

"Can residential mobility programs improve human capital?
Comparing social mechanisms in different kinds of programs"

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ABSTRACT

If residential mobility can change human capital, it is likely to be through four kinds of social influences: schools, labor markets, informal social interaction, and safety. Using data from two programs (Gautreaux and MTO), we show that these two similar programs create different kinds of placements which differ in three of these social influences (schools, labor markets, or social interactions), but are similar in improving safety. We examine specific program procedures and consider how they might influence the kinds of placements and social influences in these two programs. We suggest that these intervening mechanisms are likely to explain whether a residential mobility program improves the value of individuals' human capital, and we suggest some detailed procedures that might contribute to such improvement.

Introduction

Underlying some arguments for residential mobility is an implicit assumption that low-income individuals' capabilities can be improved by residential moves. We can conceive of four kinds of social influences by which residential moves might improve individuals' human capital: schools, labor markets, informal social interaction, and safety. Each of these mechanisms might have different kinds of influence on the value of individuals' human capital.

First, and most simply, school quality varies across different locations in the US. Affluent neighborhoods have schools with better paid teachers, more resources, and higher achievement test scores. If residential mobility moves low income families from areas with poor schools to areas with much better schools, children's human capital can increase due to better instruction and higher standards.

Second, residential mobility can move low income families from labor markets with weak demand for their labor to labor markets with stronger demand for their labor (i.e., semiskilled jobs). Even adults with modest skills will find the value of their human capital increase. For instance, if suburban employers have more difficulty than urban employers finding individuals to take semiskilled jobs (e.g., sales clerks, service workers, etc.), then individuals seeking such jobs will have much better employment prospects (and perhaps better wages) if they move from urban to suburban locations.

Third, residential mobility can move participants to areas where informal social interaction (social capital) supports employment and school effort. For children, moving away from schools and friends which discourage school effort and into areas which encourage school effort may improve children's school efforts. For adults, moving to neighborhoods where they make new friends who strongly encourage employment may make them more motivated to work which may increase their human capital.

Fourth, residential mobility can move families to safer areas, and adults' and children's human capital will be less impaired by anxiety and depression. Research has shown the debilitating effects of violent neighborhoods (Garbarino), so moves away from these neighborhoods may reduce these influences.

Obviously, each mechanism is complex, and marshaling evidence on any one of these would be a large endeavor, beyond the scope and purpose of this paper. Here, we propose these four mechanisms as ways of understanding possible ways that residential mobility programs might impact human capital. We use these conceptions to examine whether these social influences are altered by two different residential mobility programs.

This paper seeks to identify dimensions on which these two residential mobility programs differ, to describe the neighborhood placements and social influences created by these programs, and to consider how these social influences might explain individual outcomes. In contrast with literature which focuses on mobility effects on individual outcomes, this review focuses on program procedures, program placements, and the social influences that participants encounter. Although we also present empirical findings on individual outcomes, we are less concerned about inferring the average causal relationship between "mobility" and outcome behavior, than in considering variations in the kinds of "mobility" procedures, and their implications for creating a wide spectrum of different placements and social influences, which are the crucial forces that impact outcomes. In effect, we are posing a model in which outcomes are a direct byproduct of social influences, which mediates "mobility effects." The key unanswered question is not the relationship between mobility and outcomes, but rather, what kinds of social influences do residential mobility program procedures create? Once we know what social influences are created, we will better understand what behavioral outcomes result.

The paper begins describing two residential mobility programs, MTO and Gautreaux. We then describe procedures in the two programs which influence placements. The next two sections describe the kinds of neighborhood placements and the social influences created by each program. We find that the programs differ in the kinds of placements and in three aspects of social influences (whether participants attend good schools, change labor markets, and change social interactions), but are similar in improving perceived safety. We examine the specific procedures used by these two programs, and consider how these procedures might influence the kinds of placements and social influences created by these two programs. We suggest that residential ability programs can alter human capital through these mechanisms, but they must include program procedures that have strong impact on improving social influences.

Places matter--sometimes

Spatial mismatch has long been noted (Holzer, 1991). Big differences have been shown in the resources and opportunities available in different locations (Briggs, 2005). Some analyses contend that negative influences in concentrated poverty neighborhoods may undermine benefits of job and education programs (Wilson, 1996)/

Such observations have led to suggestion that residential mobility programs might provide more effective solutions. This is an amazing contention -- it suggests that mobility might increase human capital.

However, all moves don't have the same impact. Having observed enormous difficulties in the quality of public schools between affluent suburbs and inner-city

neighborhoods, affluent families choose to buy homes based on the quality of the public schools. Can residential mobility programs serving low-income families have the same impact?

