Geographic and Occupational Mobility in Britain and the U.S., 1850-1881

Jason Long
DEPARTMENT OF ECONOMICS
COLBY COLLEGE
jmlong@colby.edu

Joseph Ferrie
DEPARTMENT OF ECONOMICS
AND
INSTITUTE FOR POLICY RESEARCH
NORTHWESTERN UNIVERSITY
AND
NBER
ferrie@northwestern.edu

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Abstract

Using longitudinal data on individual males linked between censuses separated by 30 years, we examine patterns of geographic and occupational mobility in the last half of the nineteenth century for two industrializing economies: Britain (1851-81) and the U.S. (1850-80). We find considerably higher rates of geographic mobility in the U.S. Though the frequency of moves was similar (roughly two thirds moved over 30 years in each country), moves were ten times as great in distance in the U.S. Upward occupational mobility between fathers' and sons' occupations and between an individual's first and last jobs was considerably more frequent in the U.S. For example, only one in five sons of unskilled fathers in the U.S. at the start of the 1850s failed to attain a higher status job by the start of the 1880s; the corresponding figure for Britain was nearly one in two. Upward mobility was associated more strongly with education in Britain than in the U.S. Background characteristics more generally were better predictors of occupational attainment in Britain than in the U.S.

Introduction

The economies of Britain and the U.S. have historically had a great deal in common: their shared language, legal tradition, technology are the most obvious. What these otherwise similar economies have not shared, at least in the minds of observers who have looked at both over the last two centuries, is a common faith in the prospect for economic and social advancement by those who begin their working lives without the benefit of wealth, or skill, or connections. Britain has been viewed, since the time of de Tocqueville and Marx, as

a considerably more rigid system in which previous background plays a much more significant role is determining current prospects than in the U.S. These differences have been attributed to a number of factors – the frontier and the rapid growth of completely new cities in the U.S., the feudal tradition and guild and apprenticeship systems in Britain, and the wide availability of free, public education in the U.S.[1]

There has been little data with which to test the assertion that mobility was more often realized in the U.S., let alone to assess the relative importance of various differences between Britain and U.S. in generating those differences. In this work, we offer evidence on the extent of the mobility experienced during the careers of more than 23,000 representative young men in Britain and the U.S. whose careers are traced from the start of the 1850s to the start of the 1880s. This makes it possible to evaluate the degree of mobility (both across and within generations) in each place and to offer some tentative explanations for the differences that we observe. In particular, it will be possible to examine the links between geographic and occupational mobility and between schooling and occupational mobility.

Such an investigation can yield a number of insights. The first is an understanding of how current beliefs about what the "normal" amount of mobility should be in these two economies were formed. Differences in historical mobility rates between the U.S. and Britain may help account for different expectations regarding mobility throughout the twentieth century. The second insight will be a sense of how often workers changed places and jobs

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[1] For example, de Tocqueville noted in *Democracy in America* more than 150 years ago that in the U.S., "millions of men are marching at once toward the same horizon; their language, their religion, their manners differ; their object is the same. Fortune has been promised to them somewhere in the west, and to the west they go to find it." (p. xxx)

over three crucial decades in the economic development of these two countries. The U.S. and British economies diverged substantially in performance by the start of the twentieth century – what role in this process was played by differences in their abilities to allocate labor across regions and industries? Finally, Britain and the U.S. had very different histories of labor relations and political activity by workers that past scholars (e.g. Turner in the 1890s; Thernstrom in the 1970s) have attributed to different amounts of economic opportunity and mobility by individual workers – can we actually observe sufficiently large differences to explain these differences in labor radicalism?

Previous Research

Britain, 1800 – Present

Internal migration in Britain after the Industrial Revolution has been the subject of a literature dating back to the nineteenth century.[2] In 1885, Ravenstein used birthplace data from the 1881 census to reveal seven "laws of migration," which have framed subsequent work on internal migration within Britain and elsewhere. The first and most important of Ravenstein's laws is that most moves covered only a short distance, and that exceptions to this rule generally involved Britain's "great centres of commerce or industry." He also posited that urban natives were "less migratory" than their rural counterparts, and that "females are more migratory than males." Ravenstein's laws have largely stood the tests of time and modern scholarship.

Another major early work is Redford's *Labour Migration in England, 1800-1850*, which

[2] See Boyer and Hatton, "Migration" for a recent, thorough survey of the field.

confirms the short-distance nature of nineteenth century British internal migration and refutes any notion of large-scale movement from the overpopulated South to the recently industrialized North. Redford also highlights the attractive power of higher wages and better opportunities for employment in the towns and cities as the primary force behind the rural-urban moves.

Perhaps the most comprehensive study of migration within and emigration from Victorian Britain is Baines' *Migration in a Mature Economy*. He uses census birthplace information along with mortality statistics from the *Annual Reports* and *Decennial Supplements* of the Registrar General to estimate the rate of overseas emigration and the rate of intercounty migration for every county in England and Wales, for every decade from 1860 to 1900. Between 1861 and 1870, 8.2 percent of the population of England and Wales made an intercounty move.[3] Intercounty migration rates were higher for rural than for urban counties: roughly 11 versus 7 percent.[4] Finally, Baines finds that most intercounty migrants were young: 81 percent were aged 15-34, and the rest were children.[5] For migration out of Britain,

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[3] This figure is calculated using the raw migration data that Baines reports in Appendix 1. Baines measures migration net of returns. For example, if one person born and living in Devonshire moves to Lancashire and another person born in Devonshire moves back to Devonshire from Lancashire, then no migration at all is observed. This is not so rough a measure as net migration; in the example, if a person moving from Lancashire to Devonshire were not born in Devonshire, they would not mask the move of a Devonshire person to Lancashire. But Baines cannot observe repeat moves or moves back to county of origin by any individual. Also, because Baines uses county-level rather than individual-level data, return moves can be masked by off-setting moves by other individuals.

[4] Baines defines rural counties as those in which fewer than 35 percent of the population lived in towns of more than 20,000 occupants. So defined, there were 34 rural counties and 18 urban counties.

[5] Baines examined the age distribution of all internal migrants in 1861, 1871, and 1911, and at the age-mortality relationship in those years. Then he derived the age distribution of the migrants at the time of migration that best fit the age/mortality distribution. The age distribution that best fit was 4% of all migrants being aged 0-4, 15% aged 5-14, 53% aged 15-24, and 28% aged 25-34. (pages 102-104.) That totals to 100% and

the comparable figure would be that between 1861 and 1900, the mean emigration rate for the four decades was 3.1% of the population of England and Wales (i.e. the average emigration rate was 3.1% per decade). (pp. 150-151) This compares to 8.2% making an internal move. Again, this is net of returns; every English or Welsh born return migrant masks one emigrant.

Somewhat less attention has been given to the topic of occupational mobility in nineteenth century Britain. Miles and Mitch have each used samples of marriage registrations from 1839 to 1914 to measure intergenerational occupational mobility.[6] At the time of registration, both bride and groom as well as bride's father and groom's father were required to list their occupation. From this information, Miles calculates that 65 percent of grooms married between 1859 and 1874 were in the same occupational class as their fathers when the grooms married. Only 18 percent had attained a higher class than their fathers, while 17 percent found themselves in a lower class.[7] Miles thus characterizes the British economy the time as "stable but far from stagnant." Mitch's findings are quite similar, though he does find evidence for slightly more mobility – 61 percent of grooms married between 1869 and 1873 were in the same class as their father, 20 percent were higher, and 19 percent lower.

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leaves nobody over 34 migrating, which cannot have been true. This was merely a theoretically derived best-fit distribution, so it simply implies that the number of 35+ year old migrants was very small, not zero. Others have verified this result. See, for example, Friedlander and Roshier, "Internal Migration," and Williamson *Coping*, pp. 40-42.

[6] Miles, "How Open." Mitch, "Inequalities." Their samples were somewhat different. They both used marriage registries, but they used different (possibly overlapping) samples of registries.

[7] The occupational classification system used by both Miles and Mitch is the five-tiered system developed by Armstrong for nineteenth century British occupations based upon the Registrar General's social classification schemes of 1921 and 1951. See Armstrong, "Information."

Two features of the marriage registry data are worth noting. First, it includes only couples married in Anglican ceremonies; data for non-Anglican ceremonies remains unavailable. Toward the end of the nineteenth century, these samples are increasingly unrepresentative. By 1914, 42 percent of all marriages took place outside the Anglican church.[8] Second, the occupations of the groom and his father are recorded at the time of the groom's marriage. So the father's and son's occupations are observed at different points in their life cycles, with the son being considerably younger than the father. If it were possible to observe the father's and son's occupations holding age constant, a different picture of intergenerational mobility might emerge. Specifically, we might expect to observe a greater likelihood of mobility as the son gained years and experience in the labor market.

Goldthorpe has used survey data from the 1970s to assess three prominent hypotheses on social mobility in modern Britain: (1) that mobility between classes as opposed to within classes is highly unlikely; (2) that there is a largely impermeable barrier between manual and non-manual occupations; and (3) that gains in intergenerational mobility over time have been offset by declines in intragenerational mobility. He analyzes both inter- and intragenerational occupational mobility.[9] He finds evidence of substantially greater intergenerational mobility than Mitch found in the nineteenth century, though their methods are not directly comparable. The data indicate that, even using a courser three-tiered occupational classification, only 51 percent of sons were in the same class as their father. A

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[8] Vincent, *Literacy*, p. 281.

[9] Goldthorpe, *Social Mobility*.

third had moved up, while 16 percent had moved down.[10]

While in the past, data have not existed with which to examine intragenerational mobility for the whole of nineteenth century Britain, modern survey data do allow occupational mobility over the work-life history to be analyzed. Using the three-tiered classification, 58 percent of survey respondents (aged 25-49) were in the same class as their first job at the time of the survey. A third had moved up and 8 percent had moved down.[11] These findings lead Goldthorpe largely to reject each of the three hypotheses.

