THE EFFECTS OF DEMOGRAPHIC CHANGE ON MULTIGENERATIONAL FAMILY STRUCTURE: UNITED STATES WHITES, 1880-1980

Steven RUGGLES
Professor of History
University of Minnesota

INTRODUCTION

This paper assesses the impact of changing demographic behavior—fertility levels, mortality, generation length, and nuptiality—on the frequency of multigenerational families among whites in the United States between 1880 and 1980.[1] My focus is methodological. Demographers and family historians have proposed and applied a variety of different techniques for assessing the relationship between demographic conditions and household composition. I argue that most of these previous efforts—including my own—have yielded inconclusive results. The methods of historical family demography have been too ambitious and too complex, have involved too many assumptions, and have been based on insufficient data. I propose some simpler approaches that allow us not only to control for the overall effects of demographic change, but also to estimate the demographic components of change in kinship and family structure. I have applied these simplified methods to data from the new Integrated Public-Use Microdata Series (IPUMS), a national census microdatabase spanning the period 1850 through 1990 currently in preparation at the University of Minnesota (Ruggles et al. 1993). The results clearly demonstrate that the demographic transition had profound implications for the frequency of multigenerational families, and that multigenerational family structure was preferred among whites in the United States until the mid-twentieth century.

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[1] The analyses presented here build on work previously published in Ruggles and Goeken (1992) and Ruggles (1993, 1994, forthcoming). Funding for data preparation was provided by the National Science Foundation (SES-9118299, 1991-1993 and SES-9210903, 1992-1995); the National Institute of Child Health and Human Development (HD 25839, 1989-1993); and the Graduate School of the University of Minnesota (1985-1993). In this essay, the terms family and household are used in accordance with the United Nations definitions: a household is considered to be one or more persons who make common provision for food and other essentials, and a family consists of household members who are related to one another (United Nations 1980). Kin groups are simply any group of relatives, without regard to their living arrangements; multigenerational families include two or more generations of adults in a direct line of descent.

FAMILY DEMOGRAPHY AND FAMILY HISTORY

The field of family demography is of critical importance for family historians. As William Brass has stressed, the central concern of family demography is the analysis of the relationship between demographic conditions and the composition of families, households, and kin groups (Brass 1983; for other discussions of the dimensions of family demography, see Keyfitz 1987, De Vos and Palloni 1989, Bongaarts 1983, Burch 1979, Sweet 1977, and Ryder 1977). The most basic demographic events—births, deaths, and marriages—are the proximate determinants of the composition of kin groups. In turn, the composition of kin groups provides the biological context within which residence decisions are made.

Historians of the family usually focus on economic and cultural influences on family and household composition. If we do not understand the underlying demographic mechanisms of kinship, however, we cannot hope to uncover how these economic or cultural factors really operate. We have devoted a great deal of effort to comparisons across time and between populations of household structure, kin networks, the family life course, chain migration, and inheritance patterns. It is likely that many of our findings are merely reflections of variation in demographic conditions.

The study of historical family structure and the study of family demography both emerged in the mid-1960s, and historical concerns played a prominent role in the development of family demography from the beginning. The main focus of historical studies of family demography has been the effects of changing demographic conditions on the potential frequency of multigenerational households. The issue was first systematically addressed by Ansley Coale (1965), who was stimulated by Marion Levy's (1965) hypothesis that high mortality precluded a high frequency of multigenerational families in premodern societies. With the publication of Peter Laslett's (Laslett and Harrison 1963) findings that few extended families existed in preindustrial England, other historical demographers—David Glass (1966), E.A. Wrigley (1969), and Thomas Burch (1970) -- began to investigate the question (also see Bradley and Mendels 1978). All these early calculations were based on the application of a set of household formation rules to a basic stable population model of fertility, nuptiality, and mortality. All four of these analysts concluded that a minority of households could have contained multiple generations under preindustrial European demographic conditions.

This general strategy of analysis—the application of household formation rules to a stable population—culminated with an elaborate demographic microsimulation called SOCSIM, developed by Kenneth Wachter and Eugene Hammel (Wachter, Hammel and Laslett, 1978; Hammel et al. 1976). The development of SOCSIM was stimulated by the work of Lutz Berkner (1972, 1975), whose influential articles had argued that demographic conditions, in combination with stem-family formation rules, explain the low frequency of multigenerational families observed in many parts of preindustrial Europe. Like the earlier models, SOCSIM was based on a set of household formation rules applied to a hypothetical stable population approximating preindustrial English demographic behavior. But the creators of SOCSIM arrived at the opposite conclusion from the previous authors: they found that "any resort to demography for the sake of reconciling a theory of stem-family formation behavior with such low levels of occurring complex households appears unjustifiable." Eight years later, I challenged this interpretation by using a similarly elaborate demographic microsimulation with a slightly different set of assumptions (Ruggles 1986, 1987). Nevertheless, the view that demography imposed few constraints on multigenerational family structure in the past has become the dominant interpretation (see for example Kertzer 1989, 1991).

