

Fifteen Years Later: Can Residential Mobility Programs Provide A Long-Term Escape from Neighborhood Segregation, Crime, and Poverty?

Micere Keels*, Greg J. Duncan*, Stephanie Deluca**, Ruby Mendenhall*, and James Rosenbaum*

*Northwestern University

** Johns Hopkins University

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ABSTRACT

We examine the conditions under which the Gautreaux residential mobility program, which moved low-income African-American public housing families into more affluent less and minority segregated neighborhoods, produced long-run improvements in the neighborhood environments of program participants. We relate participants' current neighborhood characteristics, measured an average of 15 years after entry into the program, to the characteristics of the neighborhoods in which families initially moved. All participants have moved since placement, but only 20% have experienced more than a \$10,000 decline in average census tract household income in moving from placement to current address. Additionally, 60% of families initially placed in suburban neighborhoods continued to reside in the suburbs. Families initially moving to higher-income, mostly European-American neighborhoods are currently living in the most affluent neighborhoods. Relocation out of the most minority segregated neighborhoods and into moderately lower crime, and suburban locations increased the chances that a participant continued to reside in a low crime neighborhood.

INTRODUCTION

What is the likely long-term result of moving low-income African-American families originally residing in poor segregated inner-city neighborhoods, with the use of Section 8 vouchers and certificates, into mostly-European-American moderately affluent communities? Many would predict that these families would not integrate into their new communities because they would feel uncomfortable or would not be welcomed by their new neighbors. Clark (1992) shows that, when choosing a residence, each ethnic group prefers to live in neighborhoods that have large percentages of its own members. Patterson (1997) and Thernstrom and Thernstrom (1997) argue that many African-Americans are choosing to live with their own race—voluntary segregation. Another reasonable expectation is that Gautreaux families would move back to inner-city neighborhoods because of the access to social support found in poor neighborhoods (Boisjoly, Duncan, and Hofferth 1995; Stack 1974).

In 1966, Dorothy Gautreaux, a community organizer and activist, sued the Chicago Housing Authority (CHA) and the U.S. Department of Housing and Urban Development (HUD) in the nation's first public housing desegregation lawsuit. The lawsuit alleged that the CHA and HUD engaged in "systematic and illegal segregation". The court ruled in favor of public housing residents. One of the desegregation remedies authorized by the Supreme Court was the Gautreaux residential mobility program. This program enabled low-income African-Americans living in public housing or on the waiting list for public housing to apply to move to mostly European-American neighborhoods throughout the six-county Chicago and suburban area. Because the Gautreaux program was a desegregation remedy families had to be willing to move to census tracts with 30% or fewer African-American residents. Between 1976 and 1998 the Leadership Council for Metropolitan Open Communities¹ moved more than 7,000 families to communities throughout the six-county Chicago metropolitan area. The program gave participants rent subsidies that allowed them to live in suburban or city apartments for the same cost as public housing, but did not provide employment, transportation, or any other assistance to participating families.

The experimental Moving to Opportunity (MTO) residential mobility demonstration program, which grew in part out of early positive research on Gautreaux, assists very low-income public housing families in moving from high to low poverty communities. MTO uses an experimental design to answer questions about the effectiveness of mobility counseling and about the long-term impacts of moving to low-poverty communities. MTO's interim report showed that within four to seven years after their initial moves 66% of experimental group participants (participants required to move to low poverty neighborhoods) have made subsequent moves and on average these subsequent moves have been toward higher poverty locations (Orr, Feins, Jacob, and Beecroft 2003). However, even with these subsequent moves, experimental group families continue to reside in neighborhoods with lower poverty rates than the standard Section 8 and control groups. But since MTO began placing families only in the mid-1990s, it is far too early to tell whether the program enables families to reside permanently in safer and more affluent neighborhoods. Our paper draws data from Gautreaux, a non-experimental residential mobility program begun in 1976, to address the crucial issue of long-run neighborhood improvement.

Gautreaux participants were only required to remain at their placement address for one year, after one year they were free to move to any location that met standard Section 8 guidelines and retain their voucher. Our research uses data on the origin, initial destination, and current

location of a random subsample of Gautreaux participants to understand the nature of residential mobility among low-income families who are given an opportunity to move to better neighborhoods. By using Census and crime information about the characteristics of participants' current neighborhoods, we are able to gauge the extent to which the dramatic short-run improvements in neighborhood racial/ethnic composition, safety, and socioeconomic resources were maintained between six and 22 years after participants' initial moves. We also investigate whether the type of neighborhood into which a family initially moves is associated with its long-run success in residing in a safe and prosperous neighborhood.

When the Gautreaux court ruling was finalized in 1981 it included a provision to allow up to one-third of participants to move to census tracts with more than 30% African-American residents.² So despite the program's initial goal of moving families to census tracts with less than 30% African American residents, a significant fraction of families moved to predominantly African-American, high crime, and low affluence neighborhoods. At the other end of the spectrum, some families moved to overwhelmingly European-American, low crime, and high affluence neighborhoods. The placement neighborhoods of about half of program participants were spread within Chicago; the other half moved to the suburbs. We exploit these variations in placement neighborhood characteristics to assess the relationship between the safety, racial/ethnic composition, and affluence of families' initial placement address and long-term neighborhood quality.

The organization of this paper is as follows. In the next section we present theoretical issues and empirical results from prior studies. We then describe the sources of data used in the analyses. Our discussion of results begins with an overview of the neighborhoods from which families were drawn, the neighborhoods into which they moved, and the neighborhoods in which they are currently residing. We next present regression results on the association between placement and current neighborhood characteristics. We conclude the paper with a discussion of the implications of our results for residential mobility programs.

BACKGROUND

Residential Attainment of African-American Families

High levels of education and income are more important in determining residential attainment for African-Americans than for European-Americans; but even after controlling for group differences in family composition and socioeconomic resources, African-American families remain less likely than European-American families to live in high quality neighborhoods (Alba and Logan 1993; Logan, Alba, McNulty, and Fisher 1996; Rosenbaum 1996). Regardless of income and education, African-Americans face institutional and informal barriers when trying to gain access to residence in better neighborhoods (Darden 2000; Massey and Lundy 2001).

The prospects for low-income African-American families are even worse. Although residential mobility among poor urban minority families is high, relatively few poor urban minority families manage to escape from poor neighborhoods altogether. Using data from the Panel Study of Income Dynamics, Gramlich, Laren, and Sealand (1992) found that poor European-Americans were much more likely than poor African-Americans to move out of poor tracts. Even after controlling for racial/ethnic differences in socioeconomic status and life-course

variables, African-Americans are much less likely than European-Americans to leave poor areas and more likely to move into them (South and Crowder 1997). In fact, the most educated African-Americans in their study were less likely than the least educated European-Americans to escape distressed neighborhoods.

Studies of residential mobility and residential attainment suggest that Gautreaux participants' long-term residential outcomes will be determined by a multitude of household and metropolitan factors (Dielman 2001; Kan 1999). For example, the decision to move is affected by life-cycle changes such as job loss or promotion, marriage or divorce, and the birth of a child or a child leaving home. For Gautreaux families these life events would also affect their Section 8 status. External housing factors such as landlord turnover or rent increases beyond the Section 8 limit could trigger an involuntary move. Residential outcomes are also influenced by the availability of relocation opportunities. A qualitative study of Gautreaux participants revealed that all of these elements have affected families and triggered voluntary and involuntary moves in the years since participants moved to their placement address (Keels 2004). While a complete accounting of residential mobility is impossible with our data, we can document the neighborhoods in which a representative sample of Gautreaux participants currently reside and examine the association between placement and current neighborhoods.

Residential Quality of Assisted Housing Families

Many public housing residents are being relocated from distressed developments in an effort to reduce the concentration of poverty associated with these developments. However, some researchers found that relocation using standard Section 8 procedures does little to improve the neighborhood conditions in which public housing families live and raise their children (Popkin and Cunningham 2001; Varady and Walker 2000 1998). These researchers found that the majority of families leaving distressed developments made short distance moves and continued to be clustered in racially/ethnically and economically segregated inner-city communities.

MTO researchers found that relocation significantly improved the neighborhood economic conditions of the MTO Section 8 group though not as much as experimental group families (Orr et al. 2003). MTO Section 8 participants' leased-up in communities that had an average poverty rate of 28%, which was higher than the experimental group's 11% poverty rate, but much better than origin neighborhoods which averaged 51% poverty rate. The placement neighborhoods of Gautreaux participants averaged 17% poverty rate. Relocation did little to reduce residential racial/ethnic segregation for MTO's Section 8 or experimental groups. Placement neighborhoods for MTO's Section 8 and experimental groups were essentially equal with census tracts averaging 86% and 85% African-American residents respectively. This is in sharp contrast to the placement neighborhoods of Gautreaux families, which averaged 28% African-American residents. It appears that it may take a program like Gautreaux, which defined target neighborhoods in terms of race, to induce placement in non-minority segregated neighborhoods.

Turner et al. (1999) discuss two potential explanations for the clustering of the majority of urban minority Section 8 recipients in inner-city neighborhoods. One is that minority Section 8 recipients are excluded from living in many desirable communities because few landlords are willing to accept these families and their housing subsidies. The other is that since the Section 8 program leaves the final decision about residential location to participants, families simply prefer remaining in these segregated inner-city communities, close to friends and relatives and other

community supports. Our research indirectly addresses the issue of residential preference of minority housing voucher recipients by showing the long-run neighborhood outcomes of Gautreaux program participants.

