LIVING ARRANGEMENTS AND WELL-BEING OF OLDER PERSONS IN THE PAST

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INTRODUCTION

Analysis of long-run changes in the living arrangements and economic well-being of the aged is limited by the lack of consistent data sources across time and space. Some fragmentary evidence on the living arrangements of the aged in several European and North American countries before the mid-twentieth century is summarized in table 1. The numbers should be interpreted cautiously. The earliest estimates are especially suspect, since we generally lack information about the enumeration procedures or completeness of the surviving pre-nineteenth century listings of inhabitants. Even in the nineteenth century, there was significant variation in census concepts and definitions among countries and across time (Ruggles and Brower, Eventually, the author intends to test this interpretation for several different countries, but at present his analysis is limited to the United States. Only for the United States is there a continuous series of high-quality compatible data on the living arrangements and economic well-being of the aged over the very long run. In the conclusion, there is a description of a new data project that will eventually allow similar analysis for a variety of other countries.

Data

The present study is based on the Integrated Public Use Microdata Series (IPUMS).[1] IPUMS is a coherent

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remained in the parental household after reaching adulthood. About one third of unmarried elderly women in multigenerational households were listed as household heads, but this does not mean that the elderly mother necessarily moved in with her children after she was widowed. In many cases, property and authority shifted to the male heir upon the death of the father.

Even if most multigenerational families were formed when children remained in their parental home after reaching adulthood, there is evidence that some elderly did move in with their children. The clearest indication comes from information on marital status. Although both married elderly and widowed elderly ordinarily resided with children, widows did so slightly more frequently than did married couples. In 1880, the earliest year for which we have full information on marital status, about 68 percent of elderly widows lived with children, compared with only 63 per cent of married couples. This suggests that a significant minority of elderly 1(ouplr3(t)4.3 9(ren,8(1(o9(n)-1.2(w)7.4(e7.4(t)4(a)--12.5(el)4.2(derl)7s w)5.1(a)-0. 5ohr)-5(y)21.6(2(derl2(t)4.2(h)-0.

If an elderly man living with an unmarried daughter became widowed, there was much less need to allow the daughter to marry. As long as the father was fit to carry out the male tasks, the family could survive with one adult man and one adult woman. The result of this pattern is evident in figure VI, which shows the percentage of children(t)nds p

60.5 per cent of healthy elderly resided with a child.[9] The same pattern prevailed for women and men alike among both blacks and whites. If anything, then, sickness among the elderly actually discouraged residence in multigenerational families. This makes sense if the younger generation was usually dependent on the older generation, since chronically ill elderly probably had less to offer as incentive to stay around.

We also have good information on wealth. In 1850, the census included a question on the value of real estate owned by each individual; in 1860 and 1870 the census asked about both real estate and personal property.[10] The relationship between value of property and living arrangements is given in figures VII and VIII.

Dimensions of change

The United States in the mid-nineteenth century was already one of the leading industrial nations in the world. It was among the top producers of boots and shoes, cotton textiles, liquor, paper, agricultural implements, guns and ships. As early as 1840, more horsepower was generated by steam engines in the United States than in any other country, and more than half of the world's railroad mileage was in the United States. The improvements in transportation—not just the railroads, but also canals and turnpikes—opened up vast new tracts of land in the interior to commercial farming. Farmers began to sell most of what they produced, and they used the proceeds to buy all sorts of tools and consumer products they could not previously afford, such as magazines, almanacs, whale-oil lamps, wallpaper, clocks, scissors and woven cloth. By mid-century, the innovations in manufacturing, transportation and commerce touched the lives of virtually all Americans.

Even though the transformation of the economy was well under way, the United States in 1850 was still a fundamentally agricultural society. The great majority of Americans still lived in rural areas and most earned their living from agriculture. Wealth was reckoned in land and slaves. American families grew most of their own food and made most of their own clothes. Despite the early growth of the factory system, even manufacturing was still mostly carried out within the household: artisans and their families typically lived together adjacent to the shop where they produced such products as leather goods, flour or furniture. The system of household production also predominated in the service sector, especially in retail trade.

The gulf that separated Americans from the Victorians is apparent in figure XI, which shows the estimated percentage of the population residing in rural areas and the percentage of the labour force engaged in non-agricultural pursuits from 1790 to 1990. Employment in agriculture began to fall after 1810, when about 85 per cent of the labour force worked in farming. For the next 17 decades, agricultural employment dropped steadily by an average of 5 per cent per decade; by 1980, only 2 per cent of workers remained in farming. Few Americans lived in towns in the mid-nineteenth century; as late as 1840, 9 out of 10 Americans resided in places with less than 2,500 population. Through most of the nineteenth century, the majority of those who did

The rise of male wage labour and the decline of the multigenerational family

The multigenerational family system of mid-nineteenth century America provided benefits for both the older generation and the younger generation. Elderly farmers needed an adult child or child-in-law to do heavy work when they were no longer capable of doing it themselves. The younger generation eventually inherited the farm. As wage work replaced family labour, this system eroded. Wage labour undermined the family economy through two mechanisms. First, rising opportunities attracted young men off the farm or away from the family business. Then, when those lifelong wage earners aged, they had no need for their children to remain and operate the family business, and they had no incentives to offer for the next generation to stick around.

The chronological fit between the shift from male self-employment to wage work and the shift from multigenerational to solitary residence among the aged is fairly good. Figure XII shows the percentage of white and black men who were employed in wage or salaried jobs from 1850 to 1990, and figure XIII compares the percentage of elderly whites and blacks living without their children. Among whites, the most rapid rise in wage labour occurred before 1920, whereas the change in family composition was most rapid after 1920. Perhaps this is because there was a lag between the disappur oasa amge llste w w(w)4. 17(seruappur 3t)4.4(3ho

The black pattern of rising self-employment in the late nineteenth and early twentieth centuries highlights an important point. Some self-employed jobs—including such titles as hucksters, peddlers and bootblacks, as well as sharecroppers—provided little incentive for the younger generation to remain at home and work in the family business. Only those family businesses that represented better opportunity than wage-labour employment were sufficient to keep the younger generation at home. Similarly, the availability of wage the war, regional differences began to diminish, and self-employment became rare outside the agricultural States of the Great Plains.

For the period from 1850 through 1950, the geographic distribution of multigenerational families was closely correlated to the geographic distribution of self-employment. For example, multigenerational families in 1920 were concentrated in the southern tier and to a lesser extent in the upper Midwest, the same regions that retained the highest percentage of self-employment.