This paper shows that two residential mobility programs with similar goals lead to placements into very different neighborhoods, which lead to different social influences, which in turn may have implications for participants. The question of which moves have an impact and how they do so are of great policy importance.

Program design of two residential mobility programs

Gautreaux was a court-ordered demonstration program, removed from the political process and with low visibility. As a result of a consent decree, between 1976 and 1998, Gautreaux placed low-income black families who lived in housing projects (or were on the waiting list) into certain units in mostly white middle-income suburbs or in low-income mostly black urban neighborhoods. A few hundred families moved each year, and only a few families moved into any single neighborhood, so the program had low visibility although 7000 families ultimately moved through the program, about half of whom moved to white middle-income suburbs.

Gautreaux was not designed as a research study; few pre-move measures were collected, and families were not randomly assigned to suburbs or city. However, assignments to the two conditions created a quasi-experimental design. According to reports in the 1980s by housing counselors implementing the program, families were assigned to the two conditions on a first-come first-served basis. Although clients could refuse an offer, only 5% did so since they were unlikely to get another in the six months of their program eligibility (Rubinowitz and Rosenbaum, 2000). As a result, placements approximated random assignment, but they were not perfectly random.

Suburb and city participants were highly similar pre-move in personal attributes (age, number of children, education, marital status, public aid, years in program, etc.), but a few differences were noted in pre-move neighborhoods. While suburban movers came from slightly lower-poverty tracts than city movers (poverty rate of 40.6% vs. 43.8%), they moved to census tracts with dramatically lower poverty rates (5.0% vs. 27.3%; DeLuca and Rosenbaum 2003). Although it is possible that pre-existing differences may impact outcomes, there are reasons to think this impact is relatively small. First, it seems reasonable to infer that the large outcome differences are probably explained less by the 3 percentage point difference in initial neighborhoods than by the 22 percentage point difference in placements. Second, multivariate analyses that control for baseline attributes and locations found large, significant impacts of placement neighborhood attributes on outcomes an average of 14 years after program placement (DeLuca and Rosenbaum, 2003; Keels et al., 2005). However, random assignment but provide stronger basis for causal inferences.

The Moving to Opportunity program [MTO] was modeled on the Gautreaux program, but MTO was a random assignment experiment. Eligible families were placed in treatments by random assignment, and analysis considered all families who received offers (regardless of whether they moved or not). This allowed researchers to assess the impact of being given the offer to move compared to what similar people did in the absence of this opportunity.

MTO departed from the Gautreaux program design in several respects besides

random assignment. First, while Gautreaux placed families in specific units, MTO specified census tracts, and let families choose any housing unit in any neighborhood, as long as it was located in a qualifying tract. MTO designers may have felt that further constraints beyond census tract were unnecessary or not politically desirable. Although some counselors found units for families (much like the Gautreaux housing staff), that was not common, so families were on their own to find units. Counseling practices were not specified in the program design. It is not clear what MTO counselors told families about neighborhoods, but some reports suggest that some counselors encouraged addresses where participants would find neighbors similar to them.

Second, while Gautreaux moved experimental group families to distant suburbs, MTO focused on specifying census tract poverty concentration, and permitted any kinds of moves, including moves within the city. The emphasis in MTO was on meeting the tract poverty-rate goal quickly and efficiently.

Third, while Gautreaux was a racial integration program that moved experimental-group families into mostly white suburbs all of which were low poverty, MTO gave no consideration to tract racial composition, and many MTO program movers chose residences which met the poverty requirements but were located in mostly black neighborhoods (Orr, et al. 2003).

The two programs also had somewhat different entrance rules. All MTO participants and most Gautreaux participants were housing project residents, but some Gautreaux participants were on the housing project waitlist. While waitlist families were not in housing project circumstances, their housing circumstances were no better than those of housing project residents, and perhaps they were worse -- they were in crowded conditions, constantly moving, on the verge of eviction, or in homeless shelters (Rubinowitz and Rosenbaum, 2000). The fact that they desired to enter Chicago public housing, despite its well-known dangers, suggests that they considered their living conditions worse than the housing projects.

In terms of education and welfare receipt, two important population characteristics, we find small differences between programs. While similar portions of household heads completed high school or GED in MTO and Gautreaux (60.3%; 63.9%), more MTO families were on public aid than in Gautreaux (61% vs 50%, Orr, et al., 2003, exhibit C-2; Rubinowitz and Rosenbaum, 2000, p. 79). Participants in the two programs were probably not greatly different.

