THE LONG-RUN EFFECTS OF AMERICA'S LARGEST RESIDENTIAL RACIAL DESEGREGATION PROGRAM: GAUTREAUX*

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This article studies the effects of the largest residential racial desegregation initiative in U.S. history, the Gautreaux Assisted Housing Program. From the late 1970s to the 1990s, Gautreaux moved thousands of Black families into predominantly white neighborhoods to support racial and economic integration. We link historical program records to administrative data and use plausibly exogenous variation in neighborhood placements to study how desegregating moves affect children in the long run. Being placed in the predominantly white neighborhoods targeted by the program significantly increases children's future lifetime earnings and wealth. These moves also increase the likelihood of marriage and particularly raise the probability of being married to a white spouse. Moreover, placements through Gautreaux affect neighborhood choices in adulthood. Those placed in predominantly white neighborhoods during childhood live in more racially diverse areas with higher rates of upward mobility nearly 40 years later. *JEL codes:* J01, H00, R38, I30.

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I. Introduction

Segregation by race is a defining feature of neighborhoods in the United States. Despite the fact that Black households make up 12% of the population, the average Black family lives in a neighborhood that is 40% Black (Logan, Stults, and McKane 2023). The existence of large disparities in income and wealth by race (Bayer and Charles 2018; Derenoncourt et al. 2024) implies that racial segregation often drives economic segregation: the typical Black family resides in a neighborhood with a poverty rate that is nearly double the rate for the average white family. Theory and descriptive evidence suggest that racial and economic segregation play an important role in explaining Black poverty in major U.S. cities (Wilson 1987; Jencks and Mayer 1990; Massey 1990). However, less is known about the effectiveness of policies aimed at reducing residential segregation.

This article studies the long-run consequences of the Gautreaux Assisted Housing Program, the largest initiative to racially desegregate housing in U.S. history. From 1976 to 1998, Gautreaux sought to reduce segregation by moving more than 7,000 Black families from urban neighborhoods in Chicago to new areas. The result of a class-action lawsuit, Gautreaux served as a model for subsequent civil rights cases filed throughout the country that also sought to desegregate neighborhoods through reforms to public housing or voucher policies.

Gautreaux was a unique housing mobility program because it aimed to place Black families in predominantly white and often low-poverty neighborhoods. This emphasis differed from the landmark Moving to Opportunity (MTO) housing voucher experiment, which focused on increasing moves to low-poverty areas with no direct consideration of neighborhood racial composition. Among MTO participants who relocated to low-poverty neighborhoods, just 18% moved to neighborhoods that were majority white. Thus, the Gautreaux setting provides a rare opportunity to study the combined effects of reducing racial and economic residential segregation.

At the outset, it is unclear whether and to what extent moving to the neighborhoods targeted by Gautreaux could affect families in the program. On one hand, Black families and their children may benefit if moving to predominantly white and low-poverty neighborhoods coincides with exposure to lower crime rates, enrollment in schools with greater resources, or access

to social networks that promote economic mobility (Clampet-Lundquist et al. 2011; Chetty et al. 2022). On the other hand, the Gautreaux families moving to these neighborhoods could face risks due to hostility from the institutions or members of their new communities. For example, Black children living in predominantly white neighborhoods might encounter increased scrutiny by police (Bergman 2018) or stigmatization by school officials (Bacher-Hicks, Billings, and Deming 2019; Chin 2024). Moreover, predominantly white neighborhoods could respond to the arrival of Black families by changing public policy to curtail opportunities for minorities (Derenoncourt 2022).[1]

While Gautreaux's guidelines prioritized relocating families to predominantly white neighborhoods that had less than 30% Black residents, program administrators struggled to find enough rental units in these communities that would lease to Black tenants. Consequently, Gautreaux moved some families to a set of neighborhoods with substantial Black populations defined as "revitalizing" areas by the program. Since Gautreaux staff relocated families primarily for reasons unrelated to family preferences, we argue that comparing participants placed in predominantly white neighborhoods to those in revitalizing Black areas estimates the causal effect of desegregating moves. After accounting for factors that program staff considered for placement decisions—namely, a family's location at registration—we demonstrate that families moved to predominantly white neighborhoods were similar across a range of pre-move characteristics to those placed in revitalizing Black areas.

We construct novel data by linking digitized historical records from the Gautreaux program to administrative and census data. This allows us to conduct the first long-run study of children's outcomes, as well as the most comprehensive analysis to date on their parents. We study effects on labor market outcomes by linking the Gautreaux program data to more than two decades of earnings and employment records from the Longitudinal Employer-Household Dynamics (LEHD) data. To estimate effects on marriage, incarceration, and homeownership, we linked our sample to the 2010 decennial census. We also investigate the

1. Another consideration is that Gautreaux participants often had to make long-distance moves if they were placed in a predominantly white neighborhood. This could worsen participant outcomes by reducing proximity to family and other supportive ties (Barnhardt, Field, and Pande 2017).

effects on mortality using data from the Census Bureau's Numerical Identification (Numident) file. Finally, we examine whether experiencing a desegregating move caused children to choose to live in more racially diverse neighborhoods decades later using the MAF-ARF, an internal Census Bureau file that contains longitudinal address records.

Children desegregated through the Gautreaux program experienced significant economic gains relative to those who moved to revitalizing Black neighborhoods. We estimate that children placed in predominately white neighborhoods during childhood earned about $2,300 (20%) more at ages 24–28 and accumulated $34,000 (18%) more in lifetime earnings by age 38. These improvements in labor market outcomes have implications for household wealth: treated children are 10 percentage points more likely to own a home by their mid-30s and live in neighborhoods with 2.5 percentage points lower poverty rates.

The effects of Gautreaux extend beyond standard economic outcomes. Children who experienced a desegregating move in childhood choose to live in significantly more diverse neighborhoods nearly 40 years later. The treated children live in neighborhoods that are, on average, 35% Black, 9.8 percentage points lower than children placed in revitalizing Black neighborhoods, and 38% non-Hispanic white, 6.6 percentage points higher. We show that these effects are not driven by an increased tendency to live with parents or an increased propensity to live in their original placement neighborhood in adulthood. Treated children are also 24% (6.9 percentage points) more likely to be married in the 2010 census and about twice as likely to be married to a white spouse (a 2 percentage point increase). In addition, our analysis shows children treated through Gautreaux live in later-life neighborhoods that offer higher levels of predicted upward mobility as measured by the Opportunity Atlas (Chetty et al. 2018). This suggests that moves through Gautreaux may have important effects on subsequent generations.

Our main findings remain unchanged throughout a series of robustness exercises. In the most stringent approach, we estimate effects of desegregating moves using a specification that includes family fixed effects and compares outcomes between younger and older siblings. This specification tests whether there are distinct impacts within a family for children who were exposed to predominantly white neighborhoods for a longer duration because they moved at earlier ages. Consistent with an exposure-effects model

(Chetty, Hendren, and Katz 2016; Chetty and Hendren 2018), we find that younger children benefited more than their older siblings. This household fixed-effects design suggests that our primary specification is unlikely to be confounded by fixed unobservable differences between families.

This article contributes to the literature studying whether and how neighborhoods shape children's outcomes. Most notably, our analysis innovates and extends on previous research on the Gautreaux program in three main ways. First, we provide new long-run evidence on the program's effects by analyzing children's later-life earnings, wealth (as measured by homeownership), and social outcomes such as marriage. Prior work on Gautreaux children was limited to effects on criminal justice involvement (Keels 2008) and mortality (Votruba and Kling 2009).[2] Moreover, our data measure outcomes nearly four decades after the intervention—allowing us to examine the persistence of effects. Second, our analysis uses the most complete records of Gautreaux participants linked to administrative and census data. Early studies of Gautreaux relied on small-scale surveys with relatively high rates of nonresponse (Rosenbaum 1991, 1995; Rosenbaum et al. 1991; Rubinowitz and Rosenbaum 2000). Third, our empirical strategy allows us to obtain more convincing evidence on the effects of moves through Gautreaux. Our approach isolates plausibly exogenous neighborhood placements using a research design that differs from earlier studies. We provide evidence that our design addresses concerns over selection bias and we present a range of sensitivity analyses that further support a causal interpretation for our findings.

Furthermore, we contribute to the neighborhood-effects literature by conducting two exercises that shed light on the distinct effects of neighborhood racial and economic characteristics. First, we leverage the quasi-random assignment of Gautreaux families to a wide range of neighborhoods to estimate a series of "horse-race" regressions that include racial composition and poverty measures as independent variables in the same model. Second, we compare the overall effects of desegregating moves from Gautreaux with newly produced and existing estimated effects of moving through the MTO program. As noted, MTO re-

2. Distinct from our focus, prior long-run studies of Gautreaux studied the outcomes of adult mothers (DeLuca 2005; Mendenhall, DeLuca, and Duncan 2006; DeLuca et al. 2010).

duced exposure to economically disadvantaged areas but did not substantially change racial segregation.

Relative to economic integration, we find that changing neighborhood race appears to have distinct effects on social outcomes. In a multivariate specification that exploits variation in neighborhood placement within the Gautreaux sample, placement-neighborhood racial composition—not the poverty rate—is largely responsible for changes in social outcomes such as later-life exposure to less racially segregated neighborhoods and interracial marriage. We find a supportive pattern of results after linking the MTO sample to administrative address records from the census. Specifically, children of families that moved through MTO chose later-life neighborhoods that have lower poverty rates but negligible differences in racial composition. Again, this contrasts with results from Gautreaux, where we find that moving to a predominantly white neighborhood led children to select neighborhoods during adulthood that are more white and less Black.

For economic outcomes, the weight of the evidence suggests that much of the effect of racial desegregation is mediated by the associated reduction in exposure to neighborhood poverty. Support for this view comes from comparing the reduced-form effects of moves to predominantly white, low-poverty neighborhoods prioritized by Gautreaux to the effects of moving to racially segregated, low-poverty areas in MTO—both programs generated similar-in-magnitude impacts on later-life earnings of children. In the results from a multivariate model that features neighborhood race and poverty rates, the point estimate for poverty rates is large, although this result is not precisely estimated.

Finally, our work contributes to a broader literature studying the effects of policies and programs that aim to reduce U.S. racial segregation. Prior work has focused on the effects of school-based desegregation. Guryan (2004), Johnson (2011), and Anstreicher, Fletcher, and Thompson (2022) find that court-ordered school desegregation in the 1960s through the 1980s reduced dropout rates, improved labor market outcomes, and decreased the likelihood of incarceration for Black children. Bergman (2018) and Setren (2024) examine school-integration programs in other contexts and find beneficial effects on school test scores and college-going outcomes. In contrast to these studies, we provide comprehensive analysis of the largest residential racial desegregation policy in U.S. history. We offer evidence that the effects of relocating through Gautreaux are unlikely to be driven solely by changes

in school quality. This finding suggests that policies aimed at increasing racial integration may be effective even when they do not exclusively focus on changing school environments of children.

II. Background

II.A. Residential Desegregation Litigation and Dorothy Gautreaux

After the passage of the Voting Rights Act of 1965, the civil rights movement in the United States shifted its focus to racial inequality in Northern cities. Although discrimination in education and employment opportunities remained important targets, a push for open housing became an essential part of civil rights efforts outside of the South. Advocates for open housing viewed residential segregation and racial discrimination in housing as a major threat to progress toward integration.

Chicago became a focal point in the effort to dismantle racial discrimination in housing. In 1966, Dr. Martin Luther King Jr. temporarily moved into the impoverished North Lawndale neighborhood on Chicago's west side as part of a year-long effort to fight for open housing.[3] At the conclusion of his time in Chicago, Dr. King, alongside local civil rights leaders, established the Leadership Council for Metropolitan Open Communities to continue the fight for open housing in the Chicago metropolitan area.