U.S., 1800 – Present

A large number of studies have been completed for specific communities in the U.S. that give us a rough sense of both geographic and occupational mobility. The ten-year geographic mobility (non-persistence) rates for mid-nineteenth century communities was 56% in eleven cities (1850-80) and 64% in nine rural counties (1850-80). Higher rates were observed for lower class workers before World War I, but higher rates were then observed for high white collar workers after World War I. Between 22 and 47 percent of sons ended their careers in high status occupations than their fathers, though most estimates are for the years after 1900. Between 30 and 40% of men in two urban places (Boston and Poughkeepsie) ended their careers in higher status jobs than they enjoyed at the start of their

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[10] Calculated from Goldthorpe, *Social Mobility*, Table 2.1. The son was asked to give his father's occupation at the time the son was 14 years old. This method improves upon the marriage registry data with regard to the life cycle discrepancy between father and son.

[11] Calculated from Goldthorpe, *Social Mobility*, Table 5.1.

careers.[12]

The principal difficulty with these historical estimates is that they were constructed by observing a single community: those individuals who were observed at two census dates were counted as non-movers (persisters). Thus, our only estimate of the "movers" (non-persisters) includes those who died before the second date. The only individuals whose occupational mobility could be observed were those who remained in the same place (generally a city or county). It would be surprising if the movers and non-movers did not have systematically different patterns of occupational mobility, given the positive and often substantial costs of migration. Occupational mobility was measured using marriage records, so the figures suffer from the same shortcoming as the British data: sons' occupations are examined at different points in their careers than fathers' occupations. The data used below for the U.S. (like that for Britain) is not limited to individuals who remained in a place for a decade or more and examines sons' and fathers' occupations at similar ages, presenting a more representative picture of mobility than has previously been available.

For the modern U.S., rates of intercounty geographic mobility over ten years are roughly 60 percent for young males, while interstate migration rates are close to 35 percent over a decade.[13] Recent patterns of occupational mobility were examined by Featherman and Hauser in the "Occupational Change in a Generation" project. These data were collected as supplements to the Current Population Survey (in 1962 and 1973) and show

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[12] These studies are surveyed in Thernstrom, *The Other Bostonians.*

[13] See "Internal Migration," *Historical Statistics of the U.S., Millennial Edition* (forthcoming).

intergenerational upward mobility rates of 45% and intragenerational upward mobility rates of 74%.[14]

Comparing Mobility in Britain and the U.S.

Much scholarly attention has been paid to social mobility in the U.S. and Europe in the nineteenth and twentieth centuries, particularly in its implications for class formation, labor relations, and the political activity of workers. Marx was particularly concerned with the role of social mobility in preserving a system of class division, where even within a "developed" class society, mobility might serve as a stabilizing, anti-revolutionary process in the form of "recruitment from below."[15] To Marx, this was particularly true in America, which he saw as more open and fluid than the older European societies, with their "developed formation of classes." American classes, on the other hand, "have not yet become fixed but continually change and interchange their elements in constant flux." He related "this situation to the immature character of the American working-class movement."[16] In a more complete description, he characterized the U.S. as having "a continuous conversion of wage laborers into independent self-sustaining peasants. The position of wages laborer is for a very large part of the American people but a probational

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[14] See Featherman and Hauser, *Opportunity and Change*, for a description of the samples. The data were reworked based on the underlying individual-level observations contained in Inter-University Consortium for Political and Social Research, Study #6162, to make them consistent, in age composition and time between observations, with those described in the next section.

[15] Marx, *Capital, v.3*, 1863-83. This and subsequent quotations of Marx are from Goldthorpe, *Social Mobility.*

[16] Marx, "The Eighteenth Brumaire of Louis Napolean," 1852, *Selected Works.*

state, which they are sure to leave within a longer or a shorter term."[17]

Thernstrom shared Marx's belief that nineteenth century American workers enjoyed greater opportunity for social mobility than did their European counterparts, and that this heightened class fluidity had much to do with America's particular environment of class relations and labor organization:

> American workers…failed to flock into labor and socialist parties to the same extent as their European counterparts in the late nineteenth and twentieth centuries because of the greater permeability of the class structure that governed their lives…The American class system…allowed substantial privilege for the privileged and extensive opportunity for the underprivileged to coexist simultaneously. It is tempting to argue that…[this] explains…the relative absence of acute class conflict in our political history.[18]

Thernstrom goes on to point out that "as yet, there have not been enough quantitative studies of mobility in the European past to make systematic comparison possible."[19] According to both Marx and Thernstrom, the systematic comparison which is the aim of the present study should reveal greater socioeconomic mobility in nineteenth century America than in nineteenth century Britain.

The Data

The data used here to analyze mobility comparatively in Britain and the U.S. were constructed using a common methodology: taking a sample of the male population from a census at the start of the 1850s and locating the same individuals in the manuscripts of a

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[17] Marx, "Value, Prices, and Profits," 1865, *Selected Works.*

[18] Thernstrom, *Other Bostonians*, p. 258.

[19] Ibid, p. 259.

census taken thirty years later. For Britain we use information on approximately 13,000 males linked from the 1851 British census to the 1881 British census, and on 6,000 males linked from the 1851 British census to the 1880 U.S. census, and for the U.S. on nearly 4,000 males linked from the 1850 to the 1880 U.S. Federal Censuses.

The population censuses of Britain and the U.S. have long been regarded as the best sources of individual-level, nationally representative data from the nineteenth century. However, the cross-sectional censuses do not provide the continuity over time needed to study issues of mobility properly. Two new sources have made it possible to create the necessary continuity from the British and U.S. historical census records. The Genealogical Society of Utah in conjunction with the Federation of Family History Societies has computerized the individual-level records from all the enumerators' books of the 1881 Census of the Population of England, Wales, and Scotland. They have likewise computerized all the individual records from the 1880 U.S. Federal Population Census.[20] With these data, any individual or group of individuals can quickly and easily be located in the 1881 British or 1880 U.S. census.

We searched for individuals from two other censuses: the 1851 British and the 1850 U.S. census. For Britain, the individuals to be matched came from the computerized two

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[20] The compilers of the data have made the raw data files for the enumerators' books from England and Wales available through the U.K. Data Archive at the University of Essex as study number 3643. See http://www.dataarchive. ac.uk/. Only men born in England or Wales were included in the 1881 British census search, because men born elsewhere were not asked to give their parish of birth. Scottish born males were included in the 1880 U.S. census search, because all emigrants from the U.K. were asked to give only their country of birth.

percent sample of the 1851 census compiled principally by Anderson, Collins, and Stott.[21] From this sample were drawn all the males aged 10-29 and born in England or Wales. For the U.S., all 10-29 year old, native born males from the 1850 Federal Census one percent public use sample comprised the group to be matched.[22]

The matching technique was similar for the British and U.S. data. Both countries' censuses provide information that either remains consistent between enumerations (name and birthplace) or changes predictably (age) that can be used to identify a given individual in more than one census. The British census has more specific information than the U.S. census on each individual's birthplace (parish in Britain, state in the U.S.). In the 1880 U.S. census, respondents were asked to give the place of birth of their parents as well (state for those whose parents were born in the U.S. and country for those whose parents were born abroad). This question was missing entirely from the nineteenth century British census.

For Britain, in order to be considered a true match for an individual from 1851, an individual from 1881 had to have either the same name or a close phonetic variation thereof (for example, Aitken and Aitkin were considered to be equivalent), a year of birth different by no more than five years, and the same county and parish of birth. For the U.S., the

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[21] It is a stratified two percent systematic cluster sample from the enumerators' books. For England and Wales, settlements with fewer than 2,000 inhabitants are sampled in their entirety, on the basis of one settlement in fifty. For the remainder of these countries, and for all of Scotland, the sampling unit is the enumeration district, every fiftieth successive enumerator's book being selected. In its entirety the sample contains 945 clusters and 415,000 individuals. The clustering procedure ensures that family units remain intact; thus, for every individual contained in the sample, we have the complete census information for each member of that individual's household, including immediate family members and anyone else residing in the same dwelling place (servants, lodgers, visitors, etc.). For a full description see Anderson, *National Sample*. This dataset is also available through the Data Archive, as study number 1316.

[22] Available through the Minnesota Population Center at http://www.ipums.umn.edu/.

individual must provide the same state of birth for himself (and his parents if they were present in 1850) in 1850 and 1880, and the year of birth could differ by no more than three years. The variation in birth year was allowed in order to account for age misreporting, a fairly common phenomenon in 19th century societies which lacked the systematic record keeping and where individuals often had only an approximate idea of their age.[23] Trans-Atlantic migrants were matched according to the same criteria, with two exceptions. First, less phonetic variation was allowed in their enumerated name, and second, their year of birth was required to differ by no more than three years. The matching criteria were more stringent because less information was available for each individual. Whereas natives of Great Britain gave their parish of birth in the British censuses, they were only asked to give their country of birth in the U.S. census.[24] None of the above information could be missing from an individual's record. Also, only unique matches were considered: if by the match criteria an individual from the 1850 (1851) sample had more than one match in the 1880 (1881) census, then that individual was discarded.

Applying this matching process to 62,484 10-29 year old English and Welsh males from the 1851 two percent sample yielded 13,070 men observed in Britain both in 1851 and 1881, a success rate of 21%. Searching for the unmatched English and Welsh males, plus an additional 9,525 Scottish males yielded 6,150 men observed in the U.S. in 1850, a success rate

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[23] The smaller margin of age reporting error for the U.S. matching process is in response to the less specific birthplace information. For a discussion of age enumeration in the Victorian census, see Higgs, *Clearer Sense*, Ch. 7.

[24] The elimination of multiple matches from the sample helps to prevent incorrect matches due to this imprecise birthplace information by in effect matching only individuals with uncommon names.

of 10%[25] From a pool of 21,141 10-29 year old U.S.-born males in 1850, 3,976 were found in the 1880 U.S. census, a 19 percent success rate. For each country, the data come from two nationally representative sources, so as long as the matching process does not skew the sample, the set of matched individuals should also be representative of the two national populations that survived 1850-80 and 1851-81. Table 1 compares the sample of matched individuals and those who could not be matched, and illustrates the representativeness of the matched sample along dimensions measurable with census information.