Placements in the two programs

In both programs, families in the experimental group were intended to be placed into a different type of neighborhood than the control group. We shall describe the kinds of neighborhoods into which the experimental groups of each program were actually placed. We look at three aspects of neighborhoods: census tract, micro-neighborhood, and distance from baseline neighborhood. We find that the programs differ on all three.

Census Tracts

Although both programs aimed to move families to less poor neighborhoods, the programs led participants to neighborhoods with different compositions of poverty and race. Gautreaux suburban placements were all in low poverty census tracts. Indeed, based on an analysis of a 50% random sample of Gautreaux movers between 1976-1990 using administrative data, the 743 suburban movers were placed in census tracts where

the average percent of poverty was 5.3% (DeLuca and Rosenbaum 2003, p.323). Moreover, most neighbors were affluent; the mean family income in the suburban census tracts was \$71,545 (Ibid, p.323). The suburban locations were required to be less than 30% black, and almost all (90%) placement tracts were less than 16% black (Ibid., p.325). Overall, the average placement tract had no more than 10% black households (Ibid.).

In contrast, MTO placements did not consider racial composition. Although it was hoped that the program would increase racial integration, it was not required, and the results indicate that it often did not happen. In 1997, not long after the move, about 38% of experimental group movers were living in highly black areas (over 40% black; Goering and Feins, 2003), while less than 5% of Gautreaux suburban movers' placements were in such areas (DeLuca and Rosenbaum, 2003).

MTO accomplished its goals in terms of 1990 census figures, but fell short because of changing tract composition. Nearly all (94%) movers went to areas with less than 11% poverty, based on the 1990 census data available at the time of placement. (Orr, et al., 2003, p. 29). However, because of changes in tract composition after 1990, the actual composition of census tracts at the time of the move averaged 12.4%. Based on the 2000 census data, the program estimated that "just half of the moves were to areas estimated to have poverty rates below 10% at the time of the move, and another third were to areas of 10 to 15% poverty at the time. All told, 97% moved to areas with less than 20% poverty" (Ibid, p.30). While moving participants from tracts with over 40% poverty to less than 20% poverty is a big improvement, these neighborhoods may have had different characteristics than the intended 10% goal. Both programs moved one group to low-poverty census tracts, but the programs led to different kinds of neighborhoods.

Micro-neighborhoods

The programs led to different micro-neighborhoods. Gautreaux placed families in specific apartments. Real estate staff located units that avoided enclaves, and counselors made sure to avoid creating enclaves. Three or fewer families were placed in any neighborhood, and neighborhoods were avoided if many African-American families already lived there (Rubinowitz and Rosenbaum, 2000). The program also avoided areas that were near concentrations of black or low-income families (Ibid.).

In contrast, MTO defined neighborhoods only in terms of census tracts, and did not consider micro-neighborhoods within census tracts. MTO had no rules or procedures to avoid enclaves within census tracts, and some counselors thought that enclaves were desirable because they provided social support. MTO families chose their own housing units, choices which were presumably based on their preferences, housing availability, and landlord willingness. Unlike Gautreaux, where real-estate staff convinced reluctant landlords to take participants, the MTO program did not provide such opportunities. Consequently, in MTO, participant choices influenced micro-neighborhoods.

Did MTO move families into enclaves? Casual observation of maps of MTO placements raise concerns. While experimental group placements in Gautreaux are widely scattered (unpublished map, Leadership Council), some of those in MTO indicate more than three families placed close together. Some placements are located on census-tract boundaries adjoining higher-poverty census tracts (Goering, et al. 1999), a finding

similar to observations of another housing voucher program (Cronin and Rasmussen, 1981). Although we do not have geocoded data on MTO placements, such geocodes are possible, and research could be done to compare the programs on whether micro-neighborhoods allowed concentration. If enclaves are created, one must wonder whether and how they may insulate families from the potential benefits of low poverty census tracts.

Distance from prior neighborhoods

Part of the social impact of these programs may be in removing participants from the influence of old neighborhoods. If "prior neighborhoods seem to be magnets" (Briggs 1997), and if the power of magnets declines with distance, moving distance may influence whether old neighbors continue to influence families. The experimental group in the two programs experienced quite different moves in this respect.

For Gautreaux movers, the average suburban placement was 25 miles (Keels, et al, 2005), and less than 10% of moves were less than 10 miles (Keels, new calculation, February 22, 2006). In contrast, 84% of MTO experimentals moved less than 10 miles from their baseline address, and some moved less than 1 mile (Kling et al., 2004, Table A14). These differences raise concerns about how much families actually left their old neighborhood. While the difficulty of travelling 10 miles may differ according to public transit routes, we suspect that more participants will continue interactions with old friends 1-10 miles away than with ones 25 miles away, and they may continue to be influenced by peer pressures from their former high-poverty neighborhoods.

