Long-Term Decline in Intergenerational Mobility in the United States Since the 1850s

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Supporting Information for

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S1 Data Description

Our study involved hundreds of millions of linked household and population records that documented the histories of several million unique individuals and their families and communities. Our mobility data were derived from four major sources: (1) cross-sectional Integrated Public Use Microdata Series (IPUMS hereafter) U.S. population census data from 1850 to 2000 and the American Community Survey (ACS) from 2001 to 2015; (2) three linked samples of complete-count historical censuses, 1850–1880, 1880–1910, and 1910–1940; (3) the Current Population Survey Annual Social and Economic Supplement (CPS-ASEC 1973–1990) data linked to both the 1940 census and 2000 census long-form and the ACS (2001–2015) as part of the Census Longitudinal Infrastructure Project (CLIP); and (4) for cross-validation purposes, 11 large-scale social surveys that have been used in previous studies on intergenerational social mobility. These data sources are summarized in Table S1.

IPUMS U.S. Population Censuses

We first used the IPUMS U.S. Population Census data from 1850 to 2000 and ACS data from 2001 to 2015 (hereafter, IPUMS Population sample) to create occupational percentile ranks in the population (*1*). The year 1890 was missing because the original census records were destroyed. The IPUMS USA provides harmonized U.S. census microdata, in which all census records have been converted into a format with consistent variable names, sample restriction, coding methods, and documentation. For years for which the full-count census data were available (e.g., 1940), we chose the full-count data over census samples, except for the year 1880, for which the literacy variable was not available in the full count data. For years for which both 1% and 5% samples were available (e.g., 2000), we chose the larger sample. For the year 1970, six 1% samples were drawn independently from the population data. We

included the two 1% samples known as form 1 and form 2 metro in our analysis. We pooled individuals who were born in the same year but were observed in different census years. Based on the method described in the paper, we first restricted the sample to males and females aged 25 to 64 and then generated occupational percentile ranks by birth cohort based on the literacy rate and educational distribution within an occupation.

Linked Historical Census Data

Joseph Ferrie and his collaborators have compiled and analyzed the earlier versions of the historical data and established the suitability of the linked federal population censuses as a source for the proposed analyses (*2*–*5*). The new dataset analyzed in the present study will substantially expand the time coverage of the original sample, yielding more than four million newly linked father-son dyads from the historical censuses for the periods 1850–1880, 1880–1910, and 1910–1940. The sample construction strategy was to link a sample of young males, typically aged 0 to 17 years old and living in the same households with their fathers in one census to the census taken thirty years later.

Details on the linking algorithm and sample construction are described in Section S2. Discussions on the sample representativeness, sensitivity results, and cautionary comments can all be found in Long and Ferrie (2013, online appendix) as well as Hout and Guest (*6*) and Xie and Killewald (*7*). Because the matching procedure relies on individuals' first and last names as well as other social and demographic information, the linked samples for males are more reliable than those for females. Our analysis focused on father-son dyads, restricting the ages of sons to 28-52 years as reported in the wave 2 census and the ages of fathers to 50-95 years as reported in the wave 1. The final sample contained 373,863 father-son dyads in the 1850–1880 linked sample, 1,551,255 dyads in the 1880–1910 sample, and 3,240,198 dyads in the 1910–1940 sample.

Linked Contemporary Census and Survey Data

The contemporary linked data were drawn from the Census Longitudinal Infrastructure Project (CLIP), which created a set of linked data files from decennial censuses, surveys, and administrative records collected by the Census Bureau (*8*). The sample included 17,700 father-son pairs linked from the 1940 census to the Current Population Survey (CPS-ASEC 1973, 1979, 1981–1990); and 17,600 father-son pairs linked from the CPS to the 2000 decennial census long form and American Community Survey (ACS) 2001–2015. For each of these samples, the number of observations was rounded in accordance with Census Bureau disclosure avoidance policies.

To create the 1940-CPS father-son linkages, we began with the linkable sample of male children ages 0 to 17 in 1940. Approximately 54 percent of these children received a protected identification key (PIK) necessary for linkage to the contemporary data. We then searched for these children with PIKs in the CPS data. We limited this search to adults ages 25 to 64 in the CPS. PIK rates for the CPS ranged from a low of 38 percent in 1990, to 62- 63% for the 1856–1989 samples, and to 81-87% for the 1973–1985 samples (for an overall PIK rate of 77% across all CPS samples included in the analysis). Variation in PIK rates occurred as a result of differences in availability and details of personally identifiable information in each sample (for example, some CPS samples only contained social security numbers but no name, and some contained age instead of full date of birth).

Next, we created father-son linkages across the CPS, 2000 Census, and the 2001–2015 ACS. Our sample began with male children ages 0-17 in the CPS who received a PIK. We searched for their PIKs in the 2000 Census and 2001–2015 ACS samples, limiting the search to adults ages 25 to 64. The PIK rates for the 2000 Census are 93%, and the PIK rate ranges between 90% and 94% for the ACS samples. See Section S2 for more detail on the linking process for

the 1940 Census, the CPS, the 2000 Census, and the ACS. More descriptions about the CLIP project can be found from the Census Bureau website:
https://www.census.gov/about/adrm/linkage/projects/clip.html.

Large-Scale Social Survey Data

For cross-validation purposes, our analyses also included 11 large-scale social surveys that have been extensively used in the previous intergenerational social mobility literature. Except for the Wisconsin Longitudinal Studies, all the other datasets draw on nationally representative samples from either a cross-sectional or longitudinal framework. We weighted each sample using the sample weight variable included in the original data and created a cross-sample weight variable to adjust for variations in sample size across datasets.

General Social Survey

The General Social Survey (GSS) is a large-scale, cross-sectional survey designed and implemented since 1972 by the National Opinion Research Center (NORC) at the University of Chicago. The survey was conducted annually in most years before 1994 and changed to a biennial basis thereafter. It is designed to be representative of all adults in U.S. households aged 18 and older. The data have been widely used in studies on societal changes in individual attributes and attitudes and population composition. The present analysis relies on data from the years 1972 to 2016 and applies sample weight *wtssall* to account for the multistage sampling design. Black oversamples are dropped from our analyses (see (*9*) codebook p.3103).

Individuals were asked to report their own occupations and their fathers' occupations while they were growing up. We assumed that the corresponding age of the father was whatever it was when the child was age 16. To generate individuals' occupational percentile ranks, we first estimated respondents' birth cohorts using their ages in the survey year and converted

their current occupations to standardized 1950 occupation codes. Next, we mapped the 1950 occupations to the microclass scheme using the crosswalk file in Table S2. Finally, we merged the GSS data with the occupational percentile rank file generated from the population census data based on microclass occupations and birth cohort. The variable of fathers' birth years contains many missing values because the question was asked only in years 1993 to 1998. To impute missing data, we assumed that father's age at the child's birth follows a truncated normal distribution varying from ages 15 to 60, with the mean equal to 30 and the variance equal to 6.9. We then subtracted father's year of becoming a parent from respondents' birth year to obtain father's birth year. The final analysis included 16,077 cases with valid data from male respondents aged 25 to 64 and their reported fathers from years 1972–2016.

The data are publicly available and can be downloaded from the GSS website: http://gss.norc.org/get-the-data/.

Health and Retirement Study

The Health and Retirement Study is a longitudinal panel study that has been conducted at the University of Michigan since 1992 (*10*). The project began with a nationally representative sample of Americans over age 50 and followed roughly 20,000 respondents every two years on subjects such as health care, housing, assets, employment, and pensions. Our study used the Rand HRS Data File (Version P), which is a cleaned and user-friendly subset of the HRS data, consisting of 1992, 1993, 1994, 1995, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, and 2014 waves. The final analysis was restricted to male respondents aged 25 to 64, weighted by the *RxWTCRNH* variables for the representativeness in the corresponding wave when the individual is firstly surveyed (see page 80 of the Rand HRS documentation version P).

Respondents are asked to report their occupations since the 1992 wave and their father's occupations since the 1998 wave. This analysis relied on the 3-digit occupational code in the

restricted Industry and Occupation Data (v4.0.1). For each respondent and his father, the earliest available occupational information was used. Occupations were coded in the 1980 census code in waves 1992–2004, in the 2000 census code in waves 2004–2010, and in 2010 census code in waves 2010–2014. Because the wave 2010 already included the occupational information of most respondents in the newly added Mid Baby Boom (MBB) cohort, and the crosswalk between the census 2010 occupation code and the microclass code was not available, we only used occupational information up to the wave 2010. All occupations were converted to the standardized 1950 occupation codes and then to microclass occupations. Information on father's birth year is missing in the HRS. To impute missing data, following the same procedures that were applied to other datasets, we assumed that father's age at the child's birth followed a truncated normal distribution varying from age 15 to age 60, with the mean equal to 30 and the variance equal to 6.9. The final analysis included 5,991 cases with valid data of male respondent-father dyads from years 1992–2010.

Occupation data are only available in HRS restricted data but can be accessed via the virtual desktop infrastructure (VDI) and traditional licensing:
https://hrs.isr.umich.edu/data-products/restricted-data.

National Longitudinal Survey–Older Men

The National Longitudinal Survey–Older Men (NLS-OM) is one of a set of longitudinal cohort studies conducted by the Bureau of Labor Statistics under the United States Department of Labor from 1966 to 1990 (*11*). The project began with a nationally representative sample of 5,020 American men aged 45 to 59 in 1966 and was discontinued when respondents were 69 to 83 at the time of their last interviews in 1990. Respondents were surveyed annually between 1966 and 1969, and in the subsequent years of 1971, 1973, 1975, 1976, 1978, 1980, 1981, 1983, and 1990. The final interview was conducted with both living older men respondents and

widows or other family members of deceased respondents. The data have mainly been used to study labor market activities of middle-aged men and men close to retirement, such as their work and unemployment experiences, retirement planning, work and health insurance, and job evaluation and satisfaction. We used data from the years 1966 to 1976 (8 rounds) and applied the sample weight variable *R0000200* to account for the multistage sampling design. We kept male respondents aged 25 to 64 in every round of the survey.

Respondents were asked to report their own occupations in each survey year, and in the year 1966 they were asked about their fathers' occupations when the respondents were 15 years old. Respondents who did not live with their fathers at age 15 were asked to report household heads' occupations. The mobility analysis relies on respondents' occupations reported in the year 1966. If this information was missing, occupation in the next available year was used. We merged the NLS-OM data with the occupational percentile rank file generated from the population census data using microclass occupations and birth cohort. Because father's birth year was not asked, we imputed missing data in father's birth year using the same imputation method described in the GSS data section. The final analysis included 4,562 cases with valid data from male respondents aged 25 to 64 and their reported fathers from years 1966–1976.

The data are publicly available and can be downloaded from the NLS website: http://www.nlsinfo.org/investigator/pages/login.jsp.

National Longitudinal Survey–Young Men

The National Longitudinal Survey–Young Men (NLS-YM) is another dataset among the several longitudinal cohort studies conducted by the Bureau of Labor Statistics under the United States Department of Labor between 1966 and 1981 (*11*). The project began with a nationally representative sample of 5,225 American men aged 14 to 24 in 1966 and was discontinued in 1981 when the respondents were 29 to 39 at the time of their last interviews. Respondents were

surveyed annually between 1966 and 1971, and in the subsequent years of 1973, 1975, 1976, 1978, 1980, and 1981. The data have been used to study school and labor market experiences of men during early career, such as their educational attainment and expectations, school-to-work transitions, labor market attachment, and activities related to crime, delinquency, and school discipline. We used data from the years 1966 to 1981 (12 rounds) and applied the sample weight *R0000200* to account for the multistage sampling design. We kept male respondents aged 25 and 65 in every round of the survey.

Individuals were asked to report current or last occupations of themselves and their fathers in each survey year between 1966 and 1969. To make the data comparable with other datasets used in the analysis, we relied on respondents' occupations reported in the last wave of the survey and their fathers' occupations reported in 1966. If father's information was missing in the first wave, occupation in the next available year was used. We merged the NLS-YM data with the occupational percentile rank file generated from the population census data using microclass occupations and birth cohort. Because father's birth year was not asked, we impute missing data in father's birth year using the same imputation method described in the GSS data section. The final analysis included 3,506 cases with valid data from male respondents and their reported fathers from 1966 to 1981.

The data are publicly available and can be downloaded from the NLS website: http://www.nlsinfo.org/investigator/pages/login.jsp.

National Longitudinal Survey of Youth 1979

The National Longitudinal Survey of Youth 1979 (NLSY79) is another longitudinal cohort study conducted by the Bureau of Labor Statistics under the United States Department of Labor (*12*). The project follows the lives of a nationally representative sample of 12,686 respondents born between 1957 and 1964. The respondents were aged 14–22 when first interviewed in 1979

and revisited annually until 1994 and biennially thereafter. We used data from 1979 to 2012 and applied sample weight *R0216100* to account for the multistage sampling design. We restricted our analysis to male respondents aged 25 to 64 in every round of the survey.

Individuals were asked to report their own occupations in each survey year and their fathers' (or stepfathers') occupations in 1978 during the first wave. In order to generate occupational percentile ranks, we calculated individuals' birth years using age records in every round of the survey and converted their occupations reported at the age closest to 40 among all the waves to standardized 1950 occupation codes and then to microclass occupations. Fathers' birth years were directly observed if they coresided with their sons in 1979 or were indirectly reported by their sons if the fathers were still alive in 1987 or 1988. Because the age records were reported multiple times, we converted ages into birth years and calculated the modes of sons' and fathers' birth years. We imputed missing data in father's birth year using the same imputation method described in the GSS data section. The final analysis relied on 4,133 cases with valid data on male respondents and their reported fathers.

The data are publicly available and can be downloaded from the NLS website: http://www.nlsinfo.org/investigator/pages/login.jsp.

National Survey of Families and Households

The National Survey of Families and Households (NSFH) is a nationally representative household survey that was designed to provide information on family life and was conducted in 1987–1988, 1992–1994, and 2001–2002 (*13*). Households were randomly selected from 1,700 selection units that resulted from selecting 17 enumeration districts within each of the 100 primary sampling units. For the first wave of data collection, a primary respondent at least 19 years of age was randomly selected from each household to participate in a personal interview. We used data from Waves 1 to 3 and applied sample weight *WEIGHT* to account for

the multistage sampling design. We kept male primary respondents aged 25 to 64 years old in each wave.

Individuals were asked to report their own occupations in each wave and their fathers' occupations when the respondents were 16 years old. In order to generate occupational percentile ranks, we calculated individuals' birth years using age records in every round of the survey and converted their occupations reported at the age closest to 40 among all the waves to standardized 1950 occupation codes and then to microclass occupations. Father's birth year was asked only if the respondent co-resided with his or her father. We imputed missing values in father's birth year using the same imputation method described in the GSS data section. The final analysis relied on 3,373 cases with valid data on male respondents and their reported fathers.

The data are publicly available and can be downloaded from the NSFH website: http://www.ssc.wisc.edu/nsfh/home2.htm.

Occupational Changes in a Generation I

Occupational Changes in a Generation I (OCG I) is a large-scale survey of U.S. social mobility, implemented as a supplement to the March 1962 Current Population Survey (CPS) (*14*). The target population of OCG I was U.S. males aged 20 to 64 in the civilian, noninstitutional population. We applied a sample weight using *V24* to account for the multistage sampling design (see OCG I codebook Introduction p.3 for a description of the construction of sample weight) and kept only male respondents aged 25 to 64.

Individuals were asked to report their own occupations and their fathers' occupations when the respondents were 16 years old. We converted all occupations to the standardized 1950 occupation codes and then to microclass occupations. Because father's birth year was not asked, we imputed missing data in father's birth year using the same imputation method described in the GSS data section. The final analysis relied on 16,072 cases with valid data on male

respondents and their reported fathers.

The data are publicly available and can be downloaded from the OCG website: http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/6162.

Occupational Changes in a Generation II

Occupational Changes in a Generation II (OCG II) was collected in 1973 as a supplement to the March 1973 Current Population Survey (*14*). It was designed as a strict replication of OCG I, but also incorporated some new questions about social background and career development. The target population of OCG II remained the same as that of OCG I, and the resulting sample represented 95.4% of men aged 20 to 64. We applied the sample weight *V582* to account for the multistage sampling design and kept only male respondents aged 25 to 64.

Individuals were asked to report their own and their fathers' occupations when the respondents were 16 years old. We converted all occupations to the standardized 1950 occupation codes and then to microclass occupations. Because father's birth year was not asked in the OCG II data, we imputed the values using the same imputation method described in the GSS data section. The final analysis relied on 20,349 cases with valid data on male respondents and their reported fathers.

The data are publicly available and can be downloaded from the OCG website: http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/6162.

Panel Study of Income Dynamics

The Panel Study of Income Dynamics (PSID), carried out at the Survey Research Center at the University of Michigan, is a longitudinal panel household survey in the United States (*15*). The survey provides extensive economic, social, and health measures for individuals and their household members over the life course and across generations. Begun in 1968, the PSID

followed over 18,000 household members from roughly 5,000 U.S. families. The study interviewed individuals annually until 1997 and biennially thereafter. All original 1968 PSID respondents and their offspring are considered to carry the PSID "gene" and thus become permanent PSID respondents. Their demographic and socioeconomic information, such as age and occupation, is gathered in each wave of the PSID survey and can be linked across years. The PSID project also provides a "Family Identification Mapping System" (FIMS) tool designed to link family members across generations. The data consist of two distinct samples: SRC (Survey Research Center) is a nationally representative household sample based on a stratified, multistage selection of the civilian noninstitutional population of the United States; SEO (Survey of Economic Opportunity) is a national sample of low-income families with heads under age 60 in 1968. We used data from year 1968 to 2015 in the SRC sample. The final analysis was restricted to male respondents aged 25 to 64.

The occupation variable is asked about for household heads and spouses in all PSID waves. We first harmonized all the occupation variables by converting them to the 1950 census scheme and then chose individuals' occupations measured in the year closest to age 40 as the lifetime occupation. For example, if occupation at age 40 was unavailable, then we looked for ages 41, 39, 42, 38 and so forth. We converted all occupations to the standardized 1950 occupation codes and then to microclass occupations. For individuals whose fathers were not PSID respondents and thus were not directly observed, we relied on the question that asked household heads to report their fathers' occupations in Waves 1997–2015. If fathers' occupations were reported multiple times, we chose the mode of the data values. For missing data on fathers' birth years, we used the same imputation method described in the GSS data section. The final analysis included 5,939 cases with valid data on father-son dyads from years 1968–2015.

The data are publicly available and can be downloaded from the PSID website: https://simba.isr.umich.edu/data/data.aspx.

Survey of Income and Program Participation

The Survey of Income and Program Participation (SIPP), conducted by the United States Census Bureau, is a longitudinal panel survey that is designed to provide income of individuals and households and their participation in income transfer programs (*16*). Other topics include education, occupation, family dynamics, health insurance, childcare, and food security. The SIPP survey design is a continuous series of national panels, with the sample size ranging from approximately 14,000 to 52,000 interviewed households. The original goal was to have all panels participate for a 32-month period (8 waves), with each panel randomly divided into one of four rotation groups. Each rotation group is interviewed in a separate month. Four rotation groups constitute one wave of interviewing. At each interview, respondents provide information covering the four months since the previous interview. The first interview began in October 1983 with the 1984 panel. Subsequent panels began interviews in February of each year. We used data from survey years 1986, 1987, and 1988 because the information about fathers' occupations was collected only in the wave 2 topical module during these years. We applied the sample weight *FNLWGT_5* to account for the multistage sampling design and kept male respondents aged 25 to 64.

Individuals were asked to report their own occupations during each survey year as well as their fathers' occupations when the respondents were 16 years old. We converted all occupations to the standardized 1950 occupation codes and then to microclass occupations. Because father's birth year was not asked in the SIPP surveys, we imputed the values using the same imputation method described in the GSS data section. The final analysis relied on 14,547 cases with valid data on male respondents and their reported fathers.

The data are publicly available and can be downloaded from the SIPP website: http://www.census.gov/sipp/.

Wisconsin Longitudinal Study

The Wisconsin Longitudinal Study (WLS) is a longitudinal survey that has been conducted by the Department of Sociology at the University of Wisconsin–Madison since 1957 (*17*). The survey, which is based on a 1/3 random sample of all Wisconsin high school graduates in 1957 born between 1938 and 1940, includes a total of 10,317 male and female respondents. Nearly every student in his or her final year of high school completed the original survey, from whom a random 1/3 sample was drawn for the subsequent surveys. Survey data were collected from the original respondents or their parents in 1957, 1964, 1975, 1992, 2004, and 2011; from a selected sibling in 1977, 1994, 2005, and 2011; from the spouse of the original respondent in 2004; and from the spouse of the selected sibling in 2006. We used data from 1957 to 2011 and kept only male respondents aged 25 to 64 in each wave. The sample weight for all the cases was 1.

The final WLS dataset consists of two samples. The first sample includes father-son dyads constructed from the original survey respondents and their fathers. Respondents were asked to report their fathers' occupations in the year 1957 in the 1964 wave and their own occupations in each survey year. We first harmonized all the occupation variables by converting them to the 1950 census scheme and then chose individuals' occupations measured in the year closest to age 40 as the lifetime occupation. Both WLS original respondents and their selected siblings were asked to report their fathers' birth years in the waves conducted during 1992–1994. For missing data on fathers' birth years, we used the same imputation method described in the GSS data section. The second sample included father-son dyads constructed from WLS respondents and one of their sons. Individuals were asked to report the birth year and occupation of a selected child in Wave 2003-05. Instead of using respondents' occupations at approximately 40 years of age, we used the mode value of occupations reported by WLS respondents. This guaranteed

that the construction of intergenerational samples from the WLS would be consistent with that in the PSID. The final analysis included 4,997 cases with valid data on male respondents and their reported fathers from years 1957 to 2011.

The data are publicly available and can be downloaded from the WLS website: http://www.ssc.wisc.edu/wlsresearch/.

S2 Linking Algorithm and Sample Construction

Linked Historical Census Data, 1850–1940

To create a historical sample before 1910, the linking procedure began with a sample of sons residing with a father in the full-count 1850 U.S. Population Census. The occupation information for these children was obtained by linking them to the full-count 1880 U.S. Population Census. This procedure was repeated for the 1880 and 1910 censuses to create another intergenerational sample as well as for the 1910 and 1940 censuses. Demographic characteristics, including first and last name, age, birthplace, and both parents' birthplaces were used to link records across censuses. Each individual's own birthplace and the birthplaces of both parents were required to match exactly, but a difference of up to three years in anticipated age across census observations was allowed. For names, the linking method required that phonetic codes for first and last name match exactly, keeping the potential match with the closest name distance, as measured by the SAS SPEDIS function. The detailed linking algorithm is described in Online Appendix 2 for Long and Ferrie (*5*).

Linked Contemporary Administrative Data, 1940–2015

We used the complete count 1940 Population Census, the 1973–1990 CPS ASEC, the 2000 Census Long Form, and the 2001–2015 ACS to link families from 1940 to 2015. The linkages

across these data were conducted at the Census Bureau's Center for Administrative Records and Research (CARRA) as part of a collaborative project known as the Census Longitudinal Infrastructure Project (CLIP). The Census Bureau's unique linkage system employs Protected Identification Keys (PIK) to link individuals across data sources. PIKs are assigned by the Person Identification Validation System (PVS), which is a probabilistic matching algorithm that compares characteristics of records in census and survey data to characteristics of records in a reference file constructed from the Social Security Administration (SSA) NUMIDENT file and other administrative data. These variables include Social Security Numbers (SSN), full name, date of birth, address, and parents' names depending on the available information in the data. Each PIK uniquely identifies a particular person, thus allowing us to find individuals across multiple PIKed data sources. The linking procedure based on PIKs was similar to that based on social and demographic characteristics used in the historical censuses. Details on the data linking procedures, representativeness, and potential biases have been well documented in Ferrie, Massey, Rothbaum (*18*) and Massey et al. (*8*).

The PIKing process within CARRA facilitates record linkage as well as deduplication and validation within the Census Bureau (*19*). CARRA uses the PVS to assign these PIKs, which compares each record in a census or survey to records in a reference file. Only census and survey records that sufficiently match a record in the reference file are assigned a PIK. This reference file is composed largely of the Social Security Administration (SSA) Numident file. It also includes other information, such as street address, from IRS 1040 records. For each observation, we observed every recorded name and date of birth associated with the record, allowing us to link women before and after marriage and to link on nicknames. Combined, the reference file contains over 500 million observations.

The PVS follows the typical record linkage procedures of preprocessing, sorting and blocking, identification and scoring of matches, and resolution of matches. In the preprocessing

stage, variables in the input file (e.g., a census or survey) are formatted to match the matching fields available in the reference file (e.g., coding a sex dummy variable as "Male" or "Female"). Because the reference file (and census it is being compared to) are large, the PVS next breaks the data into smaller, easier-to-handle chunks (*20*). PVS employs multiple blocking schemes, which are referred to as "Modules" (*19*). Within each block, the PVS creates the Cartesian product of all records in the census and the reference file that were sorted into that block and produces a score of the similarity between each pair of records. In the final step, the scored potential matches are sorted by match score and only the highest scoring match for each input record is kept as a match. Once a match is established, the PVS assigns the PIK associated with the reference record to the input record.

Once the data are preprocessed, they are processed through various modules (or blocking schemes)*. The PVS employs multiple modules, each blocking on a different type of variable (e.g., geographic variable, name, birthdate, etc.) and becoming more refined over time (e.g., the first may block on the first three digits of a zip code, then the next blocks on all five). The PVS finds and scores matches within each module in a cascading fashion, as a record not matched in the first module is sent to the following modules until a link is found or the record remains unmatched throughout all records. Links are found with replacements from the reference file, which may result in the same PIK being assigned to multiple input records. These records were dropped from our analysis.

To assign the match score within a module, the PVS compares both numerical and string variables across the two files. Comparison of numerical variables (such as year) is done by allowing a maximum absolute difference between the input and reference values, with a prorated value assigned for differences falling between zero and the user-specified maximum (typically

*Here, a block is created by sorting the data on certain characteristics (e.g., date of birth) and the records falling into each block have identical values for the characteristic sorted on. For example, if you are creating blocks on initials, you would have 676 blocks for A-A, A-B,..., Z-Z combinations of the first letter of the first and last name.

a value of 2 or less for age or year of birth). The PVS uses a string comparator program to measure Jaro-Winkler similarities between string variables (such as name and place of birth). The Jaro-Winkler score employed by the PVS is a measure of similarity on a scale of 0 (no similarity) to 1 (exact match) that allows for some variability in spelling. Once each individual numeric and string variable comparison is scored, the PVS sums the scores over each matching variable to obtain a single score for the potential match.

In the final step, the PVS sorts the potential matches by score and chooses the highest scoring match (falling above a user-specified minimum threshold) as the final match. The PIK of the highest scoring match is then assigned to the input record. The PVS does not assign a PIK if two potential matches with an identical score are identified for a particular record in a module. Unmatched records in one module are sent to be processed by the following module.

Each PVS module employs multiple blocks. At the time of our writing this paper, these modules include the Verification module (blocking on SSN), the Geosearch module (blocking on zip code), the Namesearch module (blocks on first letters of first and last names), the Date of Birth module (blocks on month and day of birth), the ZIP3 Adjacency module (block on clusters of zip-3 areas that border each other), and the Household Composition module (uses information from PIKed household members to refine the search). Not every dataset is processed through the same set of modules, and the combination of modules employed is tailored to each individual input dataset and the information it contains (e.g., only datasets with SSNs are processed by the Verification module).

The 2000 Census and the 2001–2015 American Community Surveys (ACS) were formally processed by CARRA through the PVS. Assignment of these PIKs is discussed in more detail in Wagner and Layne (*19*) and relied on full name (first, last, and middle), full date of birth (month, day, and year), and street address. Massey et al. (*8*) assigned PIKs to the 1940 Census and the 1973–1990 Current Population Surveys (CPS) Annual Social and Economic Supplements

(ASEC) using a modified version of the PVS that was tailored to the variables contained within each file. The altered PVS is referred to as the Adaptable Record Matching System (ARMS).

The 1940 Census was the first historical census that contained individuals young enough to be linked to contemporary data files. In order to assign PIKs to the 1940 file, Massey et al. (*8*) created the ARMS to account for personally identifiable information contained in the 1940 Census that are not traditionally used to assign PIKs (such as place of birth). The ARMS PIKing process for 1940 used first name, middle initial, last name, birthplace and age to assign PIKs from the reference file to the 1940 Census. Birthplace in the Numident was coded to match the five-digit IPUMS birthplace (BPL) codes provided in the 1940 Census and accounted for both territories and changes in country names over time. In order match on age, Massey et al. calculated age on April 1, 1940 in the reference file using full date of birth and compared this to reported age in the 1940 Census allowing a two-year band around age.

The ARMS employed six customized modules to PIK the 1940 Census. The first ARMS module blocked on the first three digits of the IPUMS birthplace code. Records failing to find a match in the first module were then sorted into blocks based on age on April 1, 1940. Next, the ARMS blocked on the first letter of the first and last name. The following two modules used location in 1940 and 1935 observed in the 1940 Census and compared them to locations implied by the first digits of a Social Security Number (SSN), which corresponds to the state where the SSN was issued. For these modules, we required that age at time of issuance was within two years of age in 1940 and 1935. The final module used city of birth information in the Numident aggregated up to county and compared this to county observed in 1940 for children under two years of age.

The ARMS was also used to PIK the 1973, 1979, and the 1981–1990 CPS. Adaptations for these CPS data included matching on SSN, first name, middle initial, last name, age or full date of birth, and sex. The ARMS was able to employ SSNs for many of the records over the age

of 15. For records under the age of 15 without an SSN, the ARMS used an additional step to attempt to increase the matches for children. This step involved first matching parents using SSN and other identifying information and then ascribing their names from the reference file to their input records. Using relationship to the household head, the ARMS was able to use names of the parents as additional linkage keys to the reference file (as the Numident includes parent's names). For the 1986–1990 CPS files, which did not contain first or last name, the ARMS essentially merged the CPS to the Numident using SSN and compared other variables to confirm a match. Specifically, if sex and age agreed conditional on SSN agreement, the ARMS assigned the PIK to a CPS record.

Bias in Linked Samples

Historical data linkage methods may introduce measurement error, which could result in mobility estimates that overstate mobility within a population. For example, historical record linkage techniques are more successful with more unique names. If families with more unique names are more likely to be mobile, then the linked sample could overstate mobility. Indeed, Clark (*21*) finds that surnames of the elite class have been in decline due to lower fertility rates. Furthermore, it is possible to link the wrong son to a father. If this source of measurement error is classical in nature, it would also result in estimates that imply more mobility than is actually present. However, we do not believe the techniques used to produce our 1830–1880 cohorts results in biased results.