In general, the matched samples represent the overall population quite well, though not perfectly. In the U.S., men born and residing in the Northeast are over represented, while in Britain those born in London and those residing in Yorkshire are slightly under represented. The under representation of people in London is almost certainly due to the fact that London parishes are so populous: what for the rest of the country is a highly specific geographic location is much less so within London. Both matched samples over represent urban residents, the British sample more so than the U.S. sample. In Britain those with white collar occupations and sons of white collar fathers are relatively more prevalent in the matched sample; perhaps this group was more likely to consistently report personal information between enumerations. For both countries, those who in 1850 (1851) were living in a state or county other than that of their birth ("interstate/intercounty movers") are

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[25] This emigration rate (8.5% of the 72,009 English, Welsh, and Scottish) is somewhat high. Based on Baines's emigration rate of 3.1% per decade, even if everybody migrated to the U.S., nobody died, and we ignore the effect of aging over the thirty years, the maximum expected number of emigrants over the three decades out of 72,009 (all the English, Welsh, and Scottish) is 6491. This also assumes the English migration rate holds for Wales and Scotland. This means we basically matched them all, which is unlikely, as we had to eliminate so many common-named people based on multiple matches. There are still some "false matches" in the pool of 6,150.

under represented.

A final striking feature of contrast between the U.S. and British data pertains not to sample representativeness but to the occupational structures of the two economies. Farmers were five times larger a share of the labor force in the U.S. than in Britain, while skilled, semi-skilled, and unskilled workers were three times larger a share of the labor force in Britain than in the U.S.

Table 2 shows the results of binary probit regressions of linkage on individual characteristics observable in the census. The pseudo-R^2 suggests that individual characteristics explain twice as much linkage success in Britain as in the U.S. For each sample, several of the characteristics exert a statistically significant influence on probability of linkage, though especially for the U.S. the magnitude is small in each case. For the U.S., only birth in the West has an effect on linkage of close to half the predicted probability.

Though our data for the U.S. and Britain were created using essentially identical procedures, a fundamental source of incompatibility remains and should be kept in mind in the course of the comparisons that follow: the U.S. was less urbanized and less industrialized than Britain in the second half of the nineteenth century. Migration to cities and towns and out of agriculture had been underway for at least a century in Britain by 1850; in the U.S. at this date, net movement of the population was still into rural places in the expanding west and into farming. This provided a different set of paths to economic advancement in the U.S. and Britain; unskilled laborers, for example, could improve their circumstances not just by moving out of farming and toward cities and towns, as they could in Britain, but also by

moving westward and entering farming. One way to reduce this incompatibility we will employ will be excluding those who entered farming from some comparisons. An additional step will be comparing movement in Britain *1851-81* to movement in the U.S. *1880-1910* using an additional linked dataset of 10,691 males age 10-29 in 1880 linked from the 1880 census file to the new 1910 Public Use Sample.[26] By looking at the U.S. thirty year later than Britain, we will be comparing two places that are somewhat more similar in terms of their stages of economic development.

Results on Geographic Mobility

We expect nineteenth century Americans to be more socially mobile than the British. They were almost certainly more geographically mobile. The U.S. populace was rapidly expanding throughout its three million square miles, persistently pushing its internal frontier westward until by 1880 the frontier had disappeared. Conversely, Britain's 88,000 square miles had not contained an internal frontier for centuries. The British were, of course, a mobile people. They were virtually free of institutional barriers to mobility during the second half of the 1800s, and the cities in particular were drawing a steady stream of migrants from the rural areas of England, Wales, and Scotland. And though Britain itself is small, a substantial number of British people were making one particular move of tremendous distance: across the Atlantic Ocean to the U.S. and Canada. Still, in frequency and distance of internal moves, the British must be expected to be less mobile than the Americans.

Table 3 bears out this expectation conclusively. More than 60 percent of the 10-29

[26] This dataset was created using the same procedures as the U.S. 1850-80 dataset described above.

year old males in the U.S. sample changed their county of residence between 1850 and 1880. Only 27 percent of the British sample did the same. U.S. men changed *state* of residence with greater frequency than British men did county between 1851 and 1881. Figure 1 compares mobility in Britain and the U.S. with the addition of moves made by 10-29 year old males in the U.S. between 1880 and 1910. Intercounty mobility rates in the U.S. remained more than twice as high in the U.S. in the thirty years after 1880 as they had been in Britain in the thirty years after 1851. The only difference from the 1850-80 mobility in the U.S. is a decline in interstate migration rates, as migration became focused on growing urban places (many of which could be reached without undertaking an interstate move) rather than on rural places in the west (almost all of which required an interstate move to be reached).

Not surprisingly, in the average distance of internal moves, the discrepancy was even greater. Only 21 percent of movers in the British sample made a move of greater than 50 miles (excluding the trans-Atlantic migrants), while 70 percent of American movers made such a long distance move. The average move made by an American man covered a distance of 213 miles. The average distance moved in Britain was 24 miles. Of course, this result is somewhat misleading in that it includes only internal migrants. The 6,150 British emigrants to the U.S. covered a tremendous distance. The passage from Liverpool to New York, for example, covered 3,300 miles.

Figures 2 through 5 show rates of in- and out-migration by county in Britain and by state in the U.S. from the start of the 1850s to the start of the 1880s. A particularly useful feature of our longitudinal data is its ability to measure something that has been quite

difficult to capture until now: the significant turnover of the population on the western frontier. Several of the same U.S. states that were major recipients of population over the thirty years examined here were also major providers of population to still newer states ever farther west. If all we had was information on *net* population flows, instead of the *gross* inflows and outflows we now can see, these patterns would remain invisible to us.[27]

Several places in England and Wales (Cheshire, for example, which had an in-migration rate of 35% and an out-migration rate of %38) also exhibit high rates of both in- and out-migration. In the northern English counties comprising the historical boundaries of Lancashire and Yorkshire, we would expect to observe a net inflow of migrants in search of factory work. Instead, these were places with very low out-migration rates and only modest rates of in-migration, suggesting that much of their 1851 to 1881 labor force growth was the result of their ability to retain more of their population than adjacent areas, rather than the result of their ability to draw population in large numbers from elsewhere. Both Lancashire (at 23%) and Yorkshire (at 19%) had in-migration rates below the mean of 26%. They both had out-migration rates (13 and 12%, respectively) well below the mean of 29%. One of the highest areas of in-migration is southeastern England, in and around the London metropolitan area. London had been a magnet for internal migrants within Britain at least

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[27] These patterns were observed by de Tocqueville: "I have spoken of the emigration from the older states but how shall I describe that which takes place from the more recent ones? Fifty years have scarcely elapsed since Ohio was founded; the greater part of its inhabitants were not born within its confines; its capital has been built only thirty years, and its territory is still covered by an immense extent of uncultivated fields; yet already the population of Ohio is proceeding westward, and most of the settlers who descend to the fertile prairies of Illinois are citizens of Ohio. These men left their first country to improve their condition; they quit their second to ameliorate it still more; fortune awaits them everywhere, but not happiness." (de Tocqueville, *Democracy in America*, Book I, Chapter XVII, Part I, 1835)

since the 1600s, and it was clearly a popular destination during the Victorian era.

Results on Occupational Mobility

Table 4 shows occupational mobility across generations in Britain and the U.S. The figures should be read down each column to determine the destination of sons based on their fathers' occupations. For example, the figures in the upper left cell of Britain's panel reveal that 35.6 percent of sons of white collar fathers attained white collar jobs thirty years later in Britain, while the corresponding figure for the U.S. was 39.3 percent. Perhaps the most striking result is the substantially higher rate of ascent for the sons of unskilled fathers in the U.S. relative to Britain. This measure of mobility was nearly 50% greater in the U.S. (80% versus 54%).

Most of the difference is accounted for by the far greater fraction of sons of unskilled fathers entering farming in the U.S. compared to Britain, which suggests that the continuing availability of relatively inexpensive land throughout the second half of the nineteenth century provided a route to upward intergenerational mobility in the U.S. unavailable in Britain. But differences are also apparent in the rate of ascent into white collar jobs among the sons of unskilled fathers: such moves were nearly twice as common in the U.S. as in Britain. In fact, the rate of ascent into white collar jobs was greater for the sons of all U.S. fathers, regardless of their occupation, than it was for the sons of British fathers. Rates of descent (sons of fathers who were not laborers becoming laborers themselves) were similar in the two countries.

Less dramatic changes in occupational status across two generations also point to

somewhat greater fluidity in the U.S. Most of the fathers in the British sample were in either skilled or semi-skilled jobs in 1851. More than two thirds of their sons were in such jobs thirty years later. In the U.S., less than half of the sons of fathers who were skilled or semi-skilled in 1850 were themselves in such jobs in 1880. A smaller fraction of the sons of skilled and semi-skilled fathers were found in lower status jobs and a larger fraction were found in higher status jobs after thirty years in the U.S. than in Britain. Though those whose fathers were in white collar jobs had nowhere to go but down, a far smaller fraction did so in the U.S. than in Britain with many of those who did not attain white collar jobs in the U.S. entering farming.

Patterns of intragenerational mobility also reveal some striking differences. Table 5 shows that upward mobility among those who began their own careers as unskilled workers was considerably more frequent in the U.S. (82.3 percent) than in Britain (42.3 percent). Movement into both white collar jobs and farming by those who began their careers in skilled or semi-skilled work was also more frequent in the U.S. than in Britain. For example. 47.8 percent of males who began their careers in skilled or semi-skilled jobs were in white collar jobs or farming three decades later in the U.S., while in Britain only 17.6 percent made such a move.