One significant development in the movement was when Alex Polikoff, an attorney with the American Civil Liberties Union, initiated a class-action lawsuit against the Chicago Housing Authority (CHA) on behalf of Dorothy Gautreaux, an African American community organizer and activist living in public housing in Chicago, and five other named tenants. Filed in the same year that King took up residence in Chicago, the lawsuit charged that the CHA had a history of racially discriminatory practices, citing the concentration of nearly all new public housing buildings in Black neighborhoods as a restriction on Black families' access

3. King's efforts in Chicago, in collaboration with James Bevel, Al Raby, the Southern Christian Leadership Conference, and the Chicago-based Coordinating Council of Community Organizations, came to be known as the Chicago freedom movement or sometimes the Chicago open housing movement (though the scope of the movement was much broader than housing and included a focus on employment discrimination, criminal justice disparities, education, and other quality of life concerns).

to white neighborhoods. The case was successfully argued before the U.S. Supreme Court, and the resulting settlement required the CHA to develop a desegregation remedy for the metropolitan area.

The *Gautreaux* litigation was one of the first major residential desegregation lawsuits in U.S. history and inspired similar lawsuits across the country. As illustrated in Online Appendix Figure I, in the decades after *Gautreaux*, additional lawsuits aimed at desegregating housing through reforms to public housing or voucher policies were initiated in several cities, including Baltimore (MD), Boston (MA), Buffalo (NY), Cincinnati (OH), Dallas (TX), Memphis (TN), Miami (FL), Minneapolis (MN), New Haven (CT), New York (NY), Omaha (NE), Pittsburgh (PA), Port Arthur (TX), Toledo (OH), and Yonkers (NY). Although the exact desegregation remedies sought in these lawsuits varied, nearly all were influenced by the *Gautreaux* case.

II.B. The Gautreaux Assisted Housing Program

The settlement agreement between the CHA and the plaintiffs in the *Gautreaux* case included a two-pronged approach to address segregation: (i) establish a program to build scattered-site public housing in white neighborhoods that historically lacked public housing, known as the "Gautreaux Demonstration Program," and (ii) implement the "Gautreaux Assisted Housing Program," a voucher-based mobility program in which housing counselors would help eligible families move to new neighborhoods throughout the Chicago metropolitan region. While the demonstration program only achieved modest scale, primarily due to political opposition in white neighborhoods, the housing program operated for two decades from 1976 to 1998 and served 7,100 households.

The Chicago-based nonprofit Leadership Council for Metropolitan Open Communities was responsible for administering the Gautreaux Assisted Housing Program. The Leadership Council employed real estate staff and housing counselors to carry out client intake, tenant prescreening, landlord recruitment, and directed placement activity.[4] Families participating in

4. The real estate staff were responsible for identifying and developing relationships with landlords in the neighborhoods targeted by the program, recruiting them into participating in the Gautreaux program, identifying new vacancies, and arranging tours of units. Through their efforts, the Leadership Council collected

the program were given a housing voucher that enabled them to rent a unit on the private market.[5] Typically, tenants paid 25% of their income in rent, while the voucher covered the difference between the market rent and the family's contribution up to a ceiling known as the payment standard.

Families joined the Gautreaux program voluntarily and were eligible for services if they were a member of the plaintiff class, which included existing public housing residents and applicants on CHA's public housing waiting list (Popkin, Rosenbaum, and Meaden 1993; Polikoff 2007). Enrollment in Gautreaux evolved over time but followed a general pattern: families seeking assistance through the program could apply during a once-a-year, single-day registration event. Due to excess demand for the program, registration was conducted through a phone-banked dial-in "lottery" in which interested families would try to connect with Leadership Council phone operators during a specified period on the registration day.[6] After an initial eligibility screening, successful applicants were invited to an intake briefing at the Leadership Council offices to receive more information about the program.[7]

Throughout its existence, the goal of the Gautreaux program was to desegregate housing by placing families in predom-

a running list of available apartments. Note that the Leadership Council reduced the size of its real estate staff and families could search on their own for housing during the 1990s. To address concerns over this program reform, Section V.D shows that our conclusions remain the same when we exclude families placed after the reduction in real estate staffing.

5. Gautreaux families typically received section 8 certificates, which were an earlier model of today's housing vouchers. For information on differences in program rules, see Olsen (2003) or Collinson, Ellen, and Ludwig (2015).

6. Registration-day events were initially conducted in person, but Gautreaux administrators were forced to shift to a phone-based system in 1984 due to thousands of families lining up outside Leadership Council offices in early morning hours before registration opened. Polikoff (2007, 244) writes: "The throng on the sidewalk numbered several thousand and had spilled into the street. Buses had to be rerouted."

7. At the intake briefings, there were three additional screening criteria applied by the Leadership Council: (i) acceptable credit/rent payment history; (ii) no criminal background; and (iii) "good house-keeping" (Peroff et al. 1979; Polikoff 2007). Of these criteria, the most common problem was bad credit (Peroff et al. 1979). During some periods, larger families (four or more children) were also screened out (Rosenbaum 1995). If families were deemed eligible based on all criteria, the family also had to provide income verification from an employer or social worker and two references.

inantly white, frequently suburban neighborhoods. The original judgment in the *Gautreaux* case clearly defined two neighborhood options for the plaintiffs (Austin 1969; Crowley 1981). First, census tracts with a Black population share of less than 30% were defined as "general areas." Second, the remaining tracts with Black population share exceeding 30% were designated as "limited areas." Gautreaux counselors were instructed to prioritize placement in general areas (Rubinowitz and Rosenbaum 2000).

While the Leadership Council sought to maximize placements in general areas, staff faced considerable challenges in finding landlords who were willing to provide apartments in the targeted white, suburban areas (Rubinowitz and Rosenbaum 2000; Polikoff 2007). The difficulty in finding suitable apartments significantly slowed the placement of Gautreaux families. In the program's initial year, the Leadership Council planned to relocate around 400 families. However, by the end of the first year, only 168 families had been placed, largely due to the challenge of finding landlords in suburban areas.

Because of the slow pace of relocation in the program's early years, the set of acceptable placement neighborhoods was expanded in 1981 when a consent decree for Gautreaux was signed. The Court recognized that relocating Gautreaux families to general areas alone would not provide "total relief." Therefore, the new decree allowed up to one-third of the plaintiff class to be placed in "revitalizing areas," a new classification for a subset of formerly limited-area neighborhoods that were deemed to be undergoing sufficient redevelopment and were expected to be more integrated in the future (Crowley 1981).[8]

Two key factors determined whether a Gautreaux family was placed in a predominantly white neighborhood (i.e., general area) or a revitalizing Black area. First, the availability of housing units in a general-area neighborhood at the time a family was being processed heavily influenced where they were placed (Popkin, Rosenbaum, and Meaden 1993; Rosenbaum 1995; Polikoff 2007). The scarcity of affordable rental housing in general areas was partially due to housing market conditions. In line with

8. Minority areas could be classified as "revitalizing" if they met one of several criteria, such as undergoing visible redevelopment, being located along the lakefront, being accessible to good transportation, having a larger number of buildings up to code standards, having access to good shopping options, or being free of an excessive concentration of assisted housing (Crowley 1981).

this, Online Appendix Figure II uses administrative records from Gautreaux to highlight how Gautreaux's placement rate into predominantly white neighborhoods was highly correlated with the broader Chicago rental vacancy rate.[9] Second, a family's position on the registration list from the program's annual single-day registration event also influenced their placement.[10]

Notably, the Leadership Council did not directly consider family preferences when offering housing units to Gautreaux families. Instead, counselors offered the first available unit to a family after accounting for basic factors such as family size and transit needs (e.g., families without access to a vehicle might be placed in suburbs closer to their previous neighborhood) (Keels et al. 2005). Although clients were allowed to refuse up to two housing offers for any reason without losing their voucher, the vast majority accepted the first unit they were offered: Popkin, Rosenbaum, and Meaden (1993) report that 95% of Gautreaux clients accepted their first offer.

III. Data

Our analysis relies on linking official records from the Gautreaux Assisted Housing Program to multiple administrative data sets at the U.S. Census Bureau. We now describe the sample used in our analysis and define the outcomes that we study. Further details on the sample and data linkage can be found in Online Appendix B.

III.A. Sample of Gautreaux Participants and Data-Linkage Process

Our sample is based on historical records of Gautreaux participants from the Leadership Council, which were provided by the U.S. Department of Housing and Urban Development (HUD) and originally collected by Jeffrey Kling. The Gautreaux records contain information recorded at registration for families who received a placement and successfully moved through the program,

9. The correlation between the annual white neighborhood placement rate and the Chicago vacancy rate is 0.77.

10. The precise ordering of registration was determined by a family's position in line during an in-person registration event or the timing of when they connected to Leadership Council phone operators during the phone lottery (Popkin, Rosenbaum, and Meaden 1993).

including information for adults and children in the household. For each individual, the program files contain name, Social Security number (SSN), and basic demographic information, such as gender, year of birth, and place of birth. For household heads, we have more extensive information, including gender, marital status, car ownership, driver's license status, employment status, annual earnings, total income, and number of children in the household. The Gautreaux records also provide information on a household's address at the time of registration and the location of their housing placement through the program.

The name, date of birth, and SSN information in the Gautreaux program records were processed through the Census Person Identification Validation System (PVS) to link our sample of adults and children to a unique Protected Identification Key (PIK). PVS uses probabilistic matching to link individuals to a reference file constructed from the Social Security Administration Numerical Identification File and other federal administrative data (Wagner and Lane 2014). For the full and children-only samples, 90.2% and 86.2% of individuals were successfully assigned to PIKs, respectively. PIKs allow us to link the Gautreaux sample to other restricted data sets held by the U.S. Census Bureau. In Online Appendix B, we provide evidence that there is no detectable association between the likelihood of matching to a PIK and the probability of placement into the predominantly white neighborhoods (i.e., census tracts designated as general areas because they had a Black population share less than 30%) targeted by Gautreaux.

Our analysis sample is restricted to adults and children who participated in Gautreaux from 1982 to 1994, which is the last year of program data. We focus on individuals who participated after the 1981 consent decree was adopted, even though the program began in 1976. As explained in Section II, the consent degree reformed the program rules regarding the racial composition of destination neighborhoods by allowing up to one-third of participants to be placed in revitalizing Black neighborhoods. Further discussion of this decision is provided in Section IV.

After applying our sample restrictions, the primary analytical sample consists of roughly 4,800 children in Gautreaux families who are assigned a PIK and are at least age 24 by 2019.[11]

11. In the text and tables, the sample sizes and estimates derived from confidential census data are rounded according to census confidentiality rules.

However, the sample sizes vary across outcomes due to differences in availability of data and differences in child ages at the time of measurement. In Online Appendix B, we evaluate whether appearance in any of our outcome samples is correlated with placement into a predominantly white neighborhood. Consistently across outcome data sources, we find no evidence that placement is correlated with appearing in our outcome samples.

III.B. Later-Life Neighborhood Choices

We use several sources of information to measure the residential location of Gautreaux program participants over time. The Gautreaux program records provide the address of the family at intake and the placement address. After participation in the program, we can observe their location in 2000 from the 2000 decennial census, in 2010 from the 2010 decennial census, and from 2007 to 2019 from the Master Address File-Auxiliary Reference File (MAF-ARF). The MAF-ARF is a cross-sectional address file that supports census surveys, such as decennial operations and the American Community Survey (ACS). The person-address linkages in the MAF-ARF come from the IRS, HUD, Medicare, the U.S. Postal Service, and other administrative sources (Finlay and Genadek 2021).

We define neighborhoods as U.S. census tracts and focus on the neighborhood characteristics for each address covered in the years of the data. We study tract-level measures of racial composition (i.e., the Black and white population shares) and the poverty rate using the ACS 2015–2019 five-year estimates. In addition, we use the Opportunity Atlas (Chetty et al. 2018) to characterize upward mobility for each tract. Upward mobility is defined as the average income rank for all children born to parents at the 25th percentile of the income distribution.[12]

Our analysis focuses on long-run neighborhood locations measured in 2019 using the MAF-ARF. We also derive neighborhood locations at age 26 using the MAF-ARF for Gautreaux children who were age 26 during 2007–2019. In the Online Appendix,

12. Chetty et al. (2020) measure upward mobility using IRS administrative records on income from 2014–2015 to calculate later-life ranks in the nationwide income distribution for children who grew up in a given census tract. The measure of upward mobility is specific to the 1978–1983 birth cohorts. For all our analysis, we use the upward-mobility measure pooled across races.

we also investigate effects on neighborhood locations in 2010 using the MAF-ARF and the 2010 census.