Gautreaux and MTO shows that assisted housing programs that offer mobility counseling are able to move public housing families into high quality neighborhoods that are safe and non-poor. What we do not know is how subsequent mobility affects participants' long-term residential outcomes. Given the enormous changes between origin and placement neighborhoods for most Gautreaux participants, it is not surprising that families often encountered problems settling into their new neighborhoods (Rosenbaum and Rubinowitz 2001). Some of the problems were housing-related, as when apartment buildings were sold and new landlords were no longer willing to rent to program participants. Some families encountered racial animosity from their new neighbors; others had more general problems establishing new social and job networks. Children sometimes had problems adjusting to new schools, many of which had much higher academic standards than they were accustomed to. Although the discouraging experiences appeared more than matched by stories of helpful neighbors and teachers, the temptation to move back to more familiar surroundings was often strong. We are now able to look long-term and see the persistence of mobility out of racially/ethnically and economically segregated inner-city neighborhoods.

Key Placement Neighborhood Variables

There are several aspects of the initial placement neighborhood that may impact the characteristics of participants' current addresses. Based on neighborhood resources, collective socialization, and contagion/epidemic models of neighborhood effects, placement in better neighborhoods and or among better neighbors may be beneficial for Gautreaux families with the possibility that the benefits may not occur until neighborhood quality surpasses some threshold level (Jencks and Mayer 1990). The potential for placement neighborhood quality to foster positive economic outcomes is important in light of qualitative research findings, which indicate that at follow-up the majority of Gautreaux participants likely no longer receive Section 8 housing assistance (Keels 2004)

It is also important to consider the implications of competition and relative deprivation models, which focus on comparisons of self to others and how this may negatively impact low-income individuals living in higher income neighborhoods (Jencks and Mayer 1990). The ethnic and economic distance between Gautreaux families and their new neighbors may be a barrier to the development of social relationships. Additionally, Gautreaux families may be discouraged by their low social standing in affluent communities. This may reduce the likelihood that Gautreaux participants would maintain long-term residence in more affluent neighborhoods. As a result long-run residential outcomes may be better for families placed in moderately rather than substantially improved neighborhoods.

In this research we focus on four placement neighborhood variables: affluence, racial/ethnic composition, safety, and suburban location. Families initially placed in more affluent communities may be more likely to reside currently in higher SES neighborhoods because the placement community offered more access to employment opportunities that help bolster the families' long-term economic standing. Inertia may also be at work; if equal numbers of families stay in affluent and less affluent placement neighborhoods, then the former will show higher long-run levels of neighborhood affluence.

Social distance considerations may also influence the association between the socioeconomic and racial/ethnic composition of placement neighborhood and the characteristics of current neighborhoods. The greater social distance experienced by participants placed in higher vs. lower SES neighborhoods may cause greater discomfort, more mobility out of the higher SES neighborhoods and lower levels of current neighborhood affluence. All else equal, families moving to communities with higher percentages of African-American residents may adjust more easily and form stronger bonds with their new neighbors. Indeed, the optimal placement neighborhoods may be those in the middle of the distribution of percent African-American and affluence.

Crime rates in the placement neighborhood are included in our analyses to reflect the fact that safety concerns affect families' mental health, use of community resources, and willingness to continue residing in a community (Kling, Liebman, and Katz 2001). In safe communities families are likely to adjust more easily to the move and be more willing to initiate and develop relationships with neighbors and community institutions. As a result, Gautreaux families placed in safe communities would have strong incentives to maintain residence in such communities.

City versus suburban placement captures the strength of the suburban job market and the possible spatial mismatch between low-skilled urban residents and suburban job opportunities. The main thrust of this argument is that African-American inner-city residents have restricted spatial access to jobs and employment information due to their concentration in segregated residential areas distant from and poorly connected to major centers of employment growth (Ellwood 1986; Holzer 1991; Thompson 1997; Wilson 1987). Based on this, Gautreaux families placed in suburban communities would have better proximity to jobs that could strengthen their economic standing and impact their willingness and ability to maintain residence in thriving communities.

THE GAUTREAUX PROGRAM

The Gautreaux program provided extensive housing services.³ Counselors offered participants units based on their order of enrollment into the program. Although participants could refuse an offer because the court ruling mandated that all participants were entitled to a lifetime offer of three units, very few did so, since they were unlikely to be offered another unit due to the large number of families on the Gautreaux wait-list. Based on interviews with program staff, it appears that the high quality of the placement units, relative to public housing, led most families to accept their first housing offer.

Beginning in the 1990s, the rental market was strong enough for participants to search for their own units with Leadership Council's assistance. Given this, and the fact that beginning in the 1990s housing choices offered to participating families were limited to only suburban addresses, we confine our analysis to families moving between 1976 and 1989 (Rosenbaum and Rubinowitz 2001).

An important element of a program like Gautreaux is take-up—the fraction of families offered housing who in fact took up the offer and moved. Calculating take-up rates for Gautreaux is difficult since the Leadership Council intentionally enrolled more families than necessary to allow for attrition and the likelihood that larger families would have difficulty finding a unit.⁴ It appears that an average of 1,700 eligible families were enrolled each year but only about 325

families (20% of enrollees) actually moved via the program (Peterson and Williams 1995). Interviews with Leadership Council staff indicated that there were only about 350-400 annually available vouchers or certificates.⁵ Schroder (2002), using MTO data, identified variations in lease-up that could impact program outcomes. He concludes that the observed impacts of mobility programs represent the benefits of better neighborhoods for the subgroup of low-income families that think they will be better-off in them and find landlords who consider them to be acceptable risks.

Owing to limited suburban public transportation, Gautreaux program officials stated that, in the early years of the program, families without access to a car were more likely to be placed within the city or in adjacent suburbs. Consistent with this there is a small but significant correlation between origin neighborhood affluence and suburban placement. Concern about the differential nature of placement leads us to control for differences in both the demographic composition of families and the characteristics of their origin neighborhoods in all regression analyses. However, due to the fact that we have a limited number of baseline controls, sample selection bias may still remain.

In general, Gautreaux participants are demographically similar to public housing residents, Section 8 participants, Chicago AFDC recipients, and other low-income African-American families that were living in Chicago during the years in which the program operated (Rosenbaum, Popkin, Kaufman, and Rusin 1991; Rusin-White 1993).⁶ In comparison to families currently living in Chicago's distressed public housing developments Gautreaux families are demographically somewhat more advantaged (Popkin and Cunningham 2001).⁷

Despite demographic similarities, Gautreaux families clearly differ from other public housing families because they volunteered for the program. Thus, our findings generalize most readily to families voluntarily choosing to participate in future residential mobility programs in which, as with Gautreaux, the final decision to move to a new more integrated more affluent community is left up to the family. As the transformation of distressed public housing projects continues families are often involuntarily moved to new communities; involuntarily relocating families to more affluent and integrated neighborhoods may not result in the same outcomes as Gautreaux participants.

DATA

Information on program participants comes from the Gautreaux program records provided by the Leadership Council. A random half sample of all female-headed families who moved prior to 1990 (n=1506) was selected. Gautreaux program records provide the participant's address at time of enrollment as the address and date of placement. Mother's age, AFDC reciprocity status, and number of children at time of enrollment were recorded on the intake form and are used in our analyses.

Our searches for recent addresses relied on address information from a credit reporting service through July 2000 and the Illinois Department of Human Services Integrated Client Database Records (AFDC, TANF, Medicaid, Food Stamps) through September 1999. The most recent address from these two sources was used. We were able to locate a post-1990 address for all but 60 of the 1506 women, all of which we were able to geocode. However, the address was from 1994 or before for 145 of the cases, which we judged to be too old for use in our analysis.⁸

We are left with a sample of 1301 cases, 130 of whom are out of state and 16 resided in Illinois but outside the greater Chicago metropolitan area. We focus on the current address characteristics of the 1171 families currently in Illinois. Sixty-five percent of the current addresses of our final sample were found in the credit reporting database and 36% were found in the Illinois client database.

To characterize the census tract conditions in origin and placement neighborhoods we geocoded the addresses into census tracts and then matched the census tracts to data from both the 1980 and 1990 US Census, interpolated for year of relocation. All of the current addresses were matched to 2000 census tract data. The census tract racial/ethnic composition is characterized by the percent of residents who designated themselves as African-American on the Census form and the percent designating themselves as European-American. Census tract household income (in 1999 dollars), poverty rate, percentage of households with wage income, and the percentage of adults with 16 or more years of education represent neighborhood socioeconomic status.⁹

Participants' origin, placement, and current address safety is measured by uniform crime reporting (UCR) data. Information regarding monthly crime rates per 1,000 residents in the origin, placement, and current community is obtained from the FBI's UCR records for all areas in Illinois except for the city of Chicago. These crime data are based on the "reporting agency" in which the address is located.¹⁰ Crime information for all addresses within the city of Chicago (obtained from the Chicago Police Department's annual reports) is based on the police district in which the address is located.¹¹ The population estimate for the denominator of the crime data is matched to the year and geographic area for which the crime data is recorded.

