Americans’ occupational status reflects the status of both of their parents

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American workers’ occupational status strongly reflects the status of their parents. Men and women who grew up in a two-earner or father-breadwinner family achieved occupations that rose 0.5 point for every one-point increase in their parents’ statuses (less if their father was absent). Gender differences were small in two-earner families and mother-only families, but men's status persisted more when the father was the sole breadwinner. Intergenerational persistence did not change in the time the data cover (1994–2016). Absolute mobility declined for recent birth cohorts; barely half the men and women born in the 1980s were upwardly mobile compared with two-thirds of those born in the 1940s. The results as described hold for a socioeconomic index (SEI) that scores occupation according to the average pay and credentials of people in the occupation. Most results were the same when occupations were coded by different criteria, but SEI produced the smallest gender differences.

Significance

Occupational status persists across generations in the United States to a degree incompatible with the popular theme of “land of opportunity.” Data from 1994–2016 show that median occupational status rose 0.5 point for every one-point increase in parents’ status (somewhat less if the father was absent). Intergenerational persistence did not change during these years, but overall mobility declined from two-thirds of people born in the 1940s to half of those born in the 1980s. This substantial decline in absolute mobility reflects the changing distribution of occupational opportunities in the American labor market, not intergenerational persistence.

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Data deposition: Code for data analysis is archived on Open Science Framework (osf.io/jwrsc).

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evidence of change in intergenerational persistence. An analysis of absolute mobility by year of birth replicated the recent finding that income mobility declined over the last 40 y (21) and extended it to occupational status. Americans born in the 1930s and 1940s entered the dynamic workforce of the 1950s and 1960s after growing up in depression and war; Americans born since the 1970s have entered a labor force that was not as radically different from the conditions in which they grew up. Through their working careers, as many changes hurt workers as helped them (22). Still, almost half of Americans born since 1984 were upwardly mobile compared with their parents, and one-fourth moved up by 15 or more points (on a 100-point scale).

**Scoring Occupations**

Occupation lacks the intrinsic metric income has, but research throughout the 20th century confirmed that ordinary people recognize an order to occupations (23, 24). When sociologists ask people to rank a set of occupations according to “social standing” or “goodness,” or even offer no criterion for ranking (25), they get very robust answers. Treiman aggregated 85 such studies from 60 countries to form a common scale and then correlated each separate scale with the common one; the average correlation was 0.91 (23).

The pay and credentials of people in an occupation are essential attributes of the occupation; together, they strongly predict popular ratings like Treiman’s common scale (5, 26, 27). The resulting SEI was the metric in the classic studies; I use it here too. Hauser and Warren compared many ways of scoring occupations, and, for the study of intergenerational mobility, they found that a logistic transformation of the educational credentials of people in an occupation performed better than SEI. I replicated all of the results here using the Hauser–Warren scores (SI Appendix). The results using Hauser–Warren scores are mostly similar to those using SEI, but Hauser and Warren’s credential scoring introduces a difference between men’s and women’s intergenerational persistence that is not present when using SEI. I feature the more parsimonious SEI results here and leave the puzzle of the gender interaction to future research.

**Intergenerational Persistence: Father to Son.** Fig. 1 shows the detailed scatterplot of current SEI by father’s SEI for 8,196 men interviewed between 1994 and 2016. The association is strong but far from perfect, as the pattern of light and dark individual data shows. Means and medians tend to move upward as the eye goes from left to right along the horizontal axis. The individual data are positively skewed for men with upper-SEI fathers and negatively skewed for men with upper-SEI fathers, so the medians are below the means at the lower end of the distribution of father’s SEI, and the medians are above the means at the upper end. OLS regression is the usual estimator of occupational persistence across generations. OLS tracks the means quite well and yields an estimate of 0.31. None of the means depart enough from the straight line to suggest that the relationship is not linear. Quantile regression is an analog to OLS; it expresses quantiles, here the median, of the conditional distribution of an outcome variable as a linear function of each independent variable (ref. 28, chap. 7). Half of the lowest-origin men had current occupations that scored 30 or less on the SEI, while half the highest-origin men had occupations that scored 66 or more, a difference of 36 points for men whose father’s SEIs were 73 points apart. The median regression slope of 0.50 is within rounding of the ratio of those differences. A run of four consecutive medians below the median regression line for father’s SEI between 30 and 40 followed by four medians above the line for father’s SEI between 50 and 70 hint at an ogive shape, but the pattern does not appear among women or for men’s current SEI regressed on their mothers’ SEI. Thus, the linear form is appropriate for the medians. Comparing the OLS slope of 0.31 and the quantile slope of 0.50, we see that tracking the medians reveals 60% more intergenerational persistence than the means and OLS show.