In summary, program design elements of Gautreaux and MTO appear to be related to moves to very different types of neighborhoods (based on poverty and racial characteristics), different micro-neighborhood influences, and different distances from initial residences.

Social influences in the two programs

Having seen the actual placements, we might expect that the two programs would create different social influences. New neighborhoods present different institutions and conditions that offer the possibility of new influences. These "social influences" refer to broad conditions offered within neighborhoods, not individual outcomes. This section considers four kinds of influences relevant to neighborhoods: schools, local labor markets, social interaction, and safety.

1. Schools: Did residential mobility change schools and school quality?

One of the most striking aspects of American public education is the way schools vary by geography. Within a large metropolitan area, schools often vary enormously in quality between affluent suburban areas and less affluent urban areas. In part, this is due to local funding differences and to differential ways that funding is spent (i.e. whether school funds are spent on curricula and instruction or on security and building maintenance; Jencks and Philips, 1998). If low-income minority families moved to better neighborhoods, we might expect that they would attend better schools.

In Gautreaux, nearly all families moving to suburbs changed school districts and began attending different schools (Rubinowitz and Rosenbaum, 2000). They generally attended much better schools than they had in the city. Indeed, 88% of Gautreaux suburban movers attended schools where the average test scores were in the top half of

national standards (Orr, et al., 2003, Rosenbaum, et al., 1993).

In contrast, while the MTO experimental group changed neighborhoods, they rarely changed school districts. 70% of the MTO treatment group movers stayed in the same school district (Orr et al 2003). Overall, the average experimental group child was in a school in the 21st percentile and less than 10% attended schools that ranked above the 50th percentile (Orr, et al. 2003, pp.110,111).

In summary, the two residential mobility programs lead children to very different sets of schools. Research is clearly needed to understand why there was so little school improvement for MTO movers. Perhaps the short moves explain part of this school difference. Moreover, research has begun to examine how parents make these choices (see Briggs et al. 2006).

2. *Labor Market: Moving to different labor market? to stronger labor market?*

One of the most intriguing possibilities suggested by mobility programs is that residential mobility might directly increase the value of their human capital. Individuals with low-level skills and limited education may have little market value in high poverty neighborhoods where many people have the same qualifications and available jobs are quickly filled. If these individuals move to distant affluent suburbs where the demand for low-skill workers exceeds the supply, these individuals will be in greater demand and perhaps have greater value.

Gautreaux occurred during the 1980s, when employment opportunities in the suburbs were strong while they were weak in inner-city areas. The "spatial mismatch" theory posits that the distance between available unskilled jobs (in the suburbs) and available semiskilled workers in the city contributes to unemployment of semiskilled workers (Holzer, 1991). These distances often require long commutes, which are particularly onerous given poor public transportation and the low pay of these jobs is not sufficient to justify the high costs of commutes in time and money.

Given the well-documented spatial mismatch between suburb labor markets and city residents, the Gautreaux program made exactly the kinds of moves that were likely to put semiskilled adults into labor markets with strong demand and few competitors. In contrast, as noted, MTO treatment group made short distance moves, so it isn't clear whether they actually moved to a "different labor market."

In addition, there are indications that the MTO program moved the treatment group from strong labor markets. MTO occurred in the late 1990s, during a strong economy when labor market demand for semiskilled workers was very high. In addition, at the same time, the TANF program of welfare reform had pushed large numbers of families off public assistance and into jobs. As a result, the labor markets in low-income neighborhoods improved for everyone. The treatment group moved out of strong labor markets that would likely have improved their prospects if they had stayed.

3. *Social interaction: How much did families really leave prior neighborhoods behind?*

Third, residential mobility can move participants to areas where informal social interaction (social capital) supports employment and school effort. For children, moving away from schools and friends which don't encourage school effort and into areas where social norms support school effort may improve students' school efforts. If adults move to neighborhoods where they make new friends who strongly encourage employment, they

may be more motivated to work which may increase the value of their human capital. Obviously, these social influences on mothers and children are complex and require detailed analyses (see Rosenbaum et al. 2005). However, all of them are premised on the assumption that mothers and children stop interacting with their former friends, which may not be true.

Residential mobility studies implicitly assume that residential changes influence social interaction. Mothers and children whose homes are in new neighborhoods will have new neighbors and institutions with which to interact. Thus, it is important to consider whether families maintain their ties with individuals and institutions in the old neighborhood.

