. First, we found that the majority of low-income black families that were placed in suburban, low-black composition neighborhoods did *not* move back to the

city, as previous research might have predicted (Clark 1991; Farley et al. 1978). Rather, suburban placements had long-term effects on where families ended up. Even when we detected a modest increase in returns to the city from the lowest percent black suburbs (0 to 2 percent), the rate was still only 31 percent and was not significantly different from that of other categories.

Our analyses also show that families in our sample ended up in better suburbs than expected, even if they made subsequent moves. Our comparison with Harris (1999a) showed that most families were not only placed in middle- to high-socioeconomic-status suburbs, but also still live in similar areas. This allays the fears that these minority families would end up in areas that were suburbs in name, but just as disadvantaged as the inner-city neighborhoods they tried to leave.

Finally, even though 84 percent of the families made subsequent moves after placement, the racial composition of their current residence is strongly related to program placement. These findings clearly indicate that similar groups of families quasi-randomly placed in areas with few blacks are much more likely to end up in another such neighborhood than families placed in mostly black areas.

The interpretation of these relationships is not clear. They may imply that preferences, rather than being inherent attributes of people, are affected by the kinds of neighborhoods people have experienced. Alternatively, they may indicate that structural barriers, having been broken, permit families to follow new courses of action.

It may also be noteworthy that the relationship seems to take a step shape. Some increases in categories lead to incremental changes in outcomes, and some do not. While other researchers have asserted such threshold effects for neighborhood preferences (Farley et al. 1978), structural factors could also have threshold effects. In any case, these particular thresholds are intriguing, but they may not generalize to other settings. As always, we caution against overgeneralizing from a single study.

While this article has explored the extent to which the racial composition of the placement neighborhood can explain the racial composition of a family's more recent neighborhood, we have begun additional research to examine the multiple dimensions of neighborhoods, in addition to racial composition, that might help explain residential outcomes. Other work has begun to explore the effects of related correlates of neighborhood desirability, such as crime levels, income, education level, percent unemployed, and percent in poverty, on the racial

composition of later neighborhoods (DeLuca et al. 2001). There are many individual and contextual reasons why low-income black families would choose to remain in or move to suburban neighborhoods with few blacks. Although race may be the driving causal factor in determining where families end up, either because of family preferences or social structural barriers, it is likely that related neighborhood attributes play a part and may even explain portions of the race effect (Frey 1979; Harris 1999b). Many integrated or primarily white areas are rich in other resources that affect family outcomes, such as active neighborhood groups, quality schools, and engaged public officials.

In addition, it is possible that some of the effects of the placement neighborhood operate *within* census tracts, at the block group level. Since census tracts can be quite large, it is likely that some interaction between the block group and tract-level attributes characterizes placement experiences for some families. For example, families living in relatively integrated census tracts but more segregated block groups (enclaves) may fare better or worse than families placed into segregated block groups within segregated tracts (Briggs 1998). In current work, we are exploring the extent to which racial composition at these different levels can help predict long-term family and neighborhood outcomes.

This article also has policy implications. Prior research has focused on whether residential moves affect mothers' and children's outcomes. Some prior studies have shown remarkably strong effects, sometimes stronger than the outcomes of programs targeted at the outcome itself, such as job training programs (Bloom et al. 1992; Cave and Doolittle 1991). Such findings raise the possibility that residential mobility may sometimes be a better way of improving families' well-being than direct service programs. However, as we have noted, residential mobility programs can take many forms, and different forms may have different consequences. We have offered a typology for some of the salient distinctions among existing mobility programs, and we encourage careful analysis of the distinctive features and consequences of each type of program. Moreover, some of these findings may depend on the persistence of the moves, and critics have raised doubts about that issue.

If creating more racially integrated neighborhoods is a goal for society, available evidence suggests that merely giving out housing vouchers will not be sufficient; this approach often leads families to choose neighborhoods like the ones in which they already reside (Cronin and Rasmussen 1981). Multiple models of residential mobility are available (Gautreaux, MTO, and Yonkers), and such programs may be needed differentially, depending on the context. However, again, it is of the

utmost importance to know whether residential moves persist over time. Our results clearly inform this question.

Finally, researchers have been impressed with prior findings about the fears low-income black families have about living in areas with low percent black composition. Although early research on neighborhood preferences showed a tendency for whites and blacks to prefer neighborhoods in which they were a majority and research on housing vouchers showed that low-income black families tend to choose areas similar to the ones in which they began (Cronin and Rasmussen 1981), our findings indicate that quasi-randomly assigned placements have enduring effects, either because of changes in preferences or structural circumstances (landlord discrimination, search difficulties, and transportation). Having once circumvented the usual barriers to residing in the suburbs or in low percent black areas, most of the low-income black families that moved to the suburbs remained in the suburbs, and most families that moved to low percent black areas remained in such areas an average of 14 years later.

Appendix A

Interpolation between 1970 and 1980, and 1980 and 1990 censuses

To obtain appropriate time frames for premove addresses, census data were interpolated across the 1970, 1980, and 1990 censuses by subtracting 1 from the year of move and weighting the number of years for which the more recent census applied. For example, to calculate the premove neighborhood population count for a family that moved in 1980, we first subtract 1 from 1980, which gives us 1979 as the last year in the premove neighborhood. We then subtract the population count for the 1970 census from the population count for the 1980 census, divide by 10 years, multiply by 9 (the number of years for which the 1970 census applies to the premove address), and then add the 1970 population count. The equation looks like this:

$$IF(\text{year of move} = 1980, \text{population count of premove address}) = (9 * (\text{popcount 1980 census} - \text{popcount 1970 census}) / 10) + \text{popcount 1970 census} \quad (1)$$

$$IF(\text{year of move} = 1987), \text{population count of premove address}) = (6 * (\text{popcount 1990 census} - \text{popcount 1980 census}) / 10) + \text{popcount 1980 census} \quad (2)$$