The quantile regression coefficient of 0.50 is substantially higher than previous OLS-based estimates of occupational persistence and close to recent estimates of intergenerational income persistence (11). The estimator and the data are both new in Fig. 1. Checks with other data and other occupational scales on the same data make clear that the higher estimate here is due to the estimator, not the data or the scale. Similar differences between OLS and median regression results appear in the Occupational Changes in a Generation (OCG)-I and -II data (SI Appendix, Fig. S1) and in the same GSS data when occupations are scaled by the Hauser–Warren credentials scale (SI Appendix, Fig. S2). In short, focusing on medians instead of means uncovered intergenerational persistence that OLS missed. As with their income, American men’s occupational status rose by at least half a point for each one-point increase in their fathers’ status.

The individual data in Fig. 1 reveal details of intergenerational persistence as areas of deeper hue. The most substantively relevant concentration is near the points where $y = x$. Approximately 5% of men worked in exactly the same occupation their father had. This “occupational inheritance” is visible throughout the range of father’s SEI. Much of the research in the 1980s and 1990s relied on tabulated data; researchers usually included special “diagonal” parameters for $y = x$ cells (7, 29, 30). Concentration near $y = x$ also accords well with the “microclass” hypothesis (31, 32). Diagonal and microclass models imply that the usual approach misses an important piece of information. A way to quantify that here is to redo the median regression without the $y = x$ cases; the slope estimate falls to 0.43. Thus, inheritance accounts for approximately 14% (1 − 0.43/0.50 = 14%) of the father–son association.

We can think of inheritance in two ways: as the probability that a son whose father worked in a given occupation will follow him into that occupation or as the probability that a son in a given occupation had a father who also worked in that occupation. Call the first probability outflow inheritance and the second probability inflow inheritance. The 10 occupations with the highest
outflow inheritance included relatively low-status truck drivers and workers in the building trades, as well as high-status physicians, dentists, and lawyers. Among occupations with the highest inflow inheritance, farmers led by a wide margin; physicians, masons, plumbers, and loggers also had substantial inflows (SI Appendix, Table S2).

**Intergenerational Persistence: Daughters and Mothers**

Fig. 2 compares father–son mobility (Upper Left) to father–daughter (Upper Right), mother–son (Lower Left), and mother–daughter (Lower Right) mobility. Working women were highly segregated in a couple dozen occupations throughout the 20th century (33). These data show evidence of that segregation in the horizontal and vertical bands of darker, denser data points in the three parts of Fig. 2 that feature women’s occupations. Current occupations were less segregated than were mothers’ occupations, reflecting the recent decline of gender segregation. A tendency for the biggest “female” occupations to have similar scores compounded the consequences of segregation. At the high end of the socioeconomic scale, school teachers, registered nurses, and librarians clustered slightly above 80; office workers of various sorts scored in the high 30s; and home health aides, cashiers, and childcare workers scored in the low 20s (SI Appendix, Table S3).

American women’s occupational status did not depend on their father’s status quite as much as the men’s did; the women’s slope was 0.40, compared with 0.50 for the men. The pattern resembles the common idea of a “glass ceiling” in that women and men whose fathers worked in below-average status occupations had similar-status current occupations, while the women with high-status fathers had current occupations of lower status than did men from similar backgrounds.