The tradition of historical family demography represented by these models is fundamentally flawed. Part of the problem stems from unrealistic assumptions about the basic demographic mechanisms of kinship. For example, all the historical models of household structure assume that births, deaths, and marriages are independent random events. This means they assume there are no correlations in demographic behavior between different members of the same kin group. I have demonstrated elsewhere (Ruggles 1993) that this assumption ordinarily leads to substantial overestimates of the availability of kin. Moreover, demographic models of kinship usually assume that there is no relationship between many different demographic events occurring within the same lifetime, e.g. that mortality is unrelated to age-specific fertility or marriage. In a further departure from demographic realism, virtually all the models assume that fertility, mortality, and nuptiality are stable over time.

An even larger problem results from the application of household formation rules to demographic models. If there is one clear lesson of the historical models of household structure, it is that small variations in assumed household formation rules yield large variations in household structure. In the absence of empirical evidence, debates about the details of household formation assumptions are unresolvable. Thus, models that depend on assumptions about household formation cannot be expected to produce a consensus about the effects of changing demographic constraints on multigenerational family structure.

To uncover the effects of demographic change on multigenerational family structure we need to address both these problems. In this essay, I demonstrate methods and measures that minimize undue assumptions about the demography of kinship and eliminate the need for unverifiable household formation rules. Before turning to the demographic analysis, however, I shall briefly outline the hypothesized effects of the demographic transition on multigenerational family structure.

THE DEMOGRAPHIC TRANSITION AND MULTIGENERATIONAL FAMILIES

Mortality, fertility, and generation length shifted dramatically during the demographic transition of the past century, and this profoundly altered the potential for multigenerational family structure. Mortality decline is the obvious mechanism of change, the one originally stressed by Marion Levy (1965). High mortality limits the proportion of adults with surviving parents. Life expectancy at age 30 rose from about 30 years in 1850 to 46 years in 1980, and this raised the proportion of people with an opportunity to reside with elderly parents.

Microsimulation studies of preindustrial multigenerational households have stressed the importance of generation length (Wachter, Hammel and Laslett 1978; Ruggles 1987). With relatively late marriage and minimal fertility control, nineteenth-century Americans often bore children late in life. Long generations sharply limited the period during which parents and adult children were both alive, thus reducing or eliminating the extended phase of multigenerational families. Mean age at childbirth declined gradually from 1850 through 1980, from 30.7 to 26.5 among women and 35.6 to 29.2 among men, both because of falling marriage age and earlier cessation of childbearing.

The most striking demographic change of the period since 1850 was fertility decline: total fertility dropped from 5.4 in 1850 children to 2.2 in 1980. The effects of fertility change are less obvious than the effects of declining mortality or rising generation length. Under a joint family system, in which married siblings reside together with their parents, the impact of fertility would be minimal. In the United States, however, the joint family pattern has essentially never existed. At least for the period 1850 onwards, the proportion of married-spouse present persons residing with their married-spouse present siblings is barely measurable, never amounting to more than 0.1 percent of the married population. This strong aversion to coresidence between married siblings in nineteenth century America sharply limited the potential for multigenerational families. Because fertility was high and every sibling who was married resided in a separate household, many households could not contain multiple generations: a single set of parents could not live with more than one of their married children. The residence rule meant that the elderly almost never resided with more than one of their married children, so high fertility in the nineteenth century sharply constrained the proportion of households with elderly parents. The fertility decline of the twentieth century eased this demographic constraint on multigenerational family structure.

Long generations, short life expectancy, and high fertility in the nineteenth century meant that there was a small population of elderly people spread thinly among a much larger younger generation. Under these circumstances, the proportion of households with elderly extended kin was necessarily small. With declining fertility, mortality and generation length in the twentieth century, the potential for multigenerational residence increased.

THE POTENTIAL FOR HOUSEHOLDS TO INCLUDE CORESIDING ELDERLY KIN

How great was the impact of these demographic changes on multigenerational family structure? We can illustrate the effects of demographic change without recourse to formal demographic analysis. Given that the average head of household in 1880 was 43 years old and there was on average a 30- to 35-year age difference between generations, multigenerational families ordinarily had to include elderly kin. However, the proportion of households with the demographic potential to include coresident elderly kin has not remained constant.