The combined geographic and chronological association of work and family composition can be seen in figure XV, which is a scatter plot of self-employment percentage and multigenerational families in four census years. The vertical axis shows the percentage of elderly whites residing with children, and the horizontal axis shows the estimated percentage of men self-employed.[11] Each symbol represents a State in a particular census year. For example, the rightmost symbol on the graph represents Illinois in 1850, where 67 per cent of men were self-employed and 75 per cent of the elderly resided with children. Different symbols are used for each census year. To maximize comparability over time, the graph is limited to the 17 States with a sufficient number of elderly in all census years.[12]

(FIGURE XV HERE)

By analysing State differences in family composition, we can examine the relationship between change in self-employment and change in family composition. The results of this analysis, detailed in table 2, are striking. Three State-level regression models are shown. The first model shows simply the effect of the census year on the percentage of elderly whites residing with children between 1850 and 1940. The "reference category" is 1850, so the coefficients reflect the difference between co-residence of the elderly in 1850 and in the indicated year. For example, the coefficient for 1940 is –21.0, indicating that the average percentage of elderly persons with children was 21 percentage points lower in 1940 than it had been in 1850.[13]

(TABLE 2 HERE)

The second model introduces two variables describing occupational composition. The first of these variables, "farmers", is simply the percentage of white males aged 16-64 listed as farmers in each State. The second variable, "self employed", is the percentage of white males aged 16-64 in the occupations that were most frequently self-employed in 1910 and that yielded earnings of at least $2,200 in 1950.[14] The residual occupational category (not included because of multicollinearity) consists of the predominantly wage and salary occupations. Model 2 shows that if we hold these variables constant across time, the difference between 1850 and 1940 disappears entirely.

The third model is subtler: it controls for State differences in living arrangements. By controlling for State effects, we are accounting for any State differences in residential behaviour that persist over time.[15] As a result, instead of analysing the absolute effects of occupational structure on family composition, model 3 assesses the effects of changes in occupational structure on changes in family composition. Model 3 reveals that the timing of the decline of farming and other self-employment in each State is an excellent predictor of the timing of change in family composition. Indeed, the association between changing self-employment and changing family composition is so strong that it is implausible that the two are not causally related.

We lack sufficient cases to carry out a similar geographic analysis for blacks. Our historical census samples are quite large; to date, our data-entry operators at Minnesota have transcribed information about some 3 million individuals. Blacks, however, have historically comprised less than a tenth of the elderly population. Moreover, blacks were geographically concentrated in the South for most of the period under consideration, and they are still under-represented in the Plains, the Mountain States and northern New England. Thus, we cannot carry out a comparable analysis for blacks. Even if we could, however, it is doubtful whether we could distinguish the effects of changing black opportunities on the living arrangements of the elderly, since we cannot identify sharecroppers in the census database. Nevertheless, the overall trends in the living arrangements of elderly blacks are consistent with an economic interpretation. In the nineteenth century, elderly blacks were less likely to reside with their children than were elderly whites, and this is probably because they had less to offer them. In the twentieth century, as multigenerational family composition became associated with low socio-economic status, the percentage of elderly blacks residing with their children began to exceed that for whites.

Alternate interpretations for change, 1850-1940

We should bear in mind that the close relationship between change in family composition and change in self-employment is merely a statistical correlation, and does not absolutely prove that the decline in self-employment was responsible for the decline of multigenerational families. Historians and sociologists have suggested other explanations for the changing family composition that might also fit the observed geographical and chronological pattern of family change. Urbanization, rising geographic mobility, rising income and changing attitudes have all been proposed to account for the decline of the multigenerational family. None of these factors, however, show the same chronological and geographic fit with family composition as do farming and other forms of self-employment.

Urbanization occurred at the same time as the shift to independent residence of the elderly, but once we control for the effects of farming there is no independent relationship between rural residence and multigenerational family composition in any period (Ruggles, 1996b). Geographic mobility actually declined between 1850 and 1950, and so cannot be invoked to explain the decline of the multigenerational family in that period. As shown in figure XVI, the percentage of Americans who migrated across State lines declined steadily from 1850 to 1950, and then rose sharply.[16] Even today, however, inter-State migration is less frequent than it was in the mid-nineteenth century. Nor can rising income explain any shift to separate residence before the recent period. As demonstrated above, before 1950, high economic status of the elderly was associated with residence with children; thus, it is not plausible that rising incomes would have contributed to separate residence of the elderly in this period.

(FIGURE XVI HERE)

The effects of attitudinal change are more difficult to assess. Clearly, social norms were changing, and it was becoming increasingly expected that the elderly and their children would reside apart. The real question is whether changing attitudes towards co-residence of the generations were a driving factor in the shift of family composition, or whether the change in attitudes merely reflected changing behaviour. In the latter case, cultural inertia might operate as a brake on changes in the family, keeping some families together after there was any economic incentive to reside in multigenerational families. Since we lack systematic evidence about the precise geographic and chronological patterns of shifting attitudes in the first half of the twentieth century, we cannot tell for sure whether change in attitudes generally preceded or lagged behind changes in the family. The author suspects, however, that attitudes are more likely to have slowed the changes in the family than to have accelerated them.[17]

The effect of rising incomes, 1950-1990

By 1950, the great bulk of the workforce was engaged in wage and salary work, and farming had become a minor occupation. Nevertheless, the shift in the living arrangements of the elderly did not cease. On the contrary, the change in family composition accelerated: from 1950 to 1990, the percentage of elderly persons residing with their children dropped from 37 per cent to 15 per cent.

Sociologists generally attribute the rapid post-war shift in the living arrangements of the elderly to rising incomes. The Social Security programme and the growth of private pension plans meant that more and more of the elderly had good incomes, even though fewer and fewer had their own farms or businesses. Thus, analysts argue, the elderly increasingly had the economic means to maintain separate residences.

For the recent period, unlike the nineteenth century, this theory makes sense. As noted above, until relatively recently the elderly with the highest economic status were the group most likely to reside with their children. Thus, for the period from 1850 through 1940, it is highly doubtful that an increase in the economic security of the aged would have led to an increase in the percentage of elderly who lived alone. In the second half of the twentieth century, however, the pattern reversed: the elderly with the greatest economic resources were the ones most likely to live alone or with their spouse only. Thus, for the late twentieth century, it is plausible that the rising income of the elderly was responsible for at least some of the change in their family composition.

Since 1950, the census has included a direct inquiry on income, so it is fairly straightforward to estimate the effects of income on family composition. Figure XVII gives the percentage of elderly residing with adult children, by income group for each census year from 1950 through 1990. The income amounts are adjusted for inflation and expressed in 1990 dollars. In all years, the highest-income elderly were least likely to reside with children. The elderly with no income whatsoever were likely to reside with children in 1950 and 1960, but this effect has diminished in more recent years. The pattern was essentially identical for elderly widows, widowers and married couples.[18] There was, however, a significant difference between blacks and whites: among blacks, the relationship between income and family composition was considerably weaker than it was for whites.