Among those who began careers in white collar jobs, the U.S. had more workers move from white collar jobs into farming than in Britain (and a smaller fraction remaining in white collar jobs or moving into skilled and semi-skilled jobs), but this should not be counted as evidence of downward mobility in an economy with a robust farm sector.

Individuals who began their careers in farming were as likely to remain in farming in Britain as they were in the U.S.

As was noted previously, an important difference between the British and U.S. occupational structures was the much larger fraction accounted for by farmers in the U.S. Agriculture was a large sector in the 1850s, and it continued to grow through the end of the 1870s, providing opportunities for the sons of skilled, semi-skilled, and unskilled workers to improve their circumstances in a way not possible in Britain. To reduce the impact of this obvious difference between Britain and the U.S., Tables 6 and 7 calculate rates of intergenerational and intragenerational mobility excluding those who had entered agriculture by the start of the 1880s. This does not eliminate the impact of the expanding farm sector in the U.S. entirely, of course, as even skilled and white collar jobs in cities like Chicago that served as processing centers for farm products were more plentiful as the result of a robust farm sector. But it at least eliminates the direct effect of the most glaring disparity in occupational structure as a possible source of superior upward mobility in the U.S. Eliminating those who moved into farming does indeed diminish the U.S. advantage slightly (only three quarters of the sons of unskilled fathers escaped unskilled work themselves in the U.S., as opposed to 80% who did so when movement into farming was included). When intragenerational mobility is reconsidered in Table 7, the U.S. advantage in the rate of ascent out of unskilled jobs is again diminished (the difference from Britain was 40 percentage points in Table 5, but falls to 40 percentage points in Table 7), but it remains substantial.

Figures 6 and 7 attempt to adjust for the difference between the U.S. and the British occupational structures by adding data for the 1880-1910 period, in order to allow a comparison when the U.S. and Britain were at slightly more similar stages of economic development. In 1850, 66% of young (age 10-19) males in the U.S. and 9% of young males in Britain had fathers who were farmers, compared to 58% in the U.S. in 1880. In 1850, 53% of older (age 20-29) males in the U.S. and 1% of young males in Britain were farmers, compared to 30% in the U.S. in 1880. Comparing the thirty years after 1851 in Britain to the thirty years after 1880 in the U.S. still reveals substantially higher rates of occupational mobility in the U.S. both across and within generations.

What are the sources of these differences in occupational mobility patterns? We have already considered to some extent the greater role of farming in the U.S. Other important differences between the U.S. and British economies were the American Civil War (which removed much of a generation from the labor market), institutional barriers to occupational mobility (such as formal apprenticeship systems in Britain). The latter can be explored by examining the entry into specific skilled occupations, though that is left for future work.

Two variables that are available in both the British and U.S. data are geographic mobility and school attendance. Table 8 shows that, among those who changed county over thirty years, upward intergenerational mobility from unskilled jobs to better jobs occurred more often those who moved than among those who did not move in Britain, but not in the U.S. where movers and nonmovers fared the same. Among movers in Britain, the probability of upward mobility increased with the distance moved (for moves up to 250 miles); in the

U.S., there is also a positive association between upward mobility and distance among movers (for moves up to 500 miles). Downward mobility was negatively associated with distance moved in both countries.

Though this might seem evidence for the role of migration in enhancing one's prospects for mobility even in Britain where both fewer and shorter moves were made, it might reflect instead the selectivity of internal migration in both places. The migrants who performed so well might have performed no less impressively if they had not migrated. An analysis that allows the migration decision to occur endogenously is necessary to draw further inferences. We are at work on such an analysis.

The rates of upward intragenerational mobility in Table 9 paint a slightly different picture: movers in the U.S. actually were slightly less likely to move up than nonmovers, while in Britain where geographic moves occurred less often, the opposite was true. There remains the possibility that mobility was more selective in the U.S. (i.e. that in Britain, migrants would have moved up regardless of the geographic moves they made, but that in the U.S. migration made possible upward moves for individuals whose prospects for advancement were poor at their original location), but this will require further investigation.

As the sample contains several thousand trans-Atlantic migrants, it is also possible to assess the impact of extremely long-distance moves on occupational mobility. Tables 10 and 11 compares rates of mobility for the sample that remained in Britain 1851-81, the sample that remained in the U.S. 1850-80, and the sample that migrated from Britain in 1881 to the U.S. in 1880. In intergenerational mobility, the trans-Atlantic migrants look more like the

Americans they have joined than the British they have left behind: more than 85% of the sons of unskilled fathers in Britain in 1851 were in better jobs themselves in 1880, compared to the 80 percent of sons of unskilled fathers born in the U.S. who moved up. There is somewhat less ability to attain the father's white collar occupation among the trans-Atlantic movers than among those who were in either Britain or the U.S. for the entire period: only a fifth of the sons of white collar workers among the trans-Atlantic migrants were in white collar jobs by 1880, as opposed to more than a third of those who remained in Britain and 40% of those who were born and raised in the U.S. Most of the trans-Atlantic movers who did not re-attain their father's occupational class ended up in skilled or semi-skilled jobs. Though some of these may have provided a superior income than poorly-paid white collar jobs in Britain, there is also the possibility that long-distance migration came at a considerable cost in terms of the ability to capitalize on connections and access to entry-level white collar positions that geographic proximity to the fathers of those who did not migrate across the Atlantic afforded. Roughly similar conclusions emerge from an examination of intragenerational mobility in Table 11 (upward mobility out of the worst jobs that is comparable for those born in the U.S. and those who came to the U.S., both of whom out-performed those who remained in Britain, but less ability to remain in white collar jobs among the trans-Atlantic movers than among those who remained in either the U.S. or Britain throughout the period). The results on upward occupational mobility for the three groups are summarized in Table 12.

The impact of school attendance on intergenerational mobility can be seen in Table

13: in Britain, school attendance was associated with substantial improvement in upward mobility (upward moves were 16% more frequent among those who were attending school at the start of the 1850s than among those who were not), and some protection against downward moves, while in the U.S. school attendance was associated with only slightly more upward moves (5% more upward mobility) and, if anything, a slight increase in downward moves. Some of this difference may be the product of the ubiquity of education in the U.S.: three quarters of the males age 10-19 in the U.S. sample were attending school in 1850, while only a third of those in the British sample were doing so in 1851. The smaller fraction attending school in Britain may indicate a more select student population, where attendance may be correlated with parental characteristics associated with better prospects for advancement. There is also the possibility that the U.S. and British systems were providing different kinds of education: the U.S. offering basic literacy and numeracy sufficient to allow informed civic participation but little more, and the British system offering instead a set of skills linked to specific careers (e.g. bookkeeping).

Finally, it is also possible to control simultaneously for several individual characteristics as correlates of intergenerational mobility. Tables 14 and 15 show the results of multinomial logistic regressions in which occupational categories are the outcomes, and the regression coefficients measure the impact of a change in the independent variable on the probability of entering a particular occupation. Unlike an ordered probit regression, the multinomial logistic regression does not require a natural ordering of the occupations on some underlying scale.

The figures in Tables 14 and 15 are partial derivatives. Thus, the entry of 0.0173 for "Attended School" in the first column of Table 14 indicates that having attended school in 1851 made it 1.7 percentage points more likely that an individual in Britain would enter a high white collar occupation by 1881 than one who was not attending school in 1851, after controlling for the individual's other observable characteristics. In Britain, the father's occupation at the start of the 1850s was a statistically significant predictor of the son's occupation at the start of the 1880s. These effects were both statistically significant and large in magnitude. For example, having a father in a high white collar job increased the probability of entering a high white collar job oneself by 39 percentage points more than having a father in an unskilled job (the omitted category). School attendance raised the odds of entering white collar jobs (particularly low white collar jobs such as clerks) and lowered the chances of ending up in semi-skilled or unskilled jobs.

In the U.S., far fewer background characteristics influenced occupational mobility between fathers' and sons' jobs. In fact, the only background characteristic that exerted a statistically significant impact on occupational attainment was the presence of a father in a low white collar job, which made entry into low white collar work more likely and entry into farming less likely than the presence of an unskilled father. These results are the strongest evidence to date that, in terms of occupational mobility across generations, the U.S. was more fluid and less prone to the influence of prior circumstances in shaping outcomes later in life.

Table 15 includes as a regressor whether an individual changed county of residence

between the start of the 1850s and the start of the 1880s. As this is a decision that could be made in conjunction with a move in occupational status, these results should be read as provisional. They show that internal migration in Britain was associated with greater movement into white collar and skilled jobs, and less movement into farming and unskilled jobs. In the U.S., internal migration reduced the odds of entering farming and raised the odds of entering all other occupations, but this effect was not statistically significant.

Conclusions and Extensions

The new longitudinal data we have created has made it possible, for the first time, to compare rates of geographic and occupational mobility in Britain and the U.S. over three decades in the second half of the nineteenth century, when both economies were experiencing rapid urbanization and industrialization. Not surprisingly, the U.S. population was the more geographically mobile of the two. As contemporary commentators suggested, mobility in occupational status both across and within generations was also substantially different in these places. U.S. workers moved up more often when we compare their jobs in the 1880s to either their fathers' jobs or their own jobs in the 1850s than did workers in Britain. This is consistent with the views of Marx, de Tocqueville, and Thernstrom.

The superior upward mobility of U.S. men was not the simple result of greater geographic mobility (though the possibility of more selective migration in the U.S. remains). When several background characteristics are controlled simultaneously, the influence of past circumstances (such as father's occupation at the start of the 1850s) on occupational attainment by the start of the 1880s is much smaller in the U.S. than in Britain, suggesting

that the U.S. labor market was indeed more fluid overall than that in Britain. Subsequent analyses will include allowing for the endogenous choice of location, accounting for the determinants of schooling, and examining finer distinctions in occupations (e.g. mobility from manual to nonmanual, from low white collar to high white collar).