Bailey et al. (*22*) show that using Ferrie's (*23*) matching method results in little to no bias in mobility estimates relative to a carefully-produced and vetted hand-linked sample of Ohio (born 1909–1920) and North Carolina (1915–1919) birth certificates linked to the 1940 Census. This suggests that Ferrie's record linkage method does not result in mobility estimates attenuated by measurement error. This study also shows that this method may produce samples that are not

entirely representative of the population (*22*). Despite producing non-representative samples, Bailey et al. (*22*) show that the mobility estimates produced by Ferrie's method are statistically the same as those calculated by reweighting the sample to be representative of the populating using inverse-propensity scores, suggesting selection into the sample is not a source of bias. Therefore, we believe our statements that mobility has decreased in 1830 are accurate.

Similarly, Ferrie et al. (*18*) use the 1940 data linked to the CPS and the CPS data linked to the ACS and 2000 Census used in this paper. They find that propensity score weighting to correct for sample selection reduces parent-child intergenerational elasticity estimates for the 1940 to CPS population, but does not change the estimates for the CPS-ACS/Census linked sample. This suggests the presence of more selection in the earlier cohorts in our study from the 1940 to CPS linkages.

S3 Occupation Variable Definitions

We used the occupation variable OCC1950 in the IPUMS USA Census/ACS data. All occupations were coded into the 1950 Census Bureau occupational classification. The documentation of the 1950 classification can be found in "Integrated Occupation and Industry Codes and Occupational Standing Variables in the IPUMS" (https://usa.ipums.org/usa/chapter4/chapter4.shtml) and the "Alphabetic Index of Occupations and Industries: 1950" (https://usa.ipums.org/usa/resources/volii/Occupations1950.pdf). The original 1950 occupational classification consists of 283 occupational categories, but occupations with codes above 970 are excluded from our analysis, including the following:

979 Not yet classified
980 Keeps house/housekeeping at home/housewife
981 Imputed keeping house (1850–1900)
982 Helping at home/helps parents/housework
983 At school/student

984 Retired
985 Unemployed/without occupation
986 Invalid/disabled w/ no occupation reported
987 Inmate
990 New worker
991 Gentleman/lady/at leisure
995 Other nonoccupational
997 Occupation missing/unknown
999 N/A (blank)

The occupational measures used in the final analysis were generated by means of the following steps. We first mapped the OCC1950 to OCC1960 using the crosswalk file "occ1950_xwalk.xlsx" and then mapped OCC1960 to the microclass occupational scheme for the United States used in Jonsson et al. (*24*). See the word file "MASTER MC CODING TABLE US & Japan2.doc" or the excel file "USJapan.xlsx." For microclass occupations that required special coding, such as additional information about self-employment status (class of worker), we dropped these categories because of the limited information collected in the historical census data [†]. Specifically, we excluded individuals coded as 9999, occupation not reported. We then dropped several occupations, 1301 Systems analysts and programmers, 2001 Proprietors, 4202 Chemical processors, and 1314 Nursery school teachers and aide, because we were unable to identify workers in these occupations based on the crude information of OCC1950. We coded individuals who potentially worked in these occupations into other related occupations. We then collapsed microclass occupations that were not consistently observed in all census years from 1850 to 2015 with other closely related occupations. Specifically, we grouped 1105 Statistical and social scientists into 1104 Natural scientists; 1302 Aircraft pilots and navigators into 1308 Professional, technical, and related workers, n.e.c.; 1303 Personnel and labor relations workers into 1308 Professional,

[†]For example, the class of workers was not available until the 1910 census. The industry and the class of worker variables were not available in some of the social surveys used in the analysis.

technical, and related workers, n.e.c.; 1309 Social and welfare workers into 1308 Professional, technical, and related workers, n.e.c.; 4106 Electricians into 4103 Electronics service and repair workers; 4108 vehicle mechanics into 4111 Other mechanics; 4120 Heavy machine operators into 4201 Truck drivers; 4204 Longshoremen and freight handlers into 4209 Operatives and kindred workers, n.e.c.; and 4205 Food processors into 4209 Operatives and kindred workers, n.e.c. Finally, we created a crosswalk file that mapped OCC1950 to 70 microclass categories detailed enough to capture heterogeneity among occupations and generate continuous occupational percentiles while also containing enough cases within each census year for a historical comparison. Not all the OCC1950 occupations were consistently observed across all census years. Among the original 268 valid OCC1950 occupations, only 125 were observed in all years. Yet some of these occupations are too small and contain no observations in 1% or 5% Census samples or in ACS during some years. We created a crosswalk file that mapped OCC1950 to 70 microclass categories detailed enough to capture heterogeneity among occupations and generate continuous occupational percentiles while also containing enough cases within each census year for a historical comparison. The availability of the OCC1950 occupations is summarized in the file "occ1950_codes_availability.xlsx." The crosswalk file is shown in Table S2.

We provide a crude picture of the changing American occupational structure over time in Tables S3-S5. Given that our main analysis focused on birth cohort, we restricted the sample to men and women aged 25 to 64 in each census year and defined individuals' birth cohort by a 10-year interval based on the midpoint year. For example, birth cohort 1790 refers to workers who were born between 1786 and 1795. Table S3 summarizes the composition of birth cohort in each census dataset. We pooled all the census data sources and show the microclass occupational distributions by birth cohort in Tables S4 and S5.

S4 The Construction of Occupational Percentile Ranks

We propose a method that converts discrete measures of occupations into percentile ranks. Unlike education or income, the status of occupation is more difficult to measure because occupational categories lack an intrinsic metric to occupational categories[§]. To generate ordered occupations, Otis Dudley Duncan developed a "socioeconomic index of occupations"—now known as "Duncan SEI score"—that has been widely used in the literature and is available in the IPUMS U.S. census data. Duncan used prestige ratings (from the 1947 National Opinion Research Center study) as a way of getting weights for education and income and created a predicted SEI score for each occupation in the 1950 census (*28*). We devised a new occupational ranking procedure that is closely related to Duncan's method but can be used to analyze occupations in both historical and contemporary censuses. The method proceeds in six steps.

First, we create a population-based occupational database aggregated by birth cohort, occupation, and education. Specifically, we draw on data from the IPUMS population censuses and the ACS from 1850 to 2015 and restrict the data to workers aged 25 to 64. All the occupational variables in the IPUMS data have been coded into the 1950 census occupation categories. The data are grouped by birth cohort because occupational percentile ranks are assumed to vary over cohorts. For example, the occupational status of telephone operators would be higher in the 1900 birth cohort than in the 1970 cohort, as the telephone was still considered a new technology in the early 20th century.

Second, we harmonize occupational measures across years using a revised Grusky et al.'s microclass occupational scheme (*24, 30, 31*). Table S2 describes the method that maps the 269 categories of 1950 occupations into the 70 categories of microclass occupations. This mapping step results in a dataset that contains 1,400 observations, each of which refers to a microclass

[§]Previous studies have devised several well-known and widely used techniques to rank occupations, including scales of occupational prestige (e.g., (*25–27*) and occupational socioeconomic status (*28, 29*)).

occupation for a certain birth cohort that falls within the range of 1790 to 1980. Other variables in the dataset include the number of workers within each occupation and the number of persons with varying levels of education (0, 1-8, 9-10, 11, 12, 13-15, 16 and more years of schooling). The detailed education variable was not available until the 1940 census. For years prior to 1940, we generate occupations' literacy scores from a dichotomous variable (0 = illiterate; 1 = literate, can both read and write).

Third, we create occupational status based on the educational distribution within each occupation. For occupation i, its status score is

$$S_{it} = \Sigma_x p(x|i,t) \cdot Q_t(r^x) \tag{4.1}$$

where $p(x|i,t)$ is the proportion of educational level x in occupation i and birth cohort t; $Q_t(r^x)$ is the percentile rank of educational level x in birth cohort t. For example, assume we have four educational groups that are ranked from 1 (low) to high (4) and vary in size from 40, 30, 20, to 10 in a general population that contains 100 individuals in total. The percentile rank of group 4 is 95; namely, the midpoint of the 90$^{\text{th}}$ percentile and the 100$^{\text{th}}$ percentile because of tied values within this educational group. Likewise, the percentile ranks of groups 1, 2, and 3 would be 20, 55, and 80. Assume that for a specific occupation i, the proportions of educational groups from 1 to 4 are 0.1, 0.35, 0.3, and 0.25, respectively. Thus, this occupation's status score is 69 $(= 0.1 * 20 + 0.35 * 55 + 0.3 * 80 + 0.25 * 95)$.

Overall, an occupation with more college-educated workers would have a higher status than an occupation with fewer college-educated workers, all other things being equal. However, because of the expansion of higher education, the status of the college-educated group per se has also evolved. An occupation with 20 percent college-educated workers in 1940 would have a higher status than an occupation with the same proportion of college-educated workers in 2000, all other things being equal. In other words, the relative percentile ranks of different educational

groups have also changed over time because of the evolution of educational distributions.

Fourth, we rank microclass occupations from 1 to 70 by their status scores, S_{it}, given birth cohort. Because this rank is similar to Treiman's (*27*) international socioeconomic index of occupational status, we refer to it as "Treiman's rank" in the following sections. Table S6 shows correlations in Treiman's ranks across birth cohorts (the lower triangular part of the table) and correlations in percentile ranks across birth cohorts (the upper triangular part of the table).

Fifth, we convert Treiman's rank into percentiles from 0 (lowest) to 100 (highest), after accounting for variations in sizes among occupations and over birth cohorts. The percentile ranks are less stable over time, compared to the Treiman's ranks, because the former capture changes in the size of occupations. If an occupation doubles in size without changes in the educational composition and thus increases its share in the overall population, then the status of this occupation would decrease because more workers would be tied in their statuses.

We use the moving average method to smooth out fluctuations caused by small Ns. The adjusted percentile for the birth cohort t is

$$\text{pcrank\_adj}[t] = 0.25 * \text{pcrank}[t\text{-}1] + 0.5 * \text{pcrank}[t] + 0.25 * \text{pcrank}[t\text{+}1]$$

For birth cohorts at the two ends, when pcrank[t-1] or pcrank[t+1] is missing, we use

$$\text{pcrank\_adj}[t] = 0.25 * \text{pcrank}[t\text{-}1] + 0.75 * \text{pcrank}[t]$$

and

$$\text{pcrank\_adj}[t] = 0.75 * \text{pcrank}[t] + 0.25 * \text{pcrank}[t\text{+}1]$$

Table S7 shows the top 10 and bottom 10 occupations in percentile ranks. Table S8 shows the top 10 occupations that have experienced the most changes in size over time.

Sixth, we link occupational percentiles generated from the population data to the individual-level mobility table, based on father's and son's birth cohorts and occupations.

S5 Changes in Occupational Percentile Ranks, Educational Profiles of Occupations, and Occupational Sizes

Figure S1 provides an overview of changes in occupational percentile ranks for all the 70 micro-class occupations. Overall, most occupations have experienced a long-term decline in percentile ranks. Only a few occupations, mostly in classical professions, such as jurists, health professionals, professors, scientists, architects, accountants, journalists, and engineers have remained constant in their ranks. Occupational statuses of farmers, fishermen, farm laborers and launderers have been consistently low over time. Most occupations have been affected by the expansion of higher education (see Figures S2 and S3). Some occupations have experienced substantial decline in percentile ranks because of the expansion of the managerial, business, and service sectors (Figures S4 and S5). Measures of detailed educational categories were not available until the 1940 IPUMS census. Workers were only asked to report whether they could write or read before 1940. We thus use the proportion of literacy (i.e., workers who could both read and write) to estimate the occupational status score in equation (4.1). Although educational measures are different before and after 1940, percentile ranks measured by literacy rates and detailed levels of education yield very similar results for cohorts that were observed in multiple census years and have both measures available (i.e., cohorts born between 1880 and 1910). The sensitivity analysis for potential measurement errors caused by the switch from literacy to educational attainment measures is shown in Figure S6. The gaps in percentile ranks measured by these two education variables are minimal for most occupations. For all the analyses in this paper, we prefer estimates of occupational percentile ranks from educational attainment to those from literacy when both are available.

S6 Robustness Checks on Intergenerational Mobility Regression Results

Figure 2 presents the intergenerational occupational rank-rank correlations over the birth cohorts of sons from 1830 to 1980. We further restricted the estimations to the nonagricultural population in Figure 3. Below, we conduct robustness checks using both rank-rank coefficients (unstandardized regression coefficients) and rank-rank correlations (standardized regression coefficients). Table S10 shows the results over the birth cohorts of sons. Numbers in the columns for rank-rank correlations are the same as those plotted in Figures 2 and 3. Numbers in the columns for rank-rank coefficients show a largely consistent trend with that from the correlation results, suggesting that the parent-offspring association in occupational ranks has increased from 1820 to 1870 and remained largely stable during the 20th century. Results from the nonagricultural population show that after excluding the intergenerational mobility from farm to nonfarm occupations, parent-offspring associations in terms of rank-rank coefficient or correlations become more stable over time compared to the full population results. The correlations for the full population and the nonagricultural population vary between 0.17 and 0.32 and between 0.22 and 0.31, respectively. These point estimates suggest particularly high levels of intergenerational correlations for 1870 and 1880 birth cohorts and the recent 1980 cohort. However, evidence for recent cohorts is far from conclusive due to uncertainty indicated by the wide 95% confidence intervals of these estimates.

The 1950 birth cohort (sons born between 1946 and 1955) is missing because these individuals were not observed during their childhoods in either the linked historical censuses or the contemporary linked CPS-Census/ACS data, which would be necessary to make the father-son link. However, this problem would not affect estimates using fathers' birth cohorts because sons in the 1950 cohort were born to fathers at different ages. We repeated the analyses using

father's birth cohort and present the results in Table S11 and Figure S7. The results are largely consistent with those in Table S10. For the full population, the rank-rank correlations have increased from 0.16 for the 1790 birth cohort to 0.28 for the 1880 birth cohort and changed little afterward. For the nonagricultural population, the rank-rank correlations show a remarkably high continuity over time, fluctuating between 0.23 and 0.31 over 17 birth cohorts at 10-year intervals from 1790 to 1950. The results confirm our conclusion in the main analysis in Figure 3 that the pattern of intergenerational mobility net of structural changes in the agricultural sector is largely constant across time.

S7 Robustness Checks on Intergenerational Absolute Mobility

We present results on absolute mobility in Figure 4 based on the definition of the proportion of offspring whose occupational absolute ranks (a score varied from 0 to 100) are 7.5 points different from those of their parents. Because a large proportion of upward mobility was driven by the mobility of children of farmers, we excluded the farming population and focused on the mobility of nonfarm-origin adults. We chose 7.5 points as a threshold to provide more conservative estimates of absolute mobility, which may be sensitive to measurement errors in occupational ranks of fathers or sons, or both. In this section, we show robustness of the results to different measures of absolute mobility.

Figure S8 plots trends in intergenerational immobility over sons' birth cohorts for both the nonfarm origin sample and the full sample. Immobility is defined as the proportion of sons who stayed in the same micro-class occupations as their fathers. The immobility rates for the nonfarm origin sample are lower than those presented in Figure 4B because occupational misspecification or uncertainty in measurement is not considered in the sensitivity analysis. In Figure S8, the blue line suggests that immobility rates have declined from about 20 percent in

the 1830 birth cohort to 11 percent in the 1980 cohort. By contrast, the rates have changed from 40 percent to 25 percent during the same period in Figure 4B. The absolute levels of the immobility rates depend on our definitions, but the patterns of results are similar in Figures 4B and S8. When farm-origin sons are included into the analysis, the decline of immobility rates is even more substantial, as suggested by the yellow line in Figure S8.

Figure S9 shows results based on another definition of absolute mobility that is similar to the one used in Hout (*32*). Instead of measuring occupational status of fathers and sons in their own cohorts, we chose birth cohort 1980 as an anchor and converted the occupational statuses of all birth cohorts to the statuses in 1980. Thus, if fathers and sons belonged to the same occupational class, they received the same occupational status score. In other words, this measure does not take into account changes in occupational statuses over time, such as the declining status of telephone operators, due to economic, technological, and cultural changes within the U.S. and around the globe. Despite a different definition of mobility from that in Figure 4, the two figures still show similar results, suggesting that trends in absolute mobility are very robust to measures of occupational status. Overall, the disparity between upward and downward mobility changes little before 1940. For most birth cohorts, upward mobility rates are significantly higher than downward mobility rates. The two trends started to reverse in 1940, caused by a dramatic decline in upward mobility and an increase in downward mobility opportunities. The recent trends after 1940 are consistent with those reported in Chetty et al. (*33*).

Using the same definition of absolute mobility in our main analysis (shown in Figure 4), we further examine trends in absolute mobility by broad occupational groups. Figure S10 shows trends among ten meso-class occupations of fathers. For occupations in classical professions, such as jurists, health professionals, and professors and instructors, sons of fathers in these occupations experience very little upward mobility because these occupations are already ranked at the top. Likewise, sons of farmers and farm laborers experience very little downward mo-

bility. The recent convergence of upward and downward mobility shown in Figure 4 is mostly driven by the mobility of sons from fathers who were in sales, clerical, and service occupations. Figure 11 further shows that immobility rates have remained stable for almost all occupations since the 1940 birth cohorts. For earlier birth cohorts, those with sales fathers became more likely to stay in the same occupations as their fathers over time, whereas those with farmer or lower manual fathers became less likely to inherit their fathers' occupations.

S8 Alternative Modelling Strategies

A key assumption made in our previous analyses was that occupational categories are strictly rank ordered from low to high percentile ranks. We relax this assumption in this section using two common methods for analyzing categorical data in contingency tables: (1) Altham index; and (2) loglinear models. To facilitate the computation in the loglinear analysis, we collapse the 70 microclass occupational categories into 10 mesoclass groups, including Classical professions; Managers and officials; Other professions; Sales; Clericals; Crafts; Lower manual; Service workers; Farmers, fisherman, and other primary; and Members of armed forces[¶]. For the analysis of Altham index, we follow the strategy taken in Long and Ferrie (*5*) by grouping occupations into four categories: White collar; Farmer; Skilled/semiskilled; and Unskilled.

S8.1 Altham Index

The Altham index is a global measure of the association difference between mobility tables across two periods based on log odds ratios (*34, 35*).

For two tables, the Altham index measures how far the association between rows and

[¶]Specifically, we combine microclasses 1101-1109 to 1 "Classical professions"; 1201-1204 to 2 "Managers and officials"; 1301-1314 to 3 "Other professions"; 3101-3105 to 4 "Sales"; 3201-3204 to 5 "Clericals"; 4101-4120 to 6 "Crafts"; 4201-4210 to 7 "Lower manual"; 4301-4312 to 8 "Service workers"; 5101-5201 to 9 "Farmers, fisherman, and other primary"; and 9990 to 10 "Members of armed forces." The crosswalk rules are defined in Jonsson et al. (*24*).

columns in Table $\mathbf{P}$ departs from that in Table $\mathbf{Q}$. Specifically, Altham (*34*) suggested a summary measure of association as the sum of the squares of the differences between the logs of the cross-product ratios in Tables $\mathbf{P}$ and $\mathbf{Q}$.

$$d(\mathbf{P},\mathbf{Q}) = \left[\sum_{i=1}^{r}\sum_{j=1}^{s}\sum_{l=1}^{r}\sum_{m=1}^{s}\left|\log\left(\frac{p_{ij}p_{lm}q_{im}q_{lj}}{p_{im}p_{lj}q_{ij}q_{lm}}\right)\right|^2\right]^{1/2}$$

This is equivalent to estimate $4rs$ times the residual sum of squares in a two-way ANOVA, with $\theta_{ij} = \log(p_{ij}) - \log(q_{ij})$:

$$d(\mathbf{P},\mathbf{Q}) = \left[4rs\left(\sum_{i=1}^{r}\sum_{j=1}^{s}\theta_{ij}^2 - \sum_{i=1}^{r}\frac{\theta_{i\cdot}^2}{s} - \sum_{j=1}^{s}\frac{\theta_{\cdot j}^2}{s} + \frac{\theta_{\cdot\cdot}^2}{rs}\right)\right]^{1/2}$$

To test whether the association between rows and columns is the same between Tables $\mathbf{P}$ and $\mathbf{Q}$ (null hypothesis), we can rely on a three-way table, in which the row indicates father's occupation, column indicates son's occupation, and the layer indicates whether the frequencies refer to Tables $\mathbf{P}$ or $\mathbf{Q}$. The null hypothesis suggests that there is no three-way interaction between rows, columns, and layers in the three-way table. Previous research has relied on a simple likelihood-ratio χ^2 statistic G^2, also known as the deviance, with $(r-1)(s-1)$ degrees of freedom to test the null hypothesis. Because the χ^2 statistic does not indicate whether the association is stronger in $\mathbf{P}$ or $\mathbf{Q}$, a common practice is to compare $d(\mathbf{P},\mathbf{J})$ and $d(\mathbf{Q},\mathbf{J})$, in which $\mathbf{J}$ is a table with all elements of one (a table of independence). If $d(\mathbf{P},\mathbf{J}) > d(\mathbf{Q},\mathbf{J})$, we conclude that mobility is greater in Table $\mathbf{Q}$.

We calculated a series of Altham statistics by comparing cohort 1830 ($\mathbf{Q}$) with cohorts 1840–1910 ($\mathbf{P}$) for the historical data. For the contemporary survey data, we chose year 1910 as the reference group ($\mathbf{Q}$) and compared mobility in 1910 with other cohorts from 1920 to 1980 ($\mathbf{Q}$). The results are shown in Table S12.

S8.2 Loglinear Models

We replicate the analyses using loglinear models for mobility tables. Loglinear models are designed to demonstrate how the two-way association between the row variable, often the father's occupation and abbreviated as O (origin), and the column variable, often the son's occupation and abbreviated as D (destination) may vary by the third layer variable, namely cohort in our case and abbreviated as T. Let F_{ijk} denote the expected number of observations in the i^{th} row, j^{th} column, and the k^{th} layer. The saturated loglinear model can be written as

$$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}\tau_{ij}^{OD}\tau_{ijk}^{ODT}$$

where τ refers to the grand mean parameter; τ_i^O, τ_j^D, and τ_k^T refer to the marginal effects of O (row), D (column), and T (layer), respectively; τ_{ik}^{OT}, τ_{jk}^{DT}, and τ_{ij}^{OD} refer to the two-way interactions between O and T, D and T, and O and D; and τ_{ijk}^{ODT} refers to the three-way interaction among O, D, and T. The saturated model tells us nothing about the trends in mobility. Previous research has developed various models to simplify the saturated model and find the model with specific trend patterns that summarizes information in the data with fewer but more interpretable parameters.

We introduce two such models below. First, the quasi-perfect mobility model includes all two-way interactions, but simplifies the two-way interaction between O and D by using a special design matrix $\mathbf{Q}$, which assumes that father-son associations are the same across different occupations except when fathers and sons are in the same occupation. Specifically,

$$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}\tau_{ij}^{OD}$$

Instead of using a distinct parameter, τ_{ij}^{OD}, to estimate the association between fathers in occupation i and sons in occupation j, we assume that $\tau_{ij}^{OD} = \tau_{i'j}^{OD}$ (or $\tau_{ij}^{OD} = \tau_{ij'}^{OD}$) except

when $i = j$. Further, we can assume that the $\mathbf{Q}$ matrix can vary across time so that each birth cohort has its own $\mathbf{Q}$ matrix.

Second, the "unidiff" model proposed by Xie (*36*) is another model that has been widely used to reveal mobility patterns across time or countries. The model takes the following form:

$$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}exp\big(\psi_{ij}\phi_k\big)$$

where the origin-destination association parameter ψ_{ij} is assumed to be constant across birth cohorts, and the research focus is to compare odds ratios across cohorts using the ϕ_k parameter. The parameter ϕ_k is normalized so that $\sum \phi_k^2 = 1$. According to Xie (*36*), "a ϕ_k larger than average means that the origin-destination association for the k^{th} table is greater than average if the sign of ψ_{ij} is in the direction of a positive association."

We estimated loglinear models separately for the historical data and the contemporary data. The model goodness of fit shown in Table S13 suggests that the UNIDIFF model provides a better fit of the data than other models that assume either independence of parent and offspring (model *NA*) or homogeneous parent-offspring associations over time (Model *FIo*).

S9 Non-Linear Intergenerational Rank-Rank Correlations

In our main analysis, we rely on a linear model to estimate the rank-rank association between parents and offspring, assuming that the correlation is a constant within a given cohort. Yet, models based on the linearity assumption may not adequately capture the parent-offspring relationship across different levels of the occupational hierarchy. It is likely that the association may be stronger among some occupations than others. Similar findings have been shown in a few studies using intergenerational income elasticity. For example, Bratsberg et al. (*37*) show that the association between log earnings of fathers and sons is lower among the poorest and moderately poor households than among the middle and wealthiest ones in Denmark, Finland,

and Norway, whereas the association is almost linear in the U.S. and U.K. By contrast, Landersø and Heckman (*38*) show that nonlinearity in intergenerational elasticity exists in both Denmark and the U.S., depending on a specific income measure being used.

We account for non-linearity in the rank-rank correlation using the local linear regression described in Landersø and Heckman (*38*). Specifically, we estimate the nonlinear rank-rank correlation at each value of father's occupational percentile rank, denoted as $\beta[Y_o^f]$ by solving the minimization problem given by

$$\min_{\alpha[Y_o^f],\beta[Y_o^f]} \sum_{i=1}^{n} K(Y_o^f, Y_o^s, h)\{Y_t^S - \alpha[Y_o^f] - \beta[Y_o^f]Y_i^f\}^2$$

where $K(Y_o^f, Y_o^s, h)$ refers to an Epanechikov kernel with bandwidth, h. The kernel function assigns weights to observations Y_i^f based on the difference between Y_i^f and Y_o^f and the bandwidth. The intercept, $\alpha[Y_o^f]$, and the slope, $\beta[Y_o^f]$, are similar to those in ordinary least square regressions, except that the interpretations are slightly different. The intercept, $\alpha[Y_o^f]$, refers to the conditional mean at a specific value of Y_o^f, whereas the slope, $\beta[Y_o^f]$, refers to the derivative of the mean function with respect to Y_o^f. The results are presented in Figure S12 for each birth cohort of sons.

S10 An Alternative Measure of Nonparametric Mobility

Following the conventional approach that analyzes income strata based on quintiles or other percentile-based measures, we assign individuals into five occupational quintile groups and construct the mobility tables of fathers and sons for each birth cohort of sons. The mobility tables, also known as transition matrices, are shown in Table S15. Each cell shows the percentage of children in a birth cohort who reached a certain quintile of the occupational distribution given parents in the quintile specified in the column. The probability that a child will reach the

top fifth of the occupational distribution, is often used as a measure of upward mobility (*39, 40*). These probabilities for children of different family origins are shown in Figure S13.

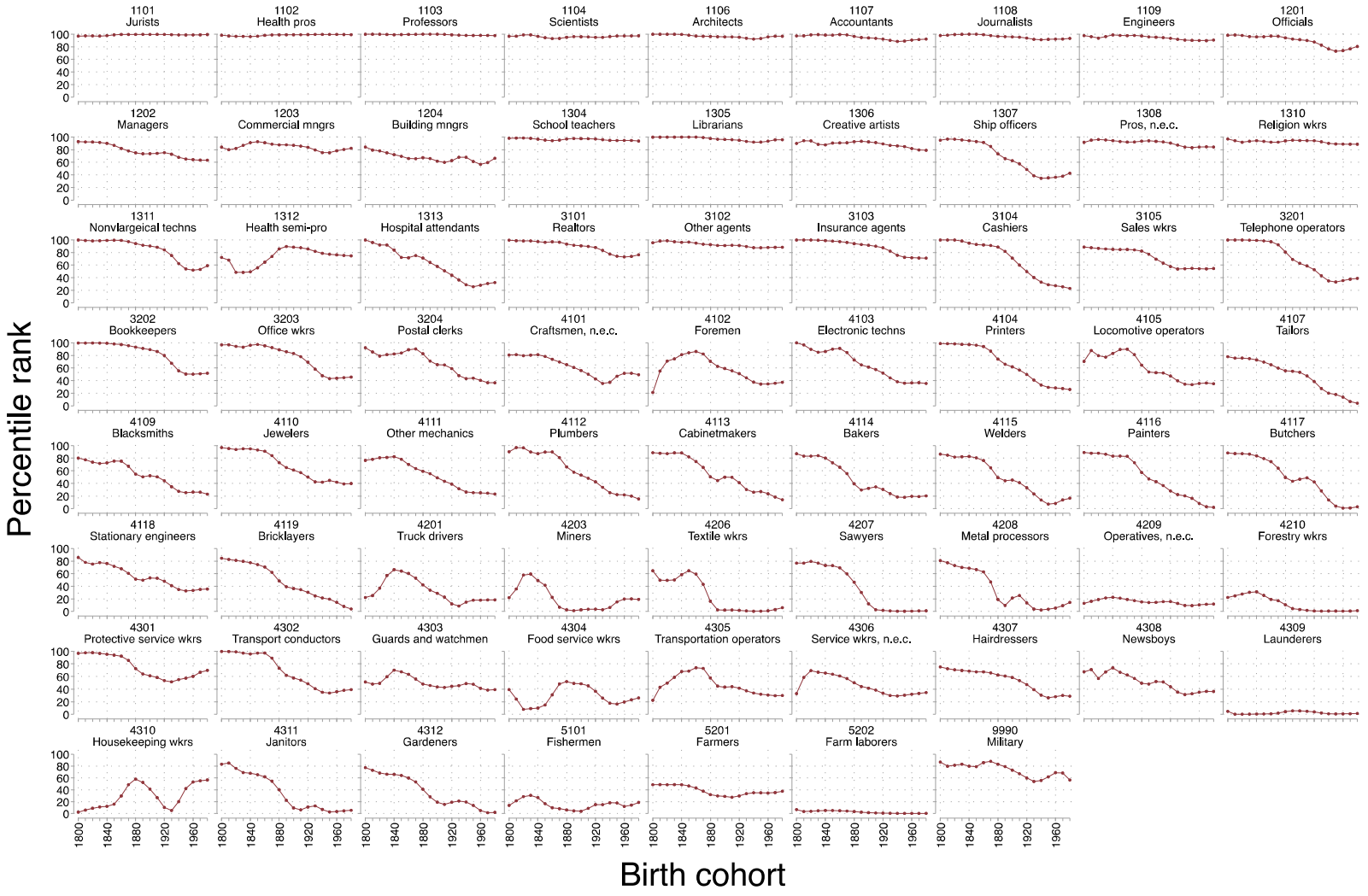
S11 Changes in Professional and Managerial Occupations and Intergenerational Mobility

Professional and managerial occupations have grown dramatically since the 1950s (see occupational codes 1101-1313 in Figures S4 and S5). Mitnik, Cumberworth, and Grusky (*41*) argue that "rising income inequality registers its effect on social mobility almost exclusively in the divide between the professional-managerial class and all other classes." In our main analysis shown in Figure 3C, estimated rank-rank correlations rose for the most recent cohorts born in 1940–1980. The point estimates suggest a declining turn in social mobility, which coincides with the recent takeoff in income inequality. Yet we were unable to draw firm conclusions due to the wide confidence intervals of the estimates.