(FIGURE XVII HERE)

How much of the decline of the multigenerational family should be attributed to rising income? Let us assume for the moment that the sole reason why the elderly with higher incomes were more likely to reside alone was because they could better afford it.[19] Then it is a straightforward matter to calculate the percentage of the elderly that would have lived with children in each period assuming no change in the income distribution. In figure XVIII, the solid line shows the percentage of elderly who resided with their adult children from 1950 through 1990. The dashed line shows what the percentage would have been had there been no change in the distribution of income.[20] It turns out that the effects of rising income are fairly modest. Overall, less than 30 per cent of the change in elderly family composition can be attributed to this source.[21]

(FIGURE XVIII HERE)

The effect of Social Security on family composition

Some analysts have attributed the shift in the living arrangements of the elderly to the introduction of the Social Security programme of old-age assistance. The Social Security programme began in 1936 during the depths of the Depression, and it has become the most substantial legacy of Roosevelt's New Deal. The programme was modest in the early years; because it was conceived as a pension plan, each person's benefit depended partly on his or her contributions. Benefits and coverage expanded dramatically from the early because before that we lack census information on Social Security income. The solid line in figure XXII shows the percentage of elderly residing with their adult children from 1950 to 1990. The dashed line shows the predicted percentage residing with children if we exclude Social Security income from 1970 through 1990. The analysis suggests that Social Security has had a significant effect on living arrangements, but in the context of the long-run change in living arrangements, that effect is rather small. Overall, Social Security might explain no more than about 20 per cent of the total drop in residence with children since 1936. Even this effect is surely overstated, since it exaggerates the impact of Social Security on the income of the elderly.

(FIGURE XXII HERE)

and a couple of sons to help farm it, or even a couple of daughters through whom able-bodied sons-in-law might be acquired (Cruickshank, 1978). And Ewan Clague, who joined the Social Security Board in 1936, wrote that earlier in the century, old people simply lived on the farm until they died; consequently, the modern old-age problem had not developed (Clague, 1961).

Thus, Social Security did not cause the major changes in the family composition of the elderly; rather, it was a consequence of such changes. The creators of the Social Security system saw it as a response to changes in the family that had already taken place as a consequence of the decline of farming and the rise of urban wage labour.

Socio-economic status of the younger generation, 1950-1990

Rising income can account for no more than 30 per cent of the decline in the residence of the elderly with their children during the second half of the twentieth century, and perhaps two thirds of this change resulted from the Social Security programme. What, then, was the source of the other 70 per cent of change? To understand what happened, we must shift our focus to the characteristics of the younger generation.

Between 1950 and 1970, the income of the elderly doubled, but the income of the younger generation rose even faster. In constant dollars, the income gap between the elderly and their children grew rapidly. In 1950, persons in their 30s and 40s made an average of $4,900 more than persons aged 65 or older, in 1990 dollars; by 1970, the gap had grown to $10,000. Even more dramatic was the growing disparity in education between the younger generation and the older one. In the early twentieth century, when secondary education was expanding gradually, the younger generation was only slightly better educated than their elders. In 1925, the elderly had an average of only 1.1 fewer years of schooling than did their children. With the rapid rise of secondary education after the turn of the century, however, that education gap expanded dramatically: by 1960, the elderly had an average of 3.0 fewer years of schooling than did their offspring.[25]

The author contends that the growing disparity in income and education between elderly parents and their children had profound implications for generational relations. The traditional authority of the patriarch had depended largely on control over economic resources. But the authority of the older generation—women as reached adulthood after the war had unprecedented success early in life, especially in contrast to their Depression-era parents.

Social gerontologists have consistently argued that the decline in residence of the elderly with their children reflects the preferences of the elderly. This argument has its roots in the pioneering surveys carried out in 1957, 1962 and 1975 by Ethel Shanas, in which the elderly consistently maintained that they did not want to move in with their children (Shanas, 1962, 1968). The elderly say that they do not want to be a burden to their children. When the elderly do live with their children, they are now usually dependants of their children, a living arrangement that is considerably less attractive than the dominant position of the elderly in the nineteenth-century family.

There has been much less attention paid to the preferences of the younger generation, but they are clearly

(TABLE 3 HERE)

The second model in table 3 adds two income variables: the percentage of elderly (age 65+) with incomes of $13,000 or more, and the percentage of the younger generation (ages 30 through 49) with incomes of $13,000 or more. State effects are also controlled, so the model predicts the effects of changes in income on changes in the family composition of the elderly. The coefficients for both income measures are significant, but not in the expected direction: high income of the elderly was associated with co-residence, not with separate residence as we would expect. High income of the younger generation, as expected, was associated

Conclusion

The finding of Peter Laslett (1965) that nuclear family composition was preferred in the West before the industrial revolution is an artifact of demography. Only a minority of households in the United States in 1850 contained multiple generations; as we have seen, however, the great majority of multigenerational households that could have existed did exist. Early death, late marriage and high fertility meant that few multigenerational households were possible.[26] If we measure multigenerational family structure from the perspective of those elderly who had surviving children, it becomes apparent that multigenerational co-residence was essentially universal in the mid-nineteenth century.

Did the co-residence of the elderly and their children result from "nuclear reincorporation" as a form of old-age assistance before the advvoltiy?1(e-3. Tf te adv)10assihan.2(st)4rong[(ol)4.3(y)8(we)-11sugge.2(st)4sore thvi4(ti)42..2

very differently from the nuclear family system of the Western countries (Hajnal, 1982, Kertzer, 1991). It is clear that North-western Europeans married unusually late, and unlike in some other places they seem to have had a strong aversion to the co-residence of married siblings. On the other hand, it is entirely plausible that the basic mechanisms of the decline of the multigenerational family in the United States also underlie the transformation of the living arrangements of the elderly across the globe. The shift to wage labour and the decline in patriarchal authority within the family are worldwide phenomena. Only further research can reveal if there is the same close association between economic opportunity of the younger generation and the simplification of families for the older generation in other countries.

Such research will soon become possible. The author has recently been awarded a large infrastructure grant by the National Science Foundation to make available contemporary and historical census microdata for a wide range of countries. This project will create and disseminate an integrated international census database incorporating 21 countries on six continents. It will be the world's largest public-use demographic database, with multiple samples from each country enabling analyses across time and space. The project entails two complementary tasks: first, the collection of data that will support broad-based investigations in the social and behavioural sciences; secondly, the creation of a system incorporating innovative capabilities for worldwide web-based access to both metadata and microdata. When this project is complete, it will make possible international comparative analyses of change in the living arrangements of the elderly, and we should be able to test whether the American case is in fact exceptional.

NOTES

[1]The IPUMS database and documentation (Ruggles and others, 1998) are available online at www.ipums.umn.edu. Data preparation was supported by NIH grants HD34572, HD34714, HD29015 and HD25839, and NSF grants SBR-9617820, SBR-9422805, SES-9118299 and SBR-9210903.

[2]A few studies—mostly by demographers—attempted long-term comparisons at the national level. These include Kobrin (1976), Smith (1986), Ruggles (1988) and Sweet and Bumpass (1987). Prior to the availability of IPUMS, such studies were plagued by problems of comparability; see Ruggles and Brower (forthcoming).

[3]This estimate is based on examination on the census microfilm of approximately 500 elderly persons residing without children randomly selected from the 1860 sample. It was fairly common for nineteenth-century farmers to build a second house on the property. The second house was usually smaller than the first; it might house a newly married child, and could also serve as a retirement home for the older generation.