Key dependent variables in our regression analysis reflect the long-run neighborhood-based success of program participants.¹² This is measured using tract level percent African-American and median household income (in 1999 dollars), and area violent crime rate matched to participants' current neighborhoods.¹³

As stated earlier, key independent variables are the conditions in the neighborhoods in which families initially moved with the assistance of the Gautreaux program. In regression analyses placement neighborhood SES is measured using average household income.¹⁴ Racial/ethnic composition is measured using percent African-American. We chose percent African-American because that was the key element for determining placement neighborhoods. Placement area safety was measured using violent crime rates. Violent crime was chosen because personal safety was the primary reason that families listed for wanting to participate in the program. City versus suburban placement is represented using a dummy variables coded one for suburban placement.

Researchers have demonstrated that neighborhood effects can be more pronounced at the ends of the distribution (Crane 1991; Ellen and Turner 1998). We may find that placement neighborhood quality must surpass some threshold before positive effects are found relative to placement in neighborhoods below that threshold. With respect to social distance, placement in very affluent mostly European-American neighborhoods may be less beneficial or even have negative impacts compared to other neighborhoods. A linear form may therefore misrepresent neighborhood effects by missing potential threshold-like changes in the relationship along the distribution of a given neighborhood characteristic. Nonlinear effects will be explored using

dummy variables for placement neighborhood racial/ethnic composition, household income, and violent crime rate.

We consider whether families may benefit differentially from initial placement neighborhood characteristics based on mothers' ability to take advantage of opportunities in the new community. Interactions between family measures (mothers' age and AFDC status, and number of children at time of move) and placement neighborhood characteristics are included to test for individual level effects. Finally, to adjust for the fact that some families are clustered within the same census tract at the time they entered the program we estimate robust standard errors using Huber-White methods.¹⁵

RESULTS

Our concerns about nonrandom placement led us to check the correlations between demographic and origin neighborhood characteristics with placement neighborhood characteristics; the absolute value of these correlations range from .01 to .31 (Appendix 1).¹⁶ The differences between city and suburban movers are detailed below. When we regressed placement neighborhood characteristics with the demographic and origin neighborhood characteristics only origin neighborhood racial/ethnic composition attained statistical significance at conventional levels.

Baseline characteristics. Table 1 presents descriptive statistics for family and origin neighborhood characteristics, both for the overall sample and separately for families moving to city and suburban locations. Families placed in the suburbs originated from neighborhoods that had somewhat better socioeconomic and social characteristics than did families moving within the city (i.e., higher neighborhood income, more employed individuals, and higher levels of education). Younger mothers were significantly more likely to move to the suburbs. Suburban and city movers were similar with respect to origin neighborhood racial/ethnic composition and crime rates. Suburban and city movers also did not differ on likelihood of AFDC receipt and number of children in the household at time of enrollment.

Placement neighborhood characteristics. In most cases, the Gautreaux program was successful in meeting its court-ordered goal of placing families in neighborhoods with 30% or fewer African-Americans. Nearly all families (96%) making suburban moves moved to such neighborhoods. On the other hand, only about half (49%) of city placements met this goal. City placements tended to follow a bimodal distribution, with 40% moving to tracts with 60% or more African-Americans and 47% of city movers moving to tracts with 25% or fewer African-Americans.

As shown in Table 2, placement neighborhoods differed dramatically on average from origin neighborhoods in terms of racial/ethnic composition, socioeconomic status, and crime. Gautreaux families moved to placement communities that were significantly more European-American, less crime-ridden, and more affluent, on average, than their origin communities. As shown by the standard deviations in the "All" column of Table 2, these averages mask considerable diversity in placement characteristics.

Owing to the high crime rates of the origin communities of these families and the devastating effects of crime on family functioning, improvement in neighborhood safety is an important issue. Participants' origin communities averaged 22.4 violent and 79.9 property

monthly crimes per 1,000. Moving resulted in substantial improvement in neighborhood safety; most of this improvement occurred among suburban movers. The city neighborhoods in which families moved averaged 18.6 violent and 72.9 property crimes per 1,000. This was much higher than suburban placement neighborhoods, which averaged 12.6 violent and 45.5 property crimes per 1,000.

The magnitude of gains in socioeconomic status from origin to placement neighborhood also differed based on whether families moved to city or suburban locations. Participants' origin tracts had a mean household income of \$30,000 (\$19,410 for those living in public housing and \$38,000 for those not living in public housing) and only 62% of families in the origin tracts reported wage income. Families moving within the city increased their tract mean family income by \$13,399 and the percentage of families with wage income increased by 11 percentage points. This is significantly less than the corresponding increases for suburban placements (respective increments of \$38,184 and 24 percentage points).

It is also important to note that for all placement neighborhood measures the standard deviation for the city placement group is significantly larger than for the suburban placement group at or above the .05 level of significance. This indicates that there is more variability in the characteristics of city versus suburban placement neighborhoods.

Current neighborhoods. Among participants whose current neighborhoods were determined in 1995 or later, none resided in the same apartments or houses into which they initially moved. But where did they move? If the majority moved back to neighborhoods like their original ones, the Gautreaux program would have failed to meet its ambitious goals of permanently improving the neighborhood conditions in which these families live and raise their children.

The second half of Table 2 provides a summary of the characteristics of the communities in which suburban and city movers currently reside. As detailed below, economic and safety conditions were much better than in origin neighborhoods, and only slightly different than in placement neighborhoods. Current neighborhood racial/ethnic composition is much more integrated than either origin or placement neighborhoods.

In general, families have made significant residential changes in the years since their initial move via the program. Families initially moving within Chicago moved an average of 7 miles between their origin and placement address, they have since moved an average of 9 miles from their initial destination address to their current location. However they did not move closer to their origin communities, because their current addresses are about 8 miles, on average, from their origin communities. Among families initially placed within Chicago, more than three-quarters continue to reside within the city. Among Chicago movers, we find that only 3% have returned to their origin census tract and 2% returned to their origin census block groups.

Suburban movers also show significant residential mobility in the years since placement. Suburban movers were placed 25 miles, on average, from their initial addresses and now reside 18 miles, on average, from their origin addresses. Their current addresses are 15 miles, on average, from their initial placement address. Only about one-third of suburban movers have returned to Chicago. The most common situation is for suburban movers to currently reside in the general suburban area in which they initially moved. Approximately 10% of all city and suburban movers have left the state of Illinois altogether.

Origin vs. placement vs. current neighborhoods. Figures 1 through 4 summarize average origin, placement and current neighborhood conditions, and also show the current conditions in the origin neighborhoods. For this latter comparison we matched 2000 census and 1997 crime characteristics to the origin address. Of course, not all Gautreaux families would have remained in their origin neighborhoods had the program not helped them move. All Gautreaux families volunteered for the program, were highly motivated to improve their neighborhood conditions, and stood a good chance of improving their neighborhood conditions even in the absence of Gautreaux. But a look at the current conditions of their origin neighborhoods provides a useful benchmark to gauge progress and regress over the 6 to 22-year period following the moves.

Average household incomes in current neighborhoods were much higher (\$61,714 in 1999 dollars) than the current income levels of the origin neighborhoods (\$39,133) (Figure 1). Poverty rates followed a similar pattern, with origin neighborhood poverty rates more than twice those of either placement or current neighborhood rates (Figure 2). Surprisingly, overall there is no regression to the mean in neighborhood incomes as participants have moved from their placement address, with current neighborhood household income (also in 1999 dollars) about \$9,500 higher than placement neighborhood incomes. This average masks substantial changes among participants placed in the lowest and highest fifth of neighborhood affluence. Participants placed in the poorest neighborhoods experienced an increase of \$24,700 in moving from placement to current residence. Whereas, subsequent moves among participants placed in the most affluent communities resulted in an \$11,100 decrease in neighborhood affluence.

Current community crime level appears to have increased slightly from placement to current address (Figure 3). Current communities average 4 more violent incidents per 1,000 than placement communities. However, most of this increase is due to the general increase in crime in both the city and suburbs over the 1980s and 1990s.

Only with respect to race was there substantial regression to the mean, with the fraction of neighbors who were African-American increasing from 28% in placement neighborhood tracts to 48% in current neighborhoods (Figure 4). Both of these fractions are much lower than the 83% average percent African-American in the origin neighborhoods. The racial/ethnic composition of the current neighborhoods is the focus of DeLuca and Rosenbaum (2002).

When we combine census tract household income and racial/ethnic composition we find that families are currently living in four distinct types of communities (Table 3). One-third reside in low-black high-income communities, 9% reside in low-black low-income communities, 35% reside in high-black low-income communities, and 23% reside in high-black high-income communities. Of the families initially moving to low-black high-income communities 46% are currently residing in similar communities, 23% reside in high-black low-income communities, and 21% reside in high-black high-income communities. Of those initially moving to high-black low-income communities, 67% are currently living in similar communities, 6% reside currently in low-black high-income communities, and 23% reside in high-black high-income communities.

Regression models of current neighborhood racial/ethnic composition. We turn now to our regression-based analyses of the links between placement neighborhoods and the racial/ethnic composition, economic, and safety conditions in participants' current neighborhoods. To control for nonrandom placement, all of our regressions include the baseline demographic and neighborhood conditions previously listed. By and large, these family and

origin neighborhood variables are fairly orthogonal to our key placement neighborhood variables. Their inclusion in the regression models produces only marginal changes in the coefficients of the placement neighborhood variables.