The second row of Fig. 2 repeats the analysis, replacing father’s with mother’s occupational status. The gender segregation of the mothers’ generations appears as vertical clusters at various points along the horizontal axis. Intergenerational persistence was very similar for men and women (β = 0.36 and 0.35 for men and women, respectively), with no sign of the glass ceiling pattern visible in comparison of father’s occupations.

Considering fathers and mothers separately is useful for introducing the median-regression approach, but the one-sex approach is potentially quite biased (34). The next section considers both at once.

**Intergenerational Persistence: Combine Parents**

In recent years, the norm has been for both the fathers and mothers of teenagers to be used. However, most of the older people in the GSS sample grew up when the norm was that fathers were the sole earner in the home. Only 17% of the people who grew up in the 1980s and 1990s had a father who was the sole support of their family, but over 50% of those who were teenagers before 1960 did. Meanwhile, 22% of the most recent cohort grew up with a single mother; 10% of the oldest cohorts did. The new normal in which both mother and father were used was true for 60% of the most recent cohort and already the case for 37% when the oldest people in the sample were growing up.

Preliminary analyses of data on two-earner families in the sample showed that, in various specifications, the coefficient for father’s occupation was ~1.5 times that for mother’s occupation when both were in the equation. As this analysis relies heavily on visual inspection of a scatterplot, it is convenient to calculate a single index of parental occupational status, combining father and mother into a single score. When data for father and mother were present, I added 0.6 times father’s score and 0.4 times mother’s score to get a combined score. For one-earner families, I used the observed parent’s SEI. Men’s and women’s results are in Fig. 3; the results for credential scores are appended (SI Appendix, Fig. S2). Individual data are shown for men and women separately; the expected values from the quantile regression are shown by gender and by parents’ employment status.

The occupational status of men and women raised in two-earner families depended very strongly on the combined statuses of their parents. For men the slope was 0.58, and for women it was 0.53 (the difference is statistically significant at conventional levels). Both are larger than the slope obtained using father’s SEI as the only status variable (0.50 for men and 0.40 for women). Stratification was slightly less in father-only families (0.53 for men and 0.41 for women) and substantially less in mother-only families (0.26 for men and 0.37 for women). Scholars usually equate low slopes with equal opportunity, but the lower intergenerational persistence in mother-only families indicates, in Bloome’s phrase, “insecurity not opportunity” (18). Men whose origins were in the lowest quarter could expect the lowest occupational outcomes, regardless of whether their low-origin status was due to the combination of their father and mother, their father alone, or their mother on her own. Higher origin men whose fathers were present could expect better occupational outcomes than men with high-status mothers and missing fathers.

**Intergenerational Persistence: Change over Time**

The American economy changed substantially in the 22 y from 1994 to 2016. Economic inequality rose dramatically (35), manufacturing declined, professional and financial services soared (36), and part-time and contingent employment spread (22). Many social scientists expected these changes to increase intergenerational persistence. However, theory is surprisingly weak on this point, and there are several good reasons to think cross-sectional inequality might not be related to intergenerational mobility (17), mainly because too much time passes between when people experience the inequality of their formative years and when they hit their own earnings or occupational peak. Fig. 4 plots the annual estimates of intergenerational persistence, by family type and gender. Point estimates vary from year to year.
year, but there is no significant trend. The flat lines show the average within-year coefficient for all years. As in Fig. 3, intergenerational persistence was strongest in two-earner families and weakest in mother-only families; father-only (breadwinner) families were in between.

Research in the late 1980s and early 1990s found evidence in these data of a decrease in intergenerational persistence from the 1970s to the 1980s (7, 8). Those analyses coded occupations according to the 1970 protocol and used very different models. In supplemental calculations (SI Appendix, Table 5), I applied the model from this paper to the 1970-based SEI. The father’s occupation median coefficients for men and women were less in the 1982–1985 period than in the 1976–1980 period, but the changes were not significant by usual criteria.