[4]The estimate on percentage never-married is based on persons aged 85+ in 1880; the estimate on childlessness is based on persons born before 1820 as reported in the 1900 and 1910 censuses; the estimate on child mortality is based on microsimulation, together with empirical evidence on the clustering of child deaths; see Ruggles (1996b).

[5]The idea of demographic constraints on multigenerational families was first proposed by Levy (1965). The first empirical estimates of the effect were published by Coale (1965) in the same volume. Since then, analysts have used a wide variety of approaches to address the problem, and have obtained a wide variety of results; see Glass (1966), Burch (1970), Wrigley (1969), Bradley and Mendels (1978), Wachter, Hammel and Laslett (1978); Post, and others (1997). The author's own work on the problem, using microsimulation, life-tanasmographic3decomposition approaches, includes Ruggles (1986, 1987, 1993, 1994, 1996a).

[6]See, for exple Smith (19719819, Costa (1, Elman (19, Elman and Uhlenerg199, McGarry and Schoeni (19, Kramarow (1995all (1995), Hammel (1995), Schoeni (19. The idea that extended families were a refug for the poor in the nineteenth century is also widespread in the work of the first generation of quantitative social historians, e.g., Anderson (1972), Hareven (1978, 1982), Katz (1975), Foster (1974), 3(as)83Modell (1978).

[7]This conceptualization3owmuch to Berkner (1972).

[8]In most States, if the father died without 3(20.9(w)19.2(ill, 3(7.5(ll c(7.5(h)-3(il)14.9(dre)7.5(n)-3(3(20.9()83)13.3(t)14.9(h)e3(e)7.5(s)6.2(
adult decedents—perhaps a quarter to 3(16.7(th)-7.2(ir)12.5(d)-7.2(—)-0.5(lef)12.5(t)-2.7(w)15(ills, b)-7.2(u)6.2(t 3m)17.3(o)-7.2(n)-7.2(g)6.

[10]About two thirds oflderly individuals ad couples respoded to these questi(16.3(ons)7.6(. T)15.9(h)-1.6(e)8.9(e)8.9(l)2.9(de)8.9(r)4.8(l)2.
cannot3be assued to be poor; many had owned property, but3had apparently already tranerred their property to their children:

most of the elderly without property listed were living with a child who had property. The elderly without listed property were almost identical to the propertied elderly with respect to the per cent residing with children. This results from two countervailing factors. Some elderly had no property because they had already transferred their property to their children; these elderly ordinarily resided with their children. Other elderly had no property listed because they were truly impoverished, and this group rarely resided with their children.

[11]Since self-employment was first explicitly asked beginning in 1910, for earlier years it was estimated by extrapolating the trend in self-employment backwards within each occupational title.

[12]That is, States with at least 100 elderly whites in every census year. These States represent about 90 per cent of the United States population.

[13]It should be noted that this is not identical to the overall percentage decline in residence with children, which was 24 percentage points, because this is the average of the 17 States represented in all census years.

[14]Ninety per cent of the people in the "self-employed" category are listed with one of the following occupational titles (in

[21]This result was obtained by decomposing the effects of changing income distribution using the method proposed by Das Gupta (1978), controlling for age in five-year groups, the income categories delineated in figure XVIII, sex and currently married status. The decomposition table is as follows:

	Components of change, 1950-1990	Index of change
Total population difference	0.2052	100.0
Effect of age	-0.0006	-0.3
Effect of sex and marital status	-0.0020	-1.0
Effect of income category	0.0542	26.4
Combined effect of factors	0.0517	25.2
Rate effect	0.1535	74.8

The income effect—26.4 per cent—in this analysis is generally a bit lower than has been found by other investigators; although there is some disagreement, most studies suggest that about half of the recent shift towards living alone can be explained by rising income (see Beresford and Rivlin (1966); Chevan and Korson (1972); Carliner (1975); Davis and van den Oever (1981); Michael, Fuchs and Scott (1980); Pampel (1983); Ruggles (1988, 1996a, 1996b); also relevant are Anderson (1977), Angel and Tienda (1982), Troll (1971), King (1988)).

[22]Social security might also affect the income of the elderly by influencing retirement decisions.

[23]Using 1990 dollars. In this analysis, elderly married couples are treated as a single observation and their combined income is divided equally between them.

[24]To estimate the effect of Social Security on the family structure of the elderly, an additional assumption must be made. It should be assumed that the reason high-income elderly were less likely to reside with children than were low-income elderly was simply because they could afford to live alone, and not the result of some other characteristic of high-income elderly. Again, this assumption makes the estimates conservative.

[25]On the impact of education, the interpretation of Caldwell (1982) is relevant.

[26]This statement assumes the context of a residence rule that prohibited joint families. The author does not argue, as Kertzer (1989, 1991) has implied, that a high frequency of extended families is impossible under such demographic conditions. Kertzer, who maintains that the notion of severe demographic constraints has been hard to kill, argues that demographic constraints on family structure are unimportant on the grounds that there was a high frequency of laterally extended joint families in a central Italian village at the turn of the century. But no one, as far as the author knows, has argued that such families would necessarily be infrequent under any demographic conditions; from Levy (1965) onward, the argument of demographic constraints has always referred to multigenerational extended families.

[27]In pre-industrial North-western Europe, with substantially earlier death and later marriage, the demographic constraints on multigenerational families were even more severe. We can be reasonably confident that only a small minority of the eighteenth-century English population had the opportunity to reside in a multigenerational family (see Ruggles (1987)).