For placement address interpolation, the calculation is the same, except that we do not subtract 1 from the year of placement. If a family was

placed in 1982, for example, the interpolation for placement neighborhood population count would look like this:

$$\text{IF (year of move = 1982, population count of placement address)} = (2 * (\text{popcount 1990 census} - \text{popcount 1980 census}) / 10) + \text{popcount 1980 census} \quad (3)$$

The same calculations were done to obtain appropriate race counts at each time period, since we know that many urban and suburban neighborhoods in the Chicago metropolitan area experienced shifts in racial composition between 1980 and 1990. These shifts are likely to affect our observations, so we include these interpolated counts to adjust for this phenomenon.

Appendix B

Remove, placement, most recent address, and census matching

While program records provide previous address and placement destination, “most recent” participant address, which we define as the participant’s address between 1993 and 2000, is more complicated to document. It came about as the result of decision rules and a combination of address sources. We used three sources to obtain a current address for the head of household:

1. Illinois Department of Human Services (DHS). AFDC records from 1989 to 1996, matched to the sample by Bong Joo Lee
2. Illinois DHS Integrated Client Database Records (AFDC, TANF, Medicaid, Food Stamps) from February 1989 to September 1999, an updated monthly match to our sample, done by Bong Joo Lee and Bob Goerge
3. TransUnion Corporation consumer credit information records through July 2000, matched to our sample by Social Security number traces and last known address re-traces

The most recent address of these three combined sources was used. In the case of two sources claiming the same date for discrepant addresses, or the choice between a TransUnion address and an address given by one of the Illinois DHS matches, the latter was used. This was done because the DHS databases contained addresses and names to which checks were sent, so we assumed that these were probably more accurate than the addresses people might use for other credit purposes.

In a small number of cases ($N = 50$, or 3.3 percent), the most recent address we obtained was “uncodable” according to the interactive geocoding software we used. These addresses were usually post office boxes or out-of-range street addresses. For these cases, we chose the next most recent address from our sources ($N = 19$, or 1.3 percent), so that we could match a recent address to area census characteristics. For 34 cases (2% percent), we could not get any recent codable street address, but we did obtain a most recent ZIP code for descriptive analyses.

To obtain information about the neighborhoods at the three different time periods, we matched census tracts within counties to data from the 1970, 1980, and 1990 censuses. The address-to-census-tract matches were done using Matchmaker, an online interactive geocoding service from Geographic Data Technology. Addresses that were rejected by the software as uncodable were cleaned by hand using postal service listings or maps and rerun through the software. If this method was unsuccessful for the most recent address data, the above algorithm was used, and the next best addresses were rerun.

Appendix C

Sample Descriptives		Listwise N	Minimum	Maximum	Mean	Standard Deviation
Total sample		1,506				
Sample with located recent address		1,501				
Sample with geocodable address		1,472				
Sample members who moved		1,239				
Sample members in state		1,082				
Most recent neighborhood % black ^a		831	0.00	100.00	47.12	40.62
Placement neighborhood % black ^a		831	0.00	100.00	23.78	34.77
City placement		831	0.00	1.00	0.43	0.50
Premove violent crime level		831	0.91	78.55	35.14	19.86
Premove median family income		831	0.00	\$38,255.98	\$32,190.39	\$17,438.74
Premove % black		831	0.00	100.00	83.25	26.19
Missing one or more premove characteristics		831	0.00	1.00	0.15	0.36
In public housing premove		831	0.00	1.00	0.39	0.49
Not sure if in public housing premove		831	0.00	1.00	0.07	0.25
City placement, city preference		831	0.00	1.00	0.13	0.33
City placement, suburban preference		831	0.00	1.00	0.03	0.17
Suburban placement, no preference		831	0.00	1.00	0.04	0.19
Suburban placement, city preference		831	0.00	1.00	0.03	0.16
Suburban placement, suburban preference		831	0.00	1.00	0.18	0.39
Other preferences or missing preferences		831	0.00	1.00	0.57	0.49
Years since move (in 1997)		831	8.00	21.00	14.13	3.36
AFDC at program entry ^a		831	0.00	1.00	0.76	0.43
Youngest child's age in 1997		831	1.00	52.00	11.93	5.72
Missing youngest child's age in 1997		831	0.00	1.00	0.19	0.40
Number in family		831	1.00	8.00	2.98	1.00
Placement address not interpolated		831	0.00	1.00	0.12	0.33
Year of move		831	1976.00	1989.00	1982.87	3.36
Year of most recent address		831	1985.00	2000.00	1997.15	1.97

Sample Descriptives (*continued*)

	Listwise N	Minimum	Maximum	Mean	Standard Deviation
Placement neighborhood 0 to 2% black	831	0.00	1.00	0.30	0.46
Placement neighborhood 2.1 to 5% black	831	0.00	1.00	0.19	0.39
Placement neighborhood 5.1 to 15% black	831	0.00	1.00	0.17	0.38
Placement neighborhood 15.1 to 50% black	831	0.00	1.00	0.17	0.38
Placement neighborhood 50.1 to 97% black	831	0.00	1.00	0.09	0.29
Placement neighborhood 97.1 to 100% black	831	0.00	1.00	0.09	0.29

Source: Authors' calculations.

^a These variables led to some losses in sample size, but since they were either the central dependent or independent variables, and one central background variable, we chose not to impute them, but rather to eliminate cases missing these data. The losses are as follows: Placement percent black (N = 165), most recent percent black (N = 170), and AFDC at entry (N = 73).

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