In this section, we assess the role of professional and managerial occupations by estimating intergenerational rank-rank correlations for sons of professional and managerial fathers and those who are not, separately. Panel A in Figure S14 shows that the share of professional and managerial occupations has more than doubled, increasing from less than 20% for sons born before the 20th century to higher than 40% for those born after the mid 20th century. Panel B shows that the social destination of sons from professional and managerial families has also changed, albeit not as dramatically as that of farm-origin sons (Figure 3B). The mean percentile ranks of sons of professional and managerial workers have fluctuated between the 60th-70th percentiles. The trend has become largely stable for those born after the 1950s. In Panel C, we excluded sons of professional and managerial workers. Compared with Figure 3C, the graph shows that the intergenerational mobility trend for 1940–1980 birth cohorts becomes almost flat, suggesting that the professional and managerial families may account for the upward trend

in intergenerational persistence observed in Figure 3C. This result is consistent with Mitnike et al's finding that the expansion of the professional and managerial occupations and changing intergenerational status reproduction of these families have largely shaped the overall mobility trend observed for birth cohorts in the 1950s and beyond.

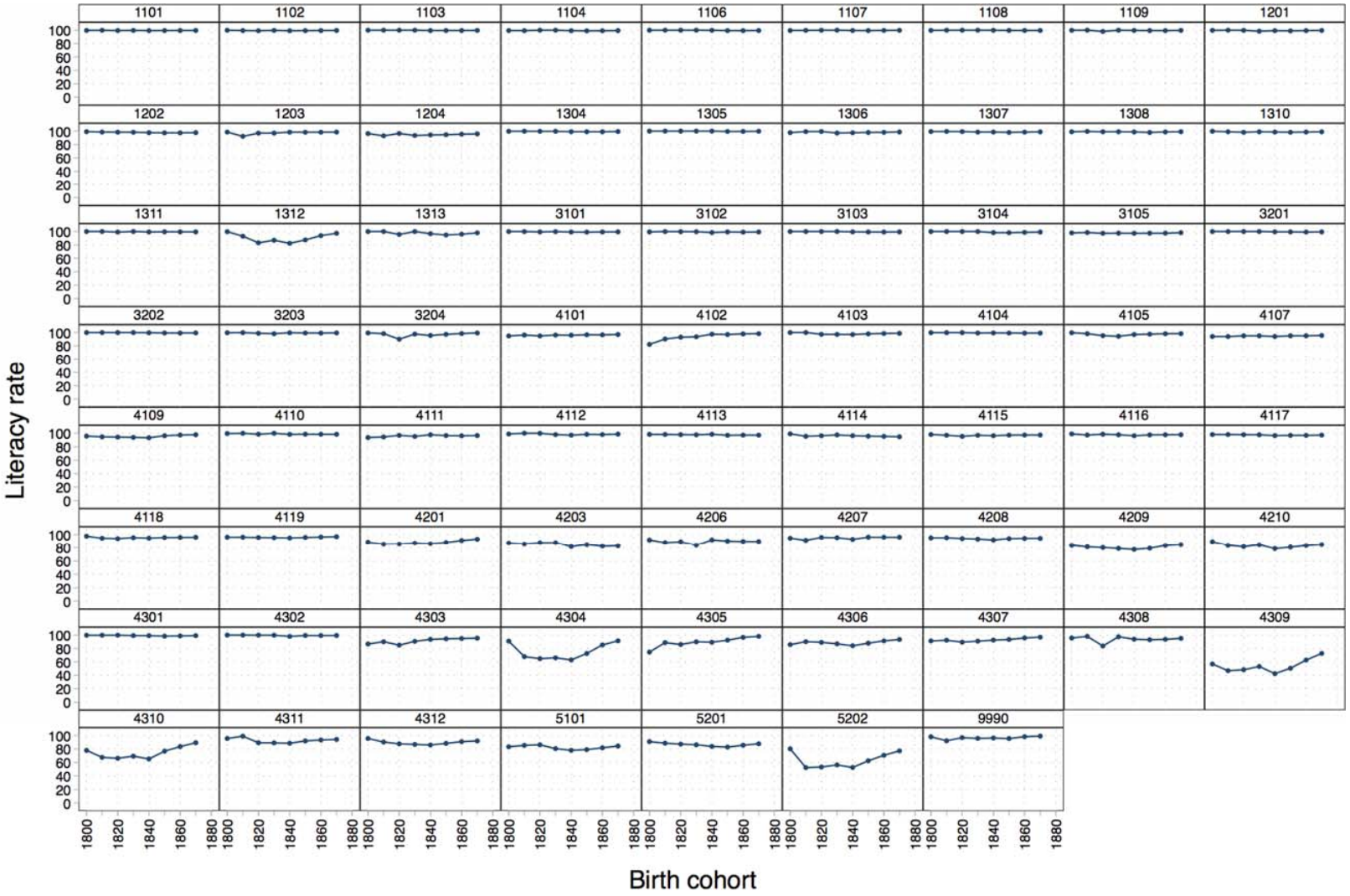
S12 Figures and Tables



Data sources: IPUMS United States Population Censuses full count 1850, 1880, 1900, 1910, 1920, 1930, 1940; 1% samples 1860, 1870, 1950; 5% samples, 1960, 1980, 1990, 2000; 6% sample, 1970; ACS 2001–2015.
Notes: The numbers in the subtitles refer to micro-class occupational codes. See Table S2 for descriptions of the occupations.
1101 Jurists; 1102 Health professionals; 1103 Professors and instructors; 1104 Natural scientists; 1106 Architects; 1107 Accountants; 1108 Journalists, authors, and related writers; 1109 Engineers;
1201 Officials, government and non-profit organizations; 1202 Managers; 1203 Commercial managers; 1204 Building managers and proprietors;

1304 Elementary and secondary school teachers; 1305 Librarians; 1306 Creative artists; 1307 Ship officers; 1308 Professional, technical, and related workers, n.e.c.; 1310 Workers in religion; 1311 Nonmedical technicians; 1312 Health semiprofessionals; 1313 Hospital attendants;
3101 Real estate agents; 3102 Other agents; 3103 Insurance agents; 3104 Cashiers; 3105 Sales workers and shop assistants;
3201 Telephone operators; 3202 Bookkeepers and related workers; 3203 Office and clerical workers;
3204 Postal and mail distribution clerks;
4101 Craftsmen and kindred workers, n.e.c.; 4102 Foremen; 4103 Electronics service and repair workers; 4104 Printers and related workers; 4105 Locomotive operators; 4107 Tailors and related workers; 4109 Blacksmiths and machinists; 4110 Jewelers, opticians, and precious metal workers; 4111 Other mechanics; 4112 Plumbers and pipe-fitters; 4113 Cabinetmakers; 4114 Bakers; 4115 Welders and related metal workers; 4116 Painters; 4117 Butchers; 4118 Stationary engine operators; 4119 Bricklayers, carpenters, and related construction workers;
4201 Truck drivers; 4203 Miners and related workers; 4206 Textile workers; 4207 Sawyers and lumber inspectors; 4208 Metal processors; 4209 Operatives and kindred workers, n.e.c.; 4210 Forestry workers;
4301 Protective service workers; 4302 Transport conductors; 4303 Guards and watchmen; 4304 Food service workers; 4305 Mass transportation operators; 4306 Service workers, n.e.c.; 4307 Hairdressers; 4308 Newsboys and deliverymen; 4309 Launderers and dry-cleaners; 4310 Housekeeping workers; 4311 Janitors and cleaners; 4312 Gardeners;
5101 Fishermen; 5201 Farmers and farm managers; 5202 Farm laborers;
9990 Members of armed forces.

Fig. S1. Trends in Occupational Percentile Ranks across Birth Cohorts



Data sources: IPUMS United States Population Censuses full count 1850, 1880, 1900, 1910, 1920, 1930, 1940; 1% samples 1860, 1870.
Notes: The numbers in the subtitles refer to micro-class occupational codes. See Table S2 for descriptions of the occupations.
1101 Jurists; 1102 Health professionals; 1103 Professors and instructors; 1104 Natural scientists; 1106 Architects; 1107 Accountants; 1108 Journalists, authors, and related writers; 1109 Engineers;
1201 Officials, government and non-profit organizations; 1202 Managers; 1203 Commercial managers;1204 Building managers and proprietors;
1304 Elementary and secondary school teachers; 1305 Librarians; 1306 Creative artists; 1307 Ship officers; 1308 Professional, technical, and related

workers, n.e.c.; 1310 Workers in religion; 1311 Nonmedical technicians; 1312 Health semiprofessionals; 1313 Hospital attendants;
3101 Real estate agents; 3102 Other agents; 3103 Insurance agents; 3104 Cashiers; 3105 Sales workers and shop assistants;
3201 Telephone operators; 3202 Bookkeepers and related workers; 3203 Office and clerical workers;
3204 Postal and mail distribution clerks;
4101 Craftsmen and kindred workers, n.e.c.; 4102 Foremen; 4103 Electronics service and repair workers; 4104 Printers and related workers; 4105 Locomotive operators; 4107 Tailors and related workers; 4109 Blacksmiths and machinists; 4110 Jewelers, opticians, and precious metal workers; 4111 Other mechanics; 4112 Plumbers and pipe-fitters; 4113 Cabinetmakers; 4114 Bakers; 4115 Welders and related metal workers; 4116 Painters; 4117 Butchers; 4118 Stationary engine operators; 4119 Bricklayers, carpenters, and related construction workers;
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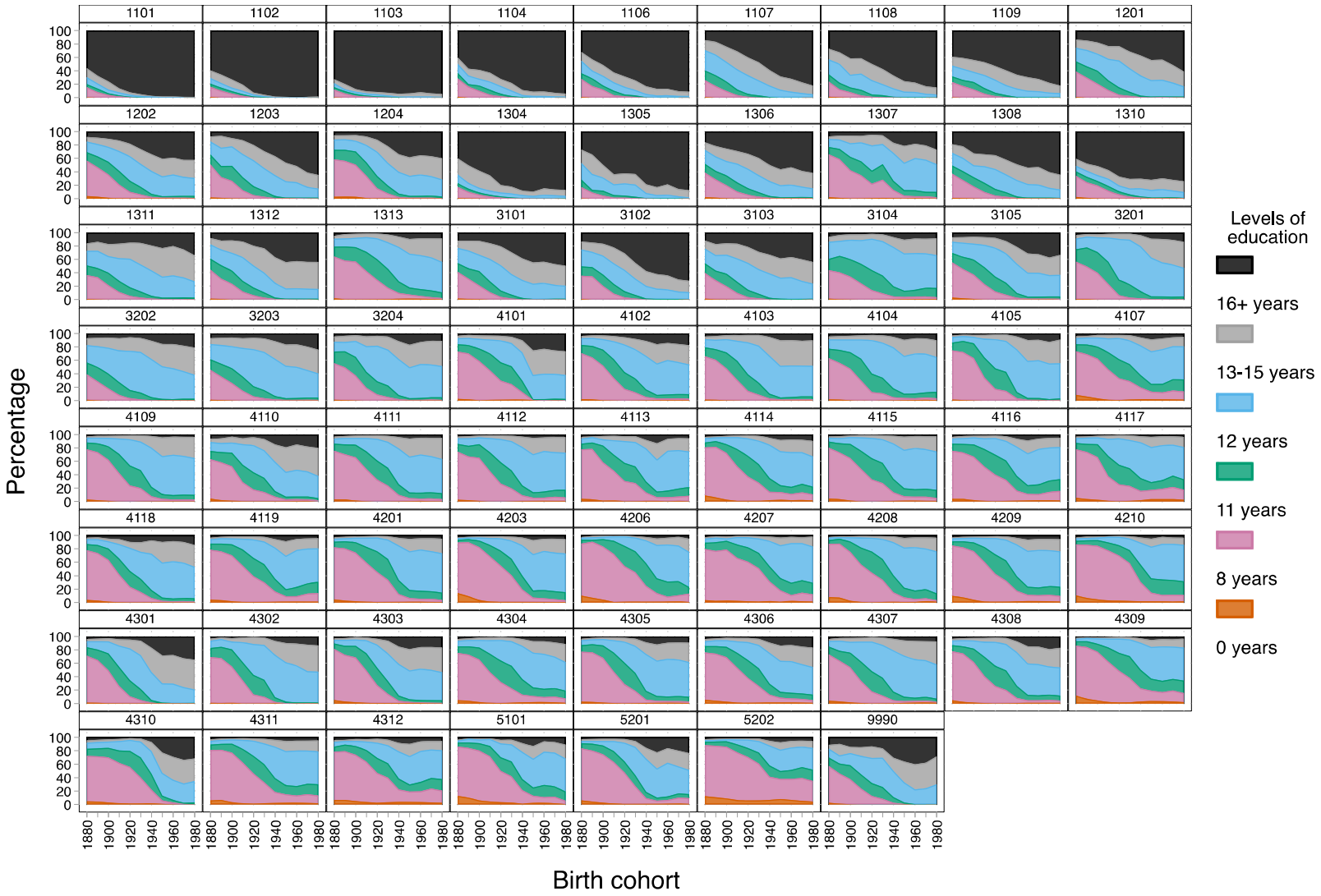
4301 Protective service workers; 4302 Transport conductors; 4303 Guards and watchmen; 4304 Food service workers; 4305 Mass transportation operators; 4306 Service workers, n.e.c.; 4307 Hairdressers; 4308 Newsboys and deliverymen; 4309 Launderers and dry-cleaners; 4310 Housekeeping workers; 4311 Janitors and cleaners; 4312 Gardeners;
5101 Fishermen; 5201 Farmers and farm managers; 5202 Farm laborers;
9990 Members of armed force.

Fig. S2. Trends in Literacy Rate by Occupation across Birth Cohorts



Data sources: IPUMS United States Population Censuses full count, 1940; 1% samples 1950; 5% samples, 1960, 1980, 1990, 2000; 6% sample, 1970; ACS 2001–2015.

Notes: The numbers in the subtitles refer to micro-class occupational codes. See Table S2 for descriptions of the occupations.

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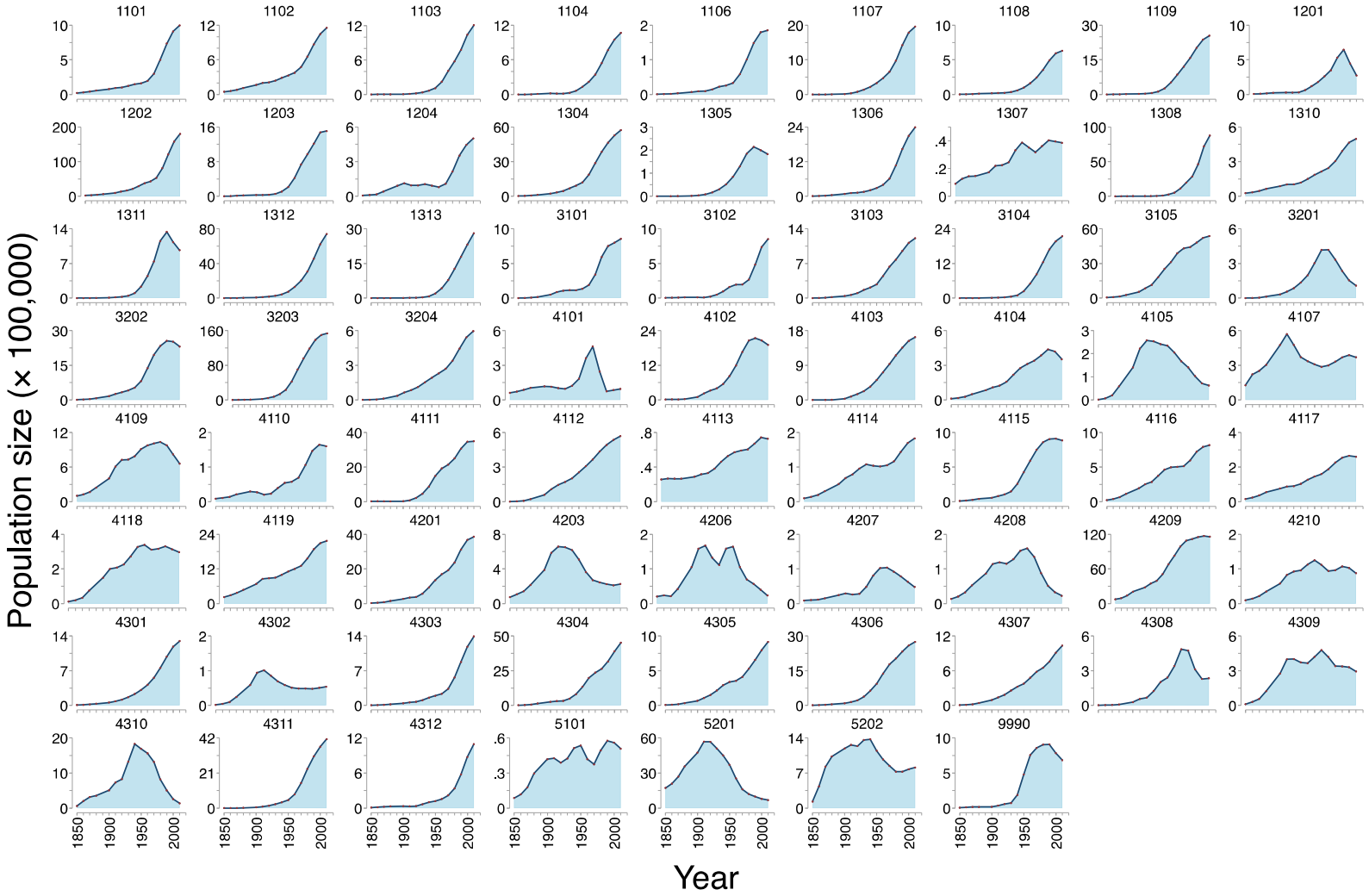
5101 Fishermen; 5201 Farmers and farm managers; 5202 Farm laborers;
9990 Members of armed forces.

Fig. S3. Trends in Educational Distribution by Occupation across Birth Cohorts



Data sources: IPUMS United States Population Censuses full count 1850, 1880, 1900, 1910, 1920, 1930, 1940; 1% samples 1860, 1870, 1950; 5% samples, 1960, 1980, 1990, 2000; 6% sample, 1970; ACS 2001–2015.
Notes: The numbers in the subtitles refer to micro-class occupational codes. See Table S2 for descriptions of the occupations.
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3204 Postal and mail distribution clerks;
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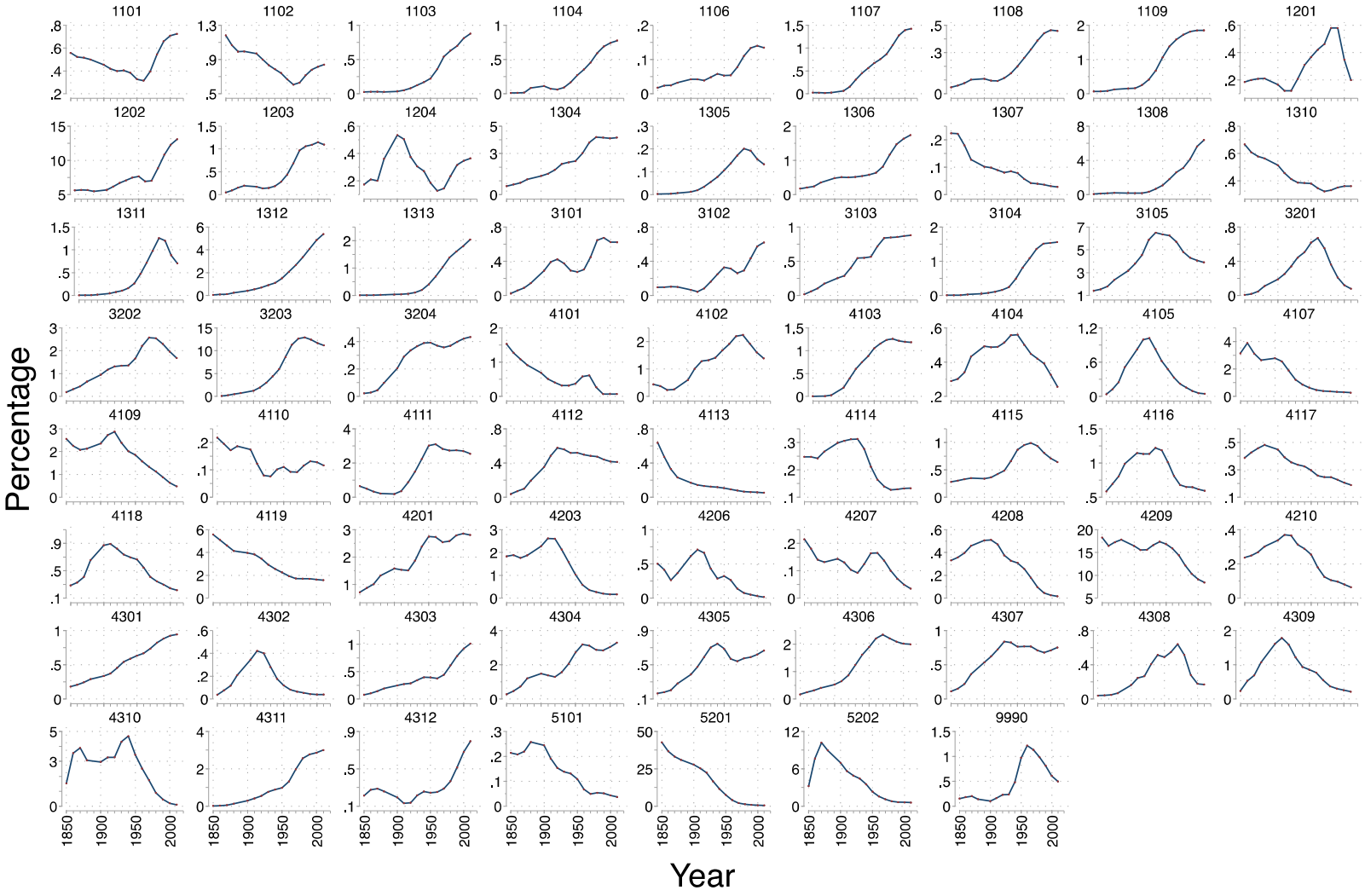
5101 Fishermen; 5201 Farmers and farm managers; 5202 Farm laborers;
9990 Members of armed force.

Fig. S4. Trends in Occupational Size across Periods



Data sources: IPUMS United States Population Censuses full count 1850, 1880, 1900, 1910, 1920, 1930, 1940; 1% samples 1860, 1870, 1950; 5% samples, 1960, 1980, 1990, 2000; 6% sample, 1970; ACS 2001–2015.
Notes: The numbers in the subtitles refer to micro-class occupational codes. See Table S2 for descriptions of the occupations.
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3204 Postal and mail distribution clerks;
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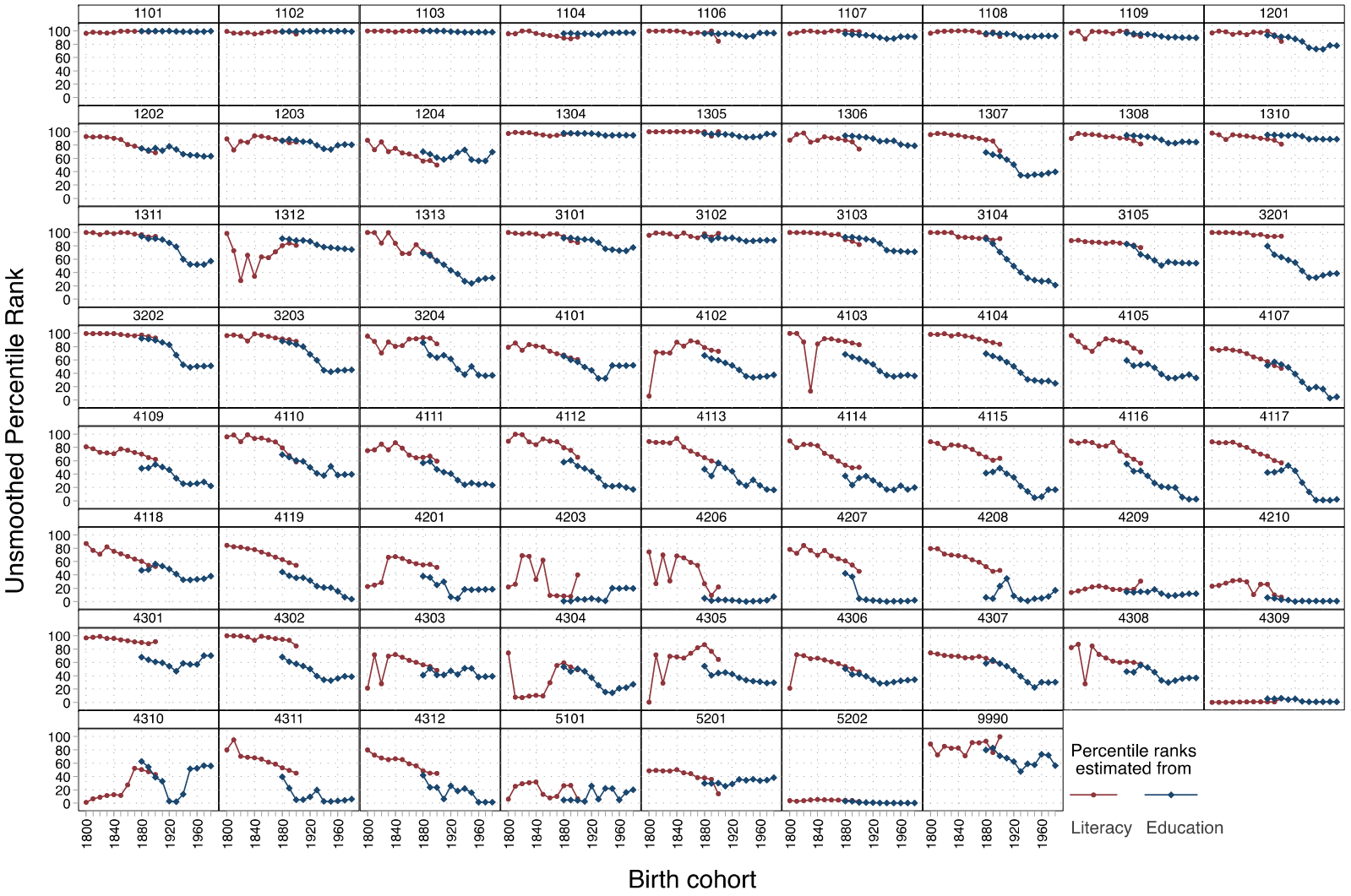
5101 Fishermen; 5201 Farmers and farm managers; 5202 Farm laborers;
9990 Members of armed force.