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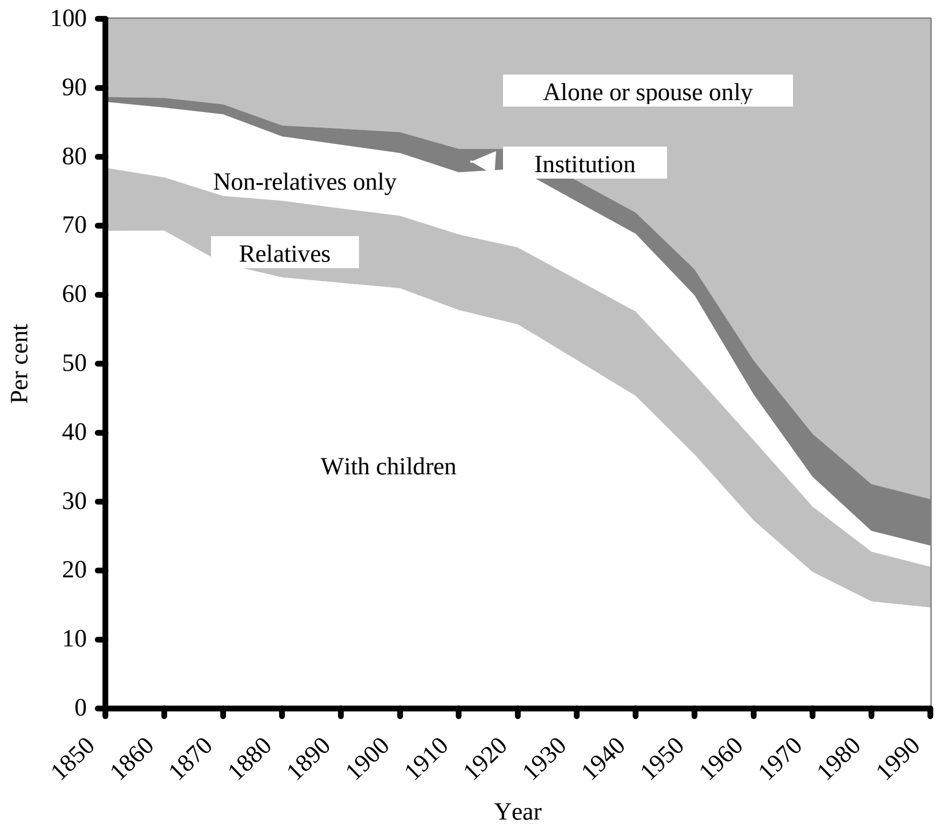
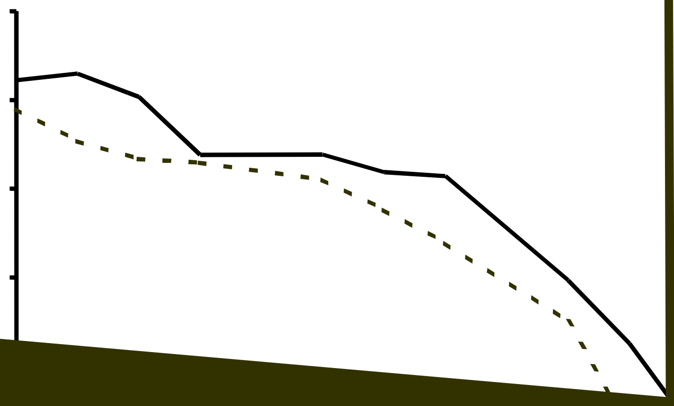
TABLE 1. PERCENTAGE OF PERSONS AGED

		Males	Females	All	Males	Females	All	[a]
Belgian industrial								
1830	Verviers	58.8	56.1	57.5	6.4	5.6	6.0	996
French Pyrenean								
1793	Bour de Bigorre	85.7	70.0	79.1	0.0	0.0	0.0	46

TABLE

Figure I. Distribution of living arrangements: elderly white individuals and couples in the United States, 1850-1990





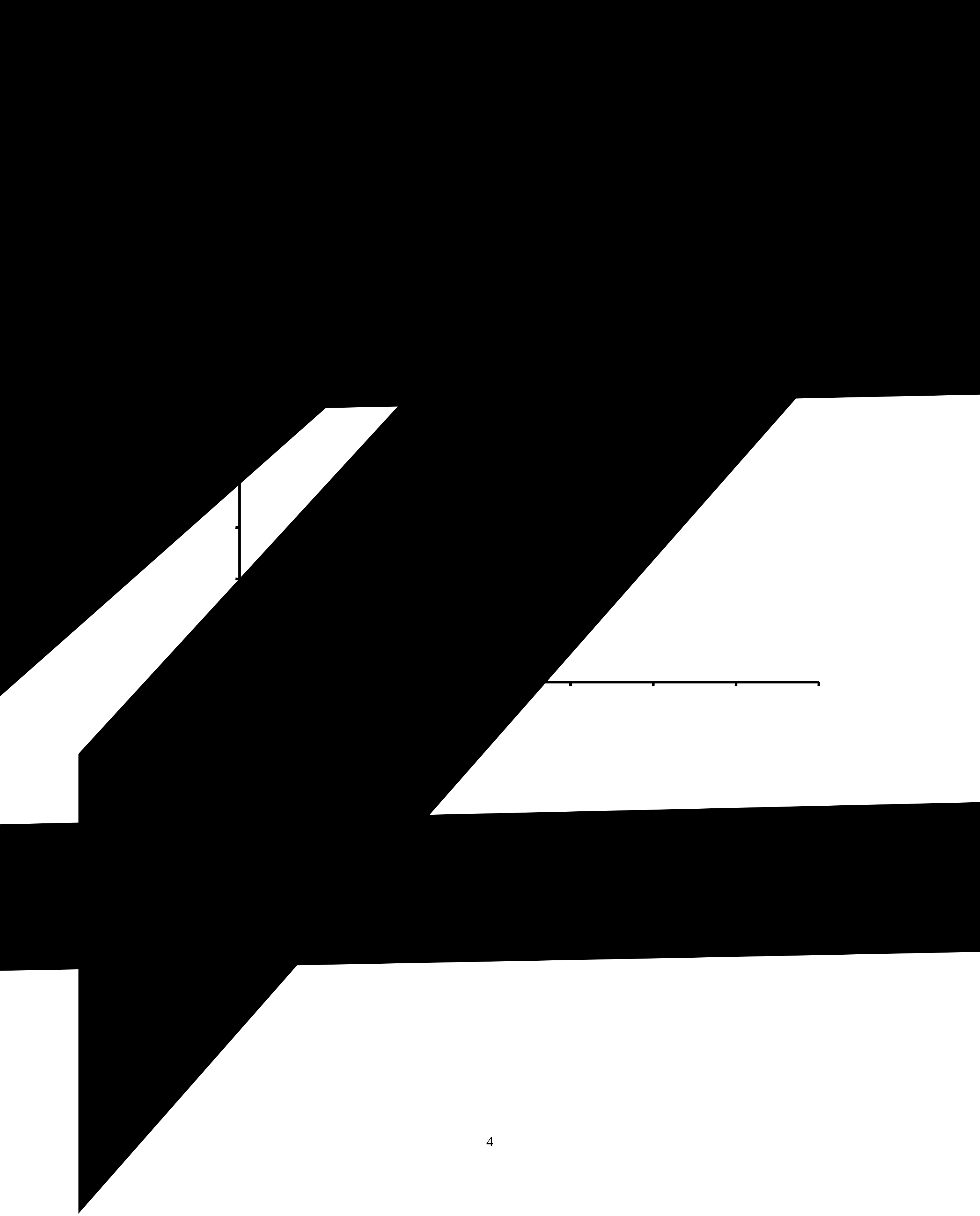


Figure V. Per cent of younger generation married, by value of real estate owned: persons residing with elderly parents, 1850-1990