Our analyses begin with “bivariate” associations between our four placement neighborhood characteristics and current neighborhood percent African-American (first column of Table 4). These “bivariate” coefficients and their standard errors come from four separate regressions, each of which includes the given placement characteristic and control variables, but no other placement characteristics. All four placement measures have significant associations in the expected direction; families initially placed in neighborhoods with lower percentages of African-Americans, higher household incomes, lower violent crime rates, and in suburban locations are more likely to currently reside in neighborhoods with lower percentages of African-Americans.

As indicated in Model 1 of Table 4 all placement neighborhood variables except percent African-American fell into insignificance when all placement neighborhood variables were included in the model. The coefficient for placement neighborhood racial/ethnic composition remains virtually unchanged in the presence of the other placement neighborhood variables. We tested for nonlinear relationships by forming six dummy variables for race.¹⁷ The best model (Model 3) included household income and violent crime included as linear variables and percent African-American represented by six dummy variables.

With or without controls for the other placement neighborhood variables, the results from Models 2 and 3 show a pronounced non-linear association between placement and current neighborhood percent African-American. It is not until families are placed in neighborhoods that have 30% or fewer African-American residents that we see a significant difference relative to placement in neighborhoods with 95% or more African-American residents. We cannot be certain of the location of this threshold because only a small number of participants were placed in neighborhoods with 45% to 60% African-American residents. Families placed in neighborhood with fewer than 30% African-American residents currently live in neighborhoods that average 26% fewer African-American residents compared to those placed in the most minority segregated neighborhoods.

Of the demographic and origin neighborhood characteristics only origin neighborhood percent African-American is significantly associated with current neighborhood racial/ethnic composition. We also tested for but found no significant interactions between mother’s characteristics at move and the placement neighborhood variables.

Regression models of current neighborhood income. As with the previous analyses, our analyses begin with “bivariate” associations between our four placement neighborhood characteristics and current neighborhood household income (first column of Table 5). All four placement measures have significant associations in the expected direction; families initially placed in neighborhoods with lower percentages of African-Americans, higher household incomes, lower violent crime rates, and in suburban locations are more likely to currently reside in more affluent neighborhoods.

As indicated in Model 1 of Table 5 placement neighborhood household income accounted for the bulk of the association between placement neighborhood location and current neighborhood household income. The coefficients in Model 1 column of Table 5 show that the coefficient for placement neighborhood racial/ethnic composition is more than cut in half in the

presence of controls for the other placement neighborhood characteristics. Surprisingly, when included with the other placement neighborhood variables the coefficient for crime rate switches from negative to positive and remains significant; however, the substantive impact is small. We tested for nonlinear relationships by forming five (in the case of income and crime) and six (in the case of race) dummy variables for each measure. The best model included percent African-American and violent crime included as linear variables and household income divided into quintiles represented by dummy variables.

With and without inclusion of the other placement neighborhood variables, the results from Model 2 and 3 display a threshold pattern in the relationship between placement and current neighborhood household income. It is not until families are placed in the third most affluent neighborhoods (census tract household income greater than \$46,800) that we see a significant difference relative to placement in the neighborhoods with the lowest household incomes (ranging from \$14,700 to \$34,200). Families placed in the third and fourth most affluent neighborhoods currently live in neighborhoods that average \$6,900 more income per household compared to those placed in the least affluent neighborhoods. We find another threshold like increase for families placed in the most affluent neighborhoods (household income greater than \$67,600). Participants placed in the most affluent neighborhoods enjoy the largest long-term gain in neighborhood affluence; current neighborhoods averaging \$15,200 more income per household than participants initially moving to the poorest fifth of placement neighborhoods.

In the final model no demographic or origin neighborhood variables had significant associations with current neighborhood median income. We also tested for but found no significant interactions between mother's characteristics at move and the placement neighborhood variables.

Regression models of current neighborhood crime. We conducted a parallel set of regression models predicting violent crime rates in the current neighborhoods (Table 6). All four placement characteristics had significant "bivariate" associations with current neighborhood crime rates. Placement into neighborhoods with lower percentages of African-Americans, higher household incomes, lower violent crime rates, and suburban locations are associated with continuing to live in safer neighborhoods. When all four placement variables were included in the same model only household income fell to insignificance (model 1 Table 6). Our more complete models of placement characteristics include sets of dummy variables for race/ethnicity and crime to allow for nonlinear relationships.

Nonlinearities are apparent in the associations between current neighborhood safety and placement neighborhood racial/ethnic composition and crime rates (Models 2 and 3 in Table 6). When all placement neighborhood measures are included in the same model (Model 4 in Table 6), thresholds continue to be apparent for both placement neighborhood racial/ethnic composition and crime rates. Placement in all but the most minority segregated neighborhoods was associated with an average of a half a standard deviation drop in current neighborhood violent crime rates. This translates to an average decrease of 7.4 monthly violent incidents per 1,000 for families placed outside the neighborhoods with the highest level of minority segregation compared to placement in the most minority segregated neighborhood.

For placement neighborhood crime, the final model (model 4) shows that it is not until placement into neighborhoods falling into the third or higher quintile (going from high to low crime) occurs that we see an average 4.9-point reduction in current neighborhood violent crime

rate. Finally, the coefficient on suburban placement shows a 7.7-point lower current crime rate for suburban as opposed to city placements.

There are no significant associations between the demographic characteristics and current neighborhood crime. With respect to origin neighborhood characteristics, there is a small, but significant association between origin neighborhood percent African-American and current neighborhood crime. We also tested for but found no significant interactions between mother's characteristics at move and the placement neighborhood variables.

DISCUSSION

When current and origin neighborhood conditions are compared, our evidence suggests that the Gautreaux program caused long-term reductions in the socioeconomic and racial/ethnic segregation of poor urban minority families. All but a handful of participants were able to escape long-term from their inner-city origin neighborhoods, and two-thirds of those initially moving to the suburbs continue to live in the suburbs some 6 to 22 years after their initial moves.

Gautreaux's success in moving low-income African-Americans into higher SES and lower crime neighborhoods is particularly striking. When compared to conditions in their origin neighborhoods, participating families enjoyed large and persistent improvements in neighborhood quality. There has been surprisingly little regression to the mean during the 15-year period after program placement. Current neighborhoods average \$61,714 household income, 16% poverty rate, 75% of households with wage income, 25% of adults with college degrees, and 28 violent and 65 property monthly crimes per 1,000. We find no support for the argument that the current clustering of minority Section 8 recipients in racially/ethnically and economically isolated inner-city neighborhoods is due to their preferences for those neighborhoods, since almost no Gautreaux families returned to communities similar to those that they left. Here it is important to point out that our results apply to families that volunteered to participate in a residential mobility program.

Our findings regarding the racial/ethnic composition of mothers' current neighborhoods are in line with previous research indicating that African-American families prefer to reside in mixed race neighborhoods. There is a strong tendency for families initially placed in neighborhoods at both ends of the spectrum (97% and 4% African-American) to move closer to more balanced neighborhoods (73% and 38% African-American respectively). However, this racial/ethnic "resegregation" observed among participants placed in predominantly European-American neighborhoods is not associated with economic "resegregation". For example families initially moving to mostly European-American higher income neighborhoods subsequently moved to neighborhoods that were less European-American but still affluent. So while Gautreaux families may prefer mixed-race neighborhoods, they appear unwilling to move to them if they are associated with a lower neighborhood income.

Our research has relevance for HUD's assisted housing policies as debate continues on the importance and benefits of providing housing search assistance to Housing Choice Voucher users. Should voucher holders be provided with counseling and housing search assistance to enable them to find residence in racially/ethnically and economically integrated communities? To add to the discussion on this policy question, we have examined the long-term outcomes of families participating in a residential mobility program that included housing search assistance and restrictions on the racial/ethnic composition of destination neighborhoods.

What do our results imply for assisted housing programs seeking to produce long-run improvements in neighborhood affluence? Based on our most comprehensive model (Model 4 in Table 5), placing families into moderately affluent neighborhoods (\$46,800 or higher average household income) was associated with long-term residence in more affluent neighborhoods compared to participants placed into neighborhoods with \$34,200 or less household incomes. Families placed in the top quintile of neighborhood affluence (household incomes higher than \$67,600) evidenced significantly larger long-term benefits. However, for programs seeking to place families permanently in more affluent neighborhoods, placing families in moderately affluent neighborhoods is enough to yield beneficial long-term results.

Placement neighborhood impact on current neighborhood violent crime rates is based on the most comprehensive model (Model 4 Table 6). We find that moving participants out of extremely minority segregated neighborhoods and into at least moderately safe neighborhoods was important. Additionally, even after controlling for placement neighborhood racial/ethnic composition, household income, and violent crime rate, families placed in suburban communities were significantly more likely to currently reside in safer neighborhoods.

Helping low-income families relocate into communities that are racially/ethnically integrated, socioeconomically prosperous, and less plagued by crime appears beneficial in both the short- and long-run. Gautreaux and MTO accomplished this by hiring and training staff, some of whom assisted families in learning about new communities and others of whom developed relationships with landlords. Our results highlight the potential of careful consideration of the safety, socioeconomic, and racial/ethnic characteristics of communities into which voucher and certificate holders would move.