Fig. S5. Trends in the Percentage of Occupations over Period, 1850–2015



Data sources: IPUMS United States Population Censuses full count 1850, 1880, 1900, 1910, 1920, 1930, 1940; 1% samples 1860, 1870, 1950; 5% samples, 1960, 1980, 1990, 2000; 6% sample, 1970; ACS 2001–2015.
Notes: The numbers in the subtitles refer to micro-class occupational codes. See Table S2 for descriptions of the occupations.
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3204 Postal and mail distribution clerks;
4101 Craftsmen and kindred workers, n.e.c.; 4102 Foremen; 4103 Electronics service and repair workers; 4104 Printers and related workers; 4105 Locomotive operators; 4107 Tailors and related workers; 4109 Blacksmiths and machinists; 4110 Jewelers, opticians, and precious metal workers; 4111 Other mechanics; 4112 Plumbers and pipe-fitters; 4113 Cabinetmakers; 4114 Bakers; 4115 Welders and related metal workers; 4116 Painters; 4117 Butchers; 4118 Stationary engine operators; 4119 Bricklayers, carpenters, and related construction workers;
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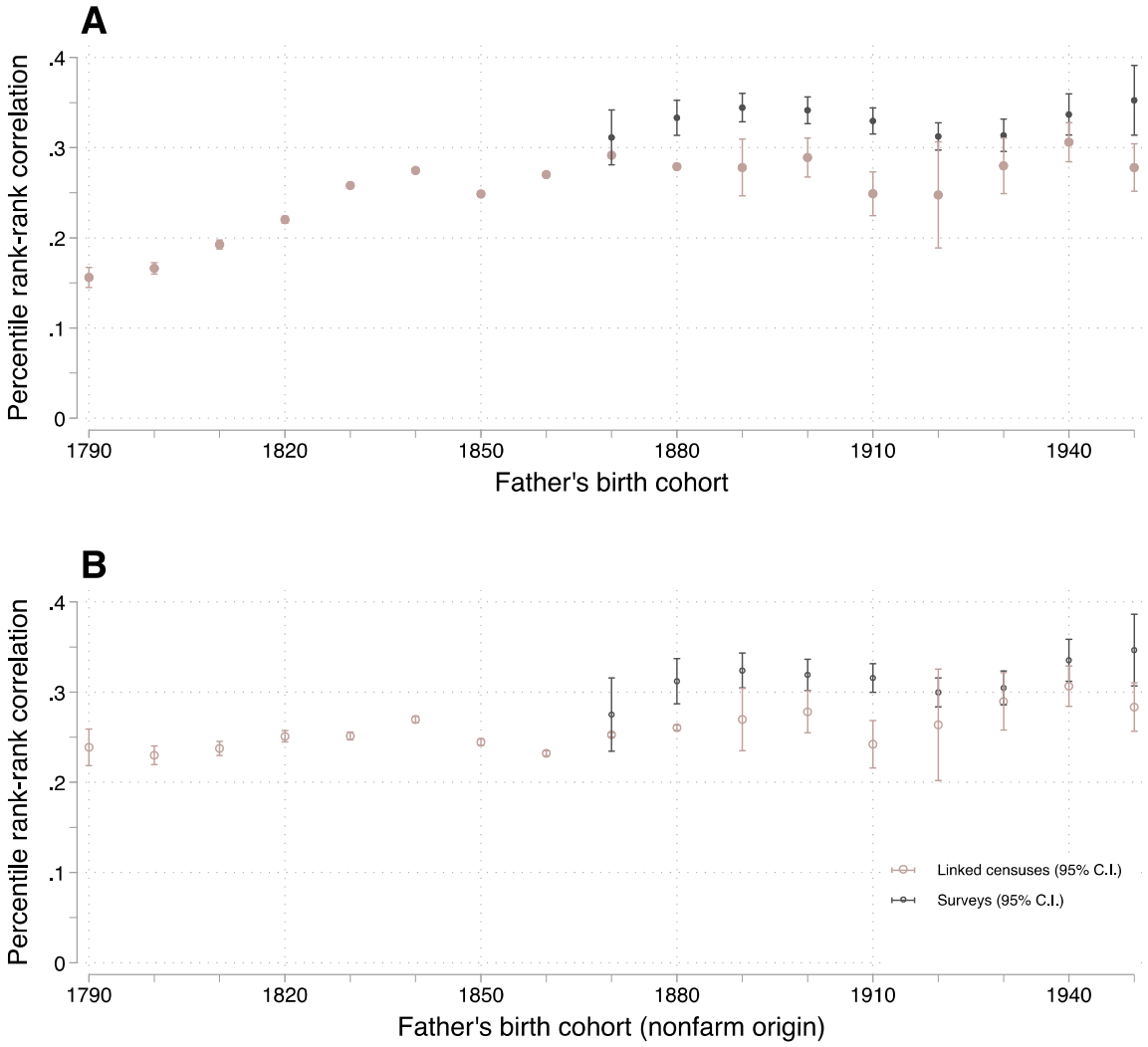
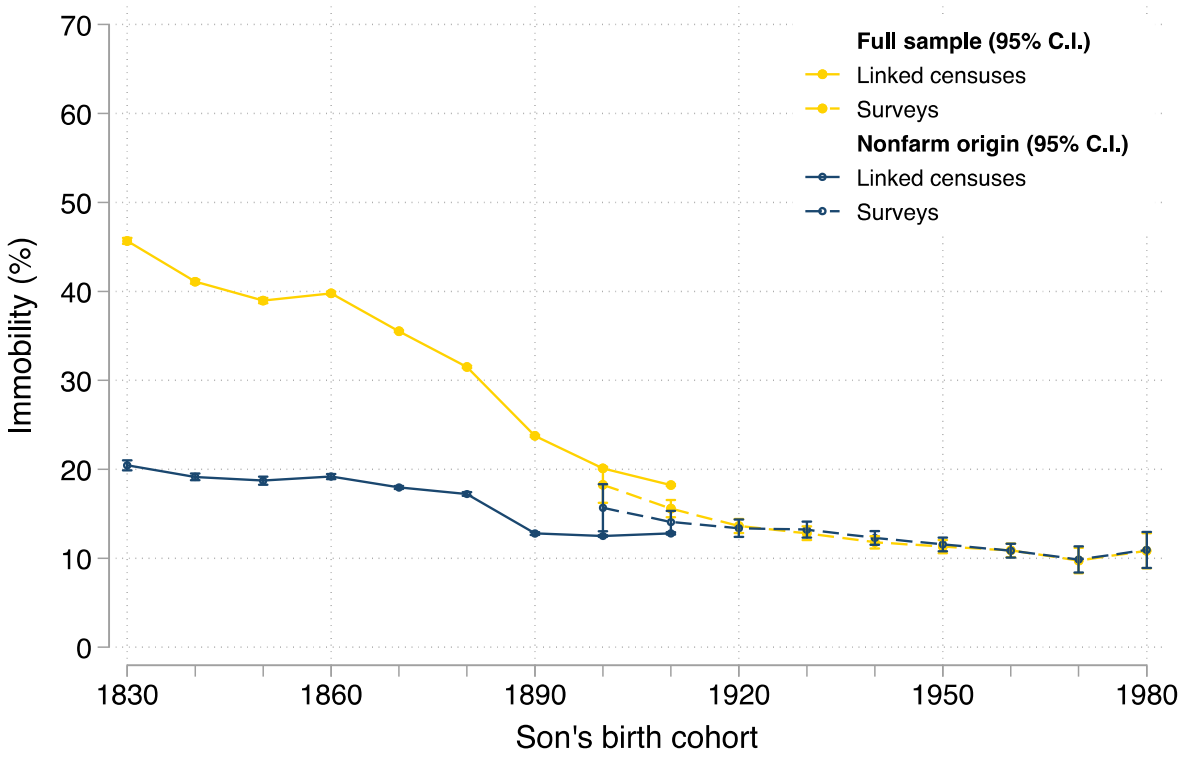
4301 Protective service workers; 4302 Transport conductors; 4303 Guards and watchmen; 4304 Food service workers; 4305 Mass transportation operators; 4306 Service workers, n.e.c.; 4307 Hairdressers; 4308 Newsboys and deliverymen; 4309 Launderers and dry-cleaners; 4310 Housekeeping workers; 4311 Janitors and cleaners; 4312 Gardeners;
5101 Fishermen; 5201 Farmers and farm managers; 5202 Farm laborers;
9990 Members of armed forces.

Fig. S6. Unsmoothed Occupational Percentile Ranks Generated from Literacy Rate and Educational Distributions



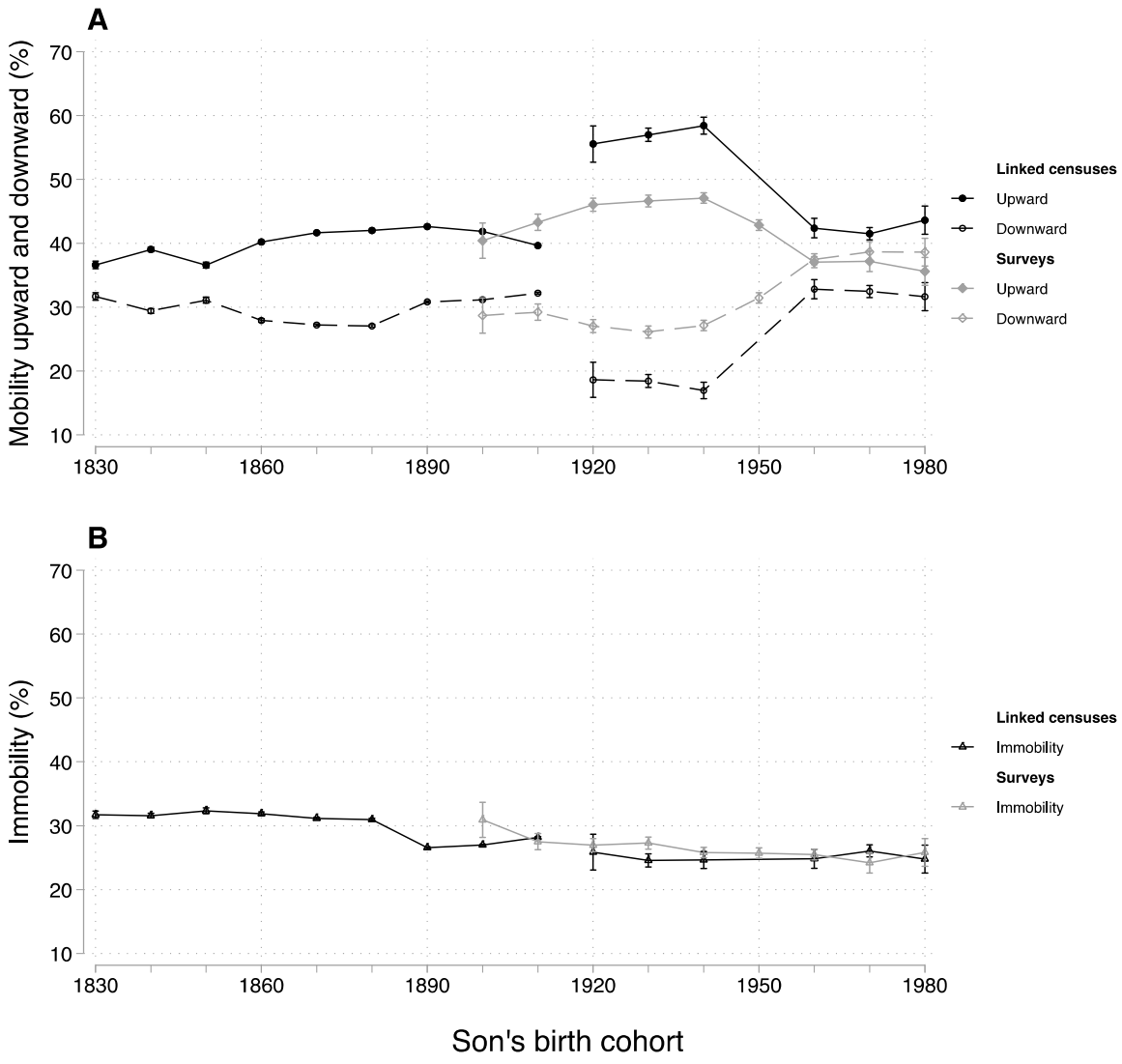
Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; linked contemporary data using census 1940 to CPS (1973, 1979, 1981–1990) and CPS to census 2000/ACS 2001–2015. General Social Surveys 1972–2016; Health and Retirement Study 1992–2010; National Longitudinal Survey–Older Men 1966–1990; National Longitudinal Survey–Young Men 1966–1981; National Longitudinal Survey of Youth 79, 1979–2012; National Survey of Families and Households, 1987, 1993, 2002; Occupational Changes in a Generation I & II; Panel Study of Income Dynamics (SRC sample), 1968–2015; Survey of Income and Program Participation, 1986, 1987, 1988; Wisconsin Longitudinal Study, 1957–2011.
Notes: Figure A plots the estimated correlation in occupational percentile ranks between fathers and sons over the birth cohorts of sons. The series of solid grey dots plots the point estimates of the rank-rank correlations between fathers and sons for the 1820–1910 birth cohorts from the linked historical census data. The series of black dots plots the rank-rank correlations estimated from weighted OLS regressions for the 1900–1980 birth cohorts from pooled contemporary social surveys. The weights are constructed from the original sampling probability weight variable in each survey as well as an additional weight variable that takes into account variation in sample size by birth cohort across surveys. The capped spikes refer to 95% confidence intervals of the correlation estimates. In Figure B, we restricted the sample to sons whose fathers are not farmers or farm laborers. The graph shows the trend in intergenerational mobility among the nonagricultural population. See online Table S11 for the exact numbers of the estimates.

Fig. S7. Trends in Intergenerational Rank-Rank Correlations Over Father's Birth Cohort



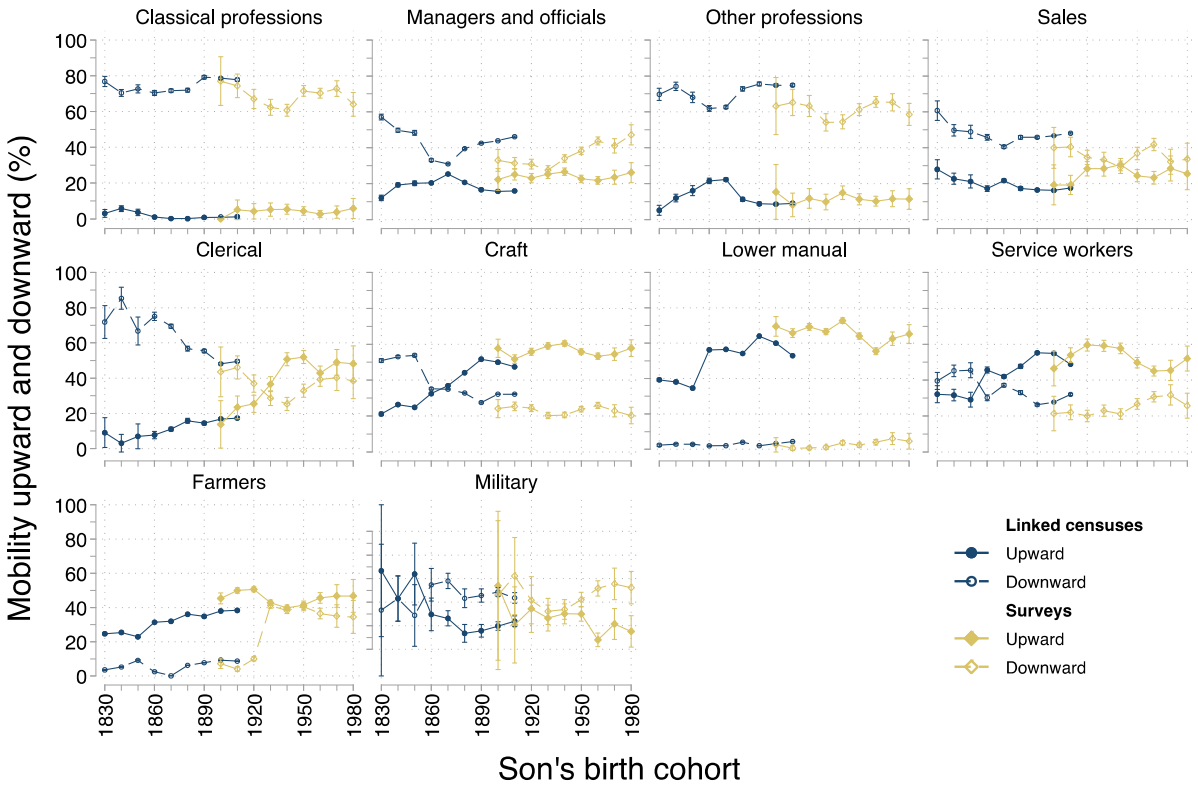
Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; linked contemporary data using census 1940 to CPS (1973, 1979, 1981–1990) and CPS to census 2000/ACS 2001–2015. General Social Surveys 1972–2016; Health and Retirement Study 1992–2010; National Longitudinal Survey–Older Men 1966–1990; National Longitudinal Survey–Young Men 1966–1981; National Longitudinal Survey of Youth 79, 1979–2012; National Survey of Families and Households, 1987, 1993, 2002; Occupational Changes in a Generation I & II; Panel Study of Income Dynamics (SRC sample), 1968–2015; Survey of Income and Program Participation, 1986, 1987, 1988; Wisconsin Longitudinal Study, 1957–2011.
Notes: Immobility is defined as sons staying in the same microclass occupations as their fathers. The level of immobility depends on the level of occupational aggregation. Immobility rates are higher at more aggregated levels of occupational classes because within-class mobility is neglected. The nonfarm origin sample is restricted to sons whose fathers are neither farm managers nor farm laborers.

Fig. S8. Trends in Intergenerational Immobility Over Son's Birth Cohort



Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; linked contemporary data using census 1940 to CPS (1973, 1979, 1981–1990) and CPS to census 2000/ACS 2001–2015. General Social Surveys 1972–2016; Health and Retirement Study 1992–2010; National Longitudinal Survey–Older Men 1966–1990; National Longitudinal Survey–Young Men 1966–1981; National Longitudinal Survey of Youth 79, 1979–2012; National Survey of Families and Households, 1987, 1993, 2002; Occupational Changes in a Generation I & II; Panel Study of Income Dynamics (SRC sample), 1968–2015; Survey of Income and Program Participation, 1986, 1987, 1988; Wisconsin Longitudinal Study, 1957–2011.
Notes: According to Hout's (2018) definitions, an upward move is mobility to an occupation 7.5 points above that of the person's father; a downward move is mobility to an occupation 7.5 points below that of the person's father. The sample is restricted to men with nonfarm origins, 25–64 years old. We first converted all fathers' and sons' microclass occupations into the simple rank from 1 to 70 based on rankings of occupations in the 1980 birth cohort (Hout used the rankings from the year 2010). To normalize the rank, we divided it by 7/10, yielding a scale ranging from 0 to 100. A given occupation has the same score on each scale regardless of whether it was the son's occupation or the father's occupation. This rank does not take into account changes in occupational status caused by the expansion of higher education over birth cohort.

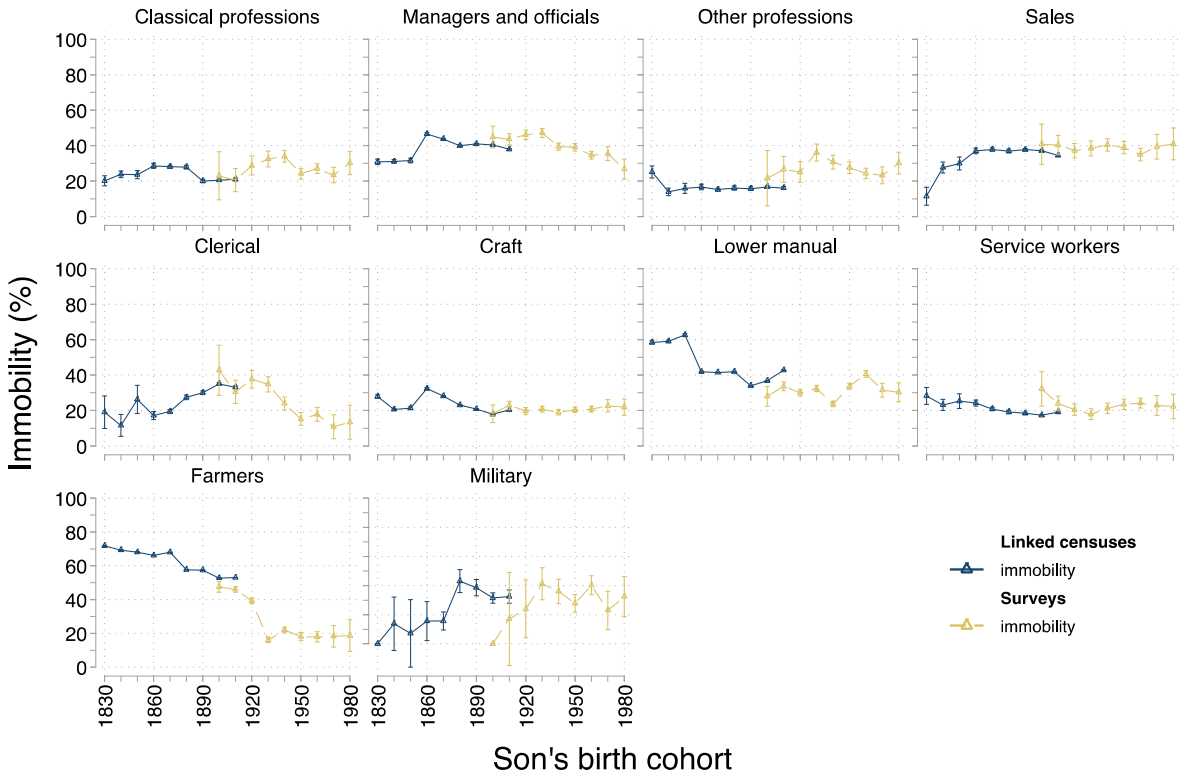
Fig. S9. Absolute Mobility Over Son's Birth Cohort Using Hout's (2018) Definitions



Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940. General Social Surveys 1972–2016; Health and Retirement Study 1992–2010; National Longitudinal Survey–Older Men 1966–1990; National Longitudinal Survey–Young Men 1966–1981; National Longitudinal Survey of Youth 79, 1979–2012; National Survey of Families and Households, 1987, 1993, 2002; Occupational Changes in a Generation I & II; Panel Study of Income Dynamics (SRC sample), 1968–2015; Survey of Income and Program Participation, 1986, 1987, 1988; Wisconsin Longitudinal Study, 1957–2011. Notes: We assume that the father's occupational rank is determined by the rank of the same occupation in the son's birth cohort. We first converted all fathers' and sons' microclass occupations into the simple rank from 1 to 70 based on rankings of occupations in the son's birth cohort. We then normalized the rank, yielding a scale ranging from 0 to 100. An upward move is mobility to an occupation 7.5 points above that of the person's father; a downward move is mobility to an occupation 7.5 points below that of the person's father. The sample is restricted to men, 25–64 years old. See Table S2 for a description of occupations. (1) Classical professions include 1101 Jurists; 1102 Health professionals; 1103 Professors and instructors; 1104 Natural scientists; 1106 Architects; 1107 Accountants; 1108 Journalists, authors, and related writers; 1109 Engineers. (2) Managers include 1201 Officials, government and non-profit organizations; 1202 Managers; 1203 Commercial managers; 1204 Building managers and proprietors. (3) Other professions include: 1304 Elementary and secondary school teachers; 1305 Librarians; 1306 Creative artists; 1307 Ship officers; 1308 Professional, technical, and related workers, n.e.c.; 1310 Workers in religion; 1311 Nonmedical technicians; 1312 Health semiprofessionals; 1313 Hospital attendants. (4) Sales occupations include 3101 Real estate agents; 3102 Other agents; 3103 Insurance agents; 3104 Cashiers; 3105 Sales workers and shop assistants. (5) Clerical occupations include 3201 Telephone operators; 3202 Bookkeepers and related workers; 3203 Office and clerical workers; 3204 Postal and mail distribution clerks. (6) Craft occupations include 4101 Craftsmen and kindred workers, n.e.c.; 4102 Foremen; 4103 Electronics service and repair workers; 4104 Printers and related workers; 4105 Locomotive operators; 4107 Tailors and related workers; 4109 Blacksmiths and machinists; 4110 Jewelers, opticians, and precious metal workers; 4111 Other mechanics; 4112 Plumbers and pipe-fitters; 4113 Cabinetmakers; 4114 Bakers; 4115 Welders and related metal workers; 4116 Painters; 4117 Butchers; 4118 Stationary engine operators; 4119 Bricklayers, carpen-

ters, and related construction workers. (7) Lower manual occupations include 4201 Truck drivers; 4203 Miners and related workers; 4206 Textile workers; 4207 Sawyers and lumber inspectors; 4208 Metal processors; 4209 Operatives and kindred workers, n.e.c.; 4210 Forestry workers. (8) Service occupations include 4301 Protective service workers; 4302 Transport conductors; 4303 Guards and watchmen; 4304 Food service workers; 4305 Mass transportation operators; 4306 Service workers, n.e.c.; 4307 Hairdressers; 4308 Newsboys and deliverymen; 4309 Launderers and dry-cleaners; 4310 Housekeeping workers; 4311 Janitors and cleaners; 4312 Gardeners. (9) Farmers, fisherman, and other primary occupations include 5101 Fishermen; 5201 Farmers and farm managers; 5202 Farm laborers. (10) Military occupations include 9990 Members of armed forces.

Fig. S10. Absolute Mobility Over Son's Birth Cohort by Mesoclass Occupations of Fathers



Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940. General Social Surveys 1972–2016; Health and Retirement Study 1992–2010; National Longitudinal Survey–Older Men 1966–1990; National Longitudinal Survey–Young Men 1966–1981; National Longitudinal Survey of Youth 79, 1979–2012; National Survey of Families and Households, 1987, 1993, 2002; Occupational Changes in a Generation I & II; Panel Study of Income Dynamics (SRC sample), 1968–2015; Survey of Income and Program Participation, 1986, 1987, 1988; Wisconsin Longitudinal Study, 1957–2011.

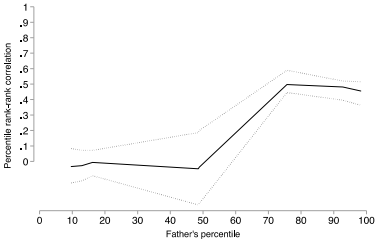
Notes: We assume that the father's occupational rank is determined by the rank of the same occupation in the son's birth cohort. We first converted all fathers' and sons' microclass occupations into the simple rank from 1 to 70 based on rankings of occupations in the son's birth cohort. We then normalized the rank, yielding a scale ranging from 0 to 100. An upward move is mobility to an occupation 7.5 points above that of the person's father; a downward move is mobility to an occupation 7.5 points below that of the person's father. The sample is restricted to men, 25–64 years old. See Table S2 for the descriptions of micro-class and meso-class occupations. (1) Classical professions include 1101 Jurists; 1102 Health professionals; 1103 Professors and instructors; 1104 Natural scientists; 1106 Architects; 1107 Accountants; 1108 Journalists, authors, and related writers; 1109 Engineers. (2) Managers include 1201 Officials, government and non-profit organizations; 1202 Managers; 1203 Commercial managers; 1204 Building managers and proprietors. (3) Other professions include: 1304 Elementary and secondary school teachers; 1305 Librarians; 1306 Creative artists; 1307 Ship officers; 1308 Professional, technical, and related workers, n.e.c.; 1310 Workers in religion; 1311 Nonmedical technicians; 1312 Health semiprofessionals; 1313 Hospital attendants. (4) Sales occupations include 3101 Real estate agents; 3102 Other agents; 3103 Insurance agents; 3104 Cashiers; 3105 Sales workers and shop assistants. (5) Clerical occupations include 3201 Telephone operators; 3202 Bookkeepers and related workers; 3203 Office and clerical workers; 3204 Postal and mail distribution clerks. (6) Craft occupations include 4101 Craftsmen and kindred workers, n.e.c.; 4102 Foremen; 4103 Electronics service and repair workers; 4104 Printers and related workers; 4105 Locomotive operators; 4107 Tailors and related workers; 4109 Blacksmiths and machinists; 4110 Jewelers, opticians, and precious metal workers; 4111 Other mechanics; 4112 Plumbers and pipe-fitters; 4113 Cabinetmakers; 4114 Bakers; 4115 Welders and

related metal workers; 4116 Painters; 4117 Butchers; 4118 Stationary engine operators; 4119 Bricklayers, carpenters, and related construction workers. (7) Lower manual occupations include 4201 Truck drivers; 4203 Miners and related workers; 4206 Textile workers; 4207 Sawyers and lumber inspectors; 4208 Metal processors; 4209 Operatives and kindred workers, n.e.c.; 4210 Forestry workers. (8) Service occupations include 4301 Protective service workers; 4302 Transport conductors; 4303 Guards and watchmen; 4304 Food service workers; 4305 Mass transportation operators; 4306 Service workers, n.e.c.; 4307 Hairdressers; 4308 Newsboys and deliverymen; 4309 Launderers and dry-cleaners; 4310 Housekeeping workers; 4311 Janitors and cleaners; 4312 Gardeners. (9) Farmers, fisherman, and other primary occupations include 5101 Fishermen; 5201 Farmers and farm managers; 5202 Farm laborers. (10) Military occupations include 9990 Members of armed forces.

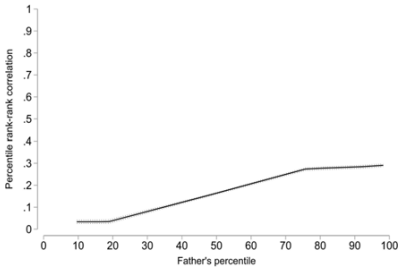
Fig. S11. Percentage of Immobility Over Son's Birth Cohort by Meso-class Occupations of Fathers

Historical linked data

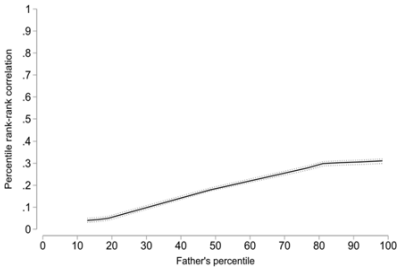
(1830)



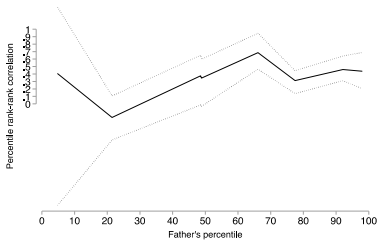
(1840)



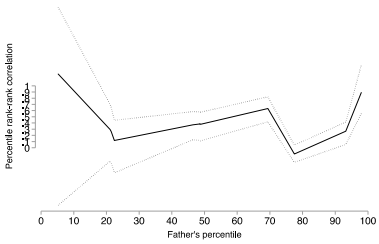
(1850)



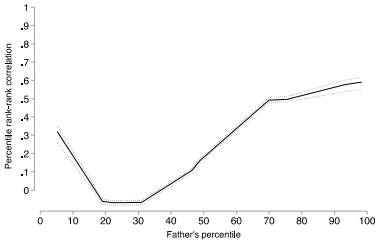
(1860)



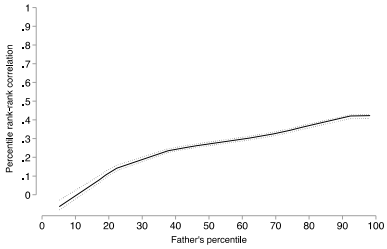
(1870)



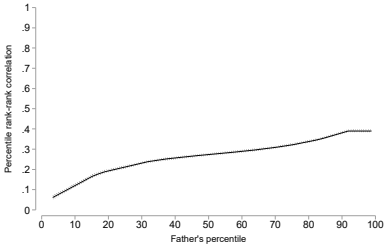
(1880)



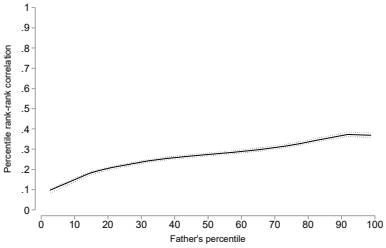
(1890)



(1900)

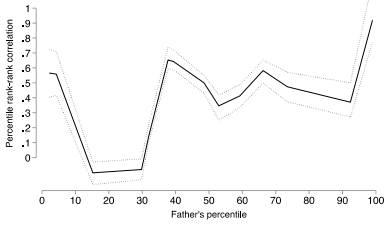


(1910)

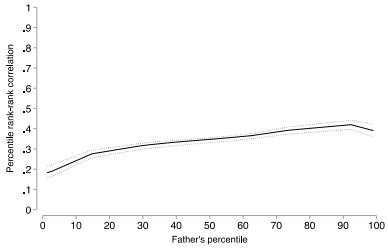


Contemporary survey data

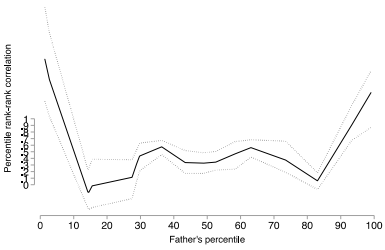
(1910)