In interviews, Gautreaux suburban movers reported that weekday visits to their former neighborhoods were very rare (Rubinowitz and Rosenbaum, 2000). With average suburban moves of 25 miles, mothers and children could not easily travel back to the old neighborhood on a daily basis. Some suburban movers returned to the old neighborhood for occasional weekend visits with relatives or to go to church, and these Sunday visits were often to family dinners and churches, and they occurred in the daytime, not at night (Ibid.). While it was theoretically possible for some children to continue attending their old schools (if they pretended to live with a relative), this almost never happened, and the few times it did was for summer school (Ibid.). Thus, children's contacts with old neighbors were limited to occasional visits and mostly in the presence of adults. While these rare visits had the downside of causing initial feelings of isolation, it may have increased the impact of the move. At the time of the second interview, over seven years after moving, very few mothers or children were socially isolated. Most of the children interacted with white classmates after school, often in each others' homes (Rosenbaum et al, 1993, p. 1538).

In contrast, the MTO short moves probably made it easier to maintain old support networks. Research suggests that many children continued to interact with friends from the old neighborhood. The interim report finds that the experimental-group movers were less likely to visit with friends from old neighborhoods (or to still be living there) compared to the control group. However, 43% of experimental-group children still visited their friends from the old neighborhood, and the rate was somewhat higher for boys.

These children moved to residences out of their old neighborhoods, but they may not have left the old neighborhood socially. It is important to note there that we do not know what children are doing when they visit friends in the old neighborhood, how often they happen, or how much these visits reduce exposure to the new neighborhood. Despite changing residence, many MTO experimental-group families spent part of their social lives in their old neighborhoods, and presumably were influenced by their former neighbors. It is important to further explore both the reasons for and the implications of social interaction with the old neighborhood. While this may have been comforting, it altered the social influences of "moving."

4. Safety

Given the higher incidence of crime and assaults in low-income neighborhoods, it is generally expected that moves to low-poverty neighborhoods would lead to less exposure to crime and greater feelings of safety. In the Gautreaux program, the suburban movers reported feeling much safer than city movers, and also much safer than

they had themselves felt when they lived in the city. For instance, only 31% of suburban movers said the suburban area was dangerous at night, while 71% of city movers said that their neighborhood was dangerous at night. (Rubinowitz and Rosenbaum, 2000, p. 94).

Similarly, MTO families reported large increases in feelings of safety. By 2001, the percent of MTO experimental group feeling safe at night rose by 30 points (from 55%), household victimization fell by nearly half (from 21%), dissatisfaction with police fell by two thirds (from 34%; Orr, et al., 2003, c-15). These moves did have an effect on perceptions of safety. These changes are likely linked to the big improvements in mental health noted below.

In summary, these findings indicate that moves in both programs led to improved neighborhood influences. However, some evidence suggests that moves in Gautreaux were accompanied by greater exposure to low-poverty neighborhoods and more social separation from the old neighborhood than the MTO moves. Future research would benefit from understanding the issues of social exposure to new and old neighborhoods and the positive and negative aspects of each.

Individual outcomes? Education, employment, subsequent moves, and mental health

Do residential moves affect individuals' outcomes? The following sections examine the effects of the two programs on four different outcomes theorized to be related to neighborhoods: education, employment, subsequent moves, and mental health.

Education - can moves improve school outcomes without improved schools?

The Gautreaux studies found dramatic differences between the suburban and city groups in educational outcomes. Compared to children who moved within the city, suburban movers were more likely to complete a high school diploma, to be in college track in high school, to attend college, and to attend a four-year college. These were statistically significant and large differences (Rosenbaum, 1995). In contrast, MTO has not had enough time to see such long-term effects, however, four to seven years after random assignment, children in the MTO experimental group did not perform better than control group children on reading and math achievement tests, or in terms of suspensions, expulsions, and school engagement (Kling, et al., 2006).

Although MTO's superior research design may explain the different findings, alternative explanations are possible. As noted, MTO moves rarely resulted in changing school districts or above-average schools, and sometimes resulted in no change of schools. In contrast, nearly all suburban movers in Gautreaux moved to new school districts, many of which were dramatically better than those in the control group (who moved within the city). As noted, less than 10% of MTO experimental group attended schools with above-average achievement test scores, while 88% of Gautreaux experimental-group students did so. MTO's findings may indicate that residential mobility without better schools has little impact on educational outcomes (particularly if children keep interacting with old friends). Merely improving the composition of neighbors (in a census tract) does not by itself improve children's educational achievement.