III.C. Earnings and Employment

We measure earnings and employment outcomes of Gautreaux participants using the quarterly earnings records from the LEHD Employment History File. The LEHD is an administrative earnings database that combines earnings records from state Unemployment Insurance (UI) offices with establishment-level data from the Quarterly Census Employment and Wages (QCEW). It covers 98% of private-sector employment in the United States (see Abowd, Haltiwanger, and Lane (2004) and Vilhuber (2018) for further details on the LEHD). For this project, we have access to data that covers all 50 states and the District of Columbia. The available years vary by state. The earliest year available for Illinois is 1990, while the majority of states have data from 1995 to 2019.

We construct two types of earnings measures from the quarterly earnings data: annual and cumulative earnings. For the annual earnings measures, we compute earnings at age 24 and average annual earnings over ages 24–28, 29–33, and 34–38. The sample size decreases with the ages being studied as many cohorts of children placed through Gautreaux are still young. Cumulative earnings are measured by aggregating all observed earnings in the LEHD data for an individual up to age 28, 33, and 38. In the cumulative-earnings analysis, we restrict the samples to individuals who were age 24 or younger in 1990 to observe their entire adult earnings history in the available years of earnings data (1990–2019). Note that the measures include all earnings for an individual, aggregated across multiple employers when applicable and are winsorized at the 99th percentile. All dollar amounts, including earnings, are expressed in 2018 US$ using the CPI-U. However, the employment and earnings records only cover formal employment and exclude those not covered by UI benefits, such as the self-employed or those in the informal sector, who appear as zero earners in the data.

III.D. Marriage, Homeownership, and Incarceration

We obtain information on marriage, homeownership, and incarceration using the 2010 decennial census Hundred-Percent Detail File. This data source is designed to cover the entire U.S.

population but includes only a relatively small set of characteristics. To determine marital status, we use the relationship to the household head. If a Gautreaux participant is the head of household or spouse, we can determine their marital status and the race of their spouse. This allows us to measure the likelihood of marrying a white spouse.

Homeownership is similarly defined for heads and the spouses of household heads in the 2010 census. However, we cannot definitively determine whether an individual is a homeowner; instead, we only know that a member of the household owns the home.[13] To define homeownership, we only consider individuals who were 35 years or older at the time of the 2010 census, since the typical age of first-time homeowners in the United States is in the mid-30s (Lautz et al. 2022). To cover a larger sample of Gautreaux children, we create an alternative proxy for homeownership by combining MAF-ARF and 2010 census records. Specifically, we link MAF-ARF addresses in 2017–2019 to the 2010 decennial census and infer ownership based on the historical tenure status of the housing unit (i.e., whether the unit was owned or rented in 2010). Using this data, we focus on persons that are age 35 or older in 2017 and create a flag for whether an individual in our Gautreaux sample ever lived in an owner-occupied housing unit at any point during 2017–2019. We also create a separate measure for the fraction of these years spent living in owner-occupied housing. These measures assume the tenure (owning or renting) status of the housing unit does not change between the 2010 census and the point when we observe a Gautreaux individual residing there.

For incarceration, the definition is based on whether the respondent was identified as residing in group quarters at the time of the 2010 census. This definition will undercount the number of individuals involved with the criminal justice system, as it is a point-in-time measure that is more likely to capture those with longer sentences. In addition, this definition will misidentify those who reside in different types of group quarters (e.g., hospitals). However, considering the age range of the Gautreaux children (a nonelderly population), they are more likely to be incarcerated than to be residing in other common forms of group quarters, such as nursing homes. Yet, it is possible that we may be

13. Specifically, the Census Bureau asks respondents whether the home is "owned by you or someone in this household."

capturing individuals in shelters or dorms when using this measure of incarceration.

III.E. Mortality

We measure all-cause mortality using the census Numident file, which is derived from Social Security data. The Numident includes administrative records of the date of death for all individuals with SSNs in the United States. It is considered a comprehensive set of death records for those who are successfully linked to a PIK and closely matches published Centers for Disease Control and Prevention death statistics (Finlay and Genadek 2021). The data allow us to observe mortality up to 2020.[14] In the final year of the Numident, our sample of Gautreaux children range in age between 23 to 56. Since death is a relatively rare outcome for those under 60 years old, we use a simple indicator of death at any time up to the end of the sample, without age or other adjustments.

IV. Empirical Strategy

The focus of our analysis is to estimate the effects of neighborhood racial and economic characteristics on the long-run outcomes of Black children from disadvantaged households. In general, the primary obstacle to credible identification of such effects is the selection problem generated by systematic sorting of families into neighborhoods. Hence, basic comparisons between Black children from families that do and do not move to predominantly white, low-poverty neighborhoods may be confounded by unobserved household differences.

The Gautreaux Assisted Housing Program represents a potentially promising setting in which there are plausibly exogenous moves to neighborhoods that are more racially mixed and less impoverished. Unlike typical moves made by households on the private market, Gautreaux families generally did not search for housing themselves. Instead, the Leadership Council found available units and prescreened families before applying to ensure they would be approved. Moreover, the Leadership Council typically offered the first available unit to families coming off the waiting list regardless of their preferences and with only minimal

14. We limit mortality up to the first quarter of 2020 to exclude COVID-related deaths.

considerations about their circumstances. Finally, the scarcity of available units in the predominantly white neighborhoods targeted by the program meant that the Leadership Council ultimately needed to place some families in revitalizing Black neighborhoods, creating differences in placement among a population that was interested in moving to largely white communities.

Although Gautreaux has useful features for identifying causal effects, previous research has raised concerns about the degree to which placements through the program were truly exogenous. Specifically, Votruba and Kling (2009) and Keels et al. (2005) find evidence that neighborhood placements through Gautreaux were correlated with a family's intake neighborhood characteristics. This pattern can be reconciled with historical accounts of the Leadership Council staff factoring in geographic proximity, as it relates to client transportation needs, when placing Gautreaux families (Popkin, Rosenbaum, and Meaden 1993; Rosenbaum 1995; Polikoff 2007). Indeed, consistent with historical accounts, Gautreaux clients were statistically more likely to be placed in a predominantly white neighborhood (i.e., a neighborhood with Black population share less than 30%) if they lived farther away from the city center (see Online Appendix Figure III).[15]

Our empirical strategies attempt to isolate plausibly exogenous variation in Gautreaux placements by departing from prior studies in two main ways. First, we focus on the period after program rules changed in 1981 to open up revitalizing Black neighborhoods as placement options in response to the scarcity of housing in suburban areas of Chicago. Second, we directly account for the Leadership Council considering the proximity of clients to placement addresses by using origin-tract fixed effects. Intuitively, our approach makes relatively narrow comparisons and relies on the idea that Gautreaux families from the same origin neighborhood placed in neighborhoods with different racial composition are otherwise comparable. In the next section, we assess the plausibility of this assumption using the observable information on family characteristics measured before placement.

Formally, our main analysis estimates the effects of moving to placement neighborhoods designated as general areas, which

15. In addition, Online Appendix Figure IV shows that Gautreaux families were considerably more likely to be placed in apartments closer to their original address than in apartments further away.

we refer to as a desegregating move. Given this definition, we estimate the following specification:

$$(1) \quad Y_i = \alpha + \beta 1(ShareBlack_{d(i)} < 0.30) + \psi_{o(i)} + \delta_{r(i)} + X_i'\gamma + \epsilon_i,$$

where Y_i is a post-relocation outcome for child i, such as earnings at age 24. The indices $o(i)$, $d(i)$, and $r(i)$ are the origin neighborhood, destination neighborhood, and registration (intake) period for individual i. The designated "treatment" group in this specification is the set of children whose family experienced a desegregating move. This is captured by the indicator $1(ShareBlack_{d(i)} < 0.30)$, which equals one if individual i's family received a neighborhood-destination placement in a census tract that was less than 30% Black. The "control" group in our framework is the set of children whose family received placements in revitalizing Black neighborhoods. The terms $\psi_{o(i)}$ and $\delta_{r(i)}$ are fixed effects for the origin neighborhood and registration (cohort) year, respectively. To improve precision, the model includes a vector X_i that controls for individual and family characteristics recorded at the time a household registered: gender, year of birth, place of birth, characteristics of the household head such as their gender, marital status, number of bedrooms required, car ownership, license status, employment status, earnings, total income, and number of children.

The main parameter of interest is the coefficient β, which represents the impact of experiencing a desegregating move through the Gautreaux program. This is a reduced-form parameter that reflects the combined effects of changing a broad set of neighborhood characteristics for the designated treatment group of children. As we show in Section V.A, there are significant contrasts between the treatment and control children in terms of the neighborhood racial and economic conditions of their initial program placement.

IV.A. Validation of the Main Specification

As discussed already, identifying the effects of racial and economic desegregation is complicated by the fact that minority families who typically make such moves differ from other families on several dimensions. To illustrate this point, we construct an "endogenous movers" sample of low-income Black families with children in the Chicago region who responded to the 2000 census

and moved between 2000 and 2005.[16] Using this sample, we individually regress pre-move (baseline) characteristics measured in the 2000 census on an indicator for whether the household head moved to a census tract with less than 30% Black population share and origin–census tract fixed effects. This is in line with our main empirical approach with the Gautreaux sample that focuses on the effects of moves to neighborhoods designated as general areas (i.e., a predominantly white community). We focus on individual characteristics in the 2000 census that correspond to the information available in the Gautreaux program records.

The results in Table I show that household pre-move characteristics are highly correlated with the likelihood of moving to predominantly white neighborhoods in a nonexperimental sample. Column (2) reports estimates of the differences in baseline characteristics between families that move to predominantly white versus high-share Black neighborhoods after conditioning on baseline tracts. Black families who move to the former areas have significantly higher earnings, income, and marriage rates. The estimated differences are substantial relative to the mean for the comparison group in column (1). A joint orthogonality test rejects the hypothesis that the two groups are the same with $p < .01$.

In contrast to these results for the endogenous sample of movers, Gautreaux families treated by having placements in predominantly white neighborhoods have similar pre-move (baseline) characteristics to their counterparts from the same neighborhood who were placed in revitalizing Black neighborhoods. The two rightmost columns of Table I report the results from a balance analysis for Gautreaux using a slightly larger set of characteristics measured at registration for household heads and a more limited set of characteristics available for children. Column (3) shows the average baseline characteristics for our designated control group, the Gautreaux families receiving placements in revitalizing areas. In column (4), we report estimates of the difference in a given baseline characteristic between treatment and control Gautreaux families after conditioning on origin and

16. Specifically, we start by linking respondents to the 2000 census long-form who were Black and lived in the Chicago area to the MAF-ARF to identify a sample of movers. We restrict the resulting sample to households with incomes below 80% of area median income to approximate the housing voucher-eligible population. As a final step, we draw a random sample which approximates the total number of households in our Gautreaux sample.