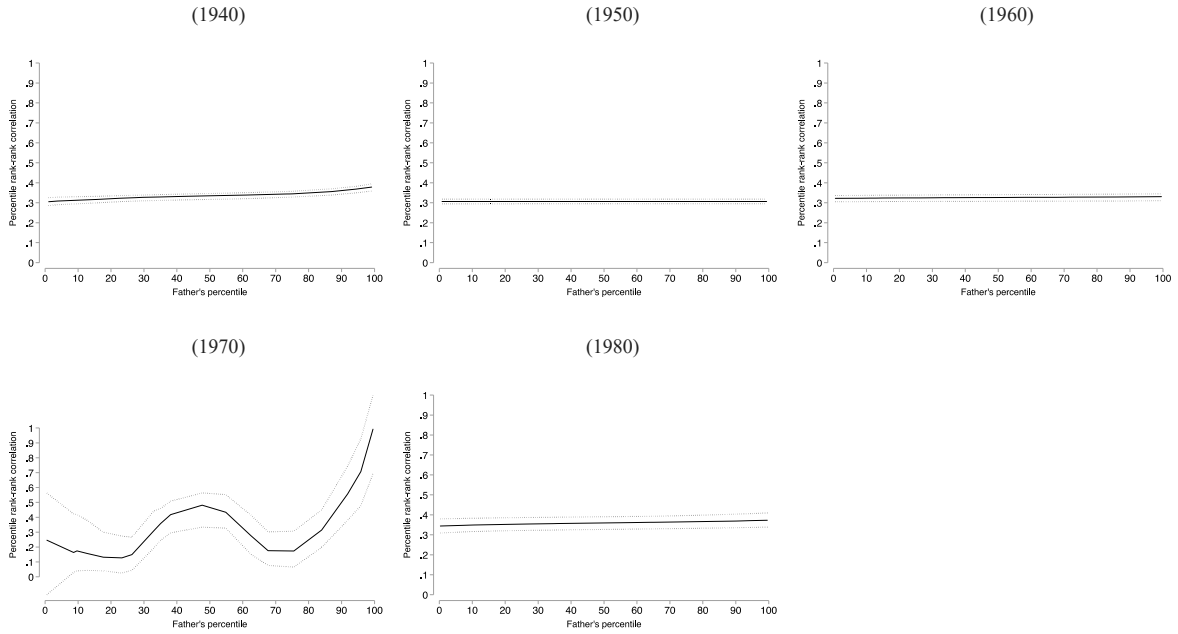


(1920)



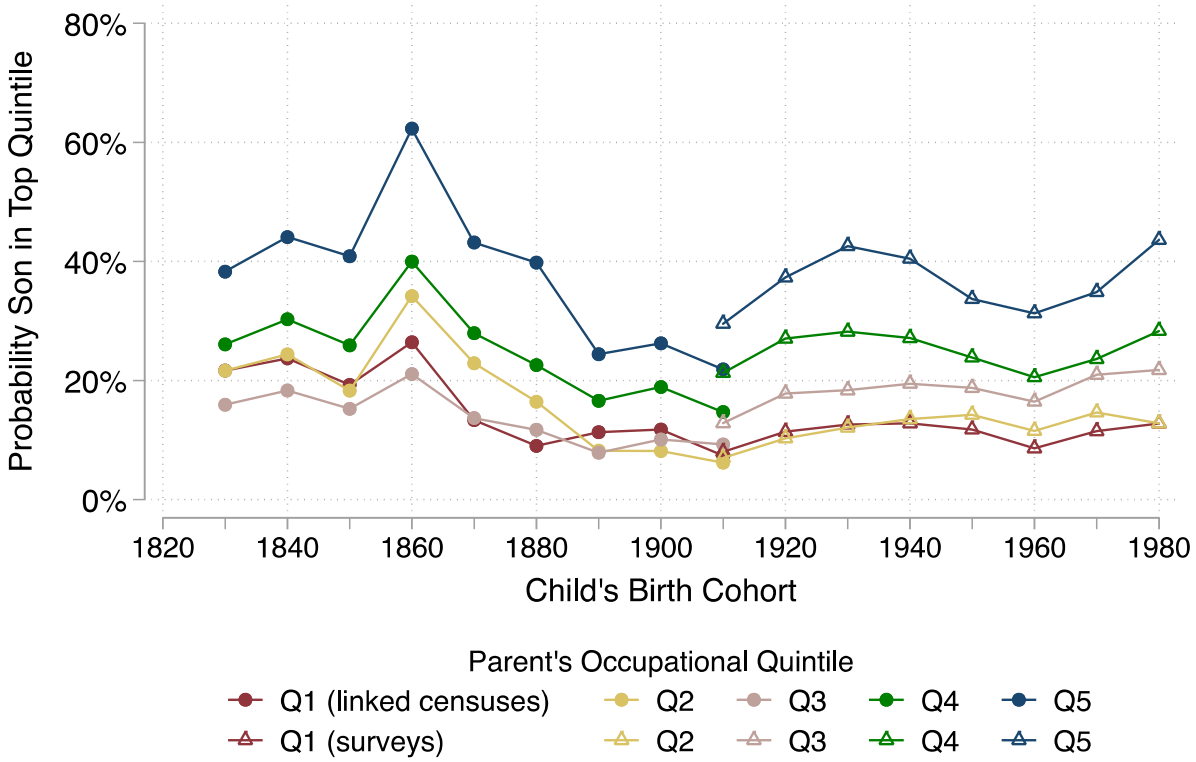
(1930)





Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; linked contemporary data using census 1940 to CPS (1973, 1979, 1981–1990) and CPS to census 2000/ACS 2001–2015. General Social Surveys 1972–2016; Health and Retirement Study 1992–2010; National Longitudinal Survey–Older Men 1966–1990; National Longitudinal Survey–Young Men 1966–1981; National Longitudinal Survey of Youth 79, 1979–2012; National Survey of Families and Households, 1987, 1993, 2002; Occupational Changes in a Generation I & II; Panel Study of Income Dynamics (SRC sample), 1968–2015; Survey of Income and Program Participation, 1986, 1987, 1988; Wisconsin Longitudinal Study, 1957–2011.
Notes: The figures show local linear regression slopes of log of children's income on log of parental income. Local linear regressions are weighted using kernels of absolute income. Standard errors have been constructed from 20 bootstraps. Model for years 1830–1850 in the linked historical data and years 1910–1980 in the survey data are estimated from full samples. Models for years 1860–1910 in the linked historical samples are estimated from 10% random samples.

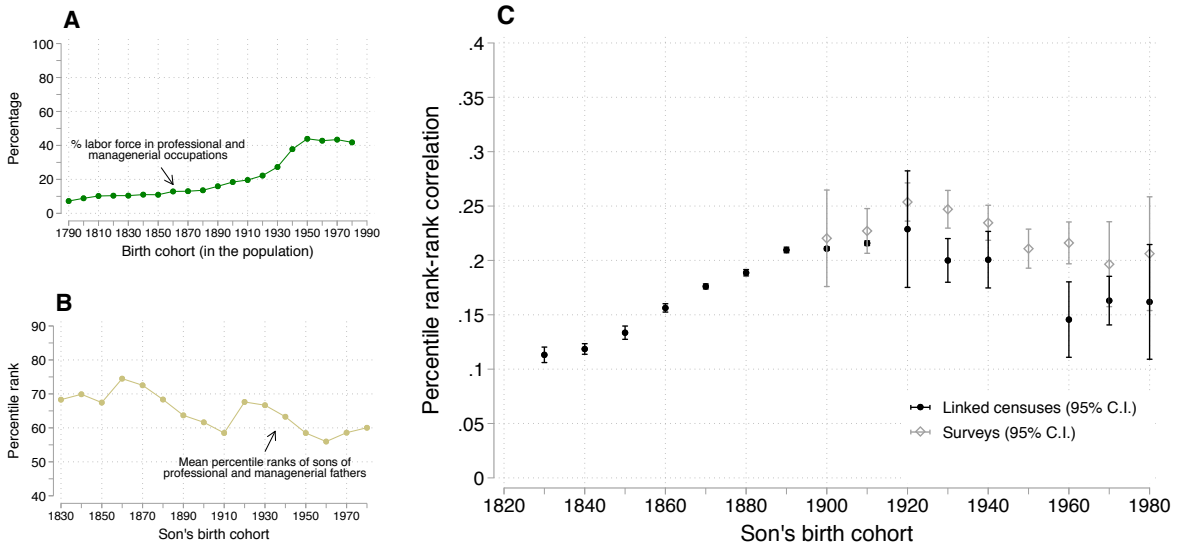
Fig. S12. Local Intergenerational Rank-Rank Correlation



Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; linked contemporary data using census 1940 to CPS (1973, 1979, 1981–1990) and CPS to census 2000/ACS 2001–2015. General Social Surveys 1972–2016; National Longitudinal Survey–Older Men 1966–1990; National Longitudinal Survey–Young Men 1966–1981; National Longitudinal Survey of Youth 79, 1979–2012; National Survey of Families and Households, 1987, 1993, 2002; Occupational Changes in a Generation I & II; Panel Study of Income Dynamics (SRC sample), 1968–2015; Survey of Income and Program Participation, 1986, 1987, 1988; Wisconsin Longitudinal Study, 1957–2011.

Notes: Following Chetty et al. (*39*), we show the percentage of sons who reach the top quintile of the occupational distribution over birth cohort. The percentage is calculated from the conditional probability of an individual reaching a certain quintile given his father's occupational quintile. The series in solid circles show estimates using the sample of linked historical censuses for the 1830–1910 birth cohorts. The series in hollow triangles show estimates using the sample of pooled survey data. See Table S15 for estimates from the full transition matrices based on occupational quintile groups for each birth cohort of sons.

Fig. S13. Probability of Reaching Top Quintile by Son's Birth Cohort



Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; linked contemporary data using census 1940 to CPS (1973, 1979, 1981–1990) and CPS to census 2000/ACS 2001–2015. General Social Surveys 1972–2016; National Longitudinal Survey–Older Men 1966–1990; National Longitudinal Survey–Young Men 1966–1981; National Longitudinal Survey of Youth 79, 1979–2012; National Survey of Families and Households, 1987, 1993, 2002; Occupational Changes in a Generation I & II; Panel Study of Income Dynamics (SRC sample), 1968–2015; Survey of Income and Program Participation, 1986, 1987, 1988; Wisconsin Longitudinal Study, 1957–2011.

Notes: Panel A plots the share of the labor force in professional and managerial over time. Professional and managerial occupations include 1101 Jurists; 1102 Health professionals; 1103 Professors and instructors; 1104 Natural scientists; 1106 Architects; 1107 Accountants; 1108 Journalists, authors, and related writers; 1109 Engineers; 1201 Officials, government and non-profit organizations; 1202 Managers; 1203 Commercial managers; 1204 Building managers and proprietors; 1304 Elementary and secondary school teachers; 1305 Librarians; 1306 Creative artists; 1307 Ship officers; 1308 Professional, technical, and related workers, n.e.c.; 1310 Workers in religion; 1311 Nonmedical technicians; 1312 Health semiprofessionals; 1313 Hospital attendants. Panel B plots percentile ranks of sons of professional and managerial fathers over 16 birth cohorts of sons. Panel C plots the estimated correlation in occupational percentile ranks between fathers and sons over 16 birth cohorts of sons. The sample excludes fathers who are either professional or managerial workers. The series of solid circles plots the point estimates of the rank-rank correlations between fathers and sons for the 1830–1980 birth cohorts of sons. The 1950 birth cohort (sons born between 1946 and 1955) is missing because these individuals were not observed during their childhoods in either the linked historical censuses or the contemporary linked CPS-Census/ACS data, which is necessary to make the father-son link. The series in diamond symbols plots the rank-rank correlations estimated from weighted OLS regressions for the 1900–1980 birth cohorts from pooled contemporary social surveys. The weights are constructed from the original sampling probability weight variable in each survey as well as an additional weight variable that takes into account variation in sample size by birth cohort across surveys. The capped spikes refer to 95% confidence intervals of the correlation estimates. See Table S16 for the exact numbers of the estimates.

Fig. S14. Changes in Professional and Managerial Occupations and Trends in Inter-generational Mobility Among Sons from Non-Professional and Managerial Family Origins

Table S1. Data Sources for Intergenerational Social Mobility Analyses (Aged 25–64)

Data Source	Observations (unweighted)	Observations (weighted)
(1) IPUMS U.S. Population Censuses		
1850 100% sample (July 2015)	3,503,544	3,503,544
1860 1% sample	56,289	5,632,291
1870 1% sample	79,207	7,955,950
1880 10% sample	1,277,360	10,792,156
1900 100% sample	16,414,656	16,414,656
1910 100% database	24,721,024	24,721,024
1920 100% database	23,550,774	23,550,774
1930 100% database	29,234,736	29,234,736
1940 100% database	40,472,832	40,472,832
1950 1% sample	519,358	46,183,832
1960 5% sample	3,190,646	63,812,920
1970 1% sample from Form 1 Metro; Form 2 Metro;	1,492,371	74,618,552
1980 5% sample	4,494,796	89,895,920
1990 5% sample	5,607,116	112,836,416
2000 5% sample	6,448,200	130,522,688
2001 ACS 0.43%	567,635	130,801,816
2002 ACS 0.38%	513,741	133,108,528
2003 ACS 0.42%	569,169	133,926,288
2004 ACS 0.42%	568,264	135,606,096
2005 ACS 1.0%	1,366,671	137,627,152
2006 ACS 1.0%	1,391,059	140,039,344
2007 ACS 1.0%	1,397,166	140,907,920
2008 ACS 1.0%	1,400,138	141,706,592
2009 ACS 1.0%	1,402,173	142,127,104
2010 ACS 1.0%	1,407,829	142,087,952
2011 ACS 1.0%	1,389,166	142,491,312
2012 ACS 1.0%	1,385,131	142,694,432
2013 ACS 1.0%	1,397,536	142,843,472
2014 ACS 1.0%	1,388,322	143,640,400
2015 ACS 1.0%	1,390,954	144,423,504
2016 ACS 1.0%	1,394,024	145,220,240

(2) Linked Historical Census Data		
Parents	Offspring	
Census 1850	Census 1880	373,863
Census 1880	Census 1910	1,551,255
Census 1910	Census 1940	3,240,198

(3) Linked Contemporary Administrative Data (U.S. Census Longitudinal Infrastructure Project)		
Parents	Offspring	
Census 1940	CPS 1973, 1979, 1981–1990	17,700
CPS 1973, 1979, 1981–1990	2000 Census long form and 2001–2015 ACS	17,600

(4) Large-Scale Social Survey Data		
General Social Survey	1972–2016	16,077
Health and Retirement Study	1992–2010	5,991
National Longitudinal Survey–Older Men	1966–1990	4,562

National Longitudinal Survey–Young Men	1966–1981	3,506
National Longitudinal Survey of Youth 79	1979–2012	4,133
National Survey of Families and Households	1987, 1993, 2002	3,373
Occupational Changes in a Generation Survey I	1962	16,072
Occupational Changes in a Generation Survey II	1973	20,349
Panel Study of Income Dynamics, SRC sample	1968–2015	5,939
Survey of Income and Program Participation	1986, 1987, 1988	14,547
Wisconsin Longitudinal Study	1957–2011	4,997

Notes: The 1890 Census data are missing because the original files were damaged by a fire. The IPUMS USA 1880 full count data do not include the literacy variable (see https://usa.ipums.org/usa-action/variables/LIT#availability_section), so the 1880 10% sample was used instead. Unweighted observations refer to person count in the original data. All the analyses are weighted by the person weight (PERWT), except for year 1950, which was weighted by the sample-line weight because the education variable (EDUC) was asked for sample-line persons only (https://usa.ipums.org/usa-action/variables/SLWT#description_section). Data sources with 100% population refer to full count censuses. Data source (1) contains both males and females, whereas the mobility data in (2), (3), (4) are males only. The number of observations for the linked contemporary administrative data has been rounded for U.S. Census Bureau disclosure purposes.

Table S2. Occupational Scheme Crosswalk

Macro-Class Occupations (5 categories)		Meso-Class Occupations (10 categories)		Micro-Class Occupations (70 categories)		1950 Occupation (269 categories)	
I	Professional-managerial	A	Classical professions	1101	Jurists	55	Lawyers and judges
				1102	Health professionals	32	Dentists
						71	Osteopaths
						73	Pharmacists
						75	Physicians and surgeons
				1103	Professors and instructors	10	College presidents and deans
						12	Agricultural sciences-Professors and instructors
						13	Biological sciences-Professors and instructors
						14	Chemistry-Professors and instructors
						15	Economics-Professors and instructors
						16	Engineering-Professors and instructors
						17	Geology and geophysics-Professors and instructors
						18	Mathematics professors and instructors
						19	Medical science professors and instructors
						23	Physics-Professors and instructors
						24	Psychology-Professors and instructors
						25	Statistics-Professors and instructors
						26	Natural science (nec)-Professors and instructors
						27	Social sciences (nec)-Professors and instructors
						28	Nonscientific subjects-Professors and instructors
						29	Subject not specified-Professors and instructors
				1104	Natural scientists	7	Chemists
						61	Agricultural scientists
						62	Biological scientists
						63	Geologists and geophysicists
						67	Mathematicians
						68	Physicists
						69	Miscellaneous natural scientists
						81	Economists
						82	Psychologists
						83	Statisticians and actuaries
						84	Miscellaneous social scientists
				1106	Architects	3	Architects
				1107	Accountants	0	Accountants and auditors
				1108	Journalists, authors, and related writers	6	Authors
						36	Editors and reporters
				1109	Engineers	41	Aeronautical-Engineers
						42	Chemical-Engineers
						43	Civil-Engineers
						44	Electrical-Engineers
						45	Industrial-Engineers
						46	Mechanical-Engineers

Macro-Class Occupations (5 categories)	Meso-Class Occupations (10 categories)		Micro-Class Occupations (70 categories)		1950 Occupation (269 categories)	
					47	Metallurgical, metallurgists-Engineers
					48	Mining-Engineers
					49	Engineers (n.e.c)
					92	Surveyors
	B	Managers and officials	1201	Officials, government and non-profit organizations	250	Officials and administrators (n.e.c), public administration
					260	Officials, lodge, society, union, etc.
					270	Postmasters
			1202	Managers	290	Managers, officials, and proprietors (n.e.c)
			1203	Commercial managers	200	Buyers and department heads, store
					201	Buyers and shippers, farm products
					280	Purchasing agents and buyers (n.e.c)
			1204	Building managers and proprietors	230	Managers and superintendents, building
					752	Boarding and lodging house keepers
	C	Other professions	1304	Elementary and secondary school teachers	93	Teachers (n.e.c)
			1305	Librarians	56	Librarians
			1306	Creative artists	1	Actors and actresses
					4	Artists and art teachers
					31	Dancers and dancing teachers
					33	Designers
					51	Entertainers (n.e.c)
					57	Musicians and music teachers
			1307	Ship officers	240	Officers, pilots, pursers and engineers, ship
			1308	Professional, technical, and related workers, n.e.c	2	Airplane pilots and navigators
					5	Athletes
					52	Farm and home management advisors
					53	Foresters and conservationists
					72	Personnel and labor relations workers
					74	Photographers
					76	Radio operators
					77	Recreation and group workers
					79	Social and welfare workers, except group
					91	Sports instructors and officials
					98	Veterinarians
					99	Professional, technical and kindred workers (n.e.c)
					210	Inspectors, public administration
					514	Decorators and window dressers
			1310	Workers in religion	9	Clergymen
					78	Religious workers
			1311	Nonmedical technicians	35	Draftsmen
					95	Testing-technicians

Macro-Class Occupations (5 categories)		Meso-Class Occupations (10 categories)		Micro-Class Occupations (70 categories)		1950 Occupation (269 categories)	
						96	Technicians (n.e.c)
				1312	Health semiprofessionals	8	Chiropractors
						34	Dietitians and nutritionists
						58	Nurses, professional
						59	Nurses, student professional
						70	Optometrists
						94	Medical and dental-technicians
						97	Therapists and healers (n.e.c)
						302	Attendants, physician's and dentist's office
						772	Midwives
						781	Practical nurses
				1313	Hospital attendants	730	Attendants, hospital and other institution
II	Routine nonmanual	D	Sales	3101	Real estate agents	470	Real estate agents and brokers
				3102	Other agents	300	Agents (n.e.c)
						400	Advertising agents and salesmen
						410	Auctioneers
						480	Stock and bond salesmen
				3103	Insurance agents	450	Insurance agents and brokers
				3104	Cashiers	320	Cashiers
				3105	Sales workers and shop assistants	205	Floormen and floor managers, store
						420	Demonstrators
						430	Hucksters and peddlers
						490	Salesmen and sales clerks (n.e.c)
		E	Clerical	3201	Telephone operators	365	Telegraph operators
						370	Telephone operators
				3202	Bookkeepers and related workers	204	Credit men
						305	Bank tellers
						310	Bookkeepers
						321	Collectors, bill and account
						380	Ticket, station, and express agents
				3203	Office and clerical workers	301	Attendants and assistants, library
						322	Dispatchers and starters, vehicle
						341	Office machine operators
						342	Shipping and receiving clerks
						350	Stenographers, typists, and secretaries
						390	Clerical and kindred workers (n.e.c)
				3204	Postal and mail distribution clerks	325	Express messengers and railway mail clerks
						335	Mail carriers
						340	Messengers and office boys
						360	Telegraph messengers
III	Manual	F	Craft	4101	Craftsmen and kindred workers, n.e.c	533	Inspectors (n.e.c)
						562	Motion picture projectionists
						572	Piano and organ tuners and repairmen

Macro-Class Occupations (5 categories)	Meso-Class Occupations (10 categories)	Micro-Class Occupations (70 categories)	1950 Occupation (269 categories)
			584 Stone cutters and stone carvers
			594 Craftsmen and kindred workers (n.e.c)
			614 Apprentices, other specified trades
			615 Apprentices, trade not specified
		4102 Foremen	523 Foremen (n.e.c)
		4103 Electronics service and repair workers	515 Electricians
			540 Linemen and servicemen, telegraph, telephone, & p
			551 Office machine-mechanics and repairmen
			552 Radio and television-mechanics and repairmen
			603 Electricians apprentice
		4104 Printers and related workers	502 Bookbinders
			512 Compositors and typesetters
			520 Electrotypers and stereotypers
			521 Engravers, except photoengravers
			571 Photoengravers and lithographers
			575 Pressmen and plate printers, printing
			613 Apprentices, printing trades
		4105 Locomotive operators	541 Locomotive engineers
			542 Locomotive firemen
			624 Brakemen, railroad
			681 Switchmen, railroad
		4107 Tailors and related workers	525 Furriers
			582 Shoemakers and repairers, except factory
			590 Tailors and tailoresses
			593 Upholsterers
			633 Dressmakers and seamstresses, except factory
			645 Milliners
		4109 Blacksmiths and machinists	501 Blacksmiths
			524 Forgemen and hammermen
			535 Job setters, metal
			544 Machinists
			560 Millwrights
			570 Pattern and model makers, except paper
			592 Tool makers, and die makers and setters
			604 Machinists and toolmakers apprentice
			612 Apprentices, metalworking trades (n.e.c)
			635 Filers, grinders, and polishers, metal
		4110 Jewelers, opticians, and precious metal workers	534 Jewelers, watchmakers, goldsmiths, and silversmiths
			563 Opticians and lens grinders and polishers
		4111 Other mechanics	545 Airplane-mechanics and repairmen
			550 Automobile-mechanics and repairmen

Macro-Class Occupations (5 categories)	Meso-Class Occupations (10 categories)	Micro-Class Occupations (70 categories)	1950 Occupation (269 categories)
			553 Mechanics and repairmen, railroad and car shop
			554 Mechanics and repairmen (n.e.c)
			600 Auto mechanics apprentice
			605 Mechanics, except auto apprentice
			662 Oilers and greaser, except auto
			920 Garage laborers and car washers and greasers
		4112 Plumbers and pipe-fitters	574 Plumbers and pipe fitters
			610 Plumbers and pipe fitters apprentice
		4113 Cabinetmakers	505 Cabinetmakers
		4114 Bakers	500 Bakers
		4115 Welders and related metal workers	503 Boilermakers
			585 Structural metal workers
			591 Tinsmiths, coppersmiths, and sheet metal workers
			685 Welders and flame cutters
		4116 Painters	564 Painters, construction and maintenance
			670 Painters, except construction or maintenance
		4117 Butchers	644 Meat cutters, except slaughter and packing house
		4118 Stationary engine operators	583 Stationary engineers
			672 Power station operators
			680 Stationary firemen
		4119 Bricklayers, carpenters, and related construction workers	504 Brickmasons, stonemasons, and tile setters
			510 Carpenters
			511 Cement and concrete finishers
			530 Glaziers
			565 Paperhangers
			573 Plasterers
			581 Roofers and slaters
			601 Bricklayers and masons apprentice
			602 Carpenters apprentice
			611 Apprentices, building trades (n.e.c)
			620 Asbestos and insulation workers
	G Lower manual	4201 Truck drivers	513 Cranemen, derrickmen, and hoistmen
			522 Excavating, grading, and road machinery operators
			683 Truck and tractor drivers
			960 Teamsters
		4203 Miners and related workers	622 Blasters and powdermen
			650 Mine operatives and laborers
			660 Motormen, mine, factory, logging camp, etc.
		4206 Textile workers	543 Loom fixers

Macro-Class Occupations (5 categories)	Meso-Class Occupations (10 categories)	Micro-Class Occupations (70 categories)	1950 Occupation (269 categories)
			634 Dyers
			675 Spinners, textile
			684 Weavers, textile
		4207 Sawyers and lumber inspectors	532 Inspectors, scalers, and graders, log and lumber
			674 Sawyers
		4208 Metal processors	531 Heat treaters, annealers, temperers
			561 Molders, metal
			580 Rollers and roll hands, metal
			641 Furnacemen, smeltermen and pourers
			642 Heaters, metal
		4209 Operatives and kindred workers, n.e.c	555 Millers, grain, flour, feed, etc.
			623 Boatmen, canalmen, and lock keepers
			630 Chainmen, rodmen, and axmen, surveying
			640 Fruit, nut, and vegetable graders, and packers, except factory
			671 Photographic process workers
			673 Sailors and deck hands
			690 Operative and kindred workers (n.e.c)
			940 Longshoremen and stevedores
			970 Laborers (n.e.c)
		4210 Forestry workers	950 Lumbermen, raftsmen, and woodchoppers
	H Service workers	4301 Protective service workers	762 Firemen, fire protection
			771 Marshals and constables
			773 Policemen and detectives
			782 Sheriffs and bailiffs
		4302 Transport conductors	203 Conductors, railroad
			631 Conductors, bus and street railway
		4303 Guards and watchmen	763 Guards, watchmen, and doorkeepers
		4304 Food service workers	750 Bartenders
			754 Cooks, except private household
			760 Counter and fountain workers
			784 Waiters and waitresses
		4305 Mass transportation operators	625 Bus drivers
			661 Motormen, street, subway, and elevated railway
			682 Taxicab drivers and chauffeurs
		4306 Service workers, n.e.c	54 Funeral directors and embalmers
			304 Baggagemen, transportation
			621 Attendants, auto service and parking
			731 Attendants, professional and personal service (n.e.c)
			732 Attendants, recreation and amusement
			751 Bootblacks
			761 Elevator operators
			780 Porters

Macro-Class Occupations (5 categories)		Meso-Class Occupations (10 categories)		Micro-Class Occupations (70 categories)		1950 Occupation (269 categories)	
						783	Ushers, recreation and amusement
						785	Watchmen (crossing) and bridge tenders
						790	Service workers, except private household (n.e.c)
				4307	Hairdressers	740	Barbers, beauticians, and manicurists
				4308	Newsboys and deliverymen	460	Newsboys
						632	Deliverymen and routemen
				4309	Launderers and dry-cleaners	643	Laundry and dry-cleaning operatives
						710	Laundresses, private household
				4310	Housekeeping workers	700	Housekeepers, private household
						720	Private household workers (n.e.c)
						764	Housekeepers and stewards, except private household
				4311	Janitors and cleaners	753	Charwomen and cleaners
						770	Janitors and sextons
				4312	Gardeners	930	Gardeners, except farm and groundskeepers
IV	Primary	I	Farmers, fisherman, and other primary	5101	Fishermen	910	Fishermen and oystermen
				5201	Farmers and farm managers	100	Farmers (owners and tenants)
						123	Farm managers
						810	Farm foremen
						830	Farm laborers, unpaid family workers
				5202	Farm laborers	820	Farm laborers, wage workers
						840	Farm service laborers, self-employed
V	Military			9990	Members of armed forces	595	Members of the armed services

Notes: The crosswalk file (occ1950_mc_xwalk_70.dta) can be downloaded from our project website. The IPUMS project has harmonized census occupational classifications across years. We use the occupational variable that was recoded into the 1950 classification (OCC1950). The variable description can be found on https://usa.ipums.org/usa-action/variables/OCC1950#description_section. Details of the variable OCC1950 are described in "Integrated Occupation and Industry Codes and Occupational Standing Variables in the IPUMS" (https://usa.ipums.org/usa/chapter4/chapter4.shtml). The original description of the 1950 occupation categories by the U.S. Bureau of the Census can be found in the file "Alphabetic Index of Occupations and Industries: 1950 (Washington D.C., 1950)" (https://usa.ipums.org/usa/resources/volii/Occupations1950.pdf).

Table S3. Data Sources for Occupational Percentile Ranks by Birth Cohort (Labor Force Aged 25–64)

	Birth Cohort																			
Data Source	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980
1850 100% population	X	X	X	X																
1860 1% sample		X	X	X	X															
1870 1% sample			X	X	X	X														
1880 10% population				X	X	X	X													
1890 (not available) -					-	-	-	-												
1900 100% sample						X	X	X	X											
1910 100% sample							X	X	X	X										
1920 100% population								X	X	X	X									
1930 100% population									X	X	X	X								
1940 100% population										X	X	X	X							
1950 1% sample											X	X	X	X						
1960 5% sample												X	X	X	X					
1970 2% sample													X	X	X	X				
1980 5% sample														X	X	X	X			
1990 5% sample															X	X	X	X		
2000 5% sample																X	X	X	X	
2001 ACS																X	X	X	X	
2002 ACS																X	X	X	X	
2003 ACS																X	X	X	X	
2004 ACS																X	X	X	X	
2005 ACS																X	X	X	X	X
2006 ACS																X	X	X	X	X
2007 ACS																X	X	X	X	X
2008 ACS																X	X	X	X	X
2009 ACS																X	X	X	X	X
2010 ACS																	X	X	X	X
2011 ACS																	X	X	X	X
2012 ACS																	X	X	X	X
2013 ACS																	X	X	X	X
2014 ACS																	X	X	X	X
2015 ACS																	X	X	X	X
2016 ACS																	X	X	X	X

Notes: We pooled individuals who were born in the same year but were observed in different census years. ACS refers to American Community Survey. Birth cohort is defined by a 10-year interval based on the midpoint year; for example, birth cohort 1790 refers to workers who were born between 1786 and 1795.