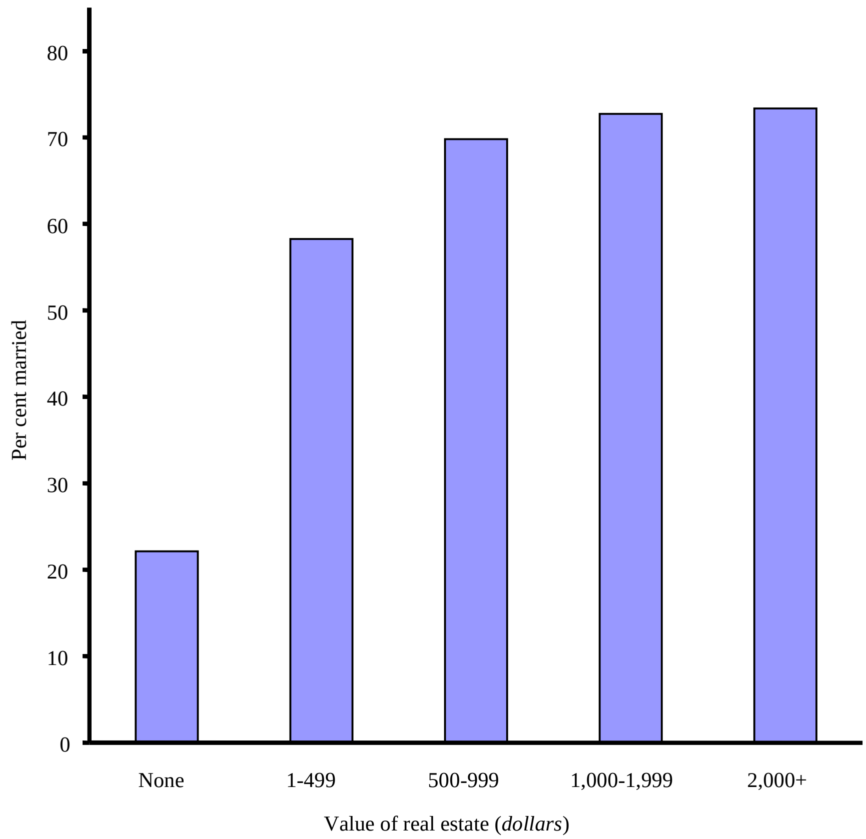


Figure VI. Per cent of sons and daughters married by sex and marital status of elderly parents: United States, 1850-1860

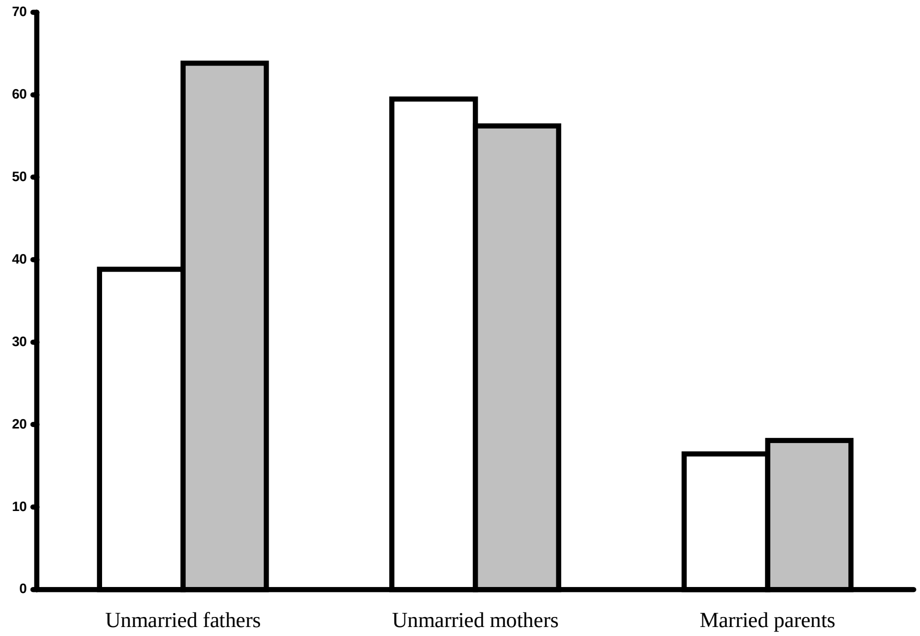


Figure VIII. Per cent of elderly residing with adult children by value of all property: United States, 1860-1870

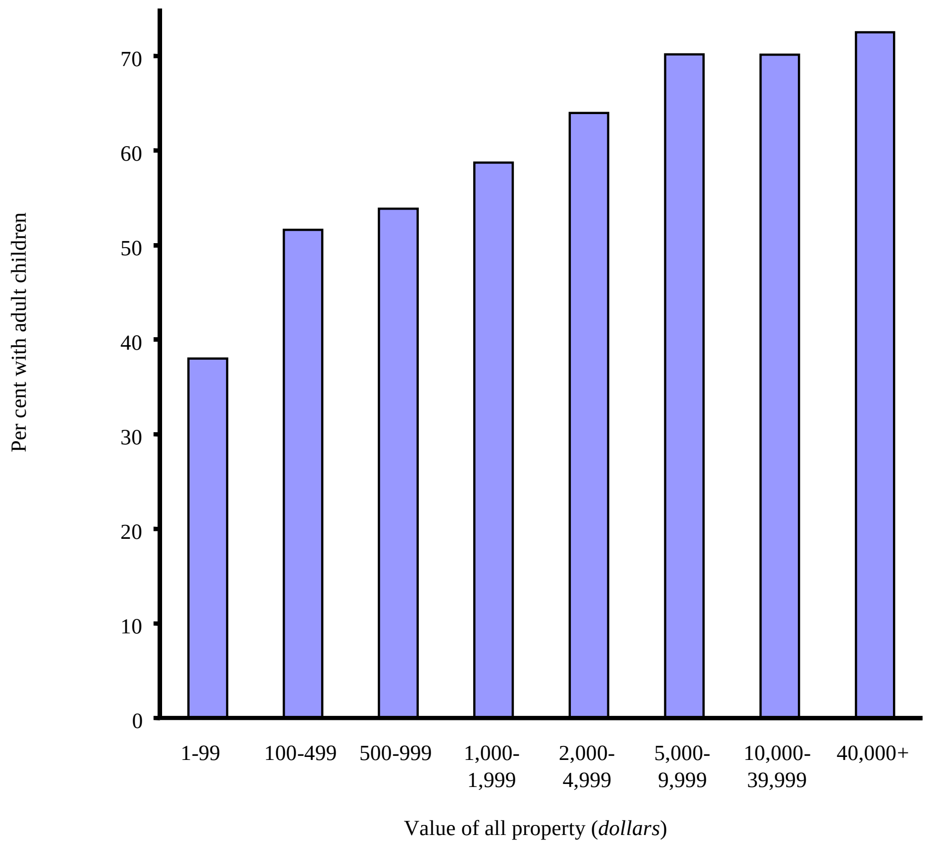


Figure IX. Per cent of elderly residing with children, by presence of servants: United States, 1880