TABLE I

SUMMARY STATISTICS AND BALANCE ANALYSIS

	2000 Census sample (endogenous movers)		Gautreaux sample	
	Control mean (1)	Est. (2)	Control mean (3)	Est. (4)
Panel A: Household heads				
Female	0.875	−0.064***	0.937	0.017
	(0.331)	(0.021)	(0.244)	(0.016)
Age	28.530	−0.814***	29.830	−0.509
	(6.924)	(0.301)	(8.031)	(0.467)
Has car	0.489	0.029	0.218	0.008
	(0.500)	(0.028)	(0.413)	(0.025)
Married	0.193	0.044*	0.227	0.033
	(0.394)	(0.023)	(0.419)	(0.029)
Working	0.549	0.036	0.240	−0.032
	(0.498)	(0.028)	(0.427)	(0.026)
Earnings	11,160	1,448**	6,266	−733
	(11,070)	(622)	(12,280)	(736)
Annual income	12,940	1,494**	8,621	−19
	(10,490)	(583)	(5,669)	(369)
# Bedrooms needed	2.192	−0.063	2.782	−0.045
	(1.041)	(0.058)	(0.697)	(0.049)
Public housing			0.312	0.024
			(0.463)	(0.023)
Has license			0.404	0.008
			(0.491)	(0.030)
Panel B: Children				
Female			0.532	−0.017
			(0.499)	(0.022)
Age			7.280	−0.121
			(4.546)	(0.236)
Born in Chicago			0.933	−0.012
			(0.250)	(0.014)
Predicted later-life earnings			9,080	32
			(2,077)	(113)
Predicted later-life share Black			0.509	−0.003
			(0.049)	(0.003)
Sample size		2,800		4,800
p-value (joint orthogonality)		.001		.535

Notes. This table reports results from assessing covariate balance in two samples. The treatment of interest is a binary indicator for moving to a predominantly white area (i.e., a census tract with less than 30% Black population share). As a benchmark, the first two columns analyze a randomly selected sample of low-income Black household heads in the 2000 census from Chicago who moved during the 2000–2005 period to either a predominantly white area or a neighborhood where the Black population share was at least 30%. Column (1) reports the average pre-move characteristics for the designated control group in this sample—heads who moved to higher-share Black neighborhoods. Column (2) reports an estimate of the difference in a given pre-move characteristic between those who did and did not move to predominantly white neighborhoods using a specification that controls for an origin-neighborhood fixed effect. The next two columns analyze the sample of children from Gautreaux families who entered the program after 1981. The unit of analysis in the Gautreaux sample is a child, and we report statistics for their respective household head in the top panel. Column (3) reports the average pre-move characteristic for the designated control group in this sample—individuals who were placed in revitalizing Black neighborhoods. Column (4) reports an estimate of the difference in a given characteristic between those who were placed in predominantly white neighborhoods and those who were placed in revitalizing Black neighborhoods using a specification that controls for origin-neighborhood and program-registration-year fixed effects. This estimated difference is based on equation (1), where the dependent variable is defined as a baseline (pre-move) characteristic measured in Gautreaux program records. For further details, see Section IV. Columns (1) and (3) report standard deviations in parentheses. Columns (2) and (4) report standard errors in parentheses. Standard errors are clustered at the household level. All results were approved for release by the U.S. Census Bureau, authorization nos. CBDRB-FY22-CES018-018 and CBDRB-FY24-0184. * $p < .1$, ** $p < .05$, *** $p < .01$.

cohort fixed effects.[17] The estimated differences are consistently small in economic terms, and none of them are statistically significant. Moreover, we fail to reject the null hypothesis in a joint orthogonality test with $p < .535$. Overall, the results in this section support the idea that Gautreaux placements were unique in producing moves that were uncorrelated with baseline characteristics after accounting for factors considered by Leadership Council staff in placing families.[18]

IV.B. Exposure Specifications with Household Fixed Effects

As noted, the key identifying assumption of our main approach is that receiving a desegregating-neighborhood placement is uncorrelated with a family's characteristics after conditioning on the basic factors considered by housing counselors. While our balance analysis does not provide evidence of any violations of this assumption, we can also rely on a weaker identifying assumption to learn about the long-run effects of moves to the predominantly white, low-poverty neighborhoods targeted by Gautreaux. Specifically, we can use a household fixed effect approach to compare younger and older siblings, which controls for permanent family unobservables. The motivation behind a household fixed-effects approach in our Gautreaux setting is based on previous evidence that suggests that the duration of childhood exposure to a new neighborhood determines the magnitude of impacts on long-run outcomes (Chetty, Hendren, and Katz 2016; Chyn 2018; Chetty and Hendren 2018).

17. Specifically, we report estimates of β from the following general specification: $X_i = \alpha + \beta 1(ShareBlack_{d(i)} < 0.30) + \psi_{o(i)} + \delta_{r(i)} + \epsilon_i$.

18. Online Appendix Table I provides additional balance results using predicted measures of child outcomes (i.e., earnings in adulthood and later-life neighborhood Black share) as the dependent variables in a model that includes a continuous placement-neighborhood characteristic in addition to the controls and fixed effects that we use in equation (1). The predicted measures are based on a model that is estimated using control-group children (i.e., those placed in a revitalizing neighborhood) and predicting the given later-life outcomes using the baseline characteristics listed in Table I. Reassuringly, we find no significant relationship between the predicted measures and the continuous placement-neighborhood characteristics that we consider.

Formally, our household fixed-effects approach is based on the following specification:

$$Y_i = \pi + \theta 1(Age_i < 10) \times 1(ShareBlack_{d(i)} < 0.30) + \lambda 1(Age_i < 10) + X_i'\gamma + \mu_{h(i)} + \varepsilon_i, \quad (2)$$

where this model includes an indicator $1(Age_i < 10)$ which is equal to one if individual i was under age 10 at the time of registration as well as an interaction between this indicator and the treatment indicator for experiencing a desegregating move. We focus on age 10 because this is the 75th percentile of child ages in our sample. The controls included in the vector X_i are gender, place of birth, and year of birth fixed effects. Importantly, $\mu_{h(i)}$ is a household fixed effect for household $h(i)$ which is the same for all children from the same household. We also estimate a linear exposure model that replaces the indicator $1(Age_i < 10)$ with a continuous measure of age.

Our primary focus is on estimates of the parameter θ. Including household fixed effects ensures this parameter is identified by comparing differences in outcomes for children from the same household. While this approach addresses concerns that fixed family unobservables may drive neighborhood selection, a causal interpretation of our estimates depends on the assumption of no time-varying family unobservables. In Section V.C, we assess the importance of time-varying factors at the family level by analyzing the outcomes of Gautreaux parents.

IV.C. Comparing the Effects of Neighborhood Racial Versus Economic Characteristics

A natural alternative to our main approach is to estimate models that isolate the distinct effect of key placement-neighborhood characteristics. This is feasible in the Gautreaux context because there is wide variation in neighborhood placements resulting from the fact that families were placed in many different neighborhoods throughout Chicago and the broader metropolitan area. Motivated by the neighborhood-effects literature (Clampet-Lundquist et al. 2011), we concentrate on isolating the role of neighborhood race from that of neighborhood economic conditions.

For this analysis, we use the following specification that allows for placement-neighborhood race and poverty rates to have

separate effects:

$$Y_i = \alpha + \pi ShareBlack_{d(i)} + \tau PovertyRate_{d(i)} + \psi_{o(i)} + \delta_{r(i)} + X_i'\gamma + \epsilon_i, \quad (3)$$

where $ShareBlack_{d(i)}$ and $PovertyRate_{d(i)}$ are measures of the share of the population that is Black and the poverty rate for an individual's destination neighborhood, respectively. To aid interpretation, we converted the underlying demographic and economic neighborhood measures into standardized (z-score) values. This specification is most directly comparable to the "horse-race" specifications used in Ludwig and Kling (2007) to explore youth criminal behavior and neighborhood-effect mechanisms in the MTO experiment. Due to collinearity, we limit our analysis to a model that features only two placement-neighborhood characteristics as independent variables.[19]

V. Results

We begin our presentation of results on the long-run effects of Gautreaux on children with graphical analysis that previews our main findings for economic and social outcomes. First, Figure I, Panel A, reports a series of binned averages that illustrate the relationship between earnings measured at age 24 for our sample of children and their family's placement-neighborhood's share of white residents. To construct the figure, we compute residuals for the earnings and placement-neighborhood's white share after accounting for registration cohort, birth year, and origin-neighborhood fixed effects. We divide the residuals of the placement-neighborhood's white share into 18 equal-sized bins, add the overall means of each measure for interpretation, and plot the resulting binned averages.

The results in the figure show clear evidence that children placed in neighborhoods with a higher share of white neighbors are earning notably more at age 24. The coefficient from a linear regression estimated on the individual-level data shows that a 10 percentage point increase in a neighborhood's white share is associated with a $346 increase in annual earnings.

19. Online Appendix Table II shows that correlations between placement-neighborhood characteristics are generally high.

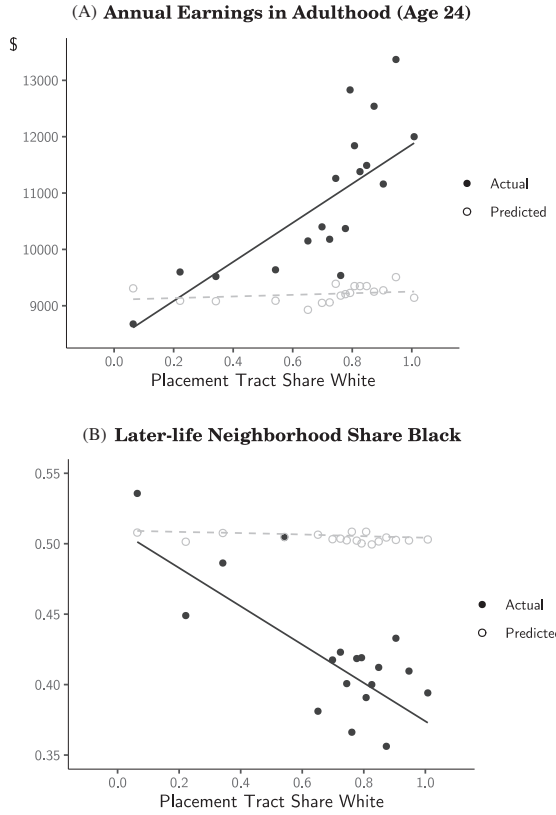

FIGURE I

Long-Run Effects of Gautreaux Placement-Neighborhood Racial Composition

This figure illustrates a binned scatterplot (solid dots) of long-run child outcomes against a measure of the tract-level white population share in an individual's Gautreaux placement neighborhood. Panels A and B provide results where the outcome (*y*-axis) is earnings measured at ages 24 and later-life neighborhood Black population share, respectively. Each panel is constructed as follows. We compute residuals for earnings and placement-neighborhood white share after accounting for cohort and origin-neighborhood fixed effects. Next, we divide the residuals of the placement-neighborhood white share into 18 equal-sized bins, add the overall means of each measure to aid interpretation, and plot the resulting binned average of earnings and later-life neighborhood share Black. In addition, the figure reports (in hollow dots) estimates of predicted earnings in the top panel and predicted later-life neighborhood share Black in the bottom panel. We construct these fitted values by predicting each outcome using the individual and household characteristics in Table I measured at baseline. As in our approach with the observed outcomes, we generate these predictions using the residuals of each outcome that only remove origin and cohort fixed effects and add the mean of each outcome to aid interpretation. All results were approved for release by the U.S. Census Bureau, authorization no. CBDRB-FY22-CES018-018.

Next, we conduct a similar graphical analysis where we shift our focus to the later-life neighborhood choices of children. Figure I, Panel B, is a similar residual-based plot where the outcome is a child's neighborhood (census tract) share Black as measured in the MAF-ARF records. In 2019, three to four decades after the Gautreaux program relocated families, we find children who relocated to neighborhoods with higher white shares are living as adults in neighborhoods that have significantly fewer Black neighbors. The results from a linear regression imply that a 10 percentage point increase in a neighborhood's white share during childhood is associated with a 1.6 percentage point reduction in the later-life neighborhood Black share.

This graphical analysis provides evidence that supports a causal interpretation of these semi-parametric results. Panels A and B of Figure I also plot the predicted earnings and later-life neighborhood Black share based on only preplacement individual and household characteristics (as hollow circles). Consistent with the evidence of balance in Section IV.A, we see no systematic relationship between the predicted measures and the white share in a Gautreaux placement neighborhood. The underlying linear regressions for predicted earnings and later-life Black share imply that a 10 percentage point increase in a neighborhood's white share is associated with a $14 increase and less than a tenth of a percentage point reduction, respectively. Neither coefficient is statistically significant.