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Example: James Bugby
1851:Raunds parish, Northampton County, England

County	Parish	First Name	Last Name	Relation	Marrital Status	Occupation	Birth County	Birth Parish	Sex	Age
Northampton	Raunds	Joseph	Bugby	Head	Married	Ag Labourer	Northampton	Raunds	M	48
Northampton	Raunds	Rachel	Bugby	Wife	Married	Ag Lab Wife	Bedford	Henlow	F	48
Northampton	Raunds	Joseph	Bugby	Son	Unmarried	Ag Labourer	Northampton	Raunds	M	17
Northampton	*Raunds*	*James A*	*Bugby*	*Son*	*Unmarried*	*Ag Labourer*	*Northampton*	*Raunds*	*M*	*15*

1881:London Shoreditch parish, Middlesex County, England

County	Parish	First Name	Last Name	Rela- tion	Marital Status	Occupation	Birth County	Birth Parish	Sex	Age
Middlesex	*London Shoreditch*	*James*	*Bugby*	*Head*	*Married*	*Inspector Of Police*	*Northampton*	*Raunds*	*M*	*45*
Middlesex	London Shoreditch	Mary	Bugby	Wife	Married	---	Northampton	Raunds	F	46

Example: Alva P. Hollister

1850:Franklin Township, district No. 22,
Clermont County, Ohio, p. 399

1880: Sherman, Kearney County, Nebraska, p. 10

Table 1: Sample Representativeness

	British Sample		U.S. Sample	
	Linked	Not Linked	Linked	Not Linked
Britain, 1851 Region of Residence				
East	8.0%	6.0%		
Midlands	21.4	19.7		
North	5.0	5.1		
South	20.1	17.6		
Lan-Chs	13.0	11.5		
London	18.6	21.4		
York	9.3	13.7		
Wales	4.7	4.9		
U.S., 1850 Region of Residence				
Northeast			47.5%	37.3%
Northwest			25.2	30.5
Southeast			16.7	16.2
Southwest			10.6	15.9
Urban (pop.>2,500)	63.9%	52.0%	13.6%	12.4%
Rural	36.1	48.0	86.4	87.6
Father's Occupation				
White Collar	12.0%	5.8%	6.6%	6.2%
Farmer	11.1	12.8	67.2	66.3
Skilled/Semi-Sk	48.6	50.5	17.7	16.9
Unskilled	28.3	30.9	8.6	10.6
Father's Real Estate Wealth			$2,095.70	$1,916.60
Father's Literacy			92.4%	90.0%

(continued)

Table 1, continued

	British Sample		U.S. Sample	
	Linked	Not Linked	Linked	Not Linked
Britain, 1851 Region of Birth				
East	8.5%	6.9%		
Midlands	21.1	20.2		
North	5.0	5.3		
South	21.3	21.3		
Lan-Chs	12.8	11.2		
London	16.9	20.5		
York	9.7	8.7		
Wales	4.7	5.9		
U.S., 1850 Region of Birth				
Northeast			52.4%	41.9%
Northwest			19.9	26.0
Southeast			19.5	19.6
Southwest			8.2	12.5
Age				
10-14	30.8%	28.3%	43.4%	45.9%
15-19	26.1	26.1	32.3	32.7
20-24	23.5	24.4	18.4	16.5
25-29	19.6	21.2	6.0	4.9
Attending School	14.4%	16.1%	51.4%	49.0%
Literacy			95.4	93.3
Own Occupation				
White Collar	6.3%	3.6%	5.9%	6.0%
Farmer	0.9	1.0	55.0	55.2
Skilled/Semi-Sk.	53.9	54.4	18.5	15.5
Unskilled	39.0	41.0	20.7	23.4
Interstate Mover			17.7%	22.5%
Intercounty Mover	10.6%	20.8%		
Obs.	13,070	59,796	3,976	17,165

Table 2: Binary Probit Regression (partial derivatives) on Linkage
(Linked=1, Not Linked=0)

	British Sample	U.S. Sample	U.S. Sample
Variable	∂P/∂X	∂P/∂X	∂P/∂X
Britain, 1851 Region of Residence			
East			
Midlands	-0.088		
North	-0.155*		
South	-0.031		
Lan-Chs	-0.080		
London	-0.046		
York	-0.224***		
Wales	-0.061		
U.S., 1850 Region of Residence			
Northeast			
Northwest		-0.002	-0.008
Southeast		-0.002	0.008
Southwest		-0.009	0.025
Urban			-0.005
Rural			
Father Missing		0.020***	-0.022***
Father's Occupation			
White Collar	0.257***	-0.007	-0.009
Farmer			
Skilled/Semi-Skilled	0.109***	-0.019***	-0.019**
Unskilled	0.104***	-0.050***	-0.037***
Father's Real Estate Wealth x 10^{-6}			0.002
Father's Literacy			0.012

(continued)

Table 2, continued

Variable	British Sample ∂P/∂X	U.S. Sample ∂P/∂X	U.S. Sample ∂P/∂X
Britain, 1851 Region of Birth			
East			
Midlands	0.092		
North	0.134		
South	0.015		
Lan-Chs	0.131**		
London	0.046		
York	0.221***		
Wales	0.016		
U.S., 1850 Region of Birth			
Northeast			
Northwest		-0.072***	-0.065***
Southeast		-0.032**	-0.019
Southwest		-0.081***	-0.072***
Age	-0.002**	0.002	0.001
Attending School			0.029***
Own Occupation			
White Collar	0.065	-0.012	-0.001
Farmer			
Skilled/Semi-Skilled	-0.048	0.009	0.021
Unskilled	-0.086	-0.020***	-0.016*
Interstate Mover		-0.043***	-0.044***
Intercounty Mover	-0.159***		
Predicted Probability	0.190	0.184	0.180
Pseudo R^2	0.027	0.014	0.018
N	15,935	21,295	18,176

Note: significant at *** 1% ** 5% * 10%.

Table 3: Geographic Mobility

	British Sample		U.S. Sample
Changed State[a]			35.3%
Changed County[b]	27.4%		61.6
Changed Town	67.5		
Distance Moved			
under 49 miles (% of movers)	79.0		29.8
50-99	11.9		13.5
100-249	8.3		20.3
250-500	0.9		14.7
over 500	0.0		21.7
Mean	23.9 miles		213.4 miles
Median	4.7 miles		35.6 miles
Obs.	13,070		3,976

Note: [a] U.S. states were 71,000 square miles in area; [b] English counties were roughly 1,000 square miles in area, while U.S. counties were 1,300 square miles in area.