Table S4. Distributions of Micro-Class Occupations by Birth Cohort, 1790–1880

Occupational Code and Category, %		1790	1800	1810	1820	1830	1840	1850	1860	1870	1880
1101	Jurists	0.42	0.45	0.45	0.56	0.55	0.52	0.51	0.46	0.45	0.40
1102	Health professionals	0.93	0.95	1.12	1.21	1.01	0.97	0.92	0.97	1.01	0.87
1103	Professors and instructors	0.02	0.01	0.03	0.03	0.03	0.03	0.02	0.03	0.06	0.09
1104	Natural scientists	0.01	0.01	0.00	0.02	0.01	0.03	0.04	0.09	0.11	0.05
1106	Architects	0.01	0.02	0.03	0.02	0.02	0.03	0.03	0.04	0.05	0.04
1107	Accountants	0.02	0.02	0.02	0.02	0.02	0.03	0.05	0.09	0.14	0.26
1108	Journalists, authors, and related writers	0.02	0.03	0.03	0.06	0.09	0.09	0.10	0.11	0.11	0.09
1109	Engineers	0.08	0.04	0.06	0.07	0.09	0.10	0.12	0.14	0.17	0.28
1201	Officials, government and non-profit organizations	0.27	0.27	0.24	0.21	0.22	0.25	0.18	0.17	0.15	0.19
1202	Managers	3.92	5.13	6.02	6.13	6.03	5.81	5.67	7.21	6.71	6.92
1203	Commercial managers	0.01	0.05	0.05	0.11	0.16	0.21	0.18	0.18	0.15	0.15
1204	Building managers and proprietors	0.14	0.25	0.25	0.22	0.23	0.60	0.56	0.64	0.46	0.41
1304	Elementary and secondary school teachers	0.36	0.39	0.42	0.44	0.77	0.97	1.03	0.92	1.50	1.70
1305	Librarians	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.03	0.04
1306	Creative artists	0.06	0.08	0.15	0.18	0.24	0.27	0.34	0.42	0.51	0.51
1307	Ship officers	0.11	0.20	0.28	0.22	0.19	0.15	0.11	0.11	0.09	0.09
1308	Professional, technical, and related workers, n.e.c.	0.03	0.04	0.09	0.09	0.14	0.21	0.17	0.18	0.19	0.21
1310	Workers in religion	0.83	0.83	0.83	0.68	0.51	0.58	0.57	0.59	0.52	0.41
1311	Nonmedical technicians	0.00	0.00	0.01	0.01	0.00	0.01	0.02	0.03	0.05	0.10
1312	Health semiprofessionals	0.01	0.11	0.14	0.14	0.12	0.20	0.34	0.49	0.55	0.71
1313	Hospital attendants	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.04	0.05	0.07
3101	Real estate agents	0.02	0.03	0.08	0.09	0.09	0.16	0.31	0.49	0.44	0.42
3102	Other agents	0.09	0.11	0.10	0.11	0.09	0.12	0.07	0.05	0.06	0.09
3103	Insurance agents	0.01	0.04	0.07	0.08	0.09	0.16	0.22	0.31	0.34	0.40
3104	Cashiers	0.01	0.00	0.00	0.01	0.01	0.01	0.02	0.04	0.06	0.10
3105	Sales workers and shop assistants	0.50	0.76	0.99	1.33	1.68	2.10	2.52	2.91	3.74	4.80
3201	Telephone operators	0.00	0.00	0.00	0.00	0.02	0.05	0.10	0.13	0.22	0.28
3202	Bookkeepers and related workers	0.10	0.19	0.18	0.25	0.39	0.55	0.64	0.74	0.98	1.19
3203	Office and clerical workers	0.09	0.11	0.12	0.18	0.35	0.61	0.70	0.98	1.62	2.59
3204	Postal and mail distribution clerks	0.02	0.03	0.03	0.03	0.04	0.07	0.14	0.26	0.31	0.36
4101	Craftsmen and kindred workers, n.e.c.	1.20	1.10	1.22	1.31	1.20	1.00	0.76	0.61	0.51	0.38
4102	Foremen	0.10	0.25	0.29	0.34	0.36	0.21	0.41	0.93	1.09	1.28
4103	Electronics service and repair workers	0.00	0.00	0.00	0.00	0.01	0.01	0.04	0.13	0.27	0.57
4104	Printers and related workers	0.11	0.17	0.23	0.26	0.28	0.41	0.41	0.43	0.55	0.48
4105	Locomotive operators	0.00	0.03	0.01	0.06	0.17	0.35	0.51	0.75	0.93	1.11
4107	Tailors and related workers	1.34	2.57	3.13	3.21	3.67	2.57	2.36	2.73	2.66	1.98
4109	Blacksmiths and machinists	1.85	1.97	2.17	2.32	2.37	2.02	2.07	2.42	2.50	2.65

Occupational Code and Category, %		1790	1800	1810	1820	1830	1840	1850	1860	1870	1880
4110	Jewelers, opticians, and precious metal workers	0.16	0.17	0.16	0.19	0.20	0.19	0.16	0.15	0.13	0.09
4111	Other mechanics	0.60	0.56	0.54	0.49	0.39	0.26	0.17	0.22	0.31	0.67
4112	Plumbers and pipe-fitters	0.01	0.02	0.03	0.04	0.09	0.14	0.19	0.31	0.51	0.58
4113	Cabinetmakers	0.44	0.45	0.58	0.51	0.39	0.23	0.20	0.18	0.14	0.15
4114	Bakers	0.12	0.15	0.21	0.25	0.26	0.25	0.24	0.29	0.31	0.32
4115	Welders and related metal workers	0.13	0.13	0.20	0.28	0.34	0.37	0.32	0.31	0.35	0.40
4116	Painters	0.23	0.30	0.46	0.65	0.82	0.96	1.12	1.24	1.25	1.23
4117	Butchers	0.20	0.25	0.31	0.40	0.50	0.47	0.45	0.43	0.42	0.36
4118	Stationary engine operators	0.05	0.12	0.23	0.32	0.43	0.56	0.75	0.97	0.95	0.86
4119	Bricklayers, carpenters, and related construction workers	4.13	4.35	5.04	5.49	5.16	4.48	4.40	4.55	3.82	3.55
4201	Truck drivers	0.32	0.42	0.62	0.82	1.04	1.20	1.32	1.54	1.45	1.28
4203	Miners and related workers	0.42	0.82	1.12	1.65	2.27	1.74	1.79	2.15	2.44	2.63
4206	Textile workers	0.49	0.63	0.45	0.35	0.31	0.24	0.33	0.58	0.68	0.59
4207	Sawyers and lumber inspectors	0.12	0.12	0.14	0.18	0.18	0.13	0.12	0.14	0.13	0.11
4208	Metal processors	0.10	0.13	0.25	0.30	0.42	0.45	0.41	0.46	0.50	0.49
4209	Operatives and kindred workers, n.e.c.	14.19	14.30	15.65	17.37	17.45	17.37	16.55	14.48	15.48	16.22
4210	Forestry workers	0.14	0.15	0.25	0.24	0.24	0.30	0.30	0.34	0.35	0.38
4301	Protective service workers	0.12	0.16	0.16	0.20	0.24	0.31	0.28	0.40	0.39	0.44
4302	Transport conductors	0.00	0.00	0.02	0.04	0.11	0.16	0.22	0.38	0.44	0.46
4303	Guards and watchmen	0.07	0.09	0.12	0.16	0.13	0.23	0.37	0.45	0.37	0.38
4304	Food service workers	0.07	0.10	0.26	0.45	0.65	0.93	1.07	1.22	1.44	1.39
4305	Mass transportation operators	0.03	0.09	0.13	0.17	0.20	0.23	0.25	0.34	0.43	0.53
4306	Service workers, n.e.c.	0.09	0.17	0.19	0.20	0.30	0.37	0.43	0.57	0.72	0.94
4307	Hairdressers	0.04	0.05	0.08	0.12	0.18	0.28	0.37	0.51	0.67	0.75
4308	Newsboys and deliverymen	0.02	0.03	0.03	0.04	0.05	0.06	0.08	0.14	0.18	0.28
4309	Launderers and dry-cleaners	0.00	0.39	0.38	0.53	0.72	0.91	1.39	1.89	1.70	1.48
4310	Housekeeping workers	0.05	1.64	1.93	2.31	3.82	3.66	3.17	2.72	3.27	4.26
4311	Janitors and cleaners	0.03	0.02	0.04	0.06	0.05	0.14	0.32	0.55	0.58	0.76
4312	Gardeners	0.21	0.31	0.30	0.34	0.29	0.28	0.22	0.18	0.18	0.21
5101	Fishermen	0.19	0.19	0.22	0.21	0.22	0.24	0.26	0.22	0.20	0.16
5201	Farmers and farm managers	63.33	55.07	46.11	39.67	32.62	31.12	32.30	29.94	24.42	20.77
5202	Farm laborers	1.15	2.33	4.85	5.85	8.48	10.06	8.03	5.31	6.37	4.85
9990	Members of armed forces	0.06	0.05	0.06	0.11	0.16	0.25	0.14	0.03	0.07	0.17
Total		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Data sources: IPUMS United States Population Censuses 1850–1940.
Notes: Occupational categories are defined in Table S2 and adapted from the microclass scheme proposed in Jonsson et al. (*24*). Occupations with 0.00 percent refer to those with very few cases observed in the sample.

Table S5. Distributions of Micro-Class Occupations by Birth Cohort, 1890–1980

Occupational Code and Category, %		1890	1900	1910	1920	1930	1940	1950	1960	1970	1980
1101	Jurists	0.34	0.39	0.36	0.29	0.38	0.64	0.84	0.69	0.74	0.67
1102	Health professionals	0.72	0.73	0.63	0.60	0.68	0.85	0.92	0.81	0.87	0.77
1103	Professors and instructors	0.13	0.19	0.24	0.38	0.58	1.12	1.00	0.71	0.79	0.95
1104	Natural scientists	0.10	0.15	0.23	0.39	0.48	0.64	0.74	0.67	0.83	0.96
1106	Architects	0.06	0.05	0.05	0.06	0.09	0.11	0.14	0.13	0.14	0.12
1107	Accountants	0.48	0.61	0.66	0.83	0.85	1.17	1.41	1.47	1.46	1.39
1108	Journalists, authors, and related writers	0.10	0.17	0.21	0.27	0.34	0.41	0.46	0.41	0.47	0.48
1109	Engineers	0.53	0.75	0.89	1.55	1.85	1.90	1.89	1.94	1.80	1.69
1201	Officials, government and non-profit organizations	0.30	0.39	0.44	0.49	0.53	0.37	0.27	0.21	0.19	0.18
1202	Managers	7.88	8.05	7.30	7.22	7.69	11.54	13.46	14.27	13.23	11.07
1203	Commercial managers	0.26	0.36	0.57	0.81	0.91	0.95	0.97	1.09	1.14	0.97
1204	Building managers and proprietors	0.33	0.23	0.15	0.14	0.20	0.41	0.43	0.38	0.34	0.30
1304	Elementary and secondary school teachers	2.08	2.81	2.97	2.50	3.72	4.82	5.17	3.56	4.11	4.20
1305	Librarians	0.07	0.10	0.13	0.15	0.19	0.22	0.23	0.12	0.09	0.08
1306	Creative artists	0.50	0.54	0.57	0.68	0.93	1.47	1.80	1.63	1.75	1.90
1307	Ship officers	0.10	0.08	0.07	0.05	0.04	0.04	0.03	0.03	0.02	0.02
1308	Professional, technical, and related workers, n.e.c.	0.39	0.71	1.30	1.86	2.44	4.16	5.55	6.08	7.00	7.03
1310	Workers in religion	0.38	0.35	0.34	0.34	0.42	0.50	0.49	0.37	0.28	0.24
1311	Nonmedical technicians	0.14	0.25	0.40	0.77	1.09	0.87	0.83	0.78	0.66	0.67
1312	Health semiprofessionals	0.94	1.28	1.61	2.02	2.69	3.80	5.29	5.35	5.48	5.86
1313	Hospital attendants	0.15	0.30	0.54	0.85	1.23	1.78	1.98	2.08	2.04	2.27
3101	Real estate agents	0.37	0.32	0.30	0.45	0.59	0.95	0.83	0.65	0.54	0.42
3102	Other agents	0.20	0.29	0.29	0.27	0.28	0.45	0.51	0.58	0.71	0.66
3103	Insurance agents	0.52	0.58	0.57	0.76	0.84	0.89	0.90	0.87	0.89	0.90
3104	Cashiers	0.17	0.33	0.58	0.89	1.20	1.33	1.25	1.37	1.53	2.17
3105	Sales workers and shop assistants	5.80	6.71	6.89	6.23	5.45	4.69	4.05	3.72	3.71	3.87
3201	Telephone operators	0.43	0.63	0.58	0.51	0.67	0.23	0.11	0.07	0.06	0.06
3202	Bookkeepers and related workers	1.30	1.57	1.84	2.33	2.72	2.38	1.93	1.72	1.48	1.34
3203	Office and clerical workers	4.24	6.76	8.77	11.42	13.39	12.84	12.05	11.05	10.39	10.95
3204	Postal and mail distribution clerks	0.42	0.37	0.31	0.46	0.41	0.42	0.52	0.51	0.39	0.28
4101	Craftsmen and kindred workers, n.e.c.	0.38	0.35	0.54	0.51	0.38	0.22	0.10	0.08	0.05	0.04
4102	Foremen	1.50	1.68	1.89	2.20	2.20	1.85	1.54	1.54	1.27	0.86
4103	Electronics service and repair workers	0.77	1.01	0.86	1.22	1.31	1.15	1.11	1.14	1.26	1.29
4104	Printers and related workers	0.54	0.56	0.53	0.46	0.46	0.35	0.26	0.29	0.24	0.17
4105	Locomotive operators	1.10	0.58	0.30	0.32	0.19	0.09	0.08	0.04	0.04	0.03
4107	Tailors and related workers	1.30	0.79	0.53	0.43	0.34	0.32	0.25	0.27	0.28	0.24
4109	Blacksmiths and machinists	2.74	2.00	1.62	1.70	1.19	0.85	0.63	0.52	0.37	0.27

Occupational Code and Category, %		1890	1900	1910	1920	1930	1940	1950	1960	1970	1980
4110	Jewelers, opticians, and precious metal workers	0.08	0.08	0.10	0.13	0.09	0.11	0.14	0.13	0.10	0.09
4111	Other mechanics	1.71	2.63	2.90	3.19	2.77	2.50	2.44	2.76	2.44	2.22
4112	Plumbers and pipe-fitters	0.65	0.57	0.49	0.53	0.46	0.38	0.37	0.43	0.43	0.45
4113	Cabinetmakers	0.13	0.10	0.09	0.09	0.07	0.05	0.05	0.06	0.05	0.04
4114	Bakers	0.31	0.26	0.22	0.16	0.13	0.12	0.11	0.14	0.13	0.14
4115	Welders and related metal workers	0.56	0.63	0.91	1.04	0.86	0.69	0.60	0.64	0.66	0.66
4116	Painters	1.21	1.15	0.98	0.73	0.61	0.48	0.50	0.63	0.64	0.65
4117	Butchers	0.34	0.30	0.29	0.27	0.23	0.21	0.16	0.18	0.19	0.20
4118	Stationary engine operators	0.84	0.75	0.58	0.50	0.38	0.27	0.27	0.26	0.18	0.14
4119	Bricklayers, carpenters, and related construction workers	3.00	2.33	1.87	1.90	1.58	1.19	1.27	1.62	1.76	1.83
4201	Truck drivers	1.56	2.34	2.87	2.90	2.94	3.00	2.87	3.09	2.81	2.14
4203	Miners and related workers	2.05	1.35	0.95	0.55	0.29	0.16	0.16	0.16	0.16	0.23
4206	Textile workers	0.47	0.36	0.27	0.23	0.12	0.04	0.02	0.02	0.01	0.01
4207	Sawyers and lumber inspectors	0.12	0.14	0.16	0.15	0.11	0.06	0.04	0.04	0.03	0.03
4208	Metal processors	0.43	0.29	0.28	0.25	0.15	0.05	0.02	0.02	0.01	0.01
4209	Operatives and kindred workers, n.e.c.	16.34	16.12	17.04	15.60	13.52	9.36	7.89	8.47	8.53	8.77
4210	Forestry workers	0.33	0.25	0.23	0.15	0.12	0.08	0.06	0.07	0.06	0.05
4301	Protective service workers	0.55	0.64	0.49	0.60	0.73	0.68	0.72	0.92	1.24	0.99
4302	Transport conductors	0.33	0.15	0.08	0.08	0.05	0.05	0.05	0.03	0.03	0.04
4303	Guards and watchmen	0.44	0.45	0.41	0.43	0.50	0.91	0.96	0.95	1.02	1.12
4304	Food service workers	1.72	2.31	2.96	3.10	3.08	2.35	2.11	2.80	3.48	5.21
4305	Mass transportation operators	0.71	0.84	0.74	0.61	0.57	0.91	0.88	0.76	0.57	0.38
4306	Service workers, n.e.c.	1.35	1.89	2.30	2.18	2.22	2.08	1.82	1.89	2.04	2.32
4307	Hairdressers	0.84	0.82	0.77	0.75	0.62	0.71	0.62	0.65	0.90	0.92
4308	Newsboys and deliverymen	0.31	0.45	0.63	0.57	0.56	0.34	0.20	0.17	0.18	0.16
4309	Launderers and dry-cleaners	1.14	0.97	0.82	0.71	0.53	0.29	0.22	0.22	0.20	0.17
4310	Housekeeping workers	4.03	4.38	3.81	1.98	1.31	0.35	0.16	0.14	0.10	0.06
4311	Janitors and cleaners	1.02	1.16	1.51	1.93	2.22	3.13	3.21	3.32	2.88	2.49
4312	Gardeners	0.25	0.28	0.28	0.26	0.28	0.46	0.58	0.76	0.87	1.09
5101	Fishermen	0.15	0.12	0.09	0.06	0.05	0.04	0.04	0.04	0.03	0.03
5201	Farmers and farm managers	15.23	9.45	5.95	3.48	1.77	1.02	0.70	0.54	0.33	0.27
5202	Farm laborers	3.81	3.18	2.43	1.39	1.04	0.59	0.47	0.54	0.63	0.75
9990	Members of armed forces	0.23	0.23	0.45	1.09	1.13	0.48	0.23	0.35	0.64	0.96
Total		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Data sources: IPUMS United States Population Censuses 1910–2000 & ACS 2001–2015.

Notes: Occupational categories are defined in Table S2 and adapted from the microclass scheme proposed in Jonsson et al. (*24*). Occupations with 0.00 percent refer to those with very few cases observed in the sample.

Table S6. Treiman's Rank and Percentile Rank Correlation Matrices

	Birth Cohort																			
	1790	**1800**	**1810**	**1820**	**1830**	**1840**	**1850**	**1860**	**1870**	**1880**	**1890**	**1900**	**1910**	**1920**	**1930**	**1940**	**1950**	**1960**	**1970**	**1980**
1790	1.00	0.99	0.95	0.92	0.89	0.86	0.82	0.79	0.75	0.72	0.68	0.64	0.60	0.57	0.54	0.52	0.50	0.48	0.46	0.44
1800	0.96	1.00	0.98	0.95	0.92	0.88	0.85	0.81	0.78	0.74	0.70	0.66	0.63	0.59	0.57	0.54	0.52	0.49	0.47	0.45
1810	0.93	0.95	1.00	0.98	0.95	0.91	0.88	0.84	0.81	0.77	0.72	0.68	0.64	0.61	0.59	0.57	0.54	0.51	0.49	0.46
1820	0.91	0.93	0.95	1.00	0.98	0.95	0.91	0.87	0.83	0.79	0.75	0.70	0.66	0.63	0.61	0.59	0.57	0.55	0.52	0.48
1830	0.90	0.91	0.92	0.95	1.00	0.98	0.94	0.90	0.86	0.82	0.78	0.73	0.68	0.65	0.64	0.62	0.60	0.58	0.55	0.52
1840	0.88	0.89	0.90	0.92	0.95	1.00	0.98	0.94	0.90	0.85	0.81	0.76	0.71	0.68	0.66	0.65	0.63	0.62	0.59	0.56
1850	0.86	0.87	0.89	0.90	0.92	0.94	1.00	0.98	0.93	0.89	0.84	0.79	0.75	0.71	0.68	0.67	0.66	0.65	0.63	0.61
1860	0.84	0.85	0.87	0.89	0.90	0.92	0.94	1.00	0.98	0.93	0.88	0.83	0.78	0.74	0.71	0.69	0.68	0.67	0.66	0.63
1870	0.81	0.83	0.85	0.86	0.88	0.90	0.91	0.94	1.00	0.98	0.92	0.87	0.82	0.77	0.75	0.72	0.70	0.68	0.67	0.65
1880	0.78	0.81	0.83	0.84	0.86	0.88	0.89	0.91	0.93	1.00	0.97	0.92	0.86	0.81	0.78	0.75	0.73	0.70	0.68	0.65
1890	0.76	0.77	0.80	0.82	0.84	0.86	0.88	0.89	0.90	0.93	1.00	0.97	0.91	0.86	0.82	0.79	0.77	0.75	0.71	0.67
1900	0.73	0.75	0.76	0.79	0.81	0.83	0.85	0.87	0.88	0.90	0.92	1.00	0.97	0.91	0.88	0.85	0.83	0.80	0.77	0.72
1910	0.70	0.71	0.73	0.75	0.77	0.80	0.82	0.84	0.86	0.87	0.89	0.92	1.00	0.97	0.93	0.90	0.88	0.86	0.84	0.79
1920	0.67	0.69	0.71	0.73	0.74	0.78	0.80	0.82	0.83	0.86	0.87	0.89	0.92	1.00	0.97	0.93	0.90	0.89	0.86	0.83
1930	0.64	0.66	0.68	0.71	0.73	0.75	0.78	0.80	0.81	0.83	0.86	0.87	0.89	0.91	1.00	0.97	0.93	0.90	0.88	0.84
1940	0.62	0.64	0.66	0.68	0.71	0.73	0.75	0.77	0.79	0.81	0.83	0.86	0.88	0.88	0.90	1.00	0.97	0.92	0.89	0.85
1950	0.60	0.61	0.63	0.65	0.68	0.71	0.73	0.74	0.77	0.79	0.81	0.83	0.87	0.87	0.87	0.88	1.00	0.97	0.91	0.87
1960	0.58	0.59	0.60	0.63	0.66	0.70	0.73	0.74	0.74	0.76	0.79	0.82	0.85	0.87	0.87	0.86	0.88	1.00	0.96	0.90
1970	0.57	0.58	0.59	0.60	0.63	0.68	0.71	0.73	0.74	0.73	0.76	0.80	0.84	0.84	0.87	0.85	0.84	0.88	1.00	0.96
1980	0.59	0.59	0.60	0.60	0.62	0.68	0.71	0.73	0.75	0.75	0.73	0.78	0.83	0.83	0.84	0.86	0.84	0.82	0.88	1.00

Data sources: IPUMS United States Population Censuses 1850–2000 & ACS 2001–2015.

Notes: The lower triangular part of the correlation matrix refers to a series of correlations between Treiman's ranks at times t and $t + n$. The upper triangular part of the correlation matrix refers to correlations between percentile ranks at times t and $t + n$. The shaded region refers to higher correlations between years in Treiman's ranks than in percentile ranks. Note that the percentile ranks are smoothed using the method described in Section S4, and correlations between the unsmoothed percentile ranks at different cohorts are weaker than those reported here.

Table S7. The Top-10 and Bottom 10 Occupations Based on Occupational Percentile Ranks

	Top-10 Occupations		Bottom-10 Occupations	
Year	Percentile Rank	Micro-Class Occupation	Percentile Rank	Micro-Class Occupation
1790	99.811	Nonmedical technicians	0.675	Housekeeping workers
	99.811	Transport conductors	2.305	Foremen
	99.811	Hospital attendants	9.675	Operatives and kindred workers, n.e.c.
	99.811	Cashiers	13.070	Mass transportation operators
	99.811	Librarians	13.255	Farm laborers
	99.811	Real estate agents	13.836	Launderers and dry-cleaners
	99.811	Architects	14.586	Fishermen
	99.811	Professors and instructors	18.502	Service workers, n.e.c.
	99.811	Insurance agents	18.958	Miners and related workers
	99.765	Bookkeepers and related workers	19.274	Food service workers
1800	99.867	Telephone operators	2.416	Housekeeping workers
	99.867	Electronics service and repair workers	4.744	Launderers and dry-cleaners
	99.835	Hospital attendants	6.812	Farm laborers
	99.835	Cashiers	12.957	Operatives and kindred workers, n.e.c.
	99.835	Insurance agents	13.727	Fishermen
	99.835	Nonmedical technicians	21.151	Foremen
	99.835	Professors and instructors	21.983	Miners and related workers
	99.835	Architects	22.223	Truck drivers
	99.835	Transport conductors	22.331	Mass transportation operators
	99.835	Librarians	22.352	Forestry workers
1810	99.828	Librarians	0.230	Launderers and dry-cleaners
	99.828	Architects	3.442	Farm laborers
	99.828	Insurance agents	5.853	Housekeeping workers
	99.828	Professors and instructors	16.200	Operatives and kindred workers, n.e.c.
	99.828	Telephone operators	21.472	Fishermen
	99.828	Cashiers	24.262	Food service workers
	99.711	Transport conductors	24.851	Forestry workers
	99.545	Bookkeepers and related workers	25.214	Truck drivers
	99.090	Nonmedical technicians	35.734	Miners and related workers
	98.756	Officials, government and non-profit organizations	42.957	Mass transportation operators
1820	99.851	Librarians	0.290	Launderers and dry-cleaners
	99.851	Insurance agents	3.895	Farm laborers
	99.851	Cashiers	7.977	Food service workers
	99.851	Architects	8.997	Housekeeping workers
	99.851	Professors and instructors	18.960	Operatives and kindred workers, n.e.c.
	99.851	Telephone operators	27.720	Forestry workers
	99.553	Bookkeepers and related workers	28.609	Fishermen
	99.394	Journalists, authors, and related writers	37.055	Truck drivers
	99.171	Transport conductors	48.528	Health semiprofessionals
	99.002	Accountants	48.592	Farmers and farm managers
1830	99.892	Librarians	0.382	Launderers and dry-cleaners
	99.864	Architects	4.808	Farm laborers
	99.779	Journalists, authors, and related writers	9.201	Food service workers
	99.549	Bookkeepers and related workers	11.193	Housekeeping workers
	99.545	Telephone operators	21.478	Operatives and kindred workers, n.e.c.
	99.517	Insurance agents	30.570	Forestry workers

Year	Top-10 Occupations		Bottom-10 Occupations	
	Percentile Rank	Micro-Class Occupation	Percentile Rank	Micro-Class Occupation
	99.483	Professors and instructors	30.631	Fishermen
	99.366	Accountants	48.411	Health semiprofessionals
	98.909	Natural scientists	48.814	Farmers and farm managers
	98.749	Nonmedical technicians	50.112	Textile workers
1840	99.925	Librarians	0.527	Launderers and dry-cleaners
	99.919	Journalists, authors, and related writers	5.323	Farm laborers
	99.567	Architects	10.044	Food service workers
	99.214	Bookkeepers and related workers	12.202	Housekeeping workers
	99.210	Telephone operators	22.438	Operatives and kindred workers, n.e.c.
	99.119	Nonmedical technicians	26.946	Fishermen
	99.101	Professors and instructors	31.301	Forestry workers
	98.906	Insurance agents	48.573	Farmers and farm managers
	98.795	Engineers	49.109	Miners and related workers
	98.618	Accountants	49.387	Health semiprofessionals
1850	99.918	Journalists, authors, and related writers	0.706	Launderers and dry-cleaners
	99.909	Librarians	5.221	Farm laborers
	99.478	Nonmedical technicians	14.828	Food service workers
	99.331	Professors and instructors	15.903	Housekeeping workers
	99.001	Jurists	16.655	Fishermen
	98.522	Telephone operators	21.128	Operatives and kindred workers, n.e.c.
	98.509	Accountants	25.516	Forestry workers
	98.339	Architects	41.693	Miners and related workers
	98.219	Bookkeepers and related workers	46.415	Farmers and farm managers
	98.103	Insurance agents	55.746	Health semiprofessionals
1860	99.909	Librarians	0.828	Launderers and dry-cleaners
	99.535	Professors and instructors	4.884	Farm laborers
	99.462	Jurists	9.908	Fishermen
	99.408	Accountants	19.049	Operatives and kindred workers, n.e.c.
	99.320	Journalists, authors, and related writers	19.195	Forestry workers
	99.214	Nonmedical technicians	22.372	Miners and related workers
	98.179	Health professionals	29.711	Housekeeping workers
	97.584	Engineers	31.010	Food service workers
	97.386	Transport conductors	43.157	Farmers and farm managers
	97.160	Insurance agents	59.358	Textile workers
1870	99.683	Professors and instructors	1.999	Launderers and dry-cleaners
	99.461	Jurists	4.287	Farm laborers
	99.187	Librarians	6.893	Miners and related workers
	98.871	Accountants	8.296	Fishermen
	98.770	Health professionals	17.129	Forestry workers
	97.978	Engineers	17.219	Operatives and kindred workers, n.e.c.
	97.846	Journalists, authors, and related writers	37.751	Farmers and farm managers
	97.217	Nonmedical technicians	43.053	Textile workers
	96.740	Architects	46.814	Metal processors
	96.691	Officials, government and non-profit organizations	48.345	Food service workers
1880	99.882	Professors and instructors	2.705	Miners and related workers
	99.567	Jurists	3.396	Farm laborers

Year	Top-10 Occupations		Bottom-10 Occupations	
	Percentile Rank	Micro-Class Occupation	Percentile Rank	Micro-Class Occupation
	98.946	Health professionals	4.272	Launderers and dry-cleaners
	97.558	Librarians	6.097	Fishermen
	97.117	Engineers	10.694	Forestry workers
	96.937	Elementary and secondary school teachers	15.208	Operatives and kindred workers, n.e.c.
	96.573	Journalists, authors, and related writers	16.376	Textile workers
	96.510	Accountants	19.029	Metal processors
	96.383	Architects	31.923	Farmers and farm managers
	95.125	Natural scientists	39.429	Bakers
1890	99.908	Professors and instructors	1.371	Miners and related workers
	99.626	Jurists	2.501	Farm laborers
	99.056	Health professionals	2.569	Textile workers
	97.590	Elementary and secondary school teachers	4.548	Fishermen
	96.455	Librarians	4.632	Forestry workers
	96.164	Natural scientists	5.615	Launderers and dry-cleaners
	96.076	Journalists, authors, and related writers	9.580	Metal processors
	95.945	Architects	14.266	Operatives and kindred workers, n.e.c.
	95.768	Engineers	22.469	Janitors and cleaners
	95.010	Workers in religion	28.287	Gardeners
1900	99.889	Professors and instructors	1.605	Farm laborers
	99.595	Jurists	2.271	Textile workers
	99.063	Health professionals	2.743	Miners and related workers
	97.432	Elementary and secondary school teachers	3.211	Forestry workers
	96.094	Librarians	3.884	Fishermen
	95.929	Natural scientists	5.490	Launderers and dry-cleaners
	95.757	Architects	9.523	Janitors and cleaners
	95.742	Journalists, authors, and related writers	12.129	Sawyers and lumber inspectors
	95.167	Engineers	14.552	Operatives and kindred workers, n.e.c.
	94.539	Workers in religion	19.290	Gardeners
1910	99.634	Jurists	1.072	Farm laborers
	99.613	Professors and instructors	1.853	Forestry workers
	99.134	Health professionals	2.368	Textile workers
	97.319	Elementary and secondary school teachers	2.878	Sawyers and lumber inspectors
	95.751	Librarians	3.637	Miners and related workers
	95.715	Architects	4.877	Launderers and dry-cleaners
	95.655	Natural scientists	6.300	Janitors and cleaners
	95.274	Journalists, authors, and related writers	8.821	Fishermen
	94.583	Engineers	15.515	Gardeners
	94.372	Workers in religion	15.557	Operatives and kindred workers, n.e.c.
1920	99.559	Jurists	0.834	Forestry workers
	99.349	Health professionals	0.837	Farm laborers
	98.981	Professors and instructors	1.841	Textile workers
	96.925	Elementary and secondary school teachers	1.852	Sawyers and lumber inspectors
	95.147	Architects	3.768	Miners and related workers
	95.075	Natural scientists	3.943	Launderers and dry-cleaners
	94.780	Librarians	10.314	Housekeeping workers
	94.260	Workers in religion	11.043	Janitors and cleaners
	93.840	Journalists, authors, and related writers	12.042	Truck drivers