The biggest limitation of our data for our regression analyses of neighborhood effects is that the Gautreaux program was the result of a court ordered desegregation ruling and not a research experiment. Our findings may be biased by the extent to which participants self-selected themselves and program staff steered participants into particular placement neighborhoods in ways that we could not control for with our baseline measures. Less susceptible to bias is our principal conclusion: That most poor families living in highly segregated neighborhoods are able to translate the opportunity provided by a residential mobility program into long-term improvements in neighborhood quality.

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APPENDIX 1. ZERO ORDER CORRELATIONS AMONG DEMOGRAPHIC, ORIGIN NEIGHBORHOOD, AND PLACEMENT NEIGHBORHOOD MEASURES

	PLACEMENT NEIGHBORHOOD VARIABLES			
	Zero Order Correlations			
	Percent African-American	Mean Household Income	Violent Crime Level	City Placement
DEMOGRAPHIC VARIABLES				
Year of Move	-.010	.113**	.308**	.051
Mother's Age at Move	.059*	-.061*	.020	.066**
Number of Children	.089**	-.108**	.041	-.044
AFDC Receipt at Time of Move ^a	-.027	.013	.046	-.033
Living in Public Housing ^a	.033	-.097**	.056*	.062*
ORIGIN NEIGHBORHOOD VARIABLES				
Percent African-American	.132**	-.066*	.133**	.040
Mean Household Income	-.045	.156**	-.154**	-.132**
Level of Violent Crime per 1,000	-.009	.001	.200**	-.026

*p<.05 level; **p<.01 level

^a Dummy variable

TABLE 1. MEAN AND STANDARD DEVIATIONS OF ORIGIN NEIGHBORHOOD MEASURES FOR FULL, CITY, AND SUBURBAN MOVE SAMPLES

Variable		Data Source	All n=1171	City n=574	Suburb n=597	p level of city suburb difference
DEMOGRAPHIC VARIABLES						
	Percent Placed in the City	Program Records	0.49 (0.50)	1.00 (0.00)	0.00 (0.00)	na
	Year of Move	Program Records	1983.15 (3.35)	1983.33 (2.85)	1982.99 (3.75)	0.065
	Mother's Age at Move	Program Records	30.21 (9.01)	30.82 (9.36)	29.63 (8.65)	0.019
	Number of Children	Program Records	1.80 (1.20)	1.74 (1.20)	1.85 (1.21)	0.116
	On AFDC at Time of Move	Program Records	0.70 (0.46)	0.68 (0.47)	0.71 (0.45)	0.235
	Percent Living in Public Housing	Program Records	0.41 (0.49)	0.44 (0.50)	0.38 (0.49)	0.032
ORIGIN NEIGHBORHOOD VARIABLES						
Ethnic Composition	Percent African-American	1980/1990 Census	82.51 (28.58)	83.67 (28.81)	81.40 (28.34)	0.186
	Percent European-American	1980/1990 Census	12.77 (21.93)	10.15 (19.15)	15.29 (24.05)	0.000
Socioeconomic Status	Mean Family Income	1980/1990 Census	30,010 (15,359)	27,935 (13,705)	31,988 (16,556)	0.000
	Non-Elderly Poverty Rate	1980/1990 Census	42.16 (23.83)	43.98 (24.08)	40.39 (23.48)	0.000
	Percent Households With Wage Income	1980/1990 Census	62.28 (19.12)	60.00 (19.33)	64.46 (18.68)	0.000
	Percent Adults With 16+ Years of School	1980/1990 Census	10.20 (14.67)	8.37 (11.16)	11.94 (17.19)	0.000
Crime	Level of Monthly Violent Crimes per 1,000	Annual Uniform Crime Reports	22.43 (15.79)	21.99 (14.65)	22.83 (16.74)	0.367
	Level of Monthly Property Crimes per 1,000	Annual Uniform Crime Reports	79.92 (76.25)	81.36 (76.10)	78.62 (76.42)	0.540

TABLE 2. MEAN AND STANDARD DEVIATIONS OF PLACEMENT AND CURRENT NEIGHBORHOOD MEASURES FOR FULL, CITY, AND SUBURBAN MOVE SAMPLES

Variable		Data Source	All n=1171	City n=574	Suburb n=597	p level of city suburb difference
PLACEMENT NEIGHBORHOOD VARIABLES						
Ethnic Composition	Percent African-American	1980/1990 Census	28.25 (36.84)	47.56 (40.01)	6.96 (15.03)	0.000
	Percent European-American	1980/1990 Census	57.02 (34.97)	32.40 (28.43)	84.15 (16.56)	0.000
Socioeconomic Status	Mean Family Income	1980/1990 Census	56,252 (22,980)	41,334 (16,849)	70,172 (18,832)	0.000
	Non-Elderly Poverty Rate	1980/1990 Census	16.75 (15.71)	27.27 (14.52)	4.96 (4.92)	0.000
	Percent Households With Wage Income	1980/1990 Census	79.26 (13.64)	70.93 (13.26)	88.45 (5.99)	0.000
	Percent Adults With 16+ Years of School	1980/1990 Census	21.51 (15.11)	19.08 (15.46)	24.19 (14.26)	0.000
Crime	Level of Monthly Violent Crime per 1,000	Annual Uniform Crime Reports	15.60 (12.19)	18.64 (13.63)	12.57 (9.65)	0.000
	Level of Monthly Property Crime per 1,000	Annual Uniform Crime Reports	59.70 (28.03)	72.98 (25.54)	46.45 (23.82)	0.000
CURRENT NEIGHBORHOOD VARIABLES						
Ethnic Composition	Percent African-American	2000 Census	47.55 (39.27)	57.21 (38.15)	38.37 (38.14)	0.000
	Percent European-American	2000 Census	32.51 (30.08)	24.14 (26.71)	40.46 (30.96)	0.000
Socioeconomic Status	Mean Family Income	2000 Census	61,714 (31,201)	58,933 (34,633)	64,355 (27,316)	0.000
	Non-Elderly Poverty Rate	2000 Census	16.15 (13.05)	20.00 (13.23)	12.49 (11.76)	0.000
	Percent Households With Wage Income	2000 Census	75.42 (11.36)	72.52 (10.85)	78.17 (11.15)	0.000
	Percent Adults With 16+ Years of School	2000 Census	24.66 (18.51)	26.29 (21.32)	23.09 (15.22)	0.072
Crime	Level of Monthly Violent Crime per 1,000	Annual Uniform Crime Reports	19.56 (17.60)	25.72 (17.45)	13.65 (15.63)	0.000
	Level of Monthly Property Crime per 1,000	Annual Uniform Crime Reports	64.76 (46.51)	76.67 (54.37)	53.33 (33.74)	0.000

TABLE 3. PLACEMENT AND CURRENT CHICAGO AND SUBURBAN LOCATION OF PARTICIPANTS

Placement Neighborhood Categorization	Current Neighborhood Categorization				Total (%)	Percent of Sample (%)
	High Black Low Income (%)	Low Black Low Income (%)	Low Black High Income (%)	High Black High Income (%)		
High Black (100%-30%) Low Income (\$14,699-\$40,000)	68	3	6	23	100	21
Low Black (29%-0%) Low Income (\$14,699-\$40,000)	30	26	18	26	100	10
Low Black (29%-0%) High Income (\$40,001-\$95,000)	23	10	46	21	100	62
High Black (100%-30%) High Income (\$40,001-\$95,000)	42	7	12	40	100	7
Total	34	10	32	24	100	
Percent of Sample	35	10	32	23		

TABLE 4. REGRESSION MODELS OF CURRENT NEIGHBORHOOD PERCENT AFRICAN-AMERICAN USING PLACEMENT NEIGHBORHOOD MEASURES

	Bivariate			
	Regressions ^a	Model 1	Model 2	Model 3
Placement Neighborhood Variables				
Percent African-American	0.37*** (0.03)	0.33*** (0.05)		
Income/10,000	-5.04*** (0.60)	-1.10 (0.91)		-1.34 (0.95)
Violent Crime Level	-0.42*** (0.10)	-0.19 (0.10)		-0.13 (0.10)
Placed in Suburbs	-19.44*** (2.21)	-4.85 (3.13)		-4.46 (3.42)
Black: Group 1 (95.1%-100%) ^b			Omitted	Omitted
Black: Group 2 (30.1%-95%)			-7.45 (4.27)	-6.62 (4.46)
Black: Group 3 (15.1%-30%)			-23.03*** (3.93)	-21.07*** (4.58)
Black: Group 4 (5.1%-15%)			-25.81*** (3.51)	-21.68*** (4.90)
Black: Group 5 (2.1%-5%)			-36.76*** (4.05)	-32.42*** (5.89)
Black: Group 6 (0%-2%)			-33.78*** (3.54)	-26.89*** (6.30)
Family & Child Variables				
Years Since Move		-0.13 (0.42)	-0.04 (0.40)	-0.19 (0.43)
Mother's Age at Move		-0.33** (0.13)	-0.34** (0.13)	-0.32* (0.13)
Number of Children		0.21 (0.91)	0.13 (0.90)	0.14 (0.91)
Receiving AFDC at Move		-1.01 (2.60)	1.53 (2.58)	-1.49 (2.63)
Pre-move Address Public Housing		-5.16 (3.10)	-4.97 (3.09)	-5.26 (3.13)
Origin Neighborhood Variables				
Percent African-American		0.21*** (0.05)	0.23*** (0.05)	0.23*** (0.05)
Income/10,000		0.76 (1.15)	0.62 (1.13)	0.71 (1.18)
Violent Crime Level		0.01 (0.09)	-0.04 (0.09)	0.001 (0.09)
Adjusted R-square		.149	.150	.142
n	1,171			

*p<.05 level, **p<.01 level, ***p<.001 level

^a Bivariate regressions include the given placement measure and all family and child and origin variables listed in the table.