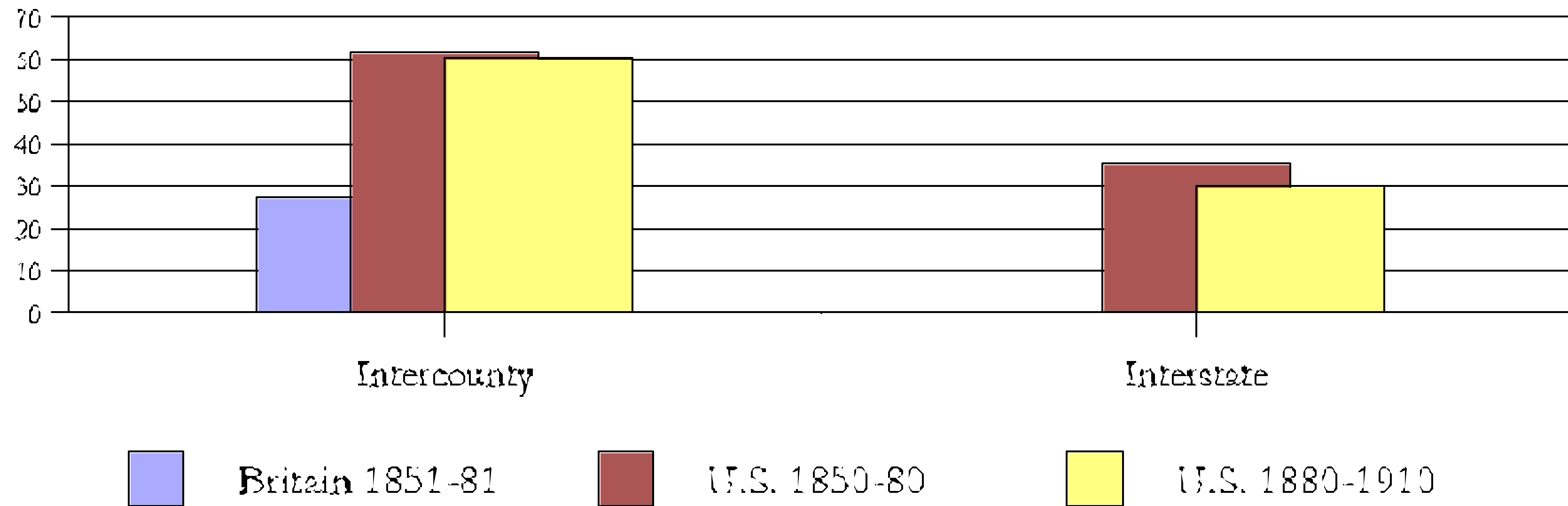

Figure 1

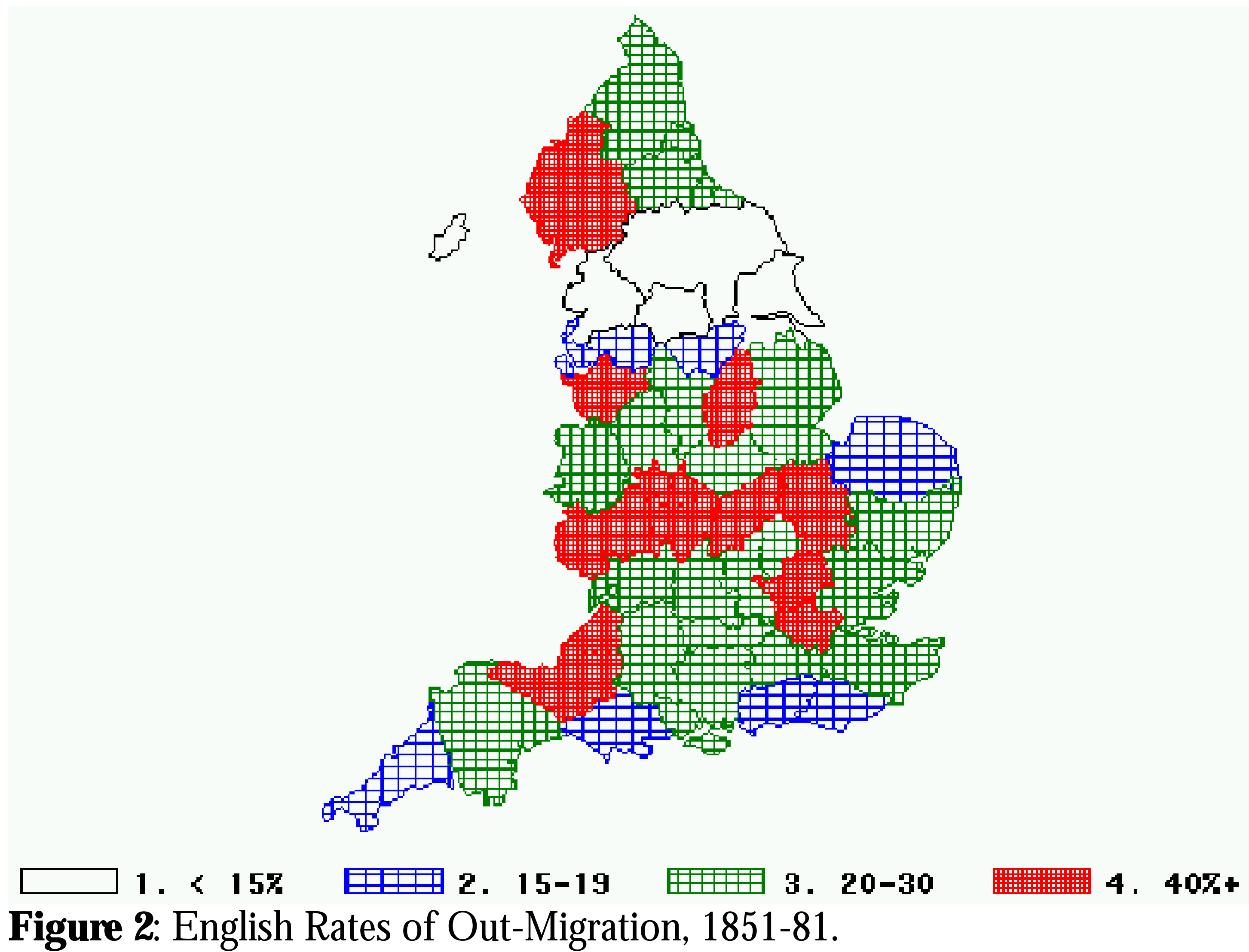

Figure 2: English Rates of Out-Migration, 1851-81.

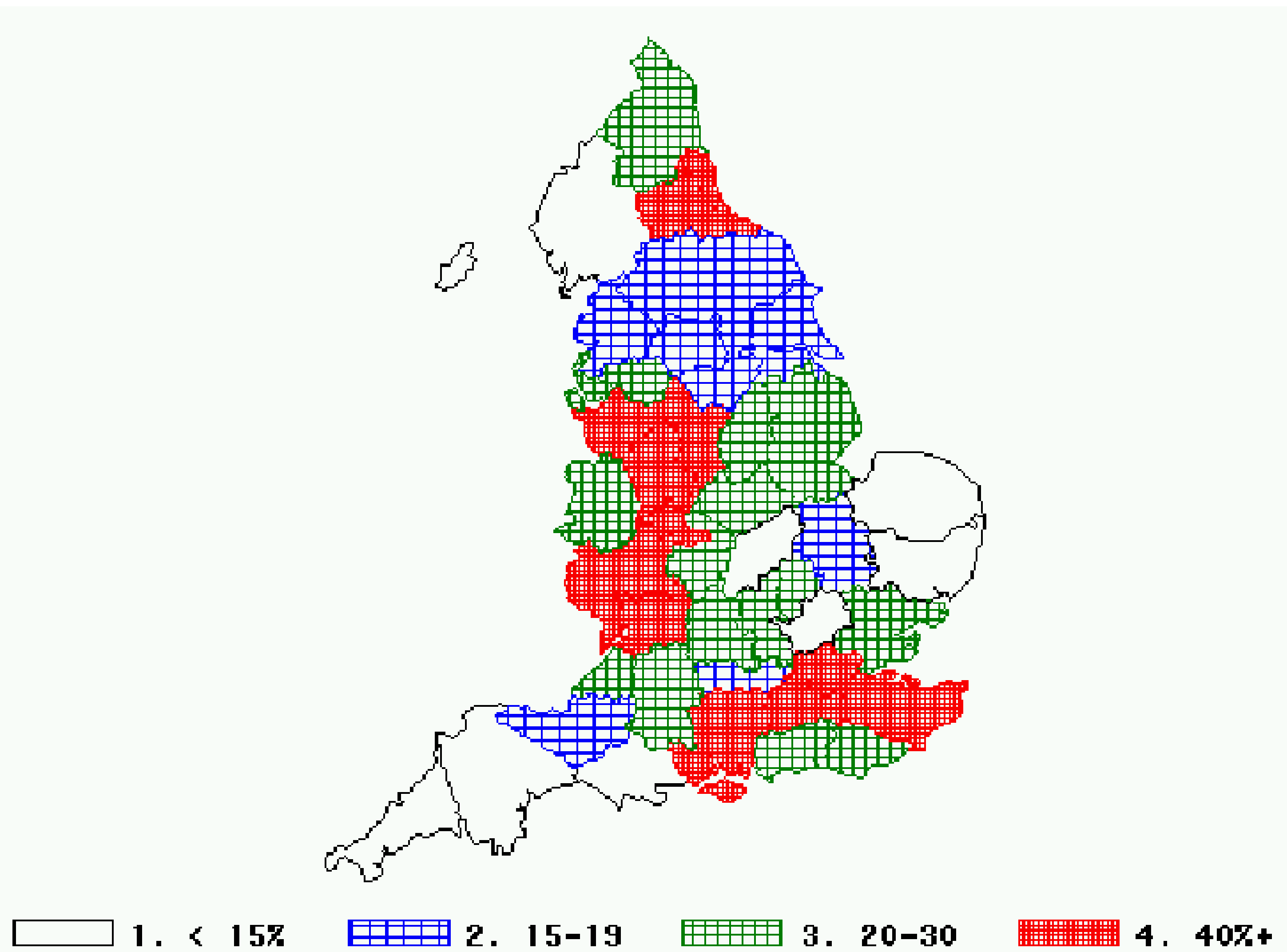

Figure 3: English Rates of In-Migration, 1851-81.

1. <30% 2. 30-39% 3. 40-49% 4. 50%+

Figure 4: U.S. Rates of Out-Migration, 1850-80.

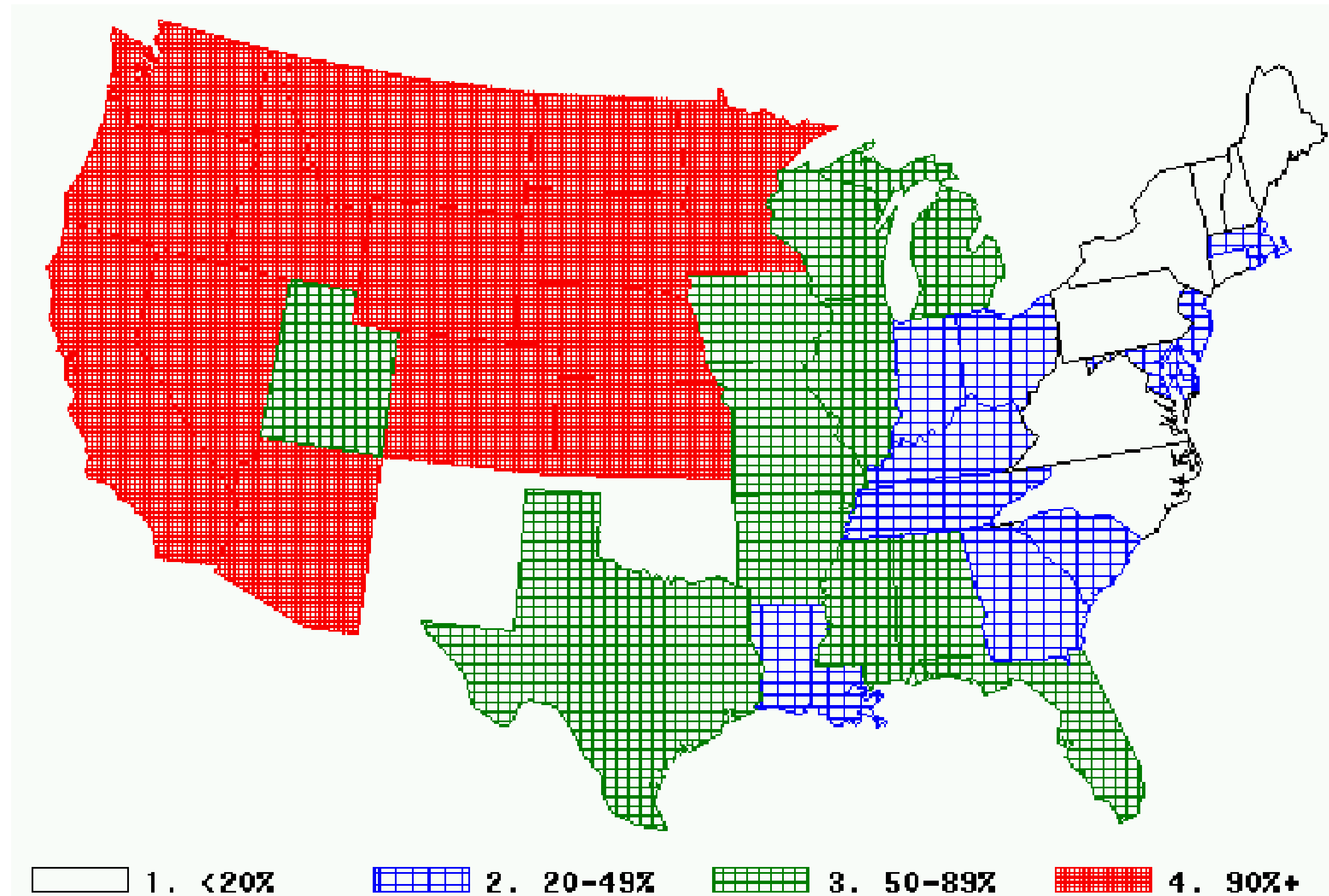

Figure 5: U.S. Rates of In-Migration, 1850-80.