This raises the important policy implication that policymakers need to think carefully about how school choices are incorporated into neighborhood choices. Middle-class families often choose neighborhoods based on school quality, but many MTO

families ignored school quality and the program provided no information or advice about school quality. It is likely that without moving children to areas with above-average schools, there will be no discernable education effects.

Employment: moves to different/stronger labor markets?

Do moves put people in different labor markets?

A second focus of research was on adult employment. The early Gautreaux survey research showed that mothers' employment was significantly higher in the suburbs, but mothers' earnings and hours worked were no different. Later analyses used administrative data on a much larger random sample, and suggest that the primary influence was neighborhood composition, not the city/suburb distinction (Mendenhall et al. 2006; DeLuca and Rosenbaum 2003; DeLuca, Rosenbaum, & Miller 1999). Research found that while the city/suburb distinction did not have a significant effect on public-aid receipt, "public-aid rates went from 26% to 39% for families placed in the highest and lowest quintile neighborhoods, with respect to education level of the tract.... The difference remains very strong and significant even after controlling for years in the program, age, and pre-move public aid" (DeLuca and Rosenbaum, 2003, p. 312). Similar findings with more extensive controls (and a different distinction based on race and poverty, not education) were found for employment outcomes and public aid (Mendenhall et al. 2006).

Employment was also a major focus of MTO research. The main finding was summarized in a subheading of the executive summary of the interim impacts evaluation -- "no effects on employment or earnings" [compared to the control group] (Orr, 2003, p. xiii). However, there are two questions that arise.

The first concern is whether MTO actually moves families to different labor markets. Unlike Gautreaux where 25-mile moves from declining inner-city neighborhoods to high-growth suburbs clearly put families in different labor markets, MTO's less than 10-mile moves (often within city limits) may not have put them in a different labor market, and it may not have even reduced commuting time.

*Did MTO move people **from** strong labor markets?*

The second concern is that MTO may have moved families from strong labor markets to (other) strong labor markets. While the Gautreaux program moved families from weak to strong labor markets (Rosenbaum, 1993), MTO moved families who were already in strong labor markets. MTO occurred during a strong economy when labor market demand for semiskilled workers was very high. MTO results were measured between 1994 and 2000, when an unusually strong economy, strong welfare reform policy (TANF), and expanded earned income tax credit encouraged many poor people to work (Blank, 2002). As a result, the labor markets in low-income neighborhoods improved, leading to less difference in labor market influences between MTO experimental and control group families.

The strength of pre-move labor markets is seen in the control group. The control group's employment gains were extraordinary -- 100% gains. The MTO control group employment increased from 23.6% to 50.9% (Ibid, p. 127). Such 100% gains are rare in experimental groups of powerful programs (Basi and Ashenfelter, 1986; Barnow, 1987; Bloom et al, 1992; Cave and Doolittle 1991). Obviously, the pre-move labor market

which the control group represented was a very strong labor market. Although the treatment group's gains were no larger than the control group's gains, both groups resided in very strong labor markets.

Indeed, in the context of such as strong labor market, one must wonder whether those still unemployed might have serious physical or psychological barriers to working--are there ceiling effects against further gains? Or are residential mobility effects effective for the same people who already benefited? One must also doubt that these findings would generalize to more ordinary historical periods.

In summary, while Gautreaux families moved from weak to strong labor markets, it is not clear whether MTO families moved to different labor markets and, even if they did, it appears the experimental group moved out of labor markets that were getting very strong -- markets that led to 100% gains in employment for the control group.

3. *Duration*

One indication of whether families see benefits to their move is whether they choose to stay, and, in turn, duration may influence the impact of moves. To the extent that they return to low-income neighborhoods, we might infer that they got few benefits in those locations, and short duration moves are likely to have little impact.

Using administrative data, research located Gautreaux participants an average of 14 years after they made their initial move in the program. Selecting a 50% random sample of all families moving between 1976-1990 (1,507 families), researchers located recent addresses of 1,504 of these 1,507 families (DeLuca and Rosenbaum 2003). The research found that about two-thirds of families placed in the suburbs still remained in mostly white suburbs an average of 14 years later. Further analyses of these data indicate that families "continued to reside in neighborhoods with income levels that matched those of their placement neighborhoods... Families who were placed in low-crime and suburban locations were more likely to reside in low-crime neighborhoods years later" (Keels et al., 2005, p. 51).