**Intergenerational Mobility: Summary**

In the last 20 y, occupational status (SEI) persisted more across generations than previously thought. Persistence was greater in two-earner families than in father-only (breadwinner) and mother-only (single mom) families. Median occupational status rose approximately one-half point for every one-point increase in parents’ status, except in mother-only households. For single mothers, insecurity made it harder to pass on any advantages that came a mother’s way to the same extent that two-earner couples and breadwinner fathers could.

**Absolute Mobility**

Intergenerational persistence limits occupational mobility, but the probability that people will do better in the labor force than their parents also depends on the distribution of occupations at a given time and how they compare with the occupational distribution faced by the parents (3). Chetty et al. found that income mobility was substantially lower for Americans born in the 1980s compared with those born in the 1940s (21). Specifically, many observers assumed that upward mobility was the dominant feature of American labor markets until the 1980s and that downward mobility is a new phenomenon. Even in the 1960s, researchers knew that downward mobility was more prevalent than the popular conception would have it (6). The “land of opportunity” image remained robust in popular culture.

Fig. 5 replicates the income mobility analysis with the GSS data on occupational changes and adds a long-distance mobility measure (15 + SEI points) for comparison. The results span the same years of birth as Chetty et al. used. Upward occupational mobility exceeded downward mobility in every cohort, but it became far less prevalent in recent cohorts than in those born in the 1940s and 1950s, just as Chetty et al. found for income. Among men born in ~1940, 65% worked in a higher status job than their parents; among men born in the 1980s, only 42% did. Upward income mobility declined even more—from 90 to 50% across those cohorts—but both are important. As the US economy recovered from depression and war in the 1950s and 1960s, both incomes and occupations changed, but incomes changed more (37). Factory workers, shopkeepers, and professionals all earned higher real incomes in 1970 than in 1940. Millions of people experienced rising pay without changing their occupation. Since then, pay growth has leveled off. Higher status occupations grew more than lower status ones between 1940 and 1970; since 1980, occupational change has been less uniformly upward (22). These differences between trends in pay and trends in the occupational structure account for the differences in men’s mobility trends across cohorts.

Women experienced less upward occupational mobility than men in the earliest cohorts. For cohorts born after 1950, the trends for women paralleled those for men.

**Fig. 4.** Intergenerational association by year, gender, and parents’ employment type: persons, 25–69 y old, living in the United States currently and at the time they were in high school, 1994–2016. Source: Author’s calculations from the GSSs, 1994–2016 (9).
To this point, any improvement of one SEI point or more has counted as upward occupational mobility. Raising the standard and counting only increases of 15 or more SEI points as real upward mobility leads to the same conclusion. Long-distance mobility declined from 37% of men born in 1945 to 22% of men born in 1985 and from 33 to 17% among women.

Upward mobility declined while intergenerational persistence remained unchanged because, over time, the labor market faced by workers became more similar to the labor market their parents faced (SI Appendix, Fig. S7). Between 1940 and 1970, the professions expanded rapidly, and industrial machinery demanded more and more skilled labor (37); since 1980, the high-status occupations continued to expand and differentiate, but the middle declined, and the low end grew (22, 36).

Conclusions and Discussion

American workers face dramatically different opportunities, depending on their parents’ occupations. New data on occupational mobility from 1994 to 2016 reveal that a one-point increase in parents’ status was associated with a 0.58-point increase in men’s median status and a 0.53-point increase in women’s median status in two-earner families; medians for men and women who grew up in father-breadwinner families rose almost as sharply (coefficients of 0.53 and 0.41 for men and women, respectively). In single-mother homes, men’s and women’s medians increased 0.26 and 0.37, respectively. These estimates are higher than previous estimates of occupational persistence in the United States, rivaling some of the higher estimates of income persistence across generations (11, 38).

Father’s and mother’s status were both significant factors in people’s occupational success from 1994 to 2016, but father consistently had more influence. To combine parents’ occupational scores, I used weights of 0.6 for father’s occupation and 0.4 for mother’s.