Year	Top-10 Occupations		Bottom-10 Occupations	
	Percentile Rank	Micro-Class Occupation	Percentile Rank	Micro-Class Occupation
	93.506	Engineers	13.661	Metal processors
1930	99.544	Health professionals	0.548	Farm laborers
	99.157	Jurists	0.670	Forestry workers
	98.373	Professors and instructors	1.019	Textile workers
	95.848	Elementary and secondary school teachers	1.036	Sawyers and lumber inspectors
	94.989	Natural scientists	2.219	Launderers and dry-cleaners
	93.553	Architects	2.814	Miners and related workers
	93.095	Librarians	3.884	Metal processors
	92.519	Workers in religion	5.247	Housekeeping workers
	91.851	Engineers	8.626	Truck drivers
	91.818	Journalists, authors, and related writers	12.788	Operatives and kindred workers, n.e.c.
1940	99.578	Health professionals	0.360	Farm laborers
	98.817	Jurists	0.414	Textile workers
	98.013	Professors and instructors	0.454	Sawyers and lumber inspectors
	96.223	Natural scientists	0.788	Forestry workers
	94.728	Elementary and secondary school teachers	0.959	Launderers and dry-cleaners
	92.234	Architects	2.333	Metal processors
	91.960	Librarians	6.303	Miners and related workers
	91.191	Journalists, authors, and related writers	6.987	Janitors and cleaners
	90.589	Engineers	9.659	Operatives and kindred workers, n.e.c.
	90.031	Workers in religion	13.665	Welders and related metal workers
1950	99.565	Health professionals	0.287	Farm laborers
	98.755	Jurists	0.435	Sawyers and lumber inspectors
	97.927	Professors and instructors	0.544	Textile workers
	97.122	Natural scientists	0.728	Forestry workers
	94.479	Elementary and secondary school teachers	0.742	Launderers and dry-cleaners
	93.196	Architects	2.868	Janitors and cleaners
	92.030	Librarians	3.659	Metal processors
	91.718	Journalists, authors, and related writers	4.027	Butchers
	90.184	Engineers	7.302	Welders and related metal workers
	89.029	Accountants	9.328	Operatives and kindred workers, n.e.c.
1960	99.574	Health professionals	0.278	Farm laborers
	98.778	Jurists	0.653	Sawyers and lumber inspectors
	97.999	Professors and instructors	0.715	Forestry workers
	97.219	Natural scientists	0.799	Launderers and dry-cleaners
	95.644	Architects	0.892	Butchers
	94.653	Elementary and secondary school teachers	1.162	Textile workers
	93.495	Librarians	3.459	Janitors and cleaners
	92.212	Journalists, authors, and related writers	5.069	Gardeners
	90.678	Accountants	5.490	Metal processors
	89.958	Engineers	8.209	Painters
1970	99.413	Health professionals	0.313	Farm laborers
	99.013	Jurists	0.766	Forestry workers
	98.047	Professors and instructors	0.905	Launderers and dry-cleaners
	97.233	Natural scientists	1.062	Sawyers and lumber inspectors
	96.761	Architects	1.116	Butchers
	95.637	Librarians	1.493	Gardeners

Year	Top-10 Occupations		Bottom-10 Occupations	
	Percentile Rank	Micro-Class Occupation	Percentile Rank	Micro-Class Occupation
	94.615	Elementary and secondary school teachers	3.122	Painters
	92.343	Journalists, authors, and related writers	3.125	Textile workers
	91.392	Accountants	4.575	Janitors and cleaners
	89.761	Engineers	6.658	Tailors and related workers
1980	99.457	Jurists	0.355	Farm laborers
	99.119	Health professionals	1.191	Sawyers and lumber inspectors
	97.857	Professors and instructors	1.374	Forestry workers
	97.453	Natural scientists	1.440	Launderers and dry-cleaners
	96.691	Architects	2.040	Gardeners
	95.705	Librarians	2.096	Painters
	93.638	Elementary and secondary school teachers	2.964	Butchers
	93.269	Journalists, authors, and related writers	4.069	Bricklayers, carpenters, and related construction workers
	92.330	Accountants	4.140	Tailors and related workers
	90.755	Engineers	5.587	Janitors and cleaners

Data sources: IPUMS United States Population Censuses 1850–2000 & ACS 2001–2015.

Notes: The percentile ranks reported are smoothed using the method described in Section S3.

Table S8. The Top-10 Occupations Based on Changes in Occupational Size between Two Adjacent Cohorts

Growing Occupations					Disappearing Occupations			
Birth cohort, t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t
1800	Housekeeping workers	1.60	1.64	2.42	Farmers and farm managers	-8.26	55.07	48.72
	Tailors and related workers	1.22	2.57	77.96	Craftsmen and kindred workers, n.e.c.	-0.11	1.10	80.52
	Managers	1.21	5.13	92.78	Other mechanics	-0.04	0.56	76.59
	Farm laborers	1.19	2.33	6.81	Engineers	-0.03	0.04	97.78
	Miners and related workers	0.41	0.82	21.98	Members of armed forces	-0.01	0.05	86.75
	Launderers and dry-cleaners	0.39	0.39	4.74	Janitors and cleaners	-0.01	0.02	83.23
	Sales workers and shop assistants	0.26	0.76	88.61	Accountants	-0.01	0.02	97.18
	Bricklayers, carpenters, and related construction workers	0.23	4.35	84.52	Cashiers	-0.01	0.00	99.83
	Foremen	0.15	0.25	21.15	Professors and instructors	-0.01	0.01	99.83
	Textile workers	0.14	0.63	64.59	Fishermen	0.00	0.19	13.73
1810	Farm laborers	2.52	4.85	3.44	Farmers and farm managers	-8.96	46.11	48.84
	Operatives and kindred workers, n.e.c.	1.36	15.65	16.20	Textile workers	-0.19	0.45	49.59
	Managers	0.89	6.02	92.23	Officials, government and non-profit organizations	-0.03	0.24	98.76
	Bricklayers, carpenters, and related construction workers	0.68	5.04	82.58	Other mechanics	-0.03	0.54	78.23
	Tailors and related workers	0.56	3.13	75.68	Locomotive operators	-0.02	0.01	87.71
	Miners and related workers	0.30	1.12	35.73	Jewelers, opticians, and precious metal workers	-0.01	0.16	95.40
	Housekeeping workers	0.28	1.93	5.85	Gardeners	-0.01	0.30	72.94
	Sales workers and shop assistants	0.23	0.99	87.66	Bookkeepers and related workers	-0.01	0.18	99.54
	Truck drivers	0.21	0.62	25.21	Natural scientists	-0.01	0.00	96.75
	Blacksmiths and machinists	0.21	2.17	77.44	Launderers and dry-cleaners	-0.01	0.38	0.23
1820	Operatives and kindred workers, n.e.c.	1.72	17.37	18.96	Farmers and farm managers	-6.44	39.67	48.59
	Farm laborers	0.99	5.85	3.89	Workers in religion	-0.15	0.68	91.76
	Miners and related workers	0.53	1.65	57.92	Textile workers	-0.10	0.35	49.44

	Growing Occupations				Disappearing Occupations			
Birth cohort, t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t
	Bricklayers, carpenters, and related construction workers	0.45	5.49	81.14	Cabinetmakers	-0.07	0.51	87.30
	Housekeeping workers	0.39	2.31	9.00	Ship officers	-0.06	0.22	96.56
	Sales workers and shop assistants	0.34	1.33	86.59	Other mechanics	-0.05	0.49	80.74
	Truck drivers	0.20	0.82	37.06	Building managers and proprietors	-0.03	0.22	78.10
	Painters	0.19	0.65	87.98	Officials, government and non-profit organizations	-0.03	0.21	97.95
	Food service workers	0.19	0.45	7.98	Forestry workers	-0.01	0.24	27.72
	Blacksmiths and machinists	0.15	2.32	73.79	Fishermen	-0.01	0.21	28.61
1830	Farm laborers	2.63	8.48	4.81	Farmers and farm managers	-7.05	32.62	48.81
	Housekeeping workers	1.50	3.82	11.19	Bricklayers, carpenters, and related construction workers	-0.33	5.16	79.57
	Miners and related workers	0.61	2.27	59.46	Health professionals	-0.20	1.01	96.60
	Tailors and related workers	0.46	3.67	74.87	Workers in religion	-0.17	0.51	93.26
	Sales workers and shop assistants	0.35	1.68	85.66	Craftsmen and kindred workers, n.e.c.	-0.12	1.20	80.40
	Elementary and secondary school teachers	0.33	0.77	97.95	Cabinetmakers	-0.12	0.39	88.58
	Truck drivers	0.22	1.04	57.17	Other mechanics	-0.10	0.39	81.28
	Food service workers	0.21	0.65	9.20	Managers	-0.09	6.03	91.45
	Launderers and dry-cleaners	0.19	0.72	0.38	Gardeners	-0.04	0.29	66.25
	Painters	0.17	0.82	86.38	Textile workers	-0.04	0.31	50.11
1840	Farm laborers	1.58	10.06	5.32	Farmers and farm managers	-1.50	31.12	48.57
	Sales workers and shop assistants	0.42	2.10	85.01	Tailors and related workers	-1.10	2.57	72.75
	Building managers and proprietors	0.36	0.60	72.02	Bricklayers, carpenters, and related construction workers	-0.67	4.48	77.47
	Food service workers	0.28	0.93	10.04	Miners and related workers	-0.53	1.74	49.11
	Office and clerical workers	0.26	0.61	95.98	Blacksmiths and machinists	-0.35	2.02	72.67
	Elementary and secondary school teachers	0.20	0.97	96.70	Managers	-0.22	5.81	90.03
	Launderers and dry-cleaners	0.19	0.91	0.53	Craftsmen and kindred workers, n.e.c.	-0.20	1.00	81.11
	Locomotive operators	0.18	0.35	83.08	Cabinetmakers	-0.17	0.23	88.50

Growing Occupations					Disappearing Occupations			
Birth cohort, t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t
	Bookkeepers and related workers	0.16	0.55	99.21	Housekeeping workers	-0.16	3.66	12.20
	Truck drivers	0.16	1.20	66.44	Foremen	-0.16	0.21	81.05
1850	Farmers and farm managers	1.18	32.30	46.42	Farm laborers	-2.03	8.03	5.22
	Launderers and dry-cleaners	0.48	1.39	0.71	Operatives and kindred workers, n.e.c.	-0.82	16.55	21.13
	Sales workers and shop assistants	0.42	2.52	84.65	Housekeeping workers	-0.48	3.17	15.90
	Foremen	0.21	0.41	84.19	Craftsmen and kindred workers, n.e.c.	-0.23	0.76	78.27
	Stationary engine operators	0.19	0.75	71.68	Tailors and related workers	-0.21	2.36	69.33
	Janitors and cleaners	0.18	0.32	65.44	Managers	-0.14	5.67	86.80
	Painters	0.16	1.12	83.44	Members of armed forces	-0.11	0.14	78.90
	Locomotive operators	0.16	0.51	89.28	Other mechanics	-0.09	0.17	78.39
	Real estate agents	0.15	0.31	96.20	Bricklayers, carpenters, and related construction workers	-0.09	4.40	74.39
	Guards and watchmen	0.14	0.37	67.53	Officials, government and non-profit organizations	-0.07	0.18	95.94
1860	Managers	1.53	7.21	81.92	Farm laborers	-2.72	5.31	4.88
	Foremen	0.52	0.93	86.22	Farmers and farm managers	-2.36	29.94	43.16
	Launderers and dry-cleaners	0.50	1.89	0.83	Operatives and kindred workers, n.e.c.	-2.07	14.48	19.05
	Sales workers and shop assistants	0.40	2.91	84.76	Housekeeping workers	-0.45	2.72	29.71
	Tailors and related workers	0.37	2.73	65.11	Craftsmen and kindred workers, n.e.c.	-0.16	0.61	73.82
	Miners and related workers	0.36	2.15	22.37	Elementary and secondary school teachers	-0.11	0.92	94.21
	Blacksmiths and machinists	0.35	2.42	75.39	Members of armed forces	-0.11	0.03	85.81
	Office and clerical workers	0.28	0.98	95.21	Jurists	-0.05	0.46	99.46
	Textile workers	0.24	0.58	59.36	Fishermen	-0.04	0.22	9.91
	Locomotive operators	0.24	0.75	89.80	Gardeners	-0.03	0.18	59.93
1870	Farm laborers	1.06	6.37	4.29	Farmers and farm managers	-5.53	24.42	37.75
	Operatives and kindred workers, n.e.c.	1.00	15.48	17.22	Bricklayers, carpenters, and related construction workers	-0.72	3.82	62.08
	Sales workers and shop assistants	0.83	3.74	84.12	Managers	-0.49	6.71	78.01
	Office and clerical workers	0.64	1.62	92.37	Launderers and dry-cleaners	-0.19	1.70	2.00

Growing Occupations					Disappearing Occupations			
Birth cohort, t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t
	Elementary and secondary school teachers	0.59	1.50	95.12	Building managers and proprietors	-0.19	0.46	65.64
	Housekeeping workers	0.55	3.27	48.67	Craftsmen and kindred workers, n.e.c.	-0.09	0.51	69.44
	Miners and related workers	0.29	2.44	6.89	Truck drivers	-0.09	1.45	52.95
	Bookkeepers and related workers	0.24	0.98	95.43	Guards and watchmen	-0.08	0.37	56.01
	Food service workers	0.22	1.44	48.34	Tailors and related workers	-0.08	2.66	59.85
	Plumbers and pipe-fitters	0.20	0.51	81.06	Workers in religion	-0.07	0.52	91.86
1880	Sales workers and shop assistants	1.06	4.80	82.32	Farmers and farm managers	-3.65	20.77	31.92
	Housekeeping workers	0.99	4.26	57.96	Farm laborers	-1.52	4.85	3.40
	Office and clerical workers	0.97	2.59	88.88	Tailors and related workers	-0.68	1.98	55.56
	Operatives and kindred workers, n.e.c.	0.74	16.22	15.21	Bricklayers, carpenters, and related construction workers	-0.27	3.55	48.51
	Other mechanics	0.36	0.67	59.22	Launderers and dry-cleaners	-0.22	1.48	4.27
	Electronics service and repair workers	0.30	0.57	72.69	Truck drivers	-0.18	1.28	42.28
	Service workers, n.e.c.	0.22	0.94	50.13	Health professionals	-0.14	0.87	98.95
	Bookkeepers and related workers	0.20	1.19	93.01	Craftsmen and kindred workers, n.e.c.	-0.13	0.38	65.26
	Managers	0.20	6.92	74.99	Workers in religion	-0.11	0.41	93.95
	Elementary and secondary school teachers	0.20	1.70	96.94	Stationary engine operators	-0.09	0.86	51.32
1890	Office and clerical workers	1.65	4.24	85.81	Farmers and farm managers	-5.54	15.23	29.79
	Other mechanics	1.04	1.71	55.40	Farm laborers	-1.05	3.81	2.50
	Sales workers and shop assistants	1.00	5.80	77.28	Tailors and related workers	-0.68	1.30	54.85
	Managers	0.96	7.88	73.50	Miners and related workers	-0.58	2.05	1.37
	Service workers, n.e.c.	0.41	1.35	44.14	Bricklayers, carpenters, and related construction workers	-0.55	3.00	39.34
	Elementary and secondary school teachers	0.38	2.08	97.59	Launderers and dry-cleaners	-0.34	1.14	5.61
	Food service workers	0.33	1.72	49.12	Housekeeping workers	-0.23	4.03	52.49
	Truck drivers	0.28	1.56	33.80	Health professionals	-0.15	0.72	99.06
	Janitors and cleaners	0.26	1.02	22.47	Transport conductors	-0.12	0.33	61.96
	Engineers	0.25	0.53	95.77	Textile workers	-0.12	0.47	2.57

Growing Occupations					Disappearing Occupations			
Birth cohort, t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t
1900	Office and clerical workers	2.52	6.76	83.04	Farmers and farm managers	-5.78	9.45	28.86
	Other mechanics	0.91	2.63	49.00	Blacksmiths and machinists	-0.74	2.00	52.21
	Sales workers and shop assistants	0.91	6.71	69.34	Miners and related workers	-0.70	1.35	2.74
	Truck drivers	0.78	2.34	28.92	Bricklayers, carpenters, and related construction workers	-0.67	2.33	36.38
	Elementary and secondary school teachers	0.73	2.81	97.43	Farm laborers	-0.63	3.18	1.61
	Food service workers	0.60	2.31	48.51	Locomotive operators	-0.51	0.58	52.57
	Service workers, n.e.c.	0.54	1.89	41.48	Tailors and related workers	-0.50	0.79	53.13
	Housekeeping workers	0.35	4.38	41.18	Operatives and kindred workers, n.e.c.	-0.23	16.12	14.55
	Health semiprofessionals	0.34	1.28	88.47	Transport conductors	-0.18	0.15	57.75
	Professional, technical, and related workers, n.e.c.	0.32	0.71	93.21	Launderers and dry-cleaners	-0.17	0.97	5.49
1910	Office and clerical workers	2.01	8.77	77.93	Farmers and farm managers	-3.50	5.95	27.50
	Operatives and kindred workers, n.e.c.	0.92	17.04	15.56	Managers	-0.75	7.30	74.11
	Food service workers	0.64	2.96	45.22	Farm laborers	-0.75	2.43	1.07
	Professional, technical, and related workers, n.e.c.	0.59	1.30	92.26	Housekeeping workers	-0.57	3.81	26.90
	Truck drivers	0.52	2.87	22.84	Bricklayers, carpenters, and related construction workers	-0.46	1.87	34.65
	Service workers, n.e.c.	0.42	2.30	38.53	Miners and related workers	-0.39	0.95	3.64
	Janitors and cleaners	0.35	1.51	6.30	Blacksmiths and machinists	-0.38	1.62	50.48
	Health semiprofessionals	0.33	1.61	87.67	Locomotive operators	-0.29	0.30	52.07
	Welders and related metal workers	0.28	0.91	41.28	Tailors and related workers	-0.27	0.53	47.45
	Bookkeepers and related workers	0.27	1.84	86.18	Stationary engine operators	-0.18	0.58	52.85
1920	Office and clerical workers	2.65	11.42	69.16	Farmers and farm managers	-2.47	3.48	29.65
	Engineers	0.66	1.55	93.51	Housekeeping workers	-1.84	1.98	10.31
	Members of armed forces	0.64	1.09	59.94	Operatives and kindred workers, n.e.c.	-1.44	15.60	15.77
	Professional, technical, and related workers, n.e.c.	0.57	1.86	90.50	Farm laborers	-1.04	1.39	0.84
	Bookkeepers and related workers	0.49	2.33	79.74	Sales workers and shop assistants	-0.66	6.23	57.63

	Growing Occupations				Disappearing Occupations			
Birth cohort, t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t
	Janitors and cleaners	0.42	1.93	11.04	Elementary and secondary school teachers	-0.47	2.50	96.93
	Health semiprofessionals	0.42	2.02	85.65	Miners and related workers	-0.41	0.55	3.77
	Nonmedical technicians	0.37	0.77	84.08	Painters	-0.25	0.73	27.98
	Electronics service and repair workers	0.36	1.22	51.92	Mass transportation operators	-0.13	0.61	41.63
	Cashiers	0.31	0.89	49.75	Service workers, n.e.c.	-0.13	2.18	33.67
1930	Office and clerical workers	1.97	13.39	58.03	Operatives and kindred workers, n.e.c.	-2.08	13.52	12.79
	Elementary and secondary school teachers	1.22	3.72	95.85	Farmers and farm managers	-1.71	1.77	33.57
	Health semiprofessionals	0.66	2.69	81.89	Sales workers and shop assistants	-0.78	5.45	53.81
	Professional, technical, and related workers, n.e.c.	0.58	2.44	87.27	Housekeeping workers	-0.67	1.31	5.25
	Managers	0.46	7.69	72.74	Blacksmiths and machinists	-0.52	1.19	34.82
	Bookkeepers and related workers	0.39	2.72	67.46	Other mechanics	-0.43	2.77	31.62
	Hospital attendants	0.38	1.23	36.47	Farm laborers	-0.35	1.04	0.55
	Nonmedical technicians	0.32	1.09	75.26	Bricklayers, carpenters, and related construction workers	-0.32	1.58	24.75
	Cashiers	0.31	1.20	40.32	Miners and related workers	-0.25	0.29	2.81
	Engineers	0.30	1.85	91.85	Welders and related metal workers	-0.18	0.86	23.31
1940	Managers	3.85	11.54	67.70	Operatives and kindred workers, n.e.c.	-4.16	9.36	9.66
	Professional, technical, and related workers, n.e.c.	1.73	4.16	83.98	Housekeeping workers	-0.96	0.35	20.17
	Health semiprofessionals	1.12	3.80	78.73	Sales workers and shop assistants	-0.76	4.69	54.26
	Elementary and secondary school teachers	1.10	4.82	94.73	Farmers and farm managers	-0.75	1.02	35.07
	Janitors and cleaners	0.91	3.13	6.99	Food service workers	-0.73	2.35	17.68
	Hospital attendants	0.56	1.78	28.82	Members of armed forces	-0.65	0.48	55.78
	Professors and instructors	0.55	1.12	98.01	Office and clerical workers	-0.55	12.84	47.67
	Creative artists	0.55	1.47	85.97	Farm laborers	-0.44	0.59	0.36
	Guards and watchmen	0.41	0.91	48.78	Telephone operators	-0.43	0.23	34.93
	Real estate agents	0.36	0.95	77.43	Bricklayers, carpenters, and related construction workers	-0.39	1.19	21.56

Growing Occupations					Disappearing Occupations			
Birth cohort, t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t
1950	Managers	1.92	13.46	65.12	Operatives and kindred workers, n.e.c.	-1.47	7.89	9.33
	Health semiprofessionals	1.48	5.29	77.18	Office and clerical workers	-0.79	12.05	43.24
	Professional, technical, and related workers, n.e.c.	1.39	5.55	83.19	Sales workers and shop assistants	-0.64	4.05	54.86
	Elementary and secondary school teachers	0.36	5.17	94.48	Bookkeepers and related workers	-0.44	1.93	50.30
	Creative artists	0.33	1.80	84.84	Farmers and farm managers	-0.31	0.70	35.01
	Accountants	0.25	1.41	89.03	Foremen	-0.31	1.54	34.45
	Hospital attendants	0.20	1.98	25.78	Service workers, n.e.c.	-0.27	1.82	30.45
	Jurists	0.20	0.84	98.75	Members of armed forces	-0.25	0.23	61.85
	Gardeners	0.12	0.58	13.78	Food service workers	-0.24	2.11	16.31
	Postal and mail distribution clerks	0.10	0.52	43.92	Blacksmiths and machinists	-0.23	0.63	25.37
1960	Managers	0.81	14.27	64.18	Elementary and secondary school teachers	-1.61	3.56	94.65
	Food service workers	0.68	2.80	19.67	Office and clerical workers	-1.00	11.05	43.77
	Operatives and kindred workers, n.e.c.	0.58	8.47	10.47	Sales workers and shop assistants	-0.32	3.72	54.30
	Professional, technical, and related workers, n.e.c.	0.53	6.08	84.17	Professors and instructors	-0.30	0.71	98.00
	Bricklayers, carpenters, and related construction workers	0.35	1.62	14.64	Bookkeepers and related workers	-0.21	1.72	50.20
	Other mechanics	0.33	2.76	25.15	Real estate agents	-0.18	0.65	73.05
	Truck drivers	0.22	3.09	18.05	Creative artists	-0.17	1.63	81.78
	Protective service workers	0.20	0.92	60.28	Farmers and farm managers	-0.16	0.54	34.54
	Gardeners	0.17	0.76	5.07	Jurists	-0.15	0.69	98.78
	Cashiers	0.13	1.37	27.40	Mass transportation operators	-0.12	0.76	30.70
1970	Professional, technical, and related workers, n.e.c.	0.92	7.00	84.56	Managers	-1.04	13.23	63.42
	Food service workers	0.68	3.48	23.15	Office and clerical workers	-0.65	10.39	44.62
	Elementary and secondary school teachers	0.55	4.11	94.62	Janitors and cleaners	-0.45	2.88	4.57
	Protective service workers	0.32	1.24	66.83	Other mechanics	-0.32	2.44	24.59
	Members of armed forces	0.29	0.64	68.33	Truck drivers	-0.28	2.81	18.33
	Hairdressers	0.24	0.90	30.02	Foremen	-0.27	1.27	35.83

Growing Occupations					Disappearing Occupations			
Birth cohort, t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t	Micro-class	% change from t to t-10	Size at t	Percentile rank at t
	Natural scientists	0.16	0.83	97.23	Bookkeepers and related workers	-0.25	1.48	50.79
	Cashiers	0.16	1.53	25.63	Farmers and farm managers	-0.21	0.33	35.36
	Service workers, n.e.c.	0.15	2.04	33.25	Mass transportation operators	-0.18	0.57	29.68
	Bricklayers, carpenters, and related construction workers	0.14	1.76	8.14	Blacksmiths and machinists	-0.15	0.37	26.18
1980	Food service workers	1.73	5.21	26.22	Managers	-2.16	11.07	63.34
	Cashiers	0.64	2.17	23.09	Truck drivers	-0.67	2.14	18.42
	Office and clerical workers	0.55	10.95	45.59	Foremen	-0.41	0.86	37.32
	Health semiprofessionals	0.39	5.86	74.75	Janitors and cleaners	-0.39	2.49	5.59
	Members of armed forces	0.32	0.96	56.43	Protective service workers	-0.25	0.99	69.92
	Service workers, n.e.c.	0.29	2.32	34.67	Other mechanics	-0.22	2.22	23.22
	Operatives and kindred workers, n.e.c.	0.24	8.77	11.86	Mass transportation operators	-0.19	0.38	29.97
	Hospital attendants	0.24	2.27	32.31	Commercial managers	-0.17	0.97	82.21
	Gardeners	0.22	1.09	2.04	Bookkeepers and related workers	-0.14	1.34	51.73
	Sales workers and shop assistants	0.16	3.87	54.57	Real estate agents	-0.12	0.42	76.35

Data sources: IPUMS United States Population Censuses 1850–2000 & ACS 2001–2015.

Notes: The percentile ranks reported in the table are smoothed using the method described in Section S4. The size change (%) is defined as the percentage of occupation i from birth cohort t to $t + 10$.

Table S9. Top Outflow Destinations of Sons From Farm Origin by Son's Birth Cohort (Abridged)

	Outflow Destinations										
Son's cohort (farm origin)	5201 Farmers & 5202 Farm laborers	4209 Operatives	4201 Truck drivers	4119 Bricklayers	4109 Blacksmith	3105 Sales workers	1202 Managers	1102 Health professional	All else	Total	*N*
Linked data											
1830	62.7	10.3	0.8	5.4	1.6	1.4	6.1	1.3	10.5	100.0	52,895
1840	60.6	11.3	1.0	4.3	1.6	2.0	6.4	1.4	11.6	100.0	104,557
1850	63.1	11.8	0.9	3.5	1.3	2.1	5.0	1.3	11.0	100.0	63,367
1860	56.7	9.7	1.4	4.2	1.5	2.5	8.6	1.1	14.4	100.0	170,542
1870	53.7	11.0	1.6	3.6	1.7	3.0	7.5	1.3	16.6	100.0	434,945
1880	51.0	13.5	1.6	3.1	1.8	3.7	5.8	1.2	18.4	100.0	262,127
1890	43.2	12.7	2.3	3.6	1.5	4.6	7.4	0.6	24.2	100.0	290,518
1900	36.7	15.4	3.8	2.8	1.6	5.2	7.0	0.6	27.1	100.0	651,666
1910	34.5	18.1	5.0	2.2	1.5	5.5	5.7	0.4	27.2	100.0	374,187
Survey data											
1900	26.4	16.5	2.9	3.6	1.6	1.6	11.0	0.3	36.1	100.0	950
1910	21.3	16.7	5.0	4.1	1.8	2.7	10.2	0.1	38.1	100.0	3,728
1920	16.5	16.4	7.3	5.0	2.1	2.6	9.7	0.3	40.2	100.0	4,300
1930	13.0	17.7	8.3	3.3	1.8	2.3	8.9	0.4	44.5	100.0	3,993
1940	12.9	15.0	7.3	3.5	1.8	2.5	8.8	0.1	48.0	100.0	3,814
1950	13.3	16.2	6.8	3.2	1.7	3.1	7.4	0.5	47.9	100.0	1,889
1960	18.0	14.7	7.4	3.0	1.1	2.9	7.9	0.1	44.8	100.0	989
1970	14.0	13.9	7.8	3.5	0.9	2.9	6.9	0.0	50.0	100.0	219
1980	10.3	10.7	1.0	10.4	0.8	1.9	9.1	2.3	53.5	100.0	98

Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; GSS 1972–2016; HRS 1992–2010; NLS–Older Men 1966–1990; NLS–Young Men 1966–1981; NLSY 79, 1979–2012; NSFH, 1987, 1993, 2002; OCG I & II; PSID (SRC sample), 1968–2015; SIPP, 1986, 1987, 1988; WLS, 1957–2011.

Notes: Farm origin is defined as men whose fathers are 5201 farmers, farm managers or 5202 farm laborers.