A new data source offers us for the first time a consistent national series of census microdata that allows us to generate detailed statistics on the coresidence of elderly kin over the past century. This data source is the Integrated Public Use Microdata Series (IPUMS), a national historical census database in preparation at the University of Minnesota with funding from the National Science Foundation and the National Institutes of Health. When complete, the IPUMS will include national samples of consistent census microdata from all census years for which individual-level data are available. The preliminary version of the database used in this analysis includes census data from 1880, 1910, 1940, 1960 and 1980.[2]

The second row of Table 1 shows the *potential* percentage of households with coresident elderly kin. The potential percentage represents what would have happened if every elderly person in each census year had moved in with relatives. This measure is estimated by eliminating from the population all elderly residing without kin and increasing the number of households with coresident elderly kin by the same amount. The potential percentage of households containing elderly persons residing with kin is calculated by simple arithmetic:

$$\frac{e_h + e_p + e_s}{nhh - e_p}$$

where e_h is the number of elderly individuals or couples actually residing with younger kin, e_p is the number of primary families consisting of elderly primary individuals or married couples residing without kin, e_s is the number of elderly individuals or couples residing as secondary individuals or secondary

[2] The source data used here are described in U.S. Bureau of the Census (1972, 1973, 1982, 1984a, 1984b); Graham 1979; Strong et al. (1989); Ruggles et al. (1993, 1994). The sample densities used throughout this essay were 1/100 for 1880, 1/250 for 1910, 1/500 for 1940, and 1/1000 for the remaining years. For discussions of the temporal comparability of the census concepts of family and household, see Ruggles (1991); Smith (1992).

families without kin, including boarders, servants, and residents of group quarters, and nhh is the total number of households.

As defined here, then, the potential frequency of households with coresident elderly kin shows what would have happened if all noncoresident elderly moved in with kin, but all other residence patterns remained unchanged. It assumes that elderly persons residing with their spouse would continue to reside with their spouse after moving in with relatives, but any other groups of elderly residing together without younger kin (such as a pair of elderly siblings) would be split up and allocated to different households that previously lacked elderly kin.

The measure of potential residence with kin is somewhat conservative for two reasons. First, it overstates the potential proportion of households with coresident elderly kin, because a few elderly had no living relatives. Second, the result depends in part on the extent to which adults residing without elderly kin tend to reside together. The rise of primary individuals and decline of secondary individuals have greatly increased the total number of separate households; if these factors were held constant, the change in the potential frequency of elderly coresidence would be considerably greater than is shown in Table 1 (see the related discussion in King and Preston 1990).

In 1880, some 16 percent of white households had the potential to include coresident elderly kin; by 1980 this figure had doubled. Only a minority of households in any period had the potential to include coresident elderly kin, and in the nineteenth century the demographic constraints on such households were especially severe.

The third row of Table 1 is the actual proportion of households containing of coresident elderly kin as a percentage of the potential proportion. Among whites, the percentage of potential coresident households that actually existed declined steadily, from 71 percent in 1880 to 16 percent in 1980.

This exercise demonstrates that the overwhelming majority of nineteenth century households could not have included elderly kin even if every elderly person had moved in with relatives. By necessity, multigenerational families usually include elderly kin. It is clear, therefore, that the opportunities to reside in multigenerational families were sharply limited in the nineteenth century, and that these opportunities expanded in the twentieth century. The following sections explicate the demographic mechanisms of this change.

COMPONENTS OF CHANGE: THE YOUNGER GENERATION

The general strategy of past demographic models of historical multigenerational families has been to estimate the maximum possible proportion of multigenerational families under a given set of demographic conditions, and then to compare that estimate to the proportion of multigenerational families that actually existed in historical populations. This analytic approach requires investigators to postulate a hypothetical set of household formation rules. The problem is that modest variations in household formation rules have been shown to yield large variations in household composition, and there is no consensus about how to specify the rules.

The reason that demographic models have had to incorporate household formation rules is that the household is the traditional unit of analysis in studies of living arrangements. There is an alternative. Beginning with Herve Le Bras (1973), family demographers have developed a variety of comparatively simple methods for estimating the effects of demographic conditions on kin frequencies at the individual level (Goodman, Keyfitz and Pullum, 1974, 1975; Pullum 1982; De Vos and Ruggles 1987; Bongaarts 1987; Reeves 1987; Smith 1987). If we also take our measures of living arrangements at the individual level, we can assess the effects of demographic constraints on family structure without making undue assumptions about household formation. For example, instead of trying to estimate the proportion of households with the potential to include multiple generations, we can estimate the proportion of adults with the demographic potential to reside with their parents, and compare that estimate to the proportion of adults actually residing with parents. The proportion of individuals with living kin of a particular sort represents the population at risk of residing with such kin; if we measure kin coresidence relative to this population at risk, we can account for the effects of demographic factors on living arrangements without resorting to unverifiable residence rules.