V.A. Effects of Desegregating Moves

We now report our main regression estimates of the effects of experiencing a desegregating move by relocating to a predominantly white neighborhood through Gautreaux. As noted already, these estimates reflect the combined effects of reducing both racial and economic segregation. To aid the interpretation of our reduced-form effects, Table II provides an initial assessment of how desegregating moves shaped a broad set of placement-neighborhood characteristics measured in the 1980 census. We conduct this analysis using the sample of Gautreaux household heads and specifying the outcomes as the placement neighborhood's racial composition, poverty rate, and predicted child income rank in adulthood. Columns (1)–(4) report estimates for each outcome based on equation (1). For comparison, the first row below the estimates reports the mean of each outcome for our

TABLE II
EFFECTS OF DESEGREGATING MOVES ON LOCATION CHARACTERISTICS

	Placement-tract characteristic			
	Share Black (1)	Share white (2)	Poverty rate (3)	Later-life income rank (4)
$1(ShareBlack_{d(i)} < 0.30)$	−0.807***	0.721***	−0.209***	0.107***
	(0.010)	(0.009)	(0.006)	(0.002)
Control mean	0.874	0.101	0.323	0.301
Sample size	3,563	3,563	3,563	3,563

Notes. This table reports the effects of placement in a predominantly white neighborhood (i.e., a census tract with less than 30% Black population share) on a range of continuous neighborhood characteristics at the time of placement. The sample consists of eligible Gautreaux household heads who entered the program after 1981. All estimates are based on equation (1). Individual controls in the model are listed in Table I, column (3). Placement information comes from the Gautreaux records described in Section III. Columns (1)–(3) report estimated effects on the following tract-level 1980 census characteristics: the Black population share, the white population share, and the poverty rate. Column (4) reports estimated effects on the tract-level later-life income rank of children using data from the Opportunity Atlas (Chetty et al. 2018). This table does not rely on restricted-access census data, so the sample sizes are not rounded. Standard errors are clustered at the household level and are reported in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

designated control group, the Gautreaux families placed in revitalizing Black neighborhoods.[20]

The pattern apparent from Table II is that desegregating moves through Gautreaux had relatively large effects on a range of neighborhood characteristics. By design, these moves substantially changed the neighborhood racial composition experienced by Gautreaux families. On average, the treatment group moved to tracts where the non-Hispanic white population share was 72 percentage points higher relative to control families. We also find statistically significant reductions in neighborhood poverty rates (20 percentage points) and improvements in the predicted later-life income rank of children (10.7 percentiles).

In addition to studying neighborhood characteristics, we explore how being placed in a predominantly white neighborhood affected the types of schools that Gautreaux children could attend. For this analysis, we link all households to the closest school near their placement address and focus on several measures, including school racial composition, district-level spending per pupil, and class size provided by the National Center for Education Statis-

20. Since all families in the Gautreaux program move, we can also compare neighborhood characteristics before and after relocating for families in the control and treatment groups. Online Appendix Figure V reports these average changes for each group, respectively.

tics (NCES). While our sample received neighborhood placements as early as 1981, the NCES measures are available only in the late 1980s and 1990s. We use the earliest year available for each school characteristic.[21]

In Online Appendix Table III, we find large effects on school racial composition and more muted impacts on measures of school quality. On average, treated families moved to neighborhoods near schools where the Black student population share was about 74 percentage points lower and the white share was about 50 percentage points higher. These large effects are consistent with residential segregation playing an important role in determining school racial composition.[22] However, we find evidence of only modest increases in school quality. For district spending per pupil, the estimated effect indicates an increase of $62 (1%) that is not statistically significant. The impact on class size is more clear and indicates treated households moved to areas with 0.793 (3.8%) fewer students per class.

1. *Effects on Economic Outcomes.* Table III reports our estimates of the effects of desegregating moves on long-run economic outcomes. The top panel begins with our labor market analysis, and columns (1)–(3) provide estimates for average annual-earnings measures from various ages in adulthood. All estimates are based on equation (1). We provide additional results in Online Appendix Table IV that show that the earnings results are essentially unchanged across alternative specifications that vary whether origin-tract or individual-level controls are included.[23]

These results show that being placed in a predominantly white neighborhood during childhood substantially boosts the later-life earnings of Gautreaux children. In column (1), we find

21. We use school-level racial composition and class size measures from the 1987–1988 and 1986–1987 academic years, respectively. For district-level spending per pupil, we use data from the 1991–1992 academic year.

22. During our period of interest, school desegregation efforts had little effect on student body composition in Chicago. In 1980, a series of legislative decisions placed Chicago Public Schools under a consent decree and court-mandated desegregation plan. Despite these efforts, about 75% of Black students enrolled in public schools still attended a school that was predominantly Black in 1989 (Jankov and Caref 2017).

23. Across all economic and social outcomes that we consider, this general pattern remains: the estimated effects of desegregating moves do not meaningfully change if we exclude origin-tract or individual controls in the specification. See Online Appendix Tables V, VI, and VII.

TABLE III
EFFECTS OF DESEGREGATING MOVES ON ECONOMIC OUTCOMES

	(1)	(2)	(3)
	Outcome: Earnings at...		
	Ages 24–28	Ages 29–33	Ages 34–38
$1(ShareBlack_{d(i)} < 0.30)$	2,341***	2,457***	2,425**
	(626)	(855)	(1,126)
Control mean	11,570	15,230	17,600
Sample size	4,800	4,500	3,500
	Outcome: Cumulative earnings by...		
	Age 28	Age 33	Age 38
$1(ShareBlack_{d(i)} < 0.30)$	16,910***	24,980***	34,090**
	(4,470)	(8,320)	(14,760)
Control mean	77,600	133,500	190,500
Sample size	4,600	3,700	2,400
	Outcome: Homeownership		
	Owner	Ever owner-occupied	Share of years owner-occupied
$1(ShareBlack_{d(i)} < 0.30)$	0.099**	0.066**	0.073**
	(0.049)	(0.032)	(0.030)
Control mean	0.247	0.429	0.365
Sample size	700	2,000	2,000

Notes. This table reports the effects of placement in a predominantly white neighborhood (i.e., a census tract with less than 30% Black population share) on the long-run economic outcomes of Gautreaux children. All estimates are based on equation (1). Individual controls in the model are listed in Table I, column (3). The top panel reports results for average earnings at various age ranges indicated. The middle panel reports results for cumulative earnings up through the age indicated. All earnings measures are based on the LEHD data described in Section III. The dollar amounts are given in 2018 US$. The bottom panel reports results for measures of homeownership based on the 2010 census and MAF-ARF records. Detailed definitions of all outcomes are provided in Section III. The sample for all outcomes consists of children from Gautreaux families who entered the program after 1981. The sample for cumulative-earnings measures is limited to children age 24 or younger in 1990. This restriction ensures that we can observe their full earnings history for the cumulative-earnings measure. The sample for homeownership is limited to individuals who were at least 35 years old at the time an outcome was measured. All results were approved for release by the U.S. Census Bureau, authorization nos. CBDRB-FY22-CES018-018 and CBDRB-FY24-0184. Standard errors are clustered at the household level and are reported in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

an estimated impact of $2,341 on earnings during ages 24–28. Relative to the control-group mean of $11,570, this effect reflects a 20% increase for treated children. These estimates for earnings are in line with recent findings on the effects of moving to lower poverty, racially segregated neighborhoods through the MTO demonstration (Chetty, Hendren, and Katz 2016) or due to public housing demolition (Chyn 2018). We provide a more detailed comparison of our effects with prior studies in Section VI.

Columns (2) and (3) suggest that the estimated impacts are generally comparable and remain statistically significant when we measure earnings using the averages between ages 29–33 or ages 34–38. The effect sizes decline slightly as the control-group mean increases with age. These effects on earnings are driven partly by extensive-margin responses on the likelihood of employment, as demonstrated in Online Appendix Table VIII. In terms of heterogeneity, Online Appendix Table IX shows that the earnings point estimates for boys and girls are similar.

The middle panel of Table III reports effects on cumulative earnings accumulated up to relatively advanced ages. This analysis of total earnings is limited to a smaller sample since our approach imposes the restriction that each child's entire early-adulthood earnings history is observable and must be younger than age 24 in 1995 (the first year of the LEHD earnings data). Gautreaux children who were treated have accrued substantially more earnings than their peers placed in revitalizing Black neighborhoods. In particular, we find that they have earned $16,910 more by age 28, $24,980 more by age 33, and $34,090 more by age 38.

Given the sizable increases in earnings for the treated children, it is plausible that desegregating moves could affect the household wealth of Gautreaux children. The literature consistently documents significant Black-white disparities in wealth (Barsky et al. 2002; Charles and Hurst 2002; Aliprantis, Carroll, and Young 2019; Derenoncourt et al. 2024) and persistent racial differences in homeownership rates (Collins and Margo 2011; Logan and Parman 2017). Motivated by these gaps, and the fact that lower-income households typically hold much of their wealth in the form of housing (Kuhn, Schularick, and Steins 2020), we examine effects on homeownership using data from the 2010 decennial census. Our analysis is uniquely suited to study homeownership given that the typical age of a first-time homeowner in the United States is mid-30s (Lautz et al. 2022) and a substantial fraction of our sample of children have reached age 35 by the time of the 2010 census (where we can observe ownership).

We find that treated Gautreaux children are substantially more likely to be homeowners as adults. The bottom panel of Table III reports effects on homeownership in the 2010 census and two proxies for homeownership. Column (1) shows that Gautreaux children placed in predominantly white neighborhoods are about 10 percentage points more likely to be a home-

owner than children placed in revitalizing Black neighborhoods. To broaden the sample for our analysis, columns (2) and (3) present results for two proxies for homeownership that we constructed by linking the addresses in the MAF-ARF to flags for tenure from the 2010 census.[24] We find that treated children are more likely to be living at a unit in 2017–2019 that was owner-occupied in 2010 and spend a greater fraction of time living in units likely to be owner-occupied. Taken together, these results suggest that desegregating moves increased not just the adult earnings of children but also their wealth accumulation and access to homeownership.

2. *Effects on Social Outcomes.* Moves through Gautreaux may have shaped the social outcomes of children, such as later-life residential segregation and marriage. Any effects on these outcomes could be driven by the labor market outcomes and wealth effects discussed in the previous section, but also may be determined by a range of noneconomic factors. Prior research has suggested that neighborhoods may play an important role in shaping norms and identity (Case and Katz 1991; Akerlof and Kranton 2000; Bertrand, Luttmer, and Mullainathan 2000; Rickford et al. 2015) in addition to playing a role in determining social networks (Huckfeldt 1983; Bayer, Ross, and Topa 2008; Chetty et al. 2022). Moreover, a large literature on the contact hypothesis—primarily based on schooling contexts—suggests that greater exposure to other racial or social groups can shape attitudes and beliefs (Allport 1954; Carrell, Hoekstra, and West 2019; Merlino, Steinhardt, and Wren-Lewis 2019; Rao 2019; Mousa 2020; Billings, Chyn, and Haggag 2021).

We begin by investigating the treatment effects of Gautreaux on the neighborhoods where children reside in adulthood. In Table IV, columns (1)–(4) report effects on neighborhood characteristics in 2019 using the MAF-ARF.[25] To characterize neighborhoods, we initially focus on three standard census tract measures

24. Because the MAF-ARF is available through 2019, we can focus on children who are old enough to be homeowners in 2019 but may also be too young to reasonably be homeowners in 2010.

25. In Online Appendix Table X, we explore the robustness of our results by studying location outcomes in an alternative time period using two different data sources. The results are similar when we study location in 2010 and measure outcomes using the decennial census and the MAF-ARF.

TABLE IV

EFFECTS OF DESEGREGATING MOVES ON SOCIAL OUTCOMES

Outcome:	Later-life neighborhood characteristics				Marriage	
	Share Black (1)	Share white (2)	Poverty rate (3)	Later-life income rank (4)	Married (5)	Married white spouse (6)
$1(ShareBlack_{d(i)} < 0.30)$	−0.098***	0.066***	−0.025***	0.020***	0.069**	0.021**
	(0.020)	(0.016)	(0.006)	(0.004)	(0.028)	(0.010)
Control mean	0.452	0.318	0.202	0.374	0.288	0.017
Sample size	4,200	4,200	4,200	4,200	2,000	2,000

Notes. This table reports the effects of placement in a predominantly white neighborhood (i.e., a census tract with less than 30% Black population share) on long-run social outcomes of Gautreaux children. All estimates are based on equation (1). Individual controls in the model are listed in Table I, column (3). Columns (1)–(4) report results for later-life neighborhood (tract) characteristics. The neighborhood location is measured in 2019 using the MAF-ARF. For each neighborhood location, the racial composition and poverty rates come from the ACS 2015–2019 estimates. The later-life income rank is a tract-level mobility measure for children whose parents were at the 25th percentile of the income distribution from the Opportunity Atlas (Chetty et al. 2018). Columns (5) and (6) report results for marriage-related outcomes from the 2010 census. Detailed definitions for all outcomes are provided in Section III. The sample for all outcomes consists of children from Gautreaux families who entered the program after 1981. The sample for marriage-related outcomes is limited to those who responded to the 2010 census and were listed as a household head or spouse. All results were approved for release by the U.S. Census Bureau, authorization no. CBDRB-FY22-CES018-018. Standard errors are clustered at the household level and are reported in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

of demographic and economic characteristics: the Black population share, the white population share, and the poverty rate.