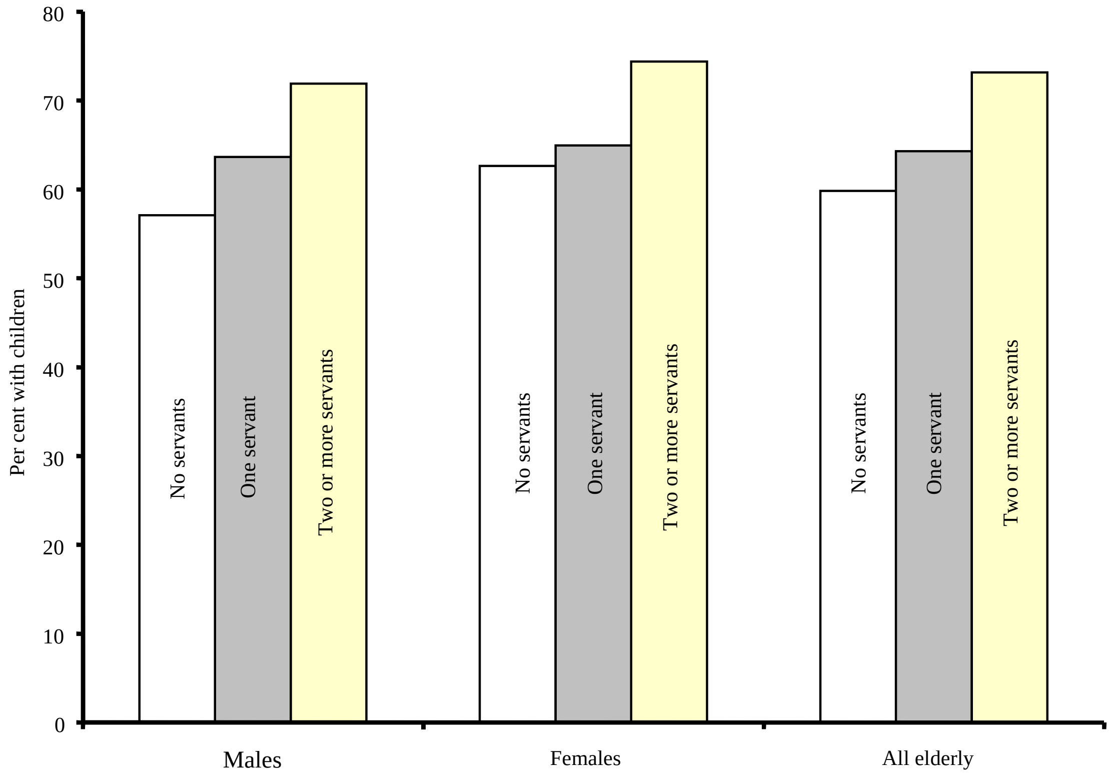


Figure XI. Per cent of population rural and per cent of the labour force employed in agriculture, 1790-1990

Figure XIII. Percentage of elderly residing without children, by race: United States, 1850-1990

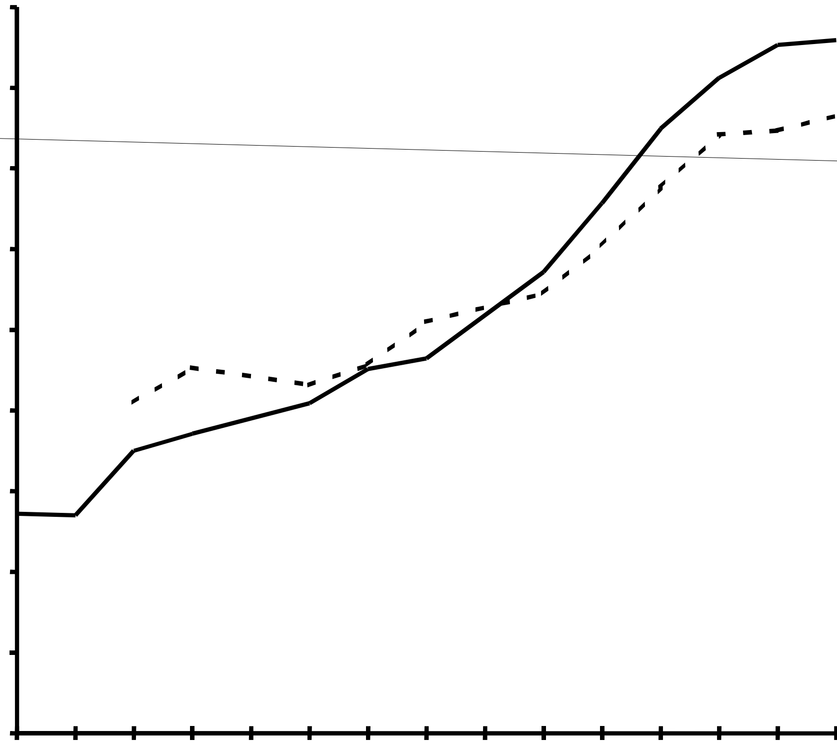


Figure XIV. Percentage of men aged 18+ with "good" jobs, by race: United States, 1850-1990

Figure XV. Scatter plot of residence with children and self-employment, 1850-1940

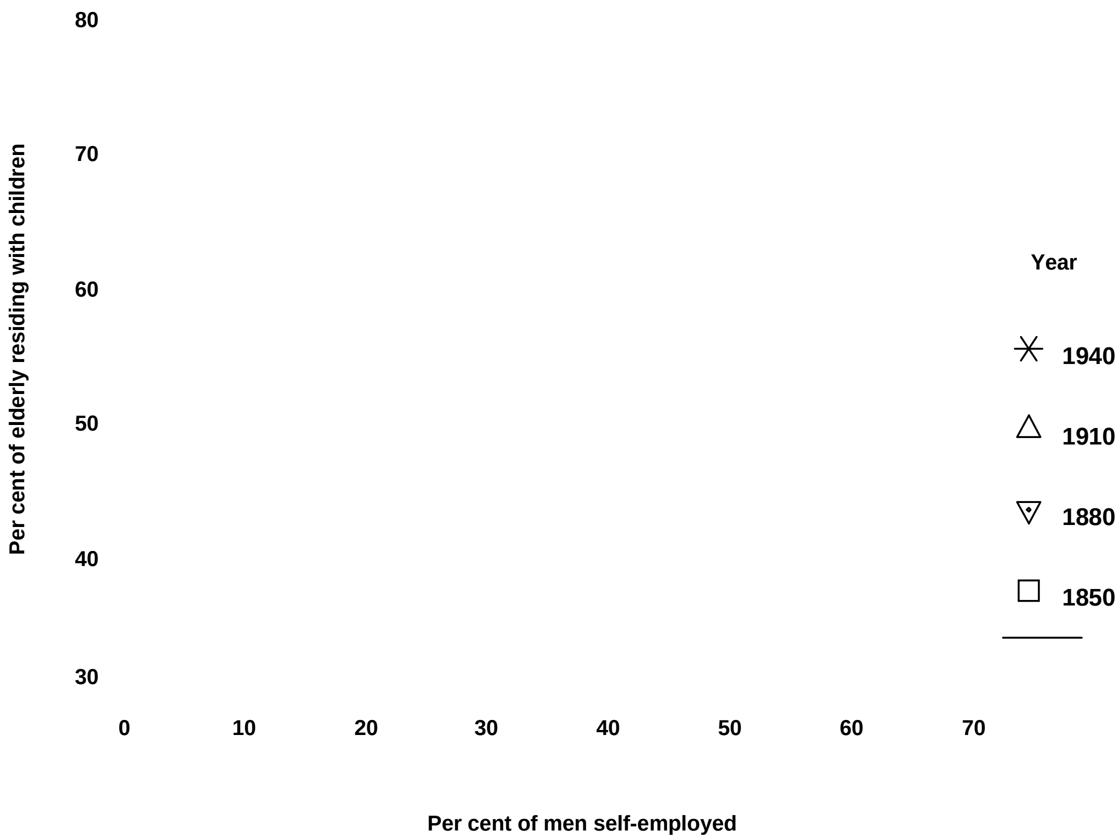
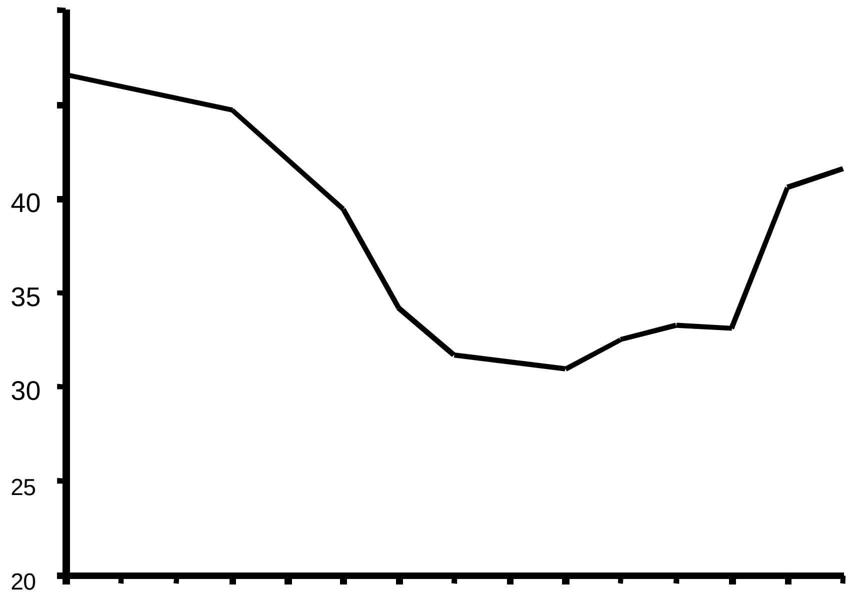