In contrast, over a much shorter time interval (5 years), MTO studies found that only 44.4% of the experimental group movers still lived in low-poverty census tracts (15% poverty or less; Orr, et al., p.30,34). In addition, a majority (59%) of the experimental-group movers were living in 80%+ minority tracts (Orr et al., 2003, pp.34, 37). As the interim report notes, many these subsequent moves were "to areas more like the ones where the section 8 families and control group movers lived ...[and] to high-minority neighborhoods (Ibid, p. 33, 37).

Ironically, although the Gautreaux moves imposed more disruption on participants' lives than did MTO moves, the 14-year retention rate in Gautreaux was substantially higher than the shorter 5-year retention rate in MTO (66% v 44%). Despite Gautreaux participants' initial fears about these moves, their preferences changed. Families reported that over time they formed friendships with neighbors and their children also made friends and became part of their schools and communities (Rubinowitz and Rosenbaum, 2000). While children had initial difficulties in school, they gradually did better. Ironically, after the program induced families to move to areas they might not have chosen otherwise, families came to appreciate the new neighborhoods. .

In contrast, since MTO families didn't move far, families may have continued interacting with their old friends, so they may not have made friends in their new

neighborhoods. Although retaining old friends preserved social support and made a smoother transition from move, it also remained as a social "magnet" (Briggs, 1997) that perhaps created a strong pull back to their old neighborhoods.

Mental health

Gautreaux did not study health outcomes, but we include this topic because it is one of the most important discoveries of the MTO research. MTO research discovered important improvements in mental health.

Despite the many countervailing influences we have identified that might have reduced the impact of MTO moves, the MTO experimental group showed strong significant differences from the control group in terms of mothers' and daughters' perceptions of neighborhood safety, as well as psychological distress, depression, and obesity (Orr et al. 2003, p.77). These findings are extremely impressive. The magnitude of difference is as great as one might see from programs devoted specifically to improving mental-health (Kling, et al, 2004). These are consistent differences, repeatedly found over time and in separate measures -- not just statistical flukes.

Conclusion

MTO is a truly impressive study. It offers a carefully designed program, and a well administered research design that provides the strongest study in this area. Although MTO offers a stronger research design than Gautreaux, it offers a weaker program, leading to much weaker changes in social influences. MTO is useful for examining the impact of modest moves and modest changes in social influences.

However, MTO is not a good test of whether residential mobility can have a strong impact. If we are interested in discovering the potential impact of residential mobility on individual outcomes, we must examine a program that creates bigger changes in social influences. We have identified specific procedures which may contribute to those kinds of placements and social influences.

While the MTO studies provide stronger research evidence, the Gautreaux program creates larger changes in the environment. The two programs create different placements and different social influences, which are likely to explain some of the discrepancy in program outcomes (see Table 1).

Some observers have argued that the low-income families selected for the Gautreaux program would have moved to these kinds of neighborhoods even without the program. MTO shows that is wrong -- most MTO families were comparable, but virtually no MTO families moved 25 miles to mostly white affluent neighborhoods on their own. Obviously, Gautreaux-type moves would not have happened without the strong program requirement and assistance provided by Gautreaux. Program design has a crucial impact on what kinds of moves happen.

This paper has shown that similar programs can lead to dramatically different placements and social influences, which are the key intervening mechanism influencing human capital. These might have been altered if programs had been run slightly differently. In other words, the devil is in the details. If the Gautreaux program had been less committed to avoiding enclaves (at the block level), it would have been easy to move many families into low income enclaves. If Gautreaux had been less committed to expanding housing options into new areas, it would have easily focused on a few nearby suburbs. Reducing the distance of moves would have been more convenient for housing

counselors who took families to see available units. These minor changes in procedures would have met the conditions demanded by the consent decree, and they would have looked pretty good in terms of census tract poverty rates. Recognizing the possibility that slight modifications of Gautreaux might have led to much weaker social influences can help us think about ways to design residential programs that have stronger benefits.

Policy implications.

In examining whether a residential mobility program is designed in a way that could improve human capital, we have asked what kinds of moves and social influences it creates. If a program moves families but leaves 90% of students in below-average schools, do we really expect improved educational achievement? If the program moves families only a few miles, do we expect that they have entered a different labor market, which will improve the value of their human capital? If children don't move far enough to change friendships and interactions, will they retain old friends, former gang memberships, and prior activities and interests?

We have identified specific procedures which may contribute to big changes in placements and social influences. We can easily conceive of MTO including one or more of these procedures, and, as a result, offering participants quite different placements and social influences. As we try to imagine what kinds of programs might create such social influences, we might consider minor modifications of MTO as realistic possibilities that might have such impact. Below, we suggest some minor modifications and some hypotheses about potential consequences.

HYP 1. MTO + identify and require units not in low-income enclaves--> higher human capital.