^b Percent African-Americans in the census tract.

TABLE 5. REGRESSION MODELS OF CURRENT NEIGHBORHOOD MEDIAN INCOME USING PLACEMENT NEIGHBORHOOD MEASURES

	Bivariate			
	Regressions ^a	Model 1	Model 2	Model 3
Placement Neighborhood Variables				
Percent African-American	-114*** (17)	-48* (24)		-56* (24)
Income/10,000	3,069*** (383)	2,876*** (572)		
Violent Crime Level	-95 (63)	166* (72)		153* (71)
Placed in Suburbs	9,035*** (1,305)	414 (2,071)		272 (2,291)
Income: Quintile 1 (\$14,699-\$34,243) ^b			Omitted	Omitted
Income: Quintile 2 (\$34,579-\$46,794)			1,340 (2,349)	699 (2,439)
Income: Quintile 3 (\$46,819-\$56,077)			8,171*** (2,227)	6,548* (2,844)
Income: Quintile 4 (\$56,201-\$67,314)			9,457*** (1,999)	7,273* (3,026)
Income: Quintile 5 (\$67,620-\$95,000)			16,556*** (2,325)	15,208*** (3,329)
Family & Child Variables				
Years Since Move		-141 (256)	-266 (254)	-169 (260)
Mother's Age at Move		136 (87)	131 (85)	135 (88)
Number of Children		-1,044 (580)	-1,136* (573)	-1,086 (584)
Receiving AFDC at Move		-182 (1,514)	178 (1,492)	-133 (1,523)
Remove Address Public Housing		1,029 (1,916)	1,444 (1,863)	977 (1,915)
Origin Neighborhood Variables				
Percent African-American		-55* (27)	-57* (26)	-52 (27)
Income/10,000		445 (747)	490 (703)	546 (734)
Violent Crime Level		-27 (59)	-16 (62)	-31 (59)
Adjusted R-square		.087	.077	.083
n	1,171			

*p<.05 level, **p<.01 level, ***p<.001 level

^a Bivariate regressions include the given placement measure and all family and child and origin variables listed in the table.

^b Census tract average household income

TABLE 6. REGRESSION MODELS OF CURRENT NEIGHBORHOOD VIOLENT CRIME LEVEL USING PLACEMENT NEIGHBORHOOD MEASURES

	Bivariate				
	Regressions ^a	Model 1	Model 2	Model 3	Model 4
Placement Neighborhood Variables					
Percent African-American	0.18*** (0.02)	0.09*** (0.02)			
Income/10,000	-2.82*** (0.32)	-0.12 (0.37)			-0.39 (0.39)
Violent Crime Level	0.37*** (0.06)	0.15** (0.06)			
Placed in Suburbs	-12.40*** (1.04)	-7.05*** (1.33)			-7.65*** (1.53)
Black: Group 1 (95.1%-100%) ^b			Omitted		Omitted
Black: Group 2 (30.1%-95%)			-7.98*** (2.24)		-5.00* (2.21)
Black: Group 3 (15.1%-30%)			-13.33*** (2.34)		-8.24*** (2.44)
Black: Group 4 (5.1%-15%)			-14.47*** (2.02)		-7.44** (2.34)
Black: Group 5 (2.1%-5%)			-17.43*** (2.24)		-8.22*** (2.57)
Black: Group 6 (0%-2%)			-19.49*** (2.10)		-7.83** (2.91)
Crime: Quintile 1 (21.2-78.0) ^c				Omitted	Omitted
Crime: Quintile 2 (14.5-21.1)				-5.21** (1.91)	-2.39 (1.76)
Crime: Quintile 3 (10.3-14.4)				-10.82*** (1.90)	-4.24* (1.80)
Crime: Quintile 4 (6.8-10.2)				-12.47*** (1.85)	-5.19** (1.82)
Crime: Quintile 5 (1.4-6.7)				-12.77*** (2.07)	-5.26** (2.08)
Family & Child Variables					
Years Since Move		0.16 (0.19)	0.12 (0.17)	0.26 (0.19)	0.19 (0.19)
Mother's Age at Move		-0.07 (0.06)	-0.06 (0.06)	-0.08 (0.06)	-0.08 (0.06)
Number of Children		-0.26 (0.40)	0.001 (0.41)	0.27 (0.40)	0.23 (0.39)
Receiving AFDC at Move		0.35 (1.15)	0.26 (1.14)	-0.34 (1.18)	0.15 (1.13)
Remove Address Public Housing		-1.39 (1.21)	-1.57 (1.21)	-1.36 (1.20)	-1.41 (1.22)
Origin Neighborhood Variables					
Percent African-American		0.06** (0.02)	0.06** (0.02)	0.05** (0.02)	0.06** (0.02)
Income/10,000		0.05 (0.49)	-0.46 (0.47)	-0.62 (0.44)	0.02 (0.49)
Violent Crime Level		0.03 (0.03)	0.01 (0.03)	-0.03 (0.03)	0.03 (0.03)
Adjusted R-square		.184	.145	.079	.177
n	1,171				

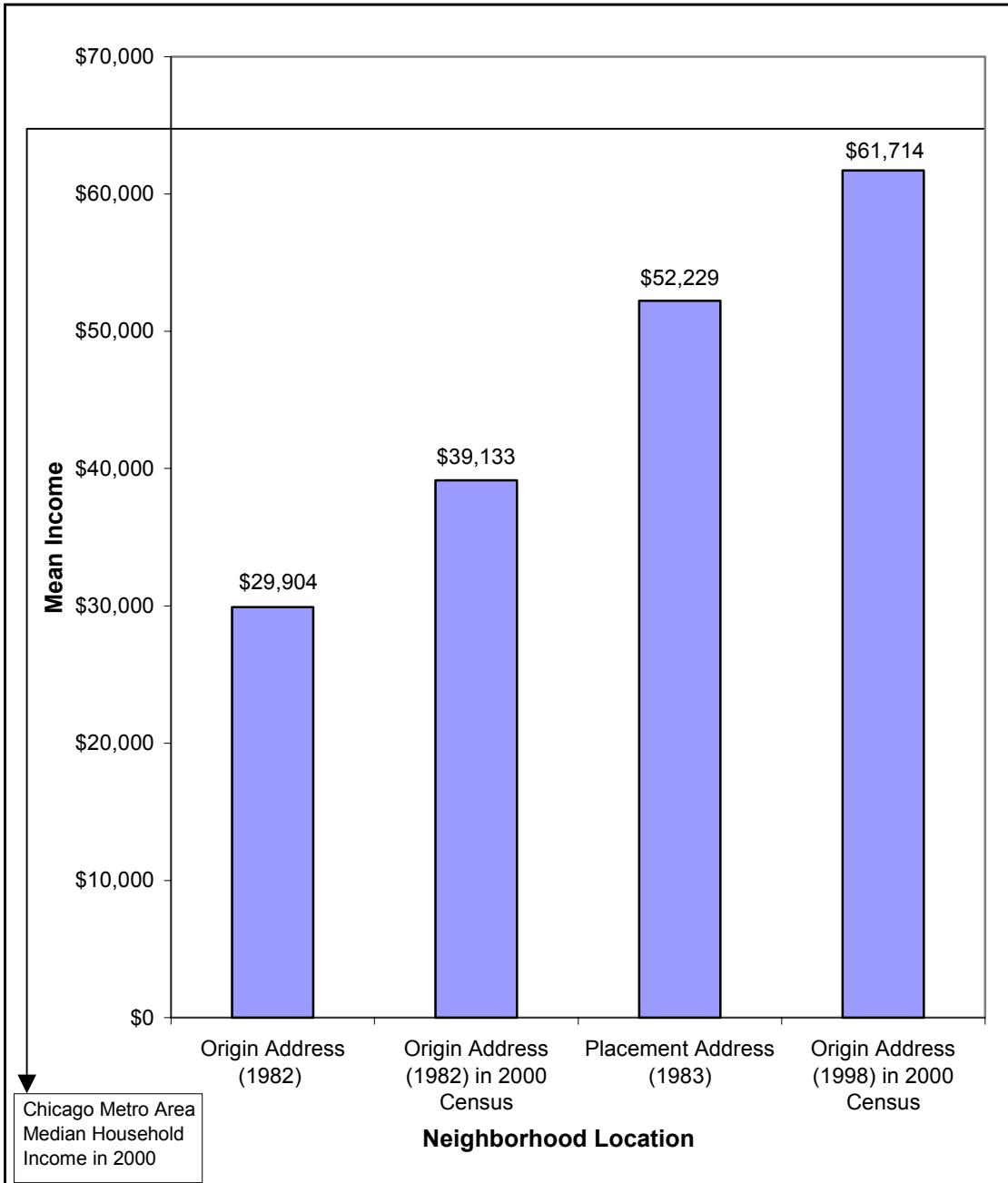
*p<.05 level, **p<.01 level, ***p<.001 level

^a Bivariate regressions include the given placement measure and all family and child and origin variables listed in the table.