Table 4: Intergenerational Occupational Mobility

	Father's 1850 Occupation							
	British Sample				U.S. Sample			
	WC	F	S/SS	U	WC	F	S/SS	U
Own 1880 Occupation								
White Collar	35.6	11.6	14.0	6.9	39.3	13.2	20.9	12.1
Farmer	3.6	38.2	2.0	2.3	23.7	62.9	26.2	34.4
Skilled/Semi-Sk	50.7	33.8	68.7	44.9	24.9	14.8	42.3	33.9
Unskilled	10.1	16.4	15.3	46.0	12.1	9.1	10.6	19.6
Obs.	665	526	2,889	1,667	173	1,668	454	224
Percent of Total	12%	9%	50%	29%	7%	66%	18%	9%

Note: Males age 10-19 in 1850 or 1851. Numbers are **column percentages**.

(Britain : 55% in same class as father – lower than 61% found using marriage registries.)

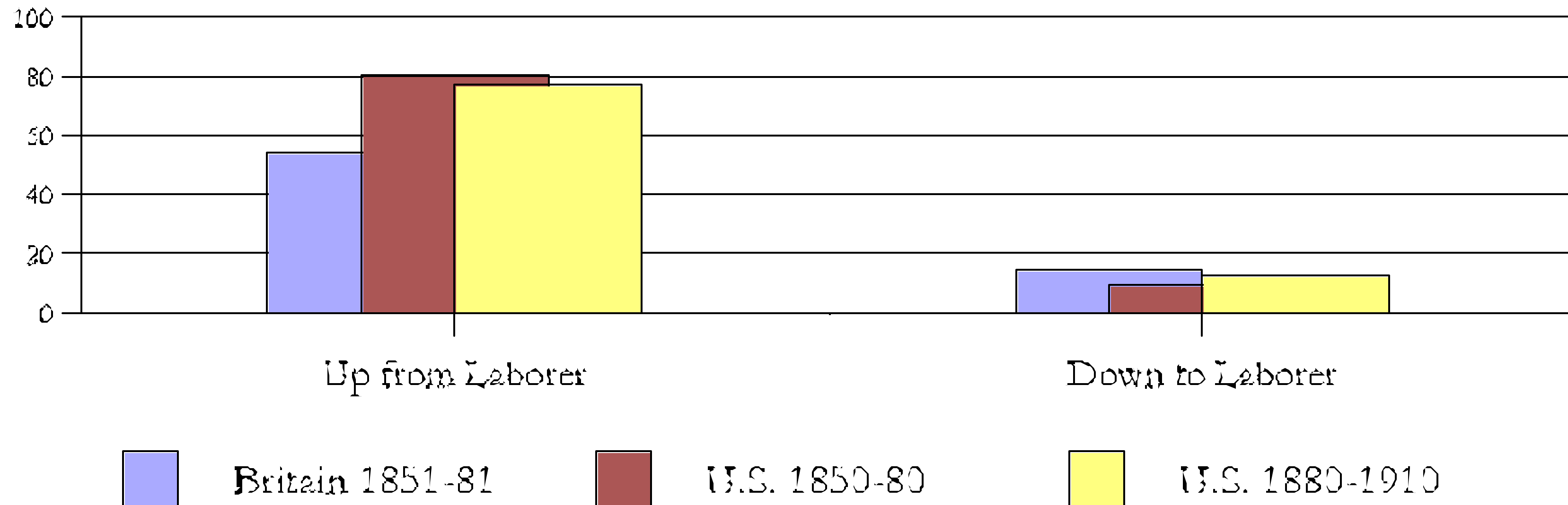

Figure 6

Table 5: Intragenerational Occupational Mobility

	Own 1850 Occupation							
	British Sample				U.S. Sample			
	WC	F	S/SS	U	WC	F	S/SS	U
Own 1880 Occupation								
White Collar	54.2	9.0	14.2	5.2	44.6	9.6	17.1	9.2
Farmer	5.6	70.5	3.4	6.8	28.6	69.4	30.7	53.9
Skilled/Semi-Sk	34.2	12.8	69.3	30.3	16.1	9.1	43.2	19.2
Unskilled	6.0	7.7	13.0	57.7	10.7	11.9	9.1	17.7
Obs.	448	78	2,962	1,757	56	428	176	141
Percent of Total	9%	1%	56%	33%	7%	53%	22%	18%

Note: Males age 20-29 in 1850 or 1851. Numbers are column percentages.

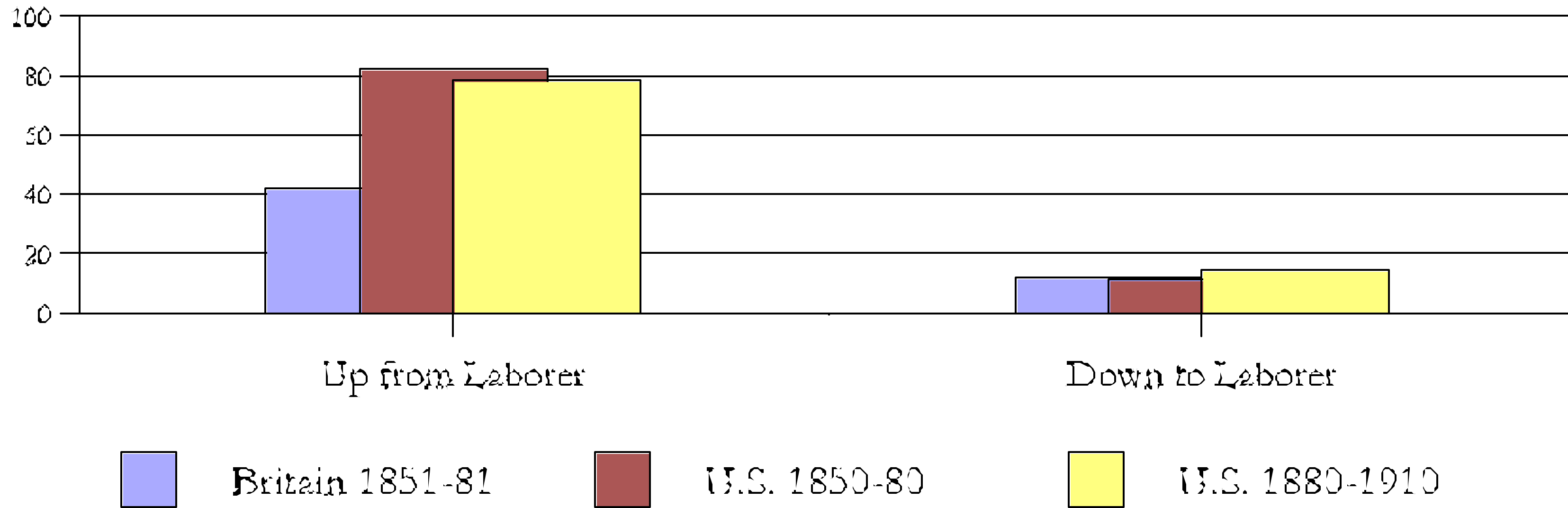

Figure 7

Table 6: Intergenerational Occupational Mobility – Excluding Farmers in 1880

	Father's 1850 Occupation							
	British Sample				U.S. Sample			
	WC	F	S/SS	U	WC	F	S/SS	U
Own 1880 Occupation								
White Collar	37.0	18.8	14.3	7.1	53.5	38.8	28.7	19.3
Skilled/Semi-Sk	52.6	54.8	70.1	45.9	33.9	43.6	58.0	54.3
Unskilled	10.5	26.5	15.6	47.0	12.6	17.6	13.3	26.4
Obs.	641	325	2,831	1,629	127	567	331	140
Percent of Total	11.8	6.0	52.2	30.0	10.9	48.7	28.4	12.0

Note: Males age 10-19 in 1850 or 1851. Numbers are column percentages.

(Including farmers, rate of unskilled immobility is 46.0% in Britain and 19.6% in the U.S..)

Table 7: Intragenerational Occupational Mobility – Excluding Farmers in 1880

	Own 1850 Occupation							
	British Sample				U.S. Sample			
	WC	F	S/SS	U	WC	F	S/SS	U
<u>Own 1880 Occupation</u>								
White Collar	57.5	30.4	14.7	5.6	65.8	36.0	24.8	22.0
Skilled/Semi-Sk	36.2	43.5	71.8	32.6	23.7	34.2	62.8	45.8
Unskilled	6.4	26.1	13.5	61.9	10.5	29.8	12.4	32.2
Obs.	423	23	1,860	1,637	38	114	121	59
Percent of Total	8.6	0.5	57.9	33.1	11.5	34.3	36.5	17.8

Note: Males age 20-29 in 1850 or 1851. Numbers are column percentages.

(Including farmers, rate of unskilled immobility is 57.7% in Britain and 17.7% in the U.S.)