We find that desegregating moves significantly shape later-life neighborhood choices. Column (1) shows that in 2019, three to four decades after the Gautreaux program relocated families, treated children were living in neighborhoods roughly 10 percentage points less Black than those in the comparison group. These results are consistent with our graphical, nonparametric results presented in Figure I. In addition to living in less segregated neighborhoods, the results in column (3) indicate that treated children are living in neighborhoods with 2.5 percentage point lower poverty rates.

These results for later-life neighborhood choices may translate directly into multigenerational impacts. That is, the next generation born to the children of Gautreaux households may also have improved economic outcomes in the future. To examine this possibility, we use the mean income rank in adulthood for a child born to parents in the 25th percentile of the income distribution

from the Opportunity Atlas (Chetty et al. 2018) to characterize neighborhood income mobility.

We find in Table IV, column (4) that treated children are living in adulthood in neighborhoods with 2 percentiles higher predicted income rank than children placed into revitalizing Black neighborhoods. Given that the average control-group child lives in a neighborhood where poor children typically reach the 37th percentile ($27,850), a move to a neighborhood where the typical poor child reaches the 39th percentile ($29,950) amounts to a $2,100 a year improvement in adult earnings.

It is reasonable to wonder whether these effects on later-life neighborhood characteristics reflect underlying propensities to live in close proximity to the area where one grows up. To evaluate this interpretation, we conduct three exercises. First, we examine whether being placed in a predominantly white neighborhood makes a person more likely to have a later-life census tract that matches the tract where they were originally placed as children. Online Appendix Table XI shows that there are no detectable effects on the tendency of children to live in the same neighborhood in adulthood. Second, we reestimate our main specification excluding children who still live in their placement tracts as adults, and the results look quite similar to our baseline specification. Finally, our third test, detailed in Section V.C, studies co-location with parents as a possible driver of our results. The findings from this test do not indicate that co-location is a potential mechanism.

Next, we analyze effects on marriage behavior as another domain likely to be influenced by social interactions and neighborhoods. Our analysis is motivated by the significantly lower marriage rate among Black households compared with white households (Charles and Luoh 2010). Wilson (1987) suggests that this marriage-rate gap is attributable partly to the relatively high rates of unemployment and incarceration for Black Americans. The effects of desegregating moves on economic outcomes documented above may have improved marriage prospects for children in our sample. In addition, the experience of growing up in a majority white neighborhood may have shifted children's norms regarding marriage or their opportunities to interact with potential spouses of another race.

Table IV reports effects on marital status and partner choice measures from the 2010 census. Column (5) shows that treated children are 5.9 percentage points more likely to be married in adulthood. We also find in column (6) that moves to predomi-

nantly white areas increase the likelihood of marrying a white spouse by 2.1 percentage points, an approximate doubling relative to the rate observed for the control group of children moving to revitalizing Black neighborhoods. The large effect size that we find is driven partly by the fact that the Black-white marriage rate for children in our Gautreaux control group is just 1.7%. Prior literature has highlighted the generally low rates of interracial marriage in the United States (Fryer 2007). Our low rates of Black-white marriage are consistent with recently documented national statistics which show that only 2.1% of Black individuals are married to a white spouse by age 30 (Goldman, Gracie, and Porter 2024).

3. *Effects on Health and Incarceration.* Finally, we examine the effects of desegregating moves on mortality and incarceration. Our analysis of these outcomes builds on prior research on the Gautreaux program. Votruba and Kling (2009) study mortality up to age 30 for a sample of young men who were under age 25 at the time of placement through Gautreaux. Keels (2008) focused on arrest outcomes up to age 29 for a sample of Gautreaux children who could be linked to local police records in Illinois.

Online Appendix Table XII shows that we find no statistically significant effects on mortality or incarceration in the pooled sample of boys and girls. Both point estimates are less than 0.5 percentage points. Given existing work on gender differences in health and criminal behavior, the remaining results report separate estimates for boys and girls. Although no individual estimates are precisely estimated, it is worth noting that the results for male mortality are broadly consistent with prior work by Votruba and Kling (2009). The point estimate suggests that Gautreaux boys who were placed in predominantly white neighborhoods were 2.5 percentage points (38%) less likely to have died by 2019.

V.B. Effects of Racial Desegregation Versus Economic Desegregation

The prior section reported estimates of the reduced-form effects of desegregating moves on children's outcomes in adulthood. As noted, these placements through Gautreaux reflect the combined effects of reducing racial and economic segregation. An alternative is to estimate a model that attempts to disentan-

gle the separate effects of individual neighborhood characteristics that may be driving the collective impact. This analysis is possible given that placement-neighborhood characteristics varied across many dimensions. For example, two families may have been placed in neighborhoods with the same racial composition but different poverty rates. Using equation (3), we can leverage this type of variation across placement neighborhoods to separately identify the effects of neighborhood race and economic conditions.[26]

Table V reports results from our horse-race analysis of the effects of initial placement-neighborhood race and poverty rates on average annual earnings at ages 24–28 and later-life neighborhood share Black in the top and bottom panels, respectively. Columns (1) and (2) provide initial benchmark estimates from models where a standardized measure of the placement neighborhood's white share or the poverty rate is the only characteristic included in the specification. Column (3) provides results from our preferred model based on equation (3) that features both placement-neighborhood characteristics.

For our earnings measure, we find a nuanced pattern of results. As expected, the benchmark estimates based on models that only include one neighborhood characteristic show that racial composition and poverty rates are strongly linked to children's earnings in adulthood. The estimate in column (1) shows that a one standard deviation change in the share of white residents in the placement neighborhood significantly increases earnings by approximately $591 at ages 24–28. Similarly, the results in column (2) imply that a one standard deviation increase in neighborhood poverty rates reduces this measure of earnings by $953. When both placement characteristics are included in column (3), each of the estimated coefficients attenuate, and the standard errors increase considerably. At face value, the fact that the point

26. While our main analysis uses the census tract poverty rate in 1980 as a standard measure of economic conditions, recent research by Chetty et al. (2018) and Chetty et al. (2022) has produced novel measures of predicted economic opportunity and social connectedness at the neighborhood level. In Online Appendix Table XIII and Online Appendix Figure VII, we show that placements into neighborhoods with higher later-life income rank or greater levels of economic social connectedness (i.e., the extent to which low- and high-socioeconomic status individuals are friends with each other) have large and significant positive impacts on average earnings during ages 24–28 in our Gautreaux sample.

TABLE V

THE EFFECTS OF NEIGHBORHOOD RACE VERSUS POVERTY

	(1)	(2)	(3)
	Outcome: Earnings at ages 24–28		
Share white (*z*-score)	591***		351*
	(138)		(213)
Poverty rate (*z*-score)		−953***	−517
		(233)	(358)
Sample size	4,800	4,800	4,800
	Outcome: Later-life neighborhood share Black		
Share white (*z*-score)	−0.025***		−0.018***
	(0.004)		(0.007)
Poverty rate (*z*-score)		0.038***	0.014
		(0.007)	(0.011)
Sample size	4,200	4,200	4,200

Notes. This table reports results from a horse-race analysis of the effects of the placement-neighborhood share white and poverty rate on long-run outcomes of Gautreaux children. The independent variables of interest are standardized measures of each placement-neighborhood characteristic. Column (1) reports results from a model where the only independent variable is the standardized white share of residents. Column (2) similarly reports results from a model where the only independent variable is the standardized poverty rate. Column (3) reports estimates from equation (3), which includes both the standardized white share and the standardized poverty rate. The top and bottom panels present separate results where the dependent variables are earnings measured at ages 24–28 and later-life neighborhood share Black measured in 2019, respectively. All results were approved for release by the U.S. Census Bureau, authorization no. CBDRB-FY24-0184. Standard errors are clustered at the household level and are reported in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

estimates for the poverty rate are consistently larger in magnitude makes a case for the idea that local-area poverty rates play a more important role for later-life earnings of children. That said, a key caveat is that only the result for neighborhood race is significant at the 10% level in our specification that controls for both characteristics.

For later-life neighborhood racial composition, the results provide clearer evidence that initial placement neighborhoods' racial and economic characteristics have distinct effects.[27] In line with our results from Figure I, column (1) shows that increases in the placement neighborhood's white share significantly reduce the share of Black residents in a child's later-life neighborhood.

27. We conduct a horse-race analysis for another key social outcome: the likelihood of being married to a white spouse. Online Appendix Table XIV shows that the placement neighborhood's standardized white share has a large and statistically significant effect on interracial marriage. The point estimate for the standardized poverty rate is one-third the magnitude of the effect for neighborhood race.

We also find detectable and large impacts of neighborhood poverty rates in column (2). When both measures are included in the horse-race specification, column (3) shows that the estimated coefficient on neighborhoods' white share remains significant while the coefficient on poverty attenuates substantially. This demonstrates that neighborhood racial composition matters for future neighborhood racial composition even after controlling for poverty rates.[28]

V.C. Additional Mechanisms

1. *School Quality.* A natural question is whether the mechanism driving the effects of desegregation documented here is related to changes in school quality rather than the shifts in neighborhood race or economic conditions. To assess school changes as a mechanism, we conduct two exercises. First, we use prior studies for evidence on the effects of changing educational inputs to perform a back-of-the-envelope calculation. Second, we estimate an augmented version of equation (1) that allows school characteristics and placement neighborhoods' racial composition to have independent effects.

In our first approach, we rely on studies of court-ordered school desegregation. Johnson (2011) and Anstreicher, Fletcher, and Thompson (2022) find that efforts to desegregate schools from the 1960s to the 1980s significantly increased average per pupil spending and reduced class sizes at the schools most likely attended by Black children. In addition to these effects on schooling inputs, the studies also find that Black children experienced large improvements in their long-run labor market earnings due to school desegregation.

Using a back-of-the-envelope calculation, we find that changes in school quality play a limited role in our setting. We compare our estimates of the effects of Gautreaux placements on school inputs from Online Appendix Table III to the impacts on schooling inputs from court-ordered school desegregation and find significantly more modest effects in Gautreaux. Specifically,

28. As previewed in Section IV, the attenuation of the point estimates and increases in the standard errors reflect a high degree of collinearity between racial and economic neighborhood characteristics. Previous research based on analysis of Gautreaux notes that the high correlation between economic and social neighborhood conditions creates challenges for identifying independent effects in a model that features several local-area characteristics (Votruba and Kling 2009).

Anstreicher, Fletcher, and Thompson (2022) use census data and find that school-desegregation orders increased average per pupil school spending by about 40% and increased labor market earnings by 30% for Black children.[29] These estimates imply an elasticity of 0.75 if the impact of school desegregation arises only because of changes in school quality. Based on this elasticity and our results from Online Appendix Table III, it appears that the roughly 1% change in school quality due to Gautreaux would be expected to increase earnings in adulthood by 0.75%. This effect is much smaller than the nearly 20% effect that we detect in Table III and suggests that changes in school spending can only account for a small fraction of the effects we detect on earnings.

We augment equation (1) by including measures of district-level spending per pupil and class size (based on the school nearest their placement address) as additional controls. Online Appendix Table XV reports results where the dependent variable is annual average earnings during ages 24–28. Column (1) reproduces our main estimate for the effect of desegregating moves from Table III for comparison. The remaining columns (2) and (3) in Online Appendix Table XV report estimates of the same parameter from models that add the pupil per teacher ratio and spending per pupil, respectively. Consistent with prior work by Jackson, Johnson, and Persico (2016), our results suggest that increased spending is associated with higher earnings in adulthood. Importantly, our estimates of the effects of moving to a predominantly white neighborhood change little when we control for class size or per pupil spending measures. Together, these exercises suggests that our estimates of the reduced-form effects of Gautreaux on long-run child outcomes are unlikely to be driven primarily by changes to the schooling environment.