Intergenerational persistence did not change during the 22 y from 1994 to 2016. Absolute mobility changed across cohorts. Americans born in the 1970s and 1980s experienced significantly less upward mobility (and more downward mobility) than did those born in the 1940s and 1950s. That was true whether mobility as small as a single point on a 100-point scale counts as mobility or if a bigger difference from generation-to-generation is deemed necessary.

The standard method of estimating intergenerational persistence, OLS, showed 30–40% less intergenerational persistence because the conditional distribution of occupational outcomes is highly skewed for workers with low-and high-ranking parents. Bigger estimates based on medians is a robust result; median regression estimates exceeded OLS estimates when I scored occupations differently and when I switched to other data sources.

Americans described their country as the land of opportunity throughout the 20th century. Scholars long doubted it (4). This research adds evidence of inequality. Socioeconomic outcomes reflect socioeconomic origins to an extent that is difficult to reconcile with talk of opportunity (1). Intergenerational persistence appeared to be less problematic when absolute mobility was high. When 90% of young adults earned more than their parents did and 60% worked in higher status occupations, it was easier to ignore how privileged young adults were advancing almost as fast as the underprivileged were. Since 1980, the pace of economic growth slowed and went disproportionately to the affluent while young people competed in an occupational structure less and less different from conditions their parents faced. High absolute mobility in the past came from broad economic growth and occupational transformation, not from equal chances to take advantage of opportunity. As the pace of growth and transformation waned, intergenerational persistence became more prominent. Declining structural mobility has unmasked inequality of opportunity as the drag on social mobility it has been at least since the 1960s.

Materials and Methods

Source. The GSS asks a representative sample of American adults a wide range of questions about living conditions, behavior, and attitudes. Surveys were fielded annually from 1972 to 1993 and in even-numbered years since 1994. Sampling is multistage; interviews are, with few exceptions, face-to-face. I adjusted standard errors for nonresponse and sample design. See the GSS website for details of sampling, nonresponse, and question wording (gss.norc.org).

Exclusions. Previous research focused on persons who were 25–64 y old (7, 8), mainly to reduce bias due to school enrollment among younger people and mortality among older people. Here, I stretched the upper end slightly to 69 y.

Immigrants grew up in many countries; their experience there is not relevant for measuring inequality of opportunity in the United States. Thus, I excluded persons who were not living in the United States when they were 16 y old; that is as close as the data allow us to be as sure as possible that each subject’s education and their parents’ occupations were pursued in the United States. Means and medians for the occupational measures were appended (SI Appendix, Table S1).

Coding Occupations. To measure occupation, interviewers asked respondents for detailed descriptions of their current occupation, their father’s occupation when they were growing up, and (since 1994) their mother’s occupation while they were growing up. Their replies were coded to 539 occupational categories according to US Census Bureau protocols. Some questionnaires from the 1970s were lost; others were too damaged to read. See gss.norc.org for details. The resulting codes were matched to data on pay and credentials for those occupations, and the SEI was calculated. (27) Most studies use one or another of these scores. Each occupation has the same score regardless of whether it is a current, father’s, or mother’s occupation.

The 1994–2016 data include 33,078 interviews, 31,488 of which include a valid current occupation. Exclusions for age, immigration, and missing data reduced that to 20,856 valid cases for analysis.

Visualizations. For the figures that include individual data (Figs. 1–3 and SI Appendix, Figs. S1, S2, and S6), each point is 4 or 5% transparent; median regression estimates exceeded OLS estimates when I scored occupations differently and when I switched to other data sources.
lines refer to persons of nonfarm origin. The means and medians depicted in those figures were calculated for 19 bins (of approximately equal size) along the x-axis.

28. Colin Cameron A, Trivedi PK (2010) Microeconomics Using Stata (Stata, College Station, TX), Revised Ed.

Data Sharing. All data used here are publicly available at GSS website: gss.norc.org/. Code for data analysis is archived on Open Science Framework (osf.io/jwrsc).