HYP 2. MTO + moves 20 miles from old address -- > less interaction with old friends. Higher human capital.

In Gautreaux, real estate staff located appropriate housing units that were not in enclaves, were in better neighborhoods, and many were quite distant. On their own, participants were unlikely to even know about these neighborhoods and so it isn't surprising that MTO participants did not find such units. Real estate staff could potentially have had a strong beneficial impact on MTO.

Counseling advice can also make a difference. Although both programs had housing counselors, MTO counselors did not provide information about school quality or labor market demand, nor did they provide advice about why participants should base their choices on such information. Gautreaux counselors mentioned both factors to help participants see the advantages of the distant moves they were offering. Residential mobility programs should give some thought to using housing counseling about these issues. Housing counseling may have strong influence on participants' choices, and could lead to better outcomes, as posited below.

HYP 3. MTO + identify locations with above-average schools + advice how to choose them--> better schools. Higher human capital

HYP 4. MTO + identify locations with better job opportunities (for participants' level of skills) + advice how to choose them -- > better employment outcomes. Higher human capital.

On the latter point, it is noteworthy that in some two-year colleges that provide occupational training, job placement counselors often advise their graduates to consider residential moves to improve their employment prospects (Rosenbaum et al., 2006). These college advisers realize the practical barriers imposed by spatial mismatch -- that their graduates who live in low income neighborhoods often live very far from the areas of employment growth, and many job vacancies require 1-2 hour commutes. Besides providing skills and training to their graduates, these colleges advise their graduates to consider residential moves. Since they advise residential moves of 20-40 miles, we might expect that residential mobility programs may need to advise similar distances to get employment benefits.

As noted, children who move to better neighborhoods, may keep interacting with old friends and experience little change in social norms, social skills, or motivation. MTO studies have found that girls benefit from the move, but boys often do not. Although such sex differences might arise from biology or early socialization, factors that programs can't change, sex differences might also arise from present influences, i.e., parents' different rules for boys and girls, which may mean that boys actually don't experience changes of "social influences."

We suspect that boys and girls may differ in their "traveling radius" -- the distance they are allowed to travel to see friends after school. If boys can travel greater distances than girls, then boys who moved only a few miles in MTO can frequently return to old neighborhoods. New residential neighborhoods may not change their social networks or social norms -- boys may retain old friends, former gang memberships, and prior activities and interests.. If so, we can hypothesize the following modifications that would reduce gender differences and increase the benefits to boys.

HYP 5. MTO + moms prevent boys from returning to old neighborhood--> change social interactions & outcomes. Higher human capital.

HYP 6. MTO + move 25 miles--> boys can't return easily, change social interactions & outcomes. Higher human capital.

We now have evidence about the kinds of placements and social influences created by two different programs. This comparison suggests that small procedural details can make a big difference. Besides the two programs described here, many other programs have arisen over the past decade. Many have entailed minor changes (Gautreaux II), but some have required dramatic changes in placements and social influences. For instance, another when created by a court decision, the Thompson decision in Baltimore, is being studied by Professor DeLuca and Johns Hopkins University, and it may provide new evidence about the issues raised here.

As we have seen, residential mobility is not a single entity. The two cases described here show how similar programs lead to very different placements and social influences. We have suggested that it is these intervening mechanisms that are likely to explain whether a residential mobility program improves the value of individuals' human capital, and we have suggested some detailed procedures that might contribute to such improvement. We hope that future policy discussions consider these issues.

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"Can residential mobility programs improve human capital? Comparing social mechanisms in different kinds of programs"

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Table 1: Program design elements in MTO & Gautreaux.

	<u>MTO</u>	<u>Gautreaux</u>
<u>Placements</u>		
<u>Census tract attributes</u>		
Placement average percent poverty (movers only)	12.4%	5.3%.
Placement over 40% black areas	38%	5%
<u>Micro-neighborhoods</u>		
Procedures to prevent enclaves?	No	Yes
Created enclaves?	Yes?	No
<u>Moving Distance</u>		
Moves less than 10 miles	84%	10% (25 mile average)
<u>Social influences</u>		
<u>Schools</u>		
School district change?	20%	100%
Schools above-average test scores	10%	88%
<u>Labor Markets</u>		
Change labor market?	No?	Yes
Labor market comparison	strong->strong	weak->strong
<u>Social Interactions</u>		
Contact with former peers?	Often?(for boys?)	Rare
<u>Safety</u>		
	Yes	Yes
<u>Duration</u>		
Retention rate in treatment	44% after 5 years	66% after 14 years

? indicates speculation, the rest is based on evidence.