^b Percent African-Americans in the census tract.

^c Number of violent incidents per 1,000 in the police reporting area.

FIGURE 1. CENSUS TRACT MEAN INCOME IN 1999\$ BASED ON RESIDENTIAL LOCATION



Note: Chicago and the surrounding suburban counties had an average median household income of \$64,798 in the 2000 Census. Origin and placement address information is interpolated for year of relocation from the 1980 and 1990 Census. The years in parentheses are the sample averages.

FIGURE 2. CENSUS TRACT NON-ELDERLY POVERTY RATE BASED ON RESIDENTIAL LOCATION

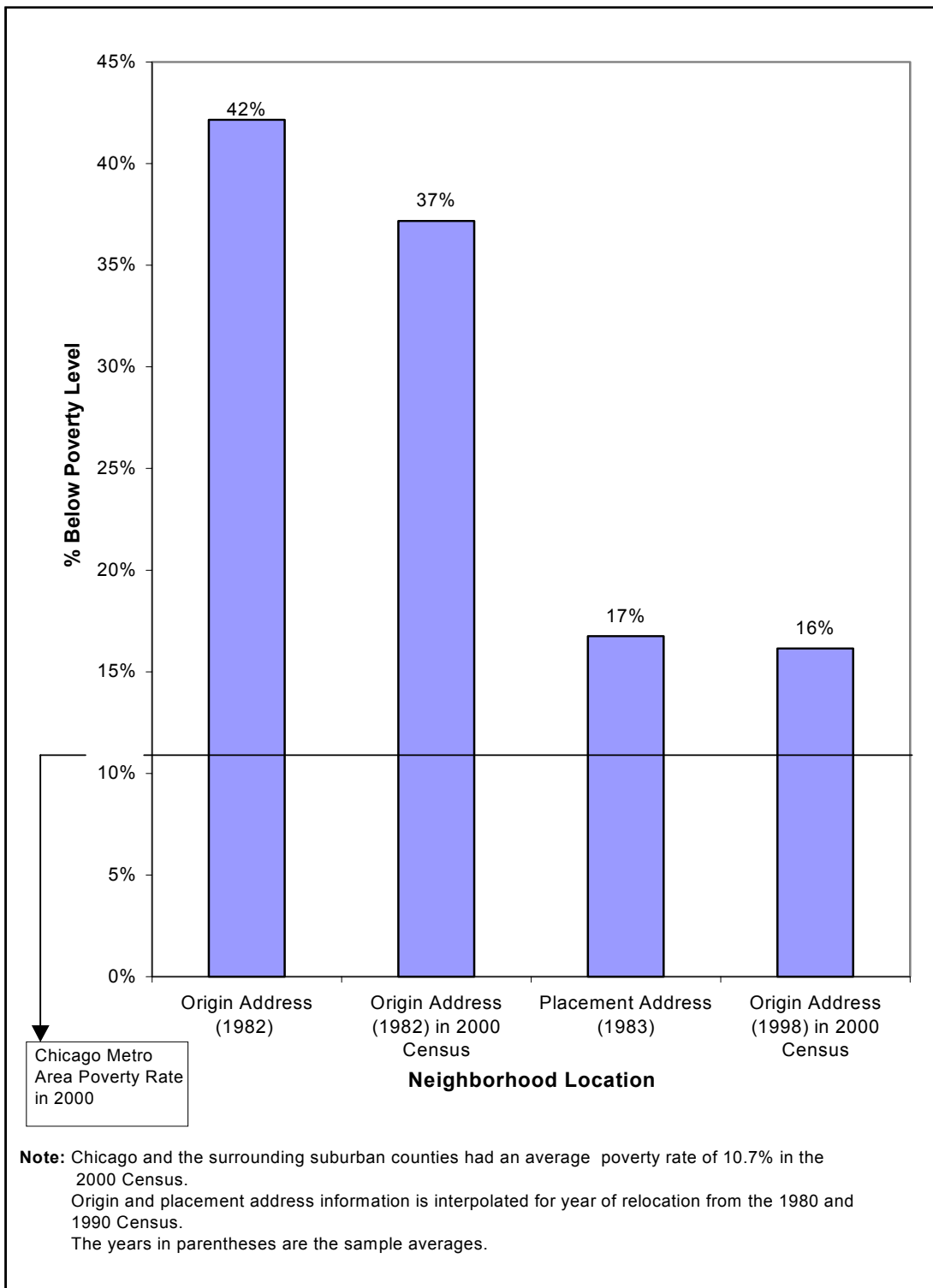


FIGURE 3. LEVEL OF VIOLENT CRIME BASED ON RESIDENTIAL LOCATION

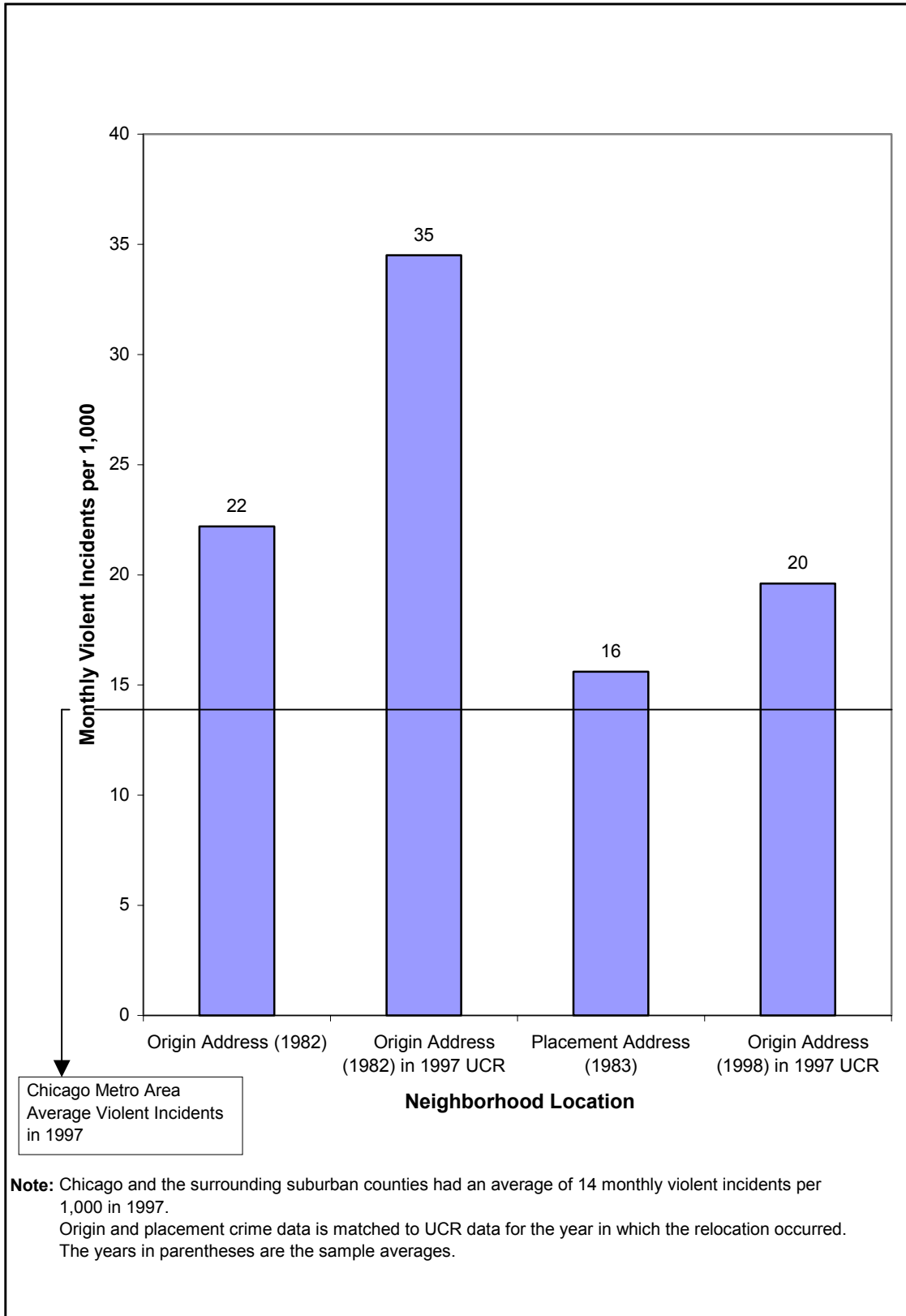
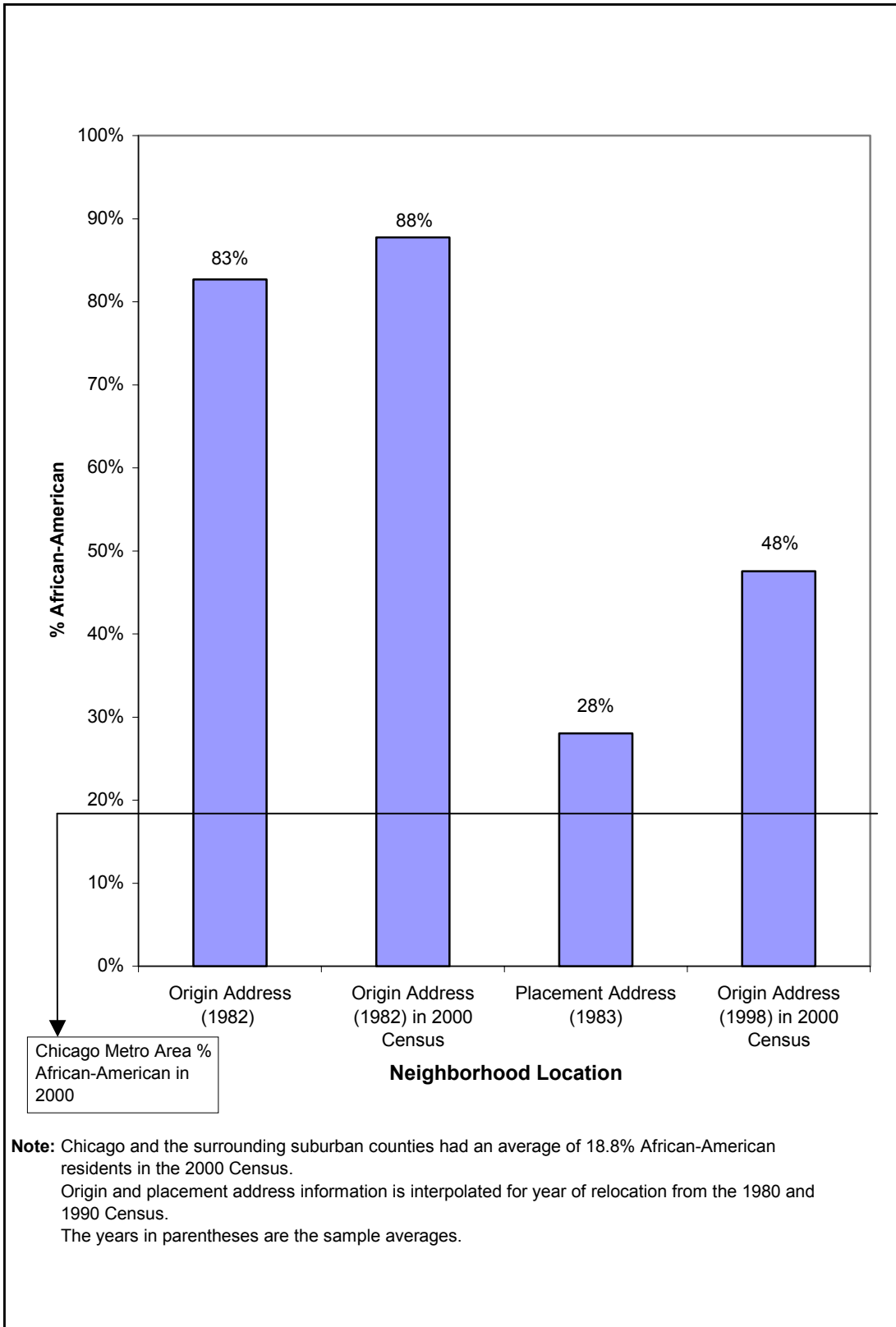