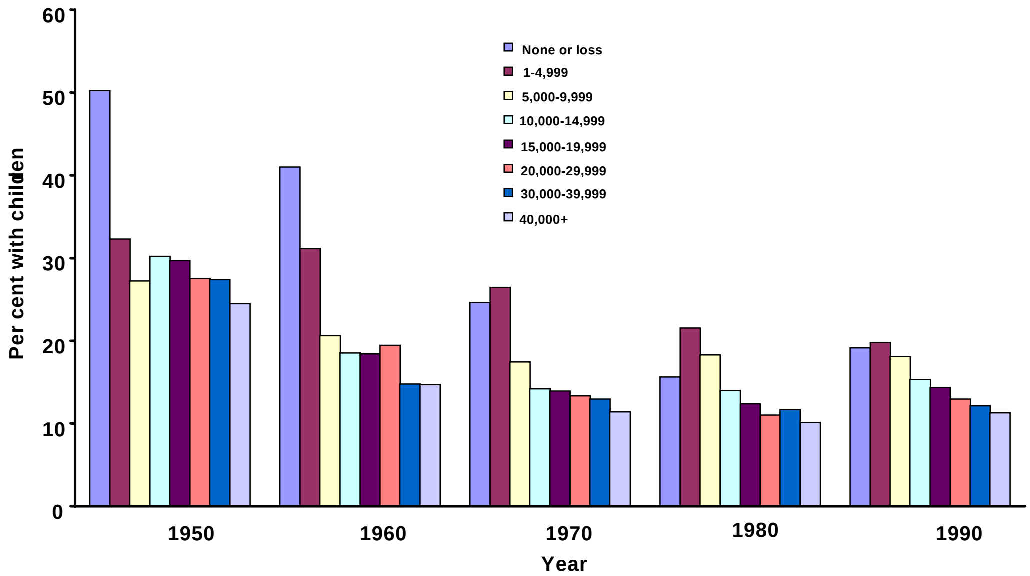
Figure XVI. Per cent of persons migrating between States by age 50-59: United States, 1850-1990



Note: Standardized to control for the changing size-distribution of State of birth.

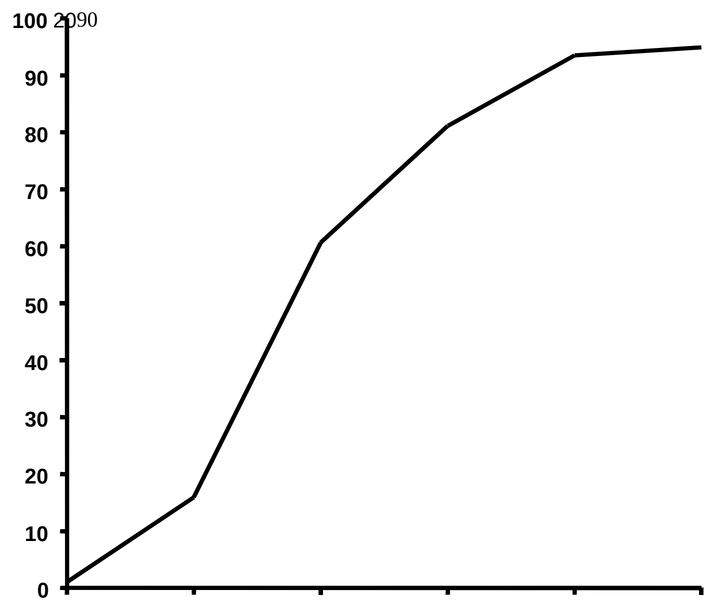
Source: Patt Kelly Hall and Steven Ruggles, "Moving through time: lifetime internal migration patterns of Americans, 1850-1990", presented at the Social Science History Association, Forth Worth, Texas, 11-14 November 1999.

Figure XVII. Per cent of elderly persons residing with children by total income, 1950-1990



Note: Income expressed in 1990 dollars.

Figure XX. Percentage of elderly receiving Social Security benefits: United States, 1940-1990



Source: McGarry and Shoeni (1998), table 3.

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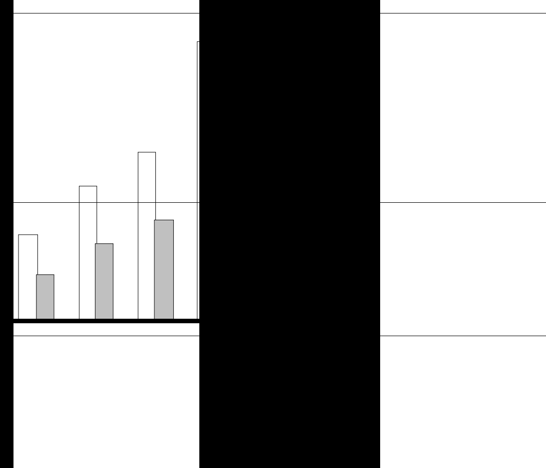

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