Table 8: Geographic and Intergenerational Occupational Mobility

	British Sample		U.S. Sample	
	Up	Down	Up	Down
Total	53.9%	14.7%	77.6%	9.4%
No county move	43.5%	16.0%	76.3%	8.0%
under 49 mi.	56.4	14.5	62.5	10.0
50-99	71.0	14.6	66.7	12.5
100-249	78.9	10.0	90.0	10.4
250-500	75.0	9.1	91.7	10.3
over 500	na	na	82.9	8.3
Obs.	1,490	3,605	232	2,354

Note: Males age 10-19 in 1850 or 1851. Percentages are for at-risk population: for "Up," all who begin as Unskilled; for "Down," all who begin in any category except Unskilled.

Table 9: Geographic and Intragenerational Occupational Mobility

	British Sample		U.S. Sample	
	Up	Down	Up	Down
Total	41.6%	11.9%	79.5%	10.7%
No move	31.8%	11.6%	84.3%	9.7%
under 49 mi.	45.7	11.9	78.8	13.8
50-99	63.1	14.1	62.5	8.7
100-249	57.8	11.5	80.0	9.9
250-500	na	7.4	70.0	9.2
over 500	na	na	84.2	12.0
Obs.	1,561	3,092	146	684

Note: Males age 20-29 in 1850 or 1851. Percentages are for at-risk population: for "Up," all who begin as Unskilled; for "Down," all who begin in any category except Unskilled.

Table 10: Intergenerational Occupational Mobility

	Father's 1850 Occupation											
	Migrants				British Sample				U.S. Sample			
	WC	F	S/SS	U	WC	F	S/SS	U	WC	F	S/SS	U
1880 Occ												
WC	19.1	17.2	15.6	17.2	35.6	11.6	14.0	6.9	39.3	13.2	20.9	12.1
F	16.2	26.1	20.6	25.1	3.6	38.2	2.0	2.3	23.7	62.9	26.2	34.4
S/SS	45.6	44.0	50.4	44.0	50.7	33.8	68.7	44.9	24.9	14.8	42.3	33.9
U	19.1	12.7	13.4	13.8	10.1	16.4	15.3	46.0	12.1	9.1	10.6	19.6
Obs.	136	134	848	443	665	526	2,889	1,667	173	1,668	454	224
%	9%	9%	54%	28%	12%	9%	50%	29%	7%	66%	18%	9%

Note: Males age 10-19 in 1850 or 1851. Numbers are column percentages.

Table 11: Intragenerational Occupational Mobility

	Own 1850 Occupation											
	Migrants				British Sample				U.S. Sample			
1880 Occ	WC	F	S/SS	U	WC	F	S/SS	U	WC	F	S/SS	U
WC	15.9	14.3	15.1	14.4	54.2	9.0	14.2	5.2	44.6	9.6	17.1	9.2
F	30.2	38.1	30.0	36.8	5.6	70.5	3.4	6.8	28.6	69.4	30.7	53.9
S/SS	41.3	42.9	43.9	38.0	34.2	12.8	69.3	30.3	16.1	9.1	43.2	19.2
U	12.7	4.8	10.9	10.9	6.0	7.7	13.0	57.7	10.7	11.9	9.1	17.7
Obs.	126	21	1,145	661	448	78	2,962	1,757	56	428	176	141
%	6%	1%	59%	34%	9%	1%	56%	33%	7%	53%	22%	18%

Note: Males age 20-29 in 1850 or 1851. Numbers are column percentages.

Table 12: Occupational and Geographic Mobility

	Britain			U.S.	
	N	Up from Unskilled		N	Up from Unskilled
INTERGENERATIONAL MOBILITY					
Same County	1,268	49.2%		85	74.1%
Diff. County, Same Country	372	68.8		147	79.6
Different Country	443	86.2			
INTRAGENERATIONAL MOBILITY					
Same County	1,422	38.4%		54	85.2%
Diff. County, Same Country	303	58.4		92	76.1
Different Country	661	89.1			

Table 13: School Attendance and Intergenerational Mobility

	British Sample			U.S. Sample	
	Up	Down		Up	Down
Total	54.3%	11.8%		81.6%	10.7%
In School					
Yes	60.6%	11.8%		83.2%	10.9%
No	52.3	15.9		79.0	9.9
Obs.	1,206	3,551		163	1,570

Note: Percentages for at-risk population

Table 14: Partial Effects From Multinomial Logistic Regressions on Occupational Attainment, Without Controlling for County Mover

	Variable (X)	High WC	Farmer	Low WC	Skilled	Semi-Skilled	Unskilled	E[X]
Britain, 1851-81	Father High WC	0.3939***	0.0502	0.0326	-0.1909***	-0.0730***	-0.2128***	0.02
	Father Farmer	0.0096	0.3018***	0.0258	-0.1311***	-0.0470***	-0.1592***	0.09
	Father Low WC	0.0776***	0.0117	0.1380***	0.0433	-0.0711***	-0.1995***	0.09
	Father Skilled	0.0223***	-0.0061	0.0366**	0.2458***	-0.0493***	-0.2494***	0.41
	Father Semi-Skilled	0.0079	-0.0043	0.0045	0.0841**	0.0480**	-0.1403***	0.08
	Not in Birth County	0.0103	-0.0255***	0.0106	0.0392	-0.0404***	0.0058	0.07
	Attended School	0.0173***	-0.0013	0.0625***	0.0039	-0.0194*	-0.0629***	0.35
	Age gap = 0	0.0116**	0.0027	0.0218*	0.0428**	-0.0128	-0.066***	0.47
	Age gap = 1	-0.0029	0.0100	-0.0084	0.0058	-0.0031	-0.0013	0.28
	Age	0.0008	-0.0006	0.0052	0.0081	-0.0023	-0.0112***	12.34
	Pr(Y|X=E[X])	0.0200	0.0300	0.1100	0.5300	0.0900	0.2200	
U.S., 1850-80	Father High WC	0.2828	-0.2103	0.0712	-0.0540	-0.0327	-0.0568	0.07
	Father Farmer	0.0558	0.1743	0.0042	-0.1102	-0.0707	-0.0535	0.64
	Father Low WC	0.4311**	-0.5059***	0.0870	-0.0168	-0.0186	0.0231	0.01
	Father Skilled	0.0909	-0.0955	0.0505	0.0261	-0.0078	-0.0643	0.12
	Father Semi-Skilled	0.0603	-0.0971	0.0331	-0.0541	0.0467	0.0111	0.05
	Not in Birth County	0.0151	-0.0285	-0.0079	0.0062	0.0136	0.0015	0.14
	Attended School	-0.0089	-0.0360	0.0211	0.0157	0.0170	-0.0090	0.75
	Age gap = 0	0.0054	0.1184	0.0099	-0.0516	-0.0276	-0.0545	0.36
	Age gap = 1	-0.0251	0.0796	0.0099	-0.0308	-0.0342	0.0006	0.34
	Age	-0.0005	-0.0026	-0.0009	0.0066	-0.0009	-0.0018	12.38
	Pr(Y|X=E[X])	0.1500	0.4600	0.0300	0.1200	0.0700	0.1600	

Note: significant at *** 1% ** 5% * 10%.

Table 15: Partial Effects From Multinomial Logit on Occ. Attainment, Controlling for County Mover

	Variable (X)	High WC	Farmer	Low WC	Skilled	Semi-Skilled	Unskilled	E[X]
Britain, 1851-81	Father High WC	0.3645***	0.0485	0.0359	-0.1658**	-0.0724***	-0.2247***	0.01
	Father Farmer	0.0084	0.2753***	0.0276	-0.1150***	-0.0442***	-0.1522***	0.08
	Father Low WC	0.0732***	0.0109	0.1362***	0.0507	-0.0717***	-0.1992***	0.09
	Father Skilled	0.0210***	-0.0051	0.0359**	0.2493***	-0.0501***	-0.2511***	0.41
	Father Semi-Skilled	0.0075	-0.0027	0.0036	0.0797**	0.0503**	-0.1383***	0.07
	Changed Cnty 1851-81	0.0152***	-0.0318***	0.0675***	0.0417**	-0.0105	-0.0822***	0.26
	Not in Birth County	0.0034	-0.0176***	-0.0089	0.0238	-0.0390**	0.0382	0.06
	Attended School	0.0160***	-0.0002	0.0584***	0.0043	-0.0188*	-0.0597***	0.34
	Age gap = 0	0.0121**	0.0002	0.0268**	0.0463**	-0.0137	-0.0718***	0.46
	Age gap = 1	-0.0027	0.0057	-0.0053	0.0098	-0.0034	-0.0042	0.27
	Age	0.0008	-0.0007	0.0054	0.0078	-0.0022	-0.0111**	12.33
	Pr(Y|X=E[X])	0.0200	0.0200	0.1100	0.5300	0.0900	0.2200	
U.S., 1850-80	Father High WC	0.2854	-0.2045	0.0685	-0.0561	-0.0340	-0.0593	0.07
	Father Farmer	0.0582	0.1686	0.0049	-0.1090	-0.0707	-0.0520	0.64
	Father Low WC	0.4374**	-0.5056***	0.0802	-0.0172	-0.0185	0.0237	0.01
	Father Skilled	0.0926	-0.1000	0.0512	0.0283	-0.0076	-0.0646	0.12
	Father Semi-Skilled	0.0600	-0.0951	0.0326	-0.0551	0.0469	0.0107	0.05
	Changed Cnty 1850-80	0.0178	-0.1188	0.0132	0.0364	0.0154	0.0360	0.61
	Not in Birth County	0.0133	-0.0118	-0.0094	0.0006	0.0111	-0.0038	0.14
	Attended School	-0.0079	-0.0398	0.0214	0.0164	0.0176	-0.0077	0.75
	Age gap = 0	0.0099	0.0953	0.0131	-0.0447	-0.0249	-0.0487	0.36
	Age gap = 1	-0.0234	0.0665	0.0120	-0.0268	-0.0331	0.0048	0.34
	Age	-0.0005	-0.0032	-0.0008	0.0070	-0.0008	-0.0017	12.38
	Pr(Y|X=E[X])	0.1500	0.4500	0.0300	0.1300	0.0800	0.1700	

Note: significant at *** 1% ** 5% * 10%.