FIGURE 4. CENSUS TRACT PERCENT AFRICAN-AMERICAN BASED ON RESIDENTIAL LOCATION



ENDNOTES

¹ The Leadership Council was founded as the result of a campaign for open housing led by Dr. Martin Luther King, Jr. in 1966. The Leadership Council's mission is to eliminate discrimination and segregation in metropolitan Chicago housing markets.

² The "revitalizing" provision in the final ruling allowed the Leadership Council to place families in neighborhoods that had more than 30% African-American residents as long as they could demonstrate that it was a "revitalizing community". A neighborhood was considered "revitalizing" if there was enough development activity underway or planned so that economic integration was likely in the short run and racial integration might follow in the long run.

³ The program had three selection criteria that were intended to assure landlords that they would get good tenants and increase the likelihood that participants would be able to continue renting these apartments. The program tried to avoid enrolling families that would potentially be making late rent payments or cause building damage by not admitting families with more than four children, large debts, or unacceptable housekeeping. Due to social stigma concerns the Leadership Council also tried to limit the number of families moving to any one area or any one building within an apartment complex. None of these criteria was extremely selective. Because 95% of AFDC families have four or fewer children, the overcrowding restriction eliminated only a few eligible families. Moreover, Gautreaux administrators estimate that about 12% of applicants were rejected by the credit check or rental records and only 13% were rejected by counselors' home visits to look for property damage (Rosenbaum 1994). Thus, all three criteria reduced the eligible pool by less than 30 percent.

⁴ Self-selection and housing availability are believed to account for the majority of the pre-move attrition. Many families ran out of time and some families opted out of the process before their 6 month search time-period expired as they tried to secure a unit (Rosenbaum and Rubinowitz 2001).

⁵ The program received an annual allotment of approximately 150 certificates. Any unused certificates were rolled-over at the end of the year. They also received a small share of all newly developed buildings that utilized HUD funding.

⁶ Gautreaux participants were similar to the Chicago AFDC sample in their time on public assistance (more than 7 years) and their marital status (about 45% never married and 10% currently married). However, Gautreaux participants were less likely to be high school dropouts (39% vs. 50%), tended to be older (median age 34 vs. 31), and had fewer children (mean 2.5 vs. 3.0). On the other hand, they were also more likely to be second-generation AFDC recipients (44% vs. 32%). Rusin-White (1993) compared families participating in the Gautreaux program to families living in public housing, families with Section 8 certificates, and the African-American segment of Wilson and Wacquant's (1989) survey of inner-city residents of Chicago. In general, Gautreaux participants are similar to the housing project and the Section 8 samples. In comparison to African-American families living in ghetto areas of Chicago, Gautreaux participants are not as well off as families living in low-poverty areas (20%-30% poverty) but somewhat better off than residents of extreme poverty areas (greater than 40% poverty).

⁷ Current CHA residents are in many ways a very disadvantaged population (Popkin and Cunningham 2001). The majority are poor (annual income of less than \$10,000) long-term public housing residents; 62% have been living in public housing for more than 10 years. Current CHA residents also have low human capital resources (63% do not have a high school diploma, 32% report being employed, and only 13% have a driver's license).

⁸ We compared the characteristics of the 145 families whose current addresses were before 1995 to those included in our final analysis sample and found statistically significant differences only on mothers' age at the time of the move and origin address violent crime rate. Mothers with older current addresses were three years older (33 versus 30) at the time of move than mothers with newer current addresses. There were no statistical differences in mothers' placement and current address characteristics except origin and current neighborhood violent crime level. Mothers with older current addresses originated from neighborhoods that were slightly less violent (19 versus 22 monthly violent incidents per 1,000) and are currently living in areas that are substantially more violent (30 versus 20 monthly violent incidents per 1,000).

⁹ We used mean income because initial move neighborhood characteristics are interpolated values based on the 1980 and 1990 Census the 1980 Census provided mean but not median income measures.

¹⁰ Each reporting agency roughly corresponds to a town/city; the city/town names were matched to Gautreaux participant addresses on the basis of zip codes.

¹¹ Chicago is divided into 25 police districts. We used the census tract boundaries of each district to match addresses to police district.

¹² Separate papers focus on the racial composition of current neighborhoods (DeLuca and Rosenbaum, 2003) and the individual successes of participants (Mendenhall et al., 2003) and their children (Keels et al., 2003) in gaining high earnings and less dependence on welfare.

¹³ Median income data were available in the 2000 Census data and are used in our regression analyses because they provide a better fit to the data. Current neighborhood mean instead of median income is used in table 4 and Figure 1 to facilitate comparisons among origin, placement and current neighborhood conditions.

¹⁴ In addition to placement neighborhood tract income, we experimented with the male unemployment rate to reflect the extent to which the placement neighborhoods contained role models and possibly marriage partners who demonstrated employment as a way to economic success. We also experimented with the percentage of families receiving public assistance as a measure of the social norms regarding public assistance and the importance of self-sufficiency. Male unemployment, percentage of families receiving public assistance, and household income proved so highly correlated that it was impossible to estimate their separate effects. We opted to use mean household income to represent neighborhood socioeconomic resources, realizing that the estimated “impacts” of placement neighborhood income on current neighborhood income and crime could be reflecting the set of resource and role model factors associated with these correlated measures.

¹⁵ There is also some clustering of cases at the level of the placement neighborhood census tract. We have chosen to cluster at the sampling stage based on where participants were living when they enrolled in the program. The difference in the standard error estimates is minimal whether the robust std. error cluster is based on initial address census tract or placement address census tract.

¹⁶ The .31 correlation between year of move and violent crime reflects the general increase in crime rates that occurred in the city and suburbs during the 1980s and 1990s.

¹⁷ In the case of race, the second quintile spanned such a large range (15.1% to 95% Black), that we subdivided it into two categories of roughly equal sample size.