2. *Parents.* In addition to mechanisms related to the characteristics of their neighborhood, children who moved to predominantly white neighborhoods may have benefited from changes in the behavior of their parents. For example, treated Gautreaux parents may have had better labor market outcomes after relocating and used the additional household income to invest in child

29. Using the PSID, Johnson (2011) reports similar estimated effects of school desegregation.

TABLE VI
EFFECTS OF DESEGREGATING MOVES ON PARENTS/HEAD OF HOUSEHOLD OUTCOMES

	(1)	(2)	(3)
	Outcome: Earnings at...		
	Ages 38–42	Ages 43–47	Ages 48–52
$1(ShareBlack_{d(i)} < 0.30)$	1,531	668	300
	(1,064)	(1,149)	(1,308)
Control mean	15,820	16,180	15,580
Sample size	2,500	2,500	2,100
	Outcome: Marriage and homeownership		
	Married	Married white spouse	Owner
$1(ShareBlack_{d(i)} < 0.30)$	0.019	−0.010	−0.018
	(0.026)	(0.010)	(0.031)
Control mean	0.178	0.013	0.269
Sample size	2,000	1,400	2,100
	Outcome: Long-run neighborhood characteristics		
	Share Black	Share white	Poverty rate
$1(ShareBlack_{d(i)} < 0.30)$	−0.141***	0.081***	−0.032***
	(0.025)	(0.019)	(0.009)
Control mean	0.512	0.279	0.201
Sample size	2,100	2,100	2,100

Notes, This table reports the effects of placement in a predominantly white neighborhood (i.e., a census tract with less than 30% Black population share) on the outcomes of Gautreaux parents/head of households. All estimates are based on equation (1). Individual controls in the model are the household head's characteristics listed in Table I, column (3) in addition to birth year and place of birth fixed effects. The top panel reports impacts on earnings at various ages. All dollar amounts are 2018 US$. The middle panel reports effects on marriage, marriage to a white spouse, and homeownership using data from the 2010 census. The bottom panel reports effects on the characteristics of the household heads'/parents' post-placement neighborhood. The neighborhood location is measured in 2019 for individuals who can be linked to the MAF-ARF records. For each neighborhood location, the racial composition and poverty rates come from the ACS 2015–2019 estimates. The sample for all outcomes consists of parents/household heads in Gautreaux families who entered the program after 1981. The sample for the homeownership outcome is limited to those who responded to the 2010 census. The sample for marriage-related outcomes is limited to those who responded and were listed as a household head or a spouse. All results were approved for release by the U.S. Census Bureau, authorization no. CBDRB-FY22-CES018-018. Standard errors are clustered at the household level and are reported in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

development. To test whether parental channels could drive our main findings, Table VI studies the earnings, marriage, and location outcomes of parents and household heads of Gautreaux children.[30]

30. We also link parents to the Numident records and report estimated effects on parent mortality in Online Appendix Table XVI. There are no statistically

Broadly, we find little evidence of effects of desegregating placement on the outcomes of parents. In contrast to our results for children, we find no statistically significant effects on earnings. While the effects on labor market earnings are positive, they are consistently smaller than the point estimates that we find for children. The estimate for average annual earnings at ages 48–52 is $300—just 2% of the control-group mean. We also find no statistically significant impacts on measures of cumulative earnings (see Online Appendix Table XVII).

These earnings results in Table VI align with prior studies of the effects of local-area conditions on economic outcomes for adults. Previous work studying voucher-based moves through the MTO experiment or due to displacement stemming from public housing demolition found few meaningful effects on the labor market outcomes of adults (Kling, Liebman, and Katz 2007; Chyn 2018). The similar lack of effects for Gautreaux parents further demonstrates that moves within a city or metropolitan area may not be sufficient for generating notable improvement in contemporaneous economic outcomes for adults.[31] Instead, as emphasized in Chyn and Katz (2021), moves to higher-wage areas or otherwise stronger labor markets may be more influential for adult economic outcomes.[32]

Our analysis also finds no evidence of effects of desegregating moves on the marital status or wealth (as proxied by homeownership) of Gautreaux household heads. The middle panel of Table VI shows there are no statistically significant treatment effects on marital status and homeownership, as measured in the 2010 census. These results directly suggest changes in parental circumstances in terms of marriage or wealth (as proxied by homeown-

significant impacts, although the point estimates consistently indicate reductions (i.e., improvements) in mortality.

31. It is worth noting that moves through the Gautreaux program covered a longer distance relative to the moves in the MTO voucher demonstration. For instance, 73% of Gautreaux participants that moved to predominantly white neighborhoods moved more than 10 miles. In contrast, only 16% of MTO households in the experimental voucher treatment group made at least a 10-mile move (Kling, Liebman, and Katz 2007). Overall, the results for labor market outcomes of adults in Gautreaux provide evidence against critiques of MTO that suggested the limited distances covered by MTO moves worked against the detection of neighborhood effects (Sampson 2008).

32. Although moves within a city may not substantially shift labor market activity for adults, the existing literature does find important impacts on measures of health and well-being (Ludwig et al. 2012; Chyn and Katz 2021).

ership) are unlikely to drive the pattern of results that our main analysis finds for children. In addition, these results could also be viewed as evidence suggesting that placement into predominantly white neighborhoods was also uncorrelated with the latent propensity of Gautreaux heads to become homeowners or to be married.

The main exception to the null effects that we estimate for adults is a pattern of persistent effects on long-run neighborhood locations. The bottom panel in Table VI reports estimates of the impacts on the neighborhood location of Gautreaux adult household heads in 2019. The results show that treated Gautreaux household heads were living in tracts that were about 14 percentage points less Black and 8 percentage points more non-Hispanic white nearly four decades after they originally moved through the Gautreaux program.

Given this persistence in the effects of initial placement on future neighborhoods of household heads, a natural consideration is whether the effects on children's later-life neighborhood locations are driven by co-location with their parents or caregivers. We evaluate this possibility in two ways. First, we use an indicator for living in the same census tract as one's parent in 2019 as the dependent variable in equation (1). Online Appendix Table XI shows no evidence that children placed into predominantly white neighborhoods are more likely to live around their parents in adulthood. Second, we remove children living in the same tract as their parents or caregivers in 2019 from our analysis and re-estimate our neighborhood results in Online Appendix Table XVIII. Our results look remarkably similar if we exclude children who are co-locating with their parents or caregivers. These results imply that the effects we observe on children's neighborhood choices in adulthood are unlikely to be driven by co-location considerations.

V.D. Robustness Exercises

We present results from three exercises that address potential concerns for the interpretation of our results. First, we provide alternative estimates of the effect of desegregating moves based on a household fixed effects approach. As discussed in Section IV, the argument for causal interpretation of the results from our main approach in equation (1) relies on the assumption that Gautreaux neighborhood placements are uncorrelated

TABLE VII

EXPOSURE EFFECTS OF DESEGREGATING MOVES ON EARNINGS (HOUSEHOLD FIXED EFFECTS ESTIMATES)

	Outcome: Earnings at...			
	Ages 24–28 (1)	Ages 26–28 (2)	Ages 29–33 (3)	Cumulative by age 28 (4)
Panel A: Binary exposure				
$1(ShareBlack_{d(i)} < 0.30) \times 1(Age_i < 10)$	4,659***	5,770***	6,049**	26,490**
	(1,802)	(1,968)	(2,474)	(12,990)
Panel B: Linear exposure				
$1(ShareBlack_{d(i)} < 0.30) \times Age_i$	−338*	−442**	−473*	−2,532
	(203)	(224)	(276)	(1,557)
Control mean	11,570	12,690	15,230	77,600
Sample size	3,800	3,800	3,500	3,600

Notes. This table reports estimates from exposure models of the effects of placement in a predominantly white neighborhood (a census tract with less than 30% Black population share) on the earnings of Gautreaux children. All results are based on models that include household fixed effects and individual controls for place of birth, birth year, and gender. The top panel reports the results from equation (2). The bottom panel replaces the indicators $1(Age_i < 10)$ in equation (2) with a continuous measure of age at registration. Columns (1)–(3) report results based on earnings outcomes measured at several different ages throughout adulthood. All earnings measures are based on the LEHD data described in Section III. The dollar amounts are 2018 US$. The sample consists of children in Gautreaux families who entered the program after 1981. All results were approved for release by the U.S. Census Bureau, authorization no. CBDRB-FY24-0184. Standard errors are clustered at the household level and are reported in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

with unobserved characteristics of households after conditioning on origin-neighborhood and cohort fixed effects. While our assessment of balance in our sample provides no strong evidence suggesting violations of this identifying assumption, our household fixed effect approach relies on alternative identification conditions.

Our strategy is informed by prior work documenting an age-based gradient in neighborhood effects, even within a family (Chetty and Hendren 2018; Chetty et al. 2018). Intuitively, we compare children within the same Gautreaux household and exploit the fact that younger children would have been exposed to a predominantly white neighborhood for a longer period of childhood than their older siblings, and hence should experience larger treatment effects under an exposure-effects model.

The top panel of Table VII reports the results from estimating equation (2), which compares outcomes for children below age

10 at baseline to their older siblings.[33] The estimate in column (1) implies that the younger siblings earned about $4,600 more on average during ages 24–28 in treated households compared with their counterparts in control households. The estimates in columns (2)–(4) appear slightly larger at later ages of earnings, but we cannot statistically reject that the effects are the same.

Based on an alternative approach, the bottom panel of Table VII reports results from a linear exposure specification, which replaces the indicator for being under age 10 with a continuous measure of age.[34] Consistent with the results from the binary specification, the benefits of moving to predominantly white neighborhoods seem to erode with age at the time of moving. The coefficients imply that the gains from treatment shrink by between $338 to $473 per year of reduced exposure, depending on when earnings are measured in adulthood. These estimates are broadly similar to those found in Chetty, Hendren, and Katz (2016). The fact that these estimates similarly point toward increases in earnings is reassuring and implies that our main specification of the effects of Gautreaux placements are unlikely to be driven by differences in unobservables across families placed in predominantly white and Black neighborhoods. Of course, this approach is unable to control for factors that vary over time within families. However, the fact that we find no evidence of meaningful changes to parental circumstances in Section V.C provides additional reassurance that our results are not confounded by time-varying unobservables within households.

Next, we address additional robustness concerns related to the sensitivity of our results to alternative sample constructions and specifications. Online Appendix Table XXI reports estimates

33. We provide additional results for the sample of Gautreaux children with siblings in the Online Appendix. First, we show that the the inclusion of baseline (pre-move) controls does not meaningfully affect the point estimates in Online Appendix Table XIX. Second, we report results from equation (1) restricted to the sibling sample used for our household fixed effect estimates in Online Appendix Table XX. The sibling-sample results are similar to our main estimates in Table III.

34. Specifically, we estimate:

$$Y_i = \lambda + \delta 1(ShareBlack_{d(i)} < 0.30) \times Age_i + \kappa Age_i + \mu_{h(i)} + X_i'\gamma + \epsilon_i',$$

where Age_i is the child's age at the time of registration, and $\mu_{h(i)}$ is a household fixed effect. This specification mirrors that of Chetty, Hendren, and Katz (2016), but the treatment main effect is absorbed by the household fixed effect.

of the effect of Gautreaux placements on earnings and neighborhood racial composition using a range of different sample restrictions and specifications. The first column reproduces the results for key outcomes based on equation (1) for comparison. Columns (2)–(5) show results from models where we vary the sample by relying only on Gautreaux households that accepted their first housing offer, exclude households placed during the 1990s (a period during which the Leadership Council reduced the size of its real estate staff), include households placed before the 1981 consent decree, and focus only on households placed during years when Chicago's housing market had a relatively low vacancy rate, respectively. Column (6) provides results from an alternative specification where we define treatment as being placed in a suburban neighborhood (i.e., any census tract outside of the city of Chicago). Owing to the potential underlying exogeneity in neighborhood placements through Gautreaux, we find consistently similar results regardless of sample restrictions or model specifications.

Finally, we conduct analysis to address the concern that some of our findings could be an artifact of multiple hypothesis testing. To address the concern over false positives, we have followed recommended practices to adjust per comparison *p*-values to account for multiple outcomes (Anderson 2008). We begin by choosing one measure from each set of outcomes that we use as dependent variables in our analysis of the effects of desegregating moves. Specifically, we focus on the following six outcomes: (i) earnings at ages 24–28, (ii) homeownership, (iii) later-life neighborhood % Black, (iv) marriage, (v) mortality, and (vi) incarceration. We then use a two-step procedure from Benjamini, Krieger, and Yekutieli (2006) to calculate *p*-values that control for the false discovery rate, which is the proportion of rejections that are false positives (Type I errors). Online Appendix Table XXII reports the results and reassuringly shows that the main conclusions of our analysis do not change as the adjusted *p*-values for the main economic and social estimates that we consider are significant at conventional levels.