Existing estimates of kin frequencies, however, are too crude to permit this kind of analysis. If we are going to use demographic estimates as a denominator for the assessment of living arrangements, we must make sure that those estimates are as reliable as possible. That means abandoning the usual assumption of a stable population and simplifying kinship measures to minimize assumptions about the independence of demographic behavior of different members of the same kin group.

To begin with, let us consider the effects of changing demographic conditions on the opportunities of middle aged adults to reside with parents. Table 2 focuses on persons aged 40-44 in each census year—about the average age of household heads. The first row (A) provides estimates of the proportion of persons aged 40-44 with surviving mothers and fathers in each census year. I assess the survival of mothers separately from the survival of fathers to avoid the usual assumption of demographic models of kinship that the mortality of spouses is independent. In real populations, mortality probabilities of spouses are correlated, and we have no way of knowing how that association may have changed over the past century (see for example Smith and Zick 1994). If we follow the standard approach of kinship models and assume independence, we will understand the proportion of persons without any surviving parents (Ruggles 1993).

To avoid the assumption of a stable population, I used a cohort life-table approach to estimate parental survival. For each sex parental survival is calculated as:

$$\sum_{x} \frac{l_{x+42.5}}{l_x} b_x$$

where x represents each possible age at childbirth for the parents of persons 40-44 years old in each census year, l_x is the number of persons alive at each exact age x, as determined from a cohort life table, and b_x is the proportion of children of the appropriate cohort born to persons of each age. Cohort life tables for every possible cohort of parents were calculated from period estimates. The period data for 1910 onwards came from U.S. Department of Health and Human Services (1991), and for earlier mortality data I used a new set of national life tables prepared by Michael Haines (1994). To calculate b_x I tabulated the age of mothers and fathers at the birth of their children for women and men with children under two years old in each census year, and used interpolation to create distributions of age at childbirth in 1837.5, 1867.5, 1897.5, 1917.5, and 1937.5, which are the birth years of persons 42.5 years old in 1880, 1910, 1940, 1960 and 1980, respectively.[3]

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[3] Even this very basic analysis of parental survival incorporates one implicit assumption: it assumes that there is no relationship between age at childbirth and age at death. In reality, we would expect a small inverse association between these two variables: people who didn't use contraception probably tended to belong to population subgroups that faced higher mortality than the general population.

As Row A of Table 2 demonstrates, the survival of mothers was always more common than survival of fathers, both because women lived longer than men and because fathers tended to be older than mothers. Overall, the percentage of persons aged 40-44 who had surviving parents more than doubled during the century from 1880 to 1980.

At this point, we must adopt one simple and empirically verifiable residence rule: in the United States, married persons did not reside with married siblings. Thus, the number of siblings born, their survival and their marital status also influenced the potential of persons aged 40-44 to reside with parents. Row B of Table 2 shows estimates of the mean size of married surviving sibling groups. These estimates were carried out according to different procedures in different census years. The simplest case is 1910, when the census included a variable on number of children surviving for each woman, so the size of the surviving sibling group was estimated as:

$$\sum_{x} s_{x+42.5} \cdot b_x$$

where x again represents each possible age at childbirth for the parents of persons 40-44 years old in 1910, $s_{x+42.5}$ is the mean children surviving for mothers of age x+42.5, and b_x is the proportion of persons who were 42.5 in 1910 born to mothers at age x. Mothers are defined as those with at least one surviving child; women with no surviving children are irrelevant to the analysis, and were excluded. To obtain the size of the currently-married sibling group, this estimate was then multiplied by the proportion of persons aged 40-44 in 1910 who were currently married.

The procedures for the period 1940-1980 are similar, except the variable on children surviving is not available. Therefore, mean surviving children was approximated by substituting mean children-ever-born to women of each age for mean children surviving, and then deflating the total by the proportion of persons of the appropriate cohort surviving to age 42.5. In 1880, there are no variables on either children ever born or children surviving, so I used the 1910 figure adjusted for changes in fertility and mortality. The fertility adjustment is calculated as the total fertility rate in 1837.5 over the total fertility rate in 1867.5, and the mortality adjustment is ratio of proportions surviving to age 42.5 of the birth cohorts of 1837.5 and 1867.5. I used total fertility rates taken from Coale and Zelnik (1963).