Table S10. Intergenerational Rank-Rank Slope and Correlation by Son's Birth Cohort

	Sample Size		Full Population				Non-Agricultural Population			
			Rank-Rank Slope		Rank-Rank Correlation		Rank-Rank Slope		Rank-Rank Correlation	
Son's Birth Cohort	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys
1820	122		0.292		0.200		0.207		0.254	
			[0.039, 0.545]		[0.027, 0.374]		[-0.178, 0.591]		[-0.219, 0.727]	
1830	80,852		0.191		0.167		0.171		0.218	
			[0.183, 0.199]		[0.160, 0.174]		[0.162, 0.180]		[0.206, 0.229]	
1840	172,335		0.208		0.179		0.192		0.233	
			[0.203, 0.214]		[0.174, 0.183]		[0.186, 0.199]		[0.226, 0.240]	
1850	109,444		0.240		0.197		0.219		0.246	
			[0.233, 0.247]		[0.191, 0.203]		[0.212, 0.227]		[0.237, 0.255]	
1860	281,320		0.299		0.251		0.216		0.244	
			[0.295, 0.303]		[0.248, 0.255]		[0.211, 0.221]		[0.238, 0.250]	
1870	762,164		0.321		0.270		0.248		0.271	
			[0.318, 0.323]		[0.268, 0.272]		[0.245, 0.251]		[0.268, 0.274]	
1880	478,869		0.333		0.281		0.278		0.295	
			[0.330, 0.336]		[0.278, 0.284]		[0.275, 0.282]		[0.291, 0.299]	
1890	643,816		0.323		0.274		0.226		0.228	
			[0.320, 0.325]		[0.272, 0.276]		[0.223, 0.229]		[0.225, 0.232]	
1900	1,489,549	2,208	0.311	0.358	0.271	0.321	0.237	0.242	0.243	0.243
			[0.309, 0.313]	[0.314, 0.402]	[0.269, 0.272]	[0.282, 0.361]	[0.234, 0.239]	[0.188, 0.295]	[0.240, 0.245]	[0.189, 0.297]
1910	899,295	9,500	0.305	0.363	0.271	0.332	0.247	0.293	0.255	0.305
			[0.303, 0.307]	[0.343, 0.383]	[0.269, 0.273]	[0.313, 0.350]	[0.245, 0.250]	[0.270, 0.316]	[0.252, 0.257]	[0.281, 0.329]
1920	1,500	13,385	0.279	0.365	0.277	0.337	0.241	0.313	0.247	0.318
			[0.230, 0.329]	[0.348, 0.382]	[0.227, 0.326]	[0.321, 0.352]	[0.188, 0.293]	[0.293, 0.332]	[0.193, 0.301]	[0.299, 0.337]
1930	10,000	15,827	0.290	0.388	0.278	0.350	0.278	0.346	0.271	0.33
			[0.271, 0.310]	[0.372, 0.405]	[0.259, 0.296]	[0.336, 0.365]	[0.258, 0.299]	[0.328, 0.364]	[0.251, 0.291]	[0.313, 0.347]
1940	6,200	20,263	0.277	0.355	0.267	0.329	0.27	0.332	0.261	0.316
			[0.253, 0.302]	[0.341, 0.369]	[0.243, 0.291]	[0.316, 0.342]	[0.244, 0.297]	[0.317, 0.347]	[0.235, 0.287]	[0.301, 0.330]

	Sample Size		Full Population				Non-Agricultural Population			
			Rank-Rank Slope		Rank-Rank Correlation		Rank-Rank Slope		Rank-Rank Correlation	
Son's Birth Cohort	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys
1950	-	17,422	-	0.321	-	0.309	-	0.308	-	0.298
				[0.307, 0.336]		[0.295, 0.323]		[0.293, 0.324]		[0.283, 0.313]
1960	4,500	14,328	0.276	0.326	0.275	0.327	0.28	0.318	0.280	0.321
			[0.248, 0.305]	[0.311, 0.342]	[0.247, 0.303]	[0.311, 0.342]	[0.251, 0.309]	[0.302, 0.334]	[0.251, 0.309]	[0.304, 0.337]
1970	11,000	3,917	0.295	0.312	0.293	0.324	0.296	0.302	0.298	0.317
			[0.278, 0.313]	[0.284, 0.341]	[0.275, 0.311]	[0.294, 0.354]	[0.278, 0.314]	[0.273, 0.331]	[0.279, 0.316]	[0.286, 0.348]
1980	2,100	2,116	0.315	0.352	0.315	0.352	0.311	0.337	0.314	0.34
			[0.274, 0.356]	[0.312, 0.392]	[0.274, 0.356]	[0.312, 0.392]	[0.269, 0.352]	[0.297, 0.378]	[0.272, 0.356]	[0.299, 0.381]

Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; linked contemporary data using census 1940 to CPS (1973, 1979, 1981–1990) and CPS to census 2000/ACS 2001–2015. GSS 1972–2016; HRS 1992–2010; NLS–Older Men 1966–1990; NLS–Young Men 1966–1981; NLSY 79, 1979–2012; NSFH, 1987, 1993, 2002; OCG I & II; PSID (SRC sample), 1968–2015; SIPP, 1986, 1987, 1988; WLS, 1957–2011.

Notes: Numbers in parentheses refer to 95% confidence intervals.

Table S11. Intergenerational Rank-Rank Slope and Correlation by Father's Birth Cohort

	Sample Size		Full Population				Non-Agricultural Population			
			Rank-Rank Slope		Rank-Rank Correlation		Rank-Rank Slope		Rank-Rank Correlation	
Father's Birth Cohort	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys
1790	30,595		0.186		0.156		0.175		0.239	
			[0.172, 0.199]		[0.145, 0.167]		[0.160, 0.190]		[0.218, 0.259]	
1800	96,738		0.193		0.166		0.18		0.230	
			[0.186, 0.200]		[0.160, 0.172]		[0.172, 0.188]		[0.220, 0.240]	
1810	148,613		0.224		0.193		0.201		0.238	
			[0.218, 0.230]		[0.188, 0.198]		[0.195, 0.208]		[0.230, 0.245]	
1820	240,049		0.271		0.220		0.221		0.251	
			[0.267, 0.276]		[0.216, 0.224]		[0.216, 0.227]		[0.245, 0.257]	
1830	448,476		0.315		0.258		0.232		0.251	
			[0.312, 0.319]		[0.255, 0.261]		[0.228, 0.236]		[0.247, 0.256]	
1840	573,446		0.329		0.275		0.255		0.270	
			[0.326, 0.332]		[0.272, 0.277]		[0.252, 0.259]		[0.266, 0.273]	
1850	616,896		0.300		0.249		0.235		0.244	
			[0.297, 0.302]		[0.246, 0.251]		[0.232, 0.239]		[0.241, 0.248]	
1860	864,626	622	0.320	0.308	0.270	0.288	0.229	0.230	0.232	0.237
			[0.318, 0.323]	[0.231, 0.385]	[0.268, 0.272]	[0.216, 0.360]	[0.226, 0.232]	[0.137, 0.323]	[0.229, 0.235]	[0.141, 0.333]
1870	1,133,575	3,637	0.334	0.347	0.292	0.311	0.252	0. 278	0.253	0.275
			[0.332, 0.336]	[0.313, 0.381]	[0.290, 0.293]	[0.281, 0.342]	[0.250, 0.255]	[0.237, 0.319]	[0.250, 0.255]	[0.234, 0.316]
1880	690,810	8,955	0.320	0.365	0.279	0.333	0.259	0. 302	0.260	0.312
			[0.317, 0.323]	[0.343, 0.386]	[0.277, 0.281]	[0.313, 0.352]	[0.256, 0.262]	[0.278, 0.327]	[0.258, 0.263]	[0.287, 0.337]
1890	3,600	13,401	0.290	0.377	0.278	0.344	0.272	0.324	0.270	0.324
			[0.257, 0.322]	[0.360, 0.394]	[0.247, 0.309]	[0.329, 0.360]	[0.238, 0.307]	[0.305, 0.343]	[0.235, 0.304]	[0.305, 0.343]
1900	7,600	16,463	0.299	0.369	0.289	0.339	0.285	0. 330	0.278	0.318
			[0.276, 0.321]	[0.354, 0.385]	[0.267, 0.311]	[0.325, 0.354]	[0.261, 0.309]	[0.313, 0.348]	[0.255, 0.302]	[0.301, 0.334]
1910	6,000	18,666	0.265	0.353	0.249	0.328	0.257	0. 332	0.242	0.313

	Sample Size		Full Population				Non-Agricultural Population			
			Rank-Rank Slope		Rank-Rank Correlation		Rank-Rank Slope		Rank-Rank Correlation	
Father's Birth Cohort	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys	Linked Data	Surveys
			[0.239, 0.291]	[0.338, 0.367]	[0.225, 0.273]	[0.314, 0.341]	[0.229, 0.285]	[0.316, 0.348]	[0.216, 0.268]	[0.298, 0.328]
1920	1,100	16,709	0.248	0.322	0.248	0.309	0.266	0. 308	0.264	0.297
			[0.190, 0.307]	[0.307, 0.338]	[0.189, 0.306]	[0.295, 0.323]	[0.203, 0.328]	[0.292, 0.324]	[0.202, 0.325]	[0.282, 0.312]
1930	3,800	11,275	0.276	0.323	0.280	0.320	0.284	0. 310	0.290	0.312
			[0.246, 0.306]	[0.305, 0.340]	[0.249, 0.311]	[0.303, 0.338]	[0.253, 0.314]	[0.291, 0.328]	[0.258, 0.321]	[0.294, 0.330]
1940	3,400	6,693	0.306	0.332	0.306	0.335	0.304	0.328	0.307	0.334
			[0.284, 0.328]	[0.310, 0.355]	[0.284, 0.328]	[0.312, 0.357]	[0.281, 0.326]	[0.305, 0.351]	[0.284, 0.329]	[0.310, 0.357]
1950	5,200	2,200	0.290	0.345	0.278	0.353	0.292	0. 337	0.283	0.347
			[0.263, 0.318]	[0.308, 0.383]	[0.252, 0.304]	[0.314, 0.391]	[0.265, 0.320]	[0.299, 0.376]	[0.257, 0.310]	[0.307, 0.386]

Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; linked contemporary data using census 1940 to CPS (1973, 1979, 1981–1990) and CPS to census 2000/ACS 2001–2015. GSS 1972–2016; HRS 1992–2010; NLS–Older Men 1966–1990; NLS–Young Men 1966–1981; NLSY 79, 1979–2012; NSFH, 1987, 1993, 2002; OCG I & II; PSID (SRC sample), 1968–2015; SIPP, 1986, 1987, 1988; WLS, 1957–2011.

Notes: Numbers in parentheses refer to 95% confidence intervals.

Table S12. Summary Measures of Mobility in the U.S. Using Altham Index

	$d(\mathbf{P},\mathbf{J})$ (2)	$d(\mathbf{Q},\mathbf{J})$ (3)	$d(\mathbf{P},\mathbf{Q})$ (4)
Linked historical censuses			
1. US 1840 ($\mathbf{P}$)	15.20***		1.97***
versus US 1830 ($\mathbf{Q}$)		14.09***	
2. US 1850 ($\mathbf{P}$)	15.78***		2.52***
versus US 1830 ($\mathbf{Q}$)		14.09***	
3. US 1860 ($\mathbf{P}$)	17.72***		4.78***
versus US 1830 ($\mathbf{Q}$)		14.09***	
4. US 1870 ($\mathbf{P}$)	18.12***		5.06***
versus US 1830 ($\mathbf{Q}$)		14.09***	
5. US 1880 ($\mathbf{P}$)	18.17***		5.47***
versus US 1830 ($\mathbf{Q}$)		14.09***	
6. US 1890 ($\mathbf{P}$)	16.15***		6.42***
versus US 1830 ($\mathbf{Q}$)		14.09***	
7. US 1900 ($\mathbf{P}$)	15.88***		5.99***
versus US 1830 ($\mathbf{Q}$)		14.09***	
8. US 1910 ($\mathbf{P}$)	15.86***		5.76***
versus US 1830 ($\mathbf{Q}$)		14.09***	
Contemporary social surveys			
9. US 1920 ($\mathbf{P}$)	21.34***		3.82
versus US 1910 ($\mathbf{Q}$)		19.68***	
10. US 1930 ($\mathbf{P}$)	20.55***		4.00
versus US 1910 ($\mathbf{Q}$)		19.68***	
11. US 1940 ($\mathbf{P}$)	22.00***		4.66***
versus US 1910 ($\mathbf{Q}$)		19.68***	
12. US 1950 ($\mathbf{P}$)	20.87***		4.04***
versus US 1910 ($\mathbf{Q}$)		19.68***	
13. US 1960 ($\mathbf{P}$)	21.76***		5.66***
versus US 1910 ($\mathbf{Q}$)		19.68***	
14. US 1970 ($\mathbf{P}$)	24.94***		9.02
versus US 1910 ($\mathbf{Q}$)		19.68***	
15. US 1980 ($\mathbf{P}$)	22.15***		8.63
versus US 1910 ($\mathbf{Q}$)		19.68***	

Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; GSS 1972–2016; HRS 1992–2010; NLS–Older Men 1966–1990; NLS–Young Men 1966–1981; NLSY 79, 1979–2012; NSFH, 1987, 1993, 2002; OCG I & II; PSID (SRC sample), 1968–2015; SIPP, 1986, 1987, 1988; WLS, 1957–2011.
Notes: Significance levels for the likelihood ratio χ^2 statistics G^2 (d.f. 9 for $d(\mathbf{P},\mathbf{J})$, $d(\mathbf{Q},\mathbf{J})$, and $d(\mathbf{P},\mathbf{Q})$).
* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. The test results from the linked historical data show that social mobility is higher in cohort 1830 than in cohorts 1840–1910 ($d(\mathbf{P},\mathbf{J}) < d(\mathbf{Q},\mathbf{J})$), whereas the results from the contemporary survey data are mostly insignificant, suggesting that there is no systematic trend in social mobility after 1910. The results are largely consistent with our finding from the main analysis using the occupational percentile rank-rank correlation.

Table S13. Goodness-of-Fit Results of Models

Model Description (O = Origin; D = Destination; T = Time)		*N*	L^2	*df*	*p*	*BIC*
Linked historical data						
NA	Null Association between O and D, given T	4,917,767	1,111,758.7	810	0.00	99,278
	$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}$					
FIo	Cross-time homogeneous full two-way O and D interaction	4,917,767	25,394.1	729	0.00	14,161
	$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}\tau_{ij}^{OD}$					
FI_x	Cross-time log-multiplicative full two-way O and D interaction	4,917,767	17,867.0	720	0.00	6,773
	$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}exp(\psi_{ij}\phi_k)$					
FI_{x2}	Cross-time log-multiplicative full two-way O and D interaction plus extra parameters for diagonal cells	4,917,767	12,021.7	630	0.00	2,314
	$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}exp(\psi_{ij}\phi_k)Q_{ijt}^{ODT}$					
Social Survey data						
NA	Null Association	90,821	17,845.8	648	0.00	10,448
	$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}$					
FI_o	Cross-time homogeneous full two-way O and D interaction	90,821	878.6	567	0.00	-5,595
	$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}\tau_{ij}^{OD}$					
FI_x	Cross-time log-multiplicative full two-way O and D interaction	90,821	878.6	560	0.00	-5,562
	$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}exp(\psi_{ij}\phi_k)$					
FI_{x2}	Cross-time log-multiplicative full two-way O and D interaction plus extra parameters for diagonal cells	90,821	676.5	490	0.00	-4,918
	$F_{ijk} = \tau\tau_i^O\tau_j^D\tau_k^T\tau_{ik}^{OT}\tau_{jk}^{DT}exp(\psi_{ij}\phi_k)Q_{ijt}^{ODT}$					

Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; GSS 1972–2016; HRS 1992–2010; NLS–Older Men 1966–1990; NLS–Young Men 1966–1981; NLSY 79, 1979–2012; NSFH, 1987, 1993, 2002; OCG I & II; PSID (SRC sample), 1968–2015; SIPP, 1986, 1987, 1988; WLS, 1957–2011.

Notes: L^2 is the log-likelihood ratio chi-square statistic with the degree of freedom reported in column *df* and the p-value in column p. $BIC = L^2 - (df)\log(N)$, where N is the total number of observations. The model FI_x refers to the log multiplicative layer effect model, also known as the UNIDIFF model, in which the cross-time variation in the father-son association is assumed to be a common association pattern and a cohort-specific parameter (the proportionality assumption). The model FI_{x2} further adds several parameters to estimate the father-son associations on the diagonal cells of mobility tables (i.e., intergenerational immobility). Both models are introduced in Xie (*36*).

Table S14. Normalized Measures of Social Immobility (ϕ's)

Son's birth cohort	Model FI_x	Model FI_{x2}
Linked historical data		
1820	8.3257	1.3033
1830	5.9665	4.7015
1840	6.0042	5.9096
1850	6.2333	6.7477
1860	8.7059	8.0380
1870	8.7258	8.9088
1880	8.6719	9.4678
1890	8.1432	8.1264
1900	7.8614	8.4084
1910	7.6767	8.4595
Social Survey data		
1910	4.6590	5.3728
1920	4.9350	5.4675
1930	4.8718	5.2888
1940	4.4439	4.4252
1950	4.2138	4.1211
1960	4.3637	4.1601
1970	4.3557	4.5253
1980	4.1814	4.3133

Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; GSS 1972–2016; HRS 1992–2010; NLS–Older Men 1966–1990; NLS–Young Men 1966–1981; NLSY 79, 1979–2012; NSFH, 1987, 1993, 2002; OCG I & II; PSID (SRC sample), 1968–2015; SIPP, 1986, 1987, 1988; WLS, 1957–2011.

Notes: The model FI_x refers to the log multiplicative layer effect model, also known as the UNIDIFF model, in which the cross-time variation in the father-son association is assumed to a common association pattern and a cohort-specific parameter (the proportionality assumption). The model FI_{x2} further adds several parameters to estimate the father-son associations on the diagonal cells of mobility tables (i.e., intergenerational immobility). Both models are introduced in Xie (*36*). The model parameter ϕ is known to be the trend parameter and is cohort specific in this analysis. A higher value of ϕ suggests a stronger intergenerational association of status. The results show that the intergenerational occupational association has increased over the birth cohort from 1830 to 1910, whereas the association has changed little since 1910. The results are largely consistent with the findings from the main analysis using the occupational percentile rank-rank correlation.

Table S15. Mobility Transition Matrix Estimates Based on Occupational Quintiles

Panel A: Linked historical censuses		Son's Quintile Group					
		1	2	3	4	5	Total
Son's cohort	Father's Quintile Group						
1830	1	4.4	28.4	30.7	14.8	21.7	100.0
(N = 80,852)	2	4.0	25.1	36.4	12.8	21.6	100.0
	3	3.7	10.9	60.8	8.7	15.9	100.0
	4	3.0	19.1	28.8	23.0	26.0	100.0
	5	2.6	14.2	26.4	18.6	38.3	100.0
1840	1	6.2	29.0	26.7	14.4	23.7	100.0
(N = 172,335)	2	4.4	28.7	27.7	14.8	24.5	100.0
	3	5.3	11.9	56.0	8.5	18.3	100.0
	4	3.7	20.8	25.4	20.0	30.2	100.0
	5	3.1	15.1	22.0	15.8	44.0	100.0
1850	1	10.9	28.9	25.2	15.9	19.2	100.0
(N = 109,444)	2	13.8	25.8	27.2	15.2	18.1	100.0
	3	9.6	12.1	54.4	8.7	15.2	100.0
	4	7.0	20.8	24.3	22.2	25.6	100.0
	5	5.3	15.6	20.4	17.9	40.7	100.0
1860	1	26.1	2.6	24.8	20.4	26.3	100.0
(N = 281,320)	2	24.8	2.2	15.6	23.3	34.1	100.0
	3	12.3	1.5	53.6	11.6	21.0	100.0
	4	13.9	1.5	13.4	31.3	39.9	100.0
	5	9.6	1.3	10.4	16.5	62.2	100.0
1870	1	29.7	30.0	7.6	19.4	13.3	100.0
(N = 762,164)	2	26.7	13.8	9.0	27.7	22.9	100.0
	3	15.7	49.5	3.5	17.6	13.7	100.0
	4	15.9	10.7	8.1	37.4	27.9	100.0
	5	10.2	8.2	5.0	33.5	43.1	100.0
1880	1	33.7	28.9	18.3	10.1	9.0	100.0
(N = 478,869)	2	30.8	12.7	23.0	17.1	16.4	100.0
	3	20.9	45.0	12.0	10.5	11.7	100.0
	4	19.5	9.3	28.6	20.1	22.5	100.0
	5	11.6	7.2	16.4	25.0	39.7	100.0
1890	1	26.9	17.8	18.3	25.7	11.3	100.0
(N = 643,816)	2	23.0	37.1	12.4	19.3	8.2	100.0
	3	20.3	43.0	10.6	18.2	7.9	100.0
	4	16.2	14.4	19.8	33.0	16.6	100.0
	5	11.1	11.2	14.0	39.2	24.4	100.0
1900	1	31.3	15.8	21.6	19.6	11.8	100.0
(N = 1,489,549)	2	25.7	35.8	15.1	15.3	8.2	100.0
	3	23.8	31.4	16.9	17.9	10.1	100.0
	4	17.4	12.1	22.1	29.6	18.9	100.0
	5	13.2	9.7	17.4	33.6	26.2	100.0

Table S15 cont'

		Son's Quintile Group					
		1	2	3	4	5	Total
1910	1	36.2	18.8	19.6	18.1	7.4	100.0
(N = 899,295)	2	29.6	36.3	13.7	14.3	6.2	100.0
	3	26.6	24.9	19.3	20.1	9.3	100.0
	4	19.8	14.8	21.3	29.4	14.7	100.0
	5	15.7	12.3	17.8	32.4	21.9	100.0
Panel B: Contemporary surveys							
1910	1	29.1	14.3	29.7	18.1	8.8	100.0
(N = 9,500)	2	24.4	30.7	21.9	15.7	7.3	100.0
	3	17.2	14.7	29.4	24.5	14.2	100.0
	4	10.7	8.7	23.9	34.1	22.6	100.0
	5	10.3	6.8	18.8	34.2	29.9	100.0
1920	1	33.5	16.8	22.5	15.6	11.6	100.0
(N = 13,385)	2	28.1	29.6	17.8	13.9	10.6	100.0
	3	20.1	17.0	25.5	19.1	18.3	100.0
	4	10.7	8.6	23.3	29.6	27.8	100.0
	5	9.5	7.9	19.2	26.1	37.3	100.0
1930	1	32.2	24.9	19.0	11.3	12.6	100.0
(N = 14,459)	2	29.2	30.4	16.4	12.2	11.8	100.0
	3	18.0	23.0	23.1	17.4	18.5	100.0
	4	10.4	13.2	21.2	27.4	27.8	100.0
	5	7.4	9.9	17.2	21.9	43.7	100.0
1940	1	34.5	26.6	11.7	14.3	12.8	100.0
(N = 17,697)	2	28.2	32.1	10.9	15.3	13.6	100.0
	3	18.6	26.9	14.8	20.3	19.4	100.0
	4	12.0	16.4	14.9	29.9	26.8	100.0
	5	8.2	13.7	12.6	25.1	40.5	100.0
1950	1	40.7	20.2	14.3	13.1	11.8	100.0
(N = 15,582)	2	34.7	25.2	12.1	13.3	14.7	100.0
	3	23.8	20.8	19.5	17.3	18.7	100.0
	4	17.4	14.1	15.5	29.5	23.5	100.0
	5	14.3	11.4	14.0	26.8	33.6	100.0
1960	1	45.9	19.8	12.0	14.0	8.4	100.0
(N = 14,112)	2	36.3	24.6	11.6	15.6	11.9	100.0
	3	25.9	20.6	15.5	21.6	16.6	100.0
	4	19.8	15.7	16.1	27.3	21.2	100.0
	5	15.4	12.6	14.2	26.1	31.7	100.0
1970	1	37.0	24.3	11.3	16.3	11.2	100.0
(N = 3,916)	2	31.7	26.1	12.3	16.3	13.7	100.0
	3	20.7	22.4	13.6	23.6	19.8	100.0

Table S15 cont'

		Son's Quintile Group					
		1	2	3	4	5	Total
	4	15.7	14.6	12.9	32.9	24.0	100.0
	5	11.8	13.6	14.1	26.0	34.5	100.0
1980	1	37.0	26.7	12.4	11.5	12.4	100.0
(N = 2,116)	2	28.6	27.2	16.3	15.4	12.4	100.0
	3	20.8	19.3	17.7	21.4	20.8	100.0
	4	18.8	18.2	13.1	22.9	27.0	100.0
	5	7.8	12.6	17.6	20.0	42.0	100.0

Data sources: Linked historical census data 1850–1880, 1880–1910, 1910–1940; GSS 1972–2016; HRS 1992–2010; NLS–Older Men 1966–1990; NLS–Young Men 1966–1981; NLSY 79, 1979–2012; NSFH, 1987, 1993, 2002; OCG I & II; PSID (SRC sample), 1968–2015; SIPP, 1986, 1987, 1988; WLS, 1957–2011.

Notes: This table shows the full transition matrix measured by occupational quintiles over the birth cohort of sons. Each cell shows the percentage of children in a birth cohort who reached a certain quintile of the occupational distribution given parents in the quintile specified in the column. Birth cohorts 1830–1910 are computed on the linked historical sample using a parent's occupation measured in census year t and a child's occupation measured in census year $t + 30$. Birth cohorts 1920–1980 are computed on the pooled social survey data using either a retrospective approach in which individuals were asked to report occupations of themselves and their fathers during individuals' childhood, or a prospective approach in which both individuals and their parents are survey respondents and were asked to report their own occupations. Some research has focused on a subset of these probabilities, especially, the probability that a child will reach the top fifth of the occupational distribution (*39*). These probabilities are presented in Figure S13.

Table S16. Summary From the Previous Literature of Intergenerational Mobility Estimates and Occupational Definitions for the U.S.

Data source	Occupational definition	Child's (approximate) cohort	Period	Method	Trends in Social Mobility
Hauser et al. (*42*)					
OCG I	Twelve occupational categories	Men in nine 5-year birth cohorts aged 20–64 in 1962	1962	Loglinear analysis	No change in father-son occupational (exchange) mobility
Featherman and Hauser (*43*)					
OCG I & II	(1) Seventeen occupational categories used in Blau and Duncan (1967); (2) twelve-category; (3) five-category	Men aged 20–64	1962–1973	Loglinear analysis	No change in father-son occupational mobility in terms of son's current occupation, but increased mobility in terms of son's first occupation
Grusky (*44*)					
Ten intergenerational linked samples from censuses and directories in four cities; OCG II	Seven occupational categories	Men aged 14–29 in the first census year; men aged 20–65 in OCG	1850–1973	Loglinear analysis	Increased father-son mobility from the 19th century to the 20th century
Hout (*45*)					
GSS 1972–1985	Seventeen occupational categories used in Blau and Duncan (1967)	Men and women aged 25–64	1972–1985	Loglinear analysis	Increased father-offspring mobility
Ganzeboom et al. (*46*)					
NORC 1947 survey; OCG I & II; GSS 1972–1986; PHCD 1957–1963; CSCC 1981–1983; PA8NS 1973–1976	Six category version of the Erikson-Goldthorpe-Portocarero (EGP) occupational scheme	Men aged 21–64	1947–1986	Loglinear analysis	Increased father-son mobility
Guest et al. (*47*)					
NPS linked sample of 1880–1900 Censuses; OCG I & II	Seven occupational categories	Men aged 25–34 in 1900	1880–1900	Loglinear analysis	Decreased father-son mobility from the late 1800s to 1962, but no difference between the late 1800s and 1973
DiPrete and Grusky (*48*)					
GSS 1972–1987	Duncan occupational socioeconomic index	Men and women aged 25–64	1972–1987	Multilevel model	Increased father-offspring mobility
Biblarz et al. (*49*)					

Data source	Occupational definition	Child's (approximate) cohort	Period	Method	Trends in Social Mobility
LSG 1971–1994	Seven category International Standard Classification of Occupations scheme	Men and women in G2 born between 1916–1931 and in G3 born between 1945–1955	1971–1994	Loglinear analysis	Increased father-offspring mobility across three generations
Beller and Hout (*50*)					
GSS 1988–2004	Six occupational categories	Men born 1950 and 1979	1988–2004	Mobility table	Increased father-offspring mobility during the 1970s but a slowdown or decline during the 1980s and 1990s
Hellerstein and Morrill (*51*)					
GSS 1975–2002, SIPP 1986–1988, OCG II	Six occupational categories	Women aged 25–64 born between 1909 and 1977	1973–2002	Linear probability model	Decreased father-daughter mobility
Long and Ferrie (*5*)					
Linked sample of 1850–1880, 1860–1880, and 1880–1900 US Censuses; OCG II 1973	Four occupational categories	Men aged 30–55 in 1880 in the 1850–1880 linked sample, and aged 33–39 in 1880 or 1900 in 1860–1880, 1880–1900 and OCG samples	1850–1973	Altham statistics	decreased father-son mobility
Pfeffer and Hertel (*52*)					
GSS 1972–2012	Six category version of the Erikson-Goldthorpe-Portocarero (EGP) occupational scheme	Men aged 30–64; six birth cohorts (1883–1921; 1922–1933; 1934–1945; 1946–1957; 1958–1969; 1970–1982)	1972–2012	Loglinear analysis	A gradual increase in social class mobility
Olivetti and Paserman (*53*)					
1850–1940 Censuses	Occupational income score	Men aged 5–15 in the earlier census	1870–1940	Intergenerational elasticity	Decreased father-son and father–son-in-law mobility
Hout (*32*)					
GSS 1972–2016	Standardized occupational rank scores from 0 to 100 based on 2010 occupational ranks from lowest to highest with respect to the percentage in the occupation with at least some college education	Men and women, aged 25–69 in year 1972–2016	1972–2016	OLS regression; Quantile regression	No change in parent-offspring association since 1972 (no mother-offspring information before 1994)

Notes: This table summarizes the results from the previous literature of trends in intergenerational occupational mobility in the United States. The columns refer to the data source used, the definition of occupational measures, cohorts or periods in the child generation at which occupation is measured, the statistical methods used in the mobility analysis, and main conclusions about mobility trends. The abbreviations of the data sources include: Occupational Changes in a Generation (OCG); General Social Survey (GSS); National Opinion Research Center (NORC); Longitudinal Study of Generations (LSG); National Panel Study (NPS); Panel Study of Income Dynamics (PSID); Survey of Income and Program Participation (SIPP);

Pattern of Human Concern Data (PHCD); Class Structure and Class Consciousness (CSCC); Political Action: An Eight Nation Study (PA8NS).

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