VI. Comparing Results from Gautreaux and the MTO Housing Voucher Experiment

We compare the effects of desegregating neighborhood placements through the Gautreaux program to the effects of voucher-

based moves from the MTO program. A landmark randomized controlled experiment conducted in partnership with HUD, MTO provided low-income, mostly minority families with subsidized housing vouchers that could be redeemed only in low-poverty neighborhoods. Unlike the Gautreaux setting, MTO had little effect on residential racial composition and saw treated families move to overwhelmingly minority neighborhoods (Kling, Liebman, and Katz 2007). Our comparison allows us to explore whether a mobility program targeting neighborhood race has different effects than a mobility program that targets poverty alone.[35]

For our comparisons, we rely on two types of sources for estimates of the effects of MTO. First, we generate new estimates of impacts on later-life neighborhood choices by linking the MTO experimental sample to the census MAF-ARF. Second, we rely on previously produced estimates of the effects of MTO on children's labor market outcomes from Chetty, Hendren, and Katz (2016). We compare effects from MTO and Gautreaux by rescaling estimates of each program's treatment-on-the-treated (TOT) effects by dividing by the relevant control-group means.[36] The motivation for this adjustment is based on the fact that there are differences between the average outcomes in each study's control groups.

To illustrate the difference in the "first-stage" effects of these housing-mobility programs, we reexamine the impacts of each program on the initial posttreatment neighborhood characteristics. Figure II, Panel A, reports estimated first-stage effects on three tract-level characteristics (rescaled by the respective control-group means): the upward mobility of children (i.e., predicted income rank) based on the Opportunity Atlas (Chetty

35. One caveat for our interpretation is that previous studies of MTO produce estimates that reflect both effects of exposure to poverty and any disruption due to moving costs. This is by design as the MTO experimental design relies on comparisons of families that moved using experimental vouchers and a control group of families who did not move. In contrast, our analysis of Gautreaux produces estimates that are free from moving costs due to the fact that our designated treatment and control groups all moved to new neighborhoods.

36. In the case of MTO, it is important to focus on TOT estimates given that only half of the treatment group who were assigned vouchers restricted to low-poverty areas complied and moved through the program (Kling, Liebman, and Katz 2007). The estimates produced from equation (1) based on the Gautreaux sample represent estimates of the TOT effect of the program.

FIGURE II

Comparing the Effects of the MTO and Gautreaux Programs

Panel A illustrates estimates of the impact of the MTO and Gautreaux programs on the initial-neighborhood characteristics of treated families after they relocate. Panel B reports effects of moving through MTO and Gautreaux on the later-life neighborhood characteristics of children when they are observed in adulthood. For MTO, the sample consists of Black children who were less than 13 at the time of random assignment. Later-life neighborhood characteristics are observed based on MAF-ARF records. For both the initial and later-life neighborhoods, we study the following tract-level characteristics: the "Inc. Rank" is the later-life average income rank for children from Chetty et al. (2018) (leftmost bars); the "Poverty rate" is the fraction of residents below the federal poverty line (middle bars); the "Share Black" is the Black population share (rightmost bars). Each bar reports an estimate of the relative effect from each program, which is defined as the estimated treatment-on-the-treated (TOT) effect divided by the respective control-group mean. All results were approved for release by the U.S. Census Bureau, authorization nos. CBDRB-FY22-CES018-018 and CBDRB-FY24-0184. * $p < .1$, ** $p < .05$, *** $p < .01$.

et al. 2018), the poverty rate, and the Black population share. The two leftmost bars indicate that MTO (light blue/gray; color version available online) and Gautreaux (dark blue/gray) had positive and roughly comparable effects on predicted income ranks.[37] Next, the middle set of bars show that both MTO and Gautreaux treatments reduced poverty rates and the magnitudes are again quite similar. Finally, as noted earlier, the right-most set of bars show that the programs diverge in their relative impacts on neighborhood racial composition. MTO moved treated families to neighborhoods with slightly lower Black population share, whereas Gautreaux—by design—placed families in neighborhoods that were drastically less Black. In sum, Figure II, Panel A, illustrates that the first-stage neighborhood effects of MTO and Gautreaux differ primarily in their impacts on residential racial segregation.

Having established the differences in the first-stage effects on neighborhood conditions, we compare the labor market effects of MTO and Gautreaux. As previewed above, we rely on published estimates from Chetty, Hendren, and Katz (2016). Online Appendix Figure VI reports relative effects on children's earnings measured for MTO and Gautreaux. In all comparisons, we focus on all children below age 13 because of the heterogeneous effect of relocation for these children found in prior work Chetty, Hendren, and Katz (2016). To achieve greater comparability with the demographic composition of the Gautreaux sample, we report the MTO estimate for the subsample of Black children in addition to the estimate for all races.[38] Given that the previous MTO studies provide estimates of the effects on earnings measured at age 26, we produce additional estimates (which are consistent with our

37. Although Figure II, Panel A shows that the first-stage effects (relative to the control-group means) on neighborhood income ranks are similar across programs, the absolute treatment effects on income ranks are larger in the Gautreaux sample (where there is an estimated 10.5 percentile increase) than in the MTO sample (where there is an estimated 7.5 percentile increase). The fact that the MTO control group lives in relatively more disadvantaged neighborhoods post-randomization (driven by the fact that few control families move from their original baseline location) is what makes the relative effects more similar between the two programs.

38. As another comparison of interest, we report estimated effects of relocation due to public housing demolition from Chyn (2018), a sample that was nearly entirely Black. As in our analysis of Gautreaux, these estimates are also based on a sample of children who moved from disadvantaged neighborhoods within Chicago.

findings in Table III) for this specific age using the Gautreaux sample.

We find that desegregating moves through Gautreaux significantly increases earnings at age 26 by approximately 22%. This estimate is broadly comparable to the estimates of moving to low-poverty areas for both of the samples of MTO children, which range from 13% to 30%. These estimates provide some suggestive evidence that mobility programs that target either residential racial segregation or neighborhood poverty have broadly similar effects on labor market outcomes of children.

Next, we compare the effects of Gautreaux placements and MTO effects on children's neighborhood choices later in life. Figure II, Panel B, compares the effects on children's neighborhood choices in adulthood across programs—that is, the "second-stage" effects of each program on neighborhood outcomes as of 2019. Again, we focus on Black children younger than age 13 at the time of move in the Gautreaux and MTO samples.

The first key finding from our analysis of later-life neighborhood choices is that MTO and Gautreaux have substantially different effects on residential racial composition. This pattern is apparent in the rightmost set of bars. Moving to low-poverty areas in MTO has little effect on Black children's propensity to live around Black neighbors as adults. In contrast, moving to predominantly white neighborhoods in childhood through Gautreaux resulted in children choosing more racially diverse later-life neighborhoods. As demonstrated in Online Appendix Table XXIII, the difference in effects is statistically significant at the 1% level.[39] This contrast of the effects on the future choices of neighborhoods for children between the programs closely mirrors the differences between each program's initial effects on the neighborhood characteristics.

One potential interpretation of this finding is that exposure to predominantly white communities in childhood could shape later-life neighborhood preferences or the ability to navigate barriers in the housing market that minorities face when attempt-

39. As an alternate comparison, Online Appendix Table XXIV reports effects on neighborhood locations measured at age 26. The patterns of results are unchanged. Estimated effects on race and upward mobility are larger in magnitude for the Gautreaux sample.

ing to move to more racially diverse neighborhoods.[40] Figure II, Panel B (in the middle set of bars), supports this interpretation by demonstrating that MTO and Gautreaux had roughly similar impacts on reducing neighborhood poverty. This pattern suggests that the relatively larger effects of Gautreaux on racial diversity are not simply driven by the program having larger effects on preferences for living in areas that have higher income.

Our second main finding is that the Gautreaux moves generated larger positive effects on the predicted later-life income rank of neighborhoods chosen by children in adulthood. The left-most bars of Figure II, Panel B, show that MTO and Gautreaux generate relative effect sizes around 1% and 5%, respectively. Importantly, these differences in estimated treatment effects on neighborhood choice imply that the effects of Gautreaux on future generations could be larger than those from MTO.

We conclude with observations on how these comparisons of Gautreaux and MTO relate to our understanding of the independent effects of neighborhood characteristics and the horse-race results from Section V.B. Across studies, the results support the idea that shifting the racial composition of neighborhoods has distinct effects on social outcomes. The Gautreaux moves to predominantly white neighborhoods increased a child's propensity to live in more racially diverse areas later in life, whereas the MTO moves to low-poverty, high-minority neighborhoods did not. This pattern is consistent with the horse-race analysis, which also found that neighborhood race plays the more important role in driving later-life neighborhood choice. In the case of economic outcomes, the similarity of each program's reduced-form impact on earnings suggests that neighborhood poverty may play a greater role in determining long-run economic mobility. Although less definitive due to limited precision, the horse-race analysis of future earnings found a larger point estimate for poverty rates compared with the neighborhood-race estimate. Collectively, we interpret these results as suggesting that economic desegregation likely mediates a substantial portion of the observed reduced-form effects of racial desegregation.

40. Bergman et al. (2024) provide experimental evidence that suggests high-cost barriers in the housing search process prevent low-income families who receive housing vouchers from moving to high-opportunity areas.

VII. Conclusion

This article provides the first comprehensive analysis of the long-run effects of Gautreaux, the largest residential racial desegregation program in U.S. history. For more than two decades, Gautreaux program administrators worked to move thousands of low-income Black families to predominantly white, low-poverty neighborhoods. The product of a civil rights–era lawsuit, Gautreaux inspired dozens of similar legal efforts to desegregate housing through the creation of new public housing and housing voucher policies.

The Gautreaux program's focus on racial desegregation provides a unique opportunity to understand how neighborhood racial composition shapes the long-run outcomes of children. Previous studies of housing-mobility interventions have focused solely on the effects of moving minority children to low-poverty but still racially segregated areas (Chetty, Hendren, and Katz 2016; Chyn 2018). Yet, the importance of neighborhood race as a factor that may affect children has long been posited in discussions of neighborhood effects (Wilson 2010; Clampet-Lundquist et al. 2011).

We link historical program records to a rich array of administrative and census data to study the effects of Gautreaux moves on both economic and social measures. In terms of economic outcomes, our analysis yields two main findings. First, our reduced-form analysis of desegregating moves suggests that the combined effects of moves to white and low-poverty neighborhoods on children's earnings and wealth are positive and large in magnitude. Second, a substantial portion of this overall effect on long-run economic outcomes of children appears to be due to the distinct effect of neighborhood economic desegregation.

For social outcomes, we find that experiencing desegregating moves during childhood caused Gautreaux children to live in neighborhoods that are substantially more racially diverse in adulthood. In contrast to the results for economic outcomes, the evidence suggests these effects are due primarily to the impacts of Gautreaux placements on neighborhood racial composition and not the accompanying reductions in exposure to poverty. Our findings can be interpreted as in line with predictions based on the contact hypothesis, which has been documented frequently in schooling contexts (Allport 1954; Carrell, Hoekstra, and West

2019; Merlina, Steinhardt, and Wren-Lewis 2019; Rao 2019; Mousa 2020; Billings, Chyn, and Haggag 2021).

What do our results imply for policy? Our findings for economic outcomes broadly suggest that housing-mobility programs targeted to families with children can be an effective antipoverty strategy. This aligns with recent studies of other residential mobility programs that similarly show beneficial effects on the economic mobility of low-income children (Chetty, Hendren, and Katz 2016; Chyn 2018). The effects of Gautreaux on social outcomes also have implications if policy makers seek to reduce racial segregation across neighborhoods for social or political grounds. The fact that childhood exposure to residential diversity has distinct effects on later-life neighborhood choice suggests that mobility programs may need to look beyond a singular focus on encouraging moves to higher-income neighborhoods.

Supplementary Material

An Online Appendix for this article can be found at *The Quarterly Journal of Economics* online.

Data Availability

The data underlying this article are available in the Harvard Dataverse, https://doi.org/10.7910/DVN/NY0UAK (Chyn, Collinson, and Sandler 2025).

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