As shown in Row B of Table 2, the average size of married surviving sibling groups fell some 39 percent between 1880 and 1980. The number of surviving parents per 100 surviving married siblings (Row C), represents the maximum percentage of persons aged 40-44 with the demographic potential to reside with their mothers or fathers. This measure suggests that if residential preferences had remained constant, we might expect there to have been a three or four-fold *increase* in coresidence with parents. Row D of Table 2 shows the observed percentage of persons aged 40-44 residing with parents, as measured from the historical census files. Residence of the middle aged with their parents increased between 1880 and 1940, but this increase was modest compared to the expansion of residential opportunities in the same period. In recent decades, coresidence with parents has declined even as opportunities to reside with parents continue to grow.

However, as long as we assess the survival of each parent individually, as opposed to measuring the combined probability of parental survival, the effects of this assumption will cancel out.

The final row of Table 2 (Row E) shows the propensity of persons aged 40-44 in each census year to reside with their mothers and fathers. This is calculated as observed coresidence over potential coresidence. In 1880, about 70 percent of persons who could have resided with their mothers were doing so; by 1980, this had fallen to about 10 percent. The decline in the propensity to coreside with fathers was comparable, from about 67 percent to 8 percent. This reinforces the conclusion of Table 1: in the late nineteenth century, the great majority of those who could have resided with parents were actually doing so; by the late twentieth century, such coresidence was rare. The results indicate that this transformation of living arrangements is not of recent origin: in fact, the greatest change in residential propensities actually occurred in the period between 1880 and 1910.

To really understand the demographic mechanisms that increased the opportunities for coresidence with parents, we must go further. By successively holding each demographic input constant, we can decompose the changing opportunities to reside with mothers and fathers into their demographic components. This analysis appears in Table 3. Overall, about 60 percent of the change can be attributed to an increase in the proportion of persons with surviving parents. The change in parental survival can be broken into the two components of parental mortality and generation length; declining parental mortality was the most important factor, but declining generation length also played a significant role, especially for fathers. About 40 percent of the increase in opportunities to reside with parents came from the declining number of surviving married children. This change came about entirely because of the dramatic decline of fertility. The effect of fertility decline was moderated by declining mortality in the younger generation and an increase in the percentage of the younger generation that was currently married. In sum, then, the two key elements of demographic change from the perspective of the younger generation were declining parental mortality and declining fertility.

COMPONENTS OF CHANGE: THE OLDER GENERATION OF WOMEN

We can obtain additional insight into the effects of demographic change on multigenerational family structure by assessing coresidence from the perspective of the older generation. The impact of the demographic transition on opportunities to reside in multigenerational families is far smaller for the elderly than it is for the younger generation. The only absolute constraint on the percentage of elderly residing with children is the percentage with surviving children, and this has varied only modestly over the past century.

Estimating the percentage of elderly women with surviving children is greatly facilitated by the availability of individual-level information on the number of children each woman had ever borne in the census years 1900, 1910, and 1940 through 1980. In addition, the censuses of 1900 and 1910 inquired about the number of those children who survived. To estimate the percentage of elderly women with any surviving children for the census years 1880 and 1940 through 1980, I turned to microsimulation techniques (see Ruggles 1987, 1993 for detailed descriptions of the method). For each child born, I randomly allocated birth intervals between mothers and children on the basis of the cohort-specific birth interval distributions described above. For 1880, where the distribution of children ever born is not available from the census, I used parity distributions for women who were twenty years older in the 1900 census file.

For the allocation of mortality, I departed from the usual practice of previous microsimulations. Ordinarily, each child of a given mother would be subjected to an independent probability of death. In real populations, however, the risk of death is correlated within sibling sets, so the probability that all children in a given sibling set will have died is higher than one would expect if mortality were allocated independently to each child. To estimate the proportion of elderly women with no surviving children accurately, we therefore need to introduce a correlation in the risk of death within each sibling set. Using a method described in Ruggles (1993), I therefore introduced a mortality correlation sufficient to yield accurate results in 1900 and 1910, the two census years in which we can measure the proportion of women with surviving children directly. I then assumed that the correlation remained constant across census years; this assumption may not be warranted, but it is the best we can do for now.

The results are given in Table 4. The first row (A) shows the estimated percentage of women aged 65 or older with surviving children. There has been no secular trend in this measure over the course of the past century; the modest changes that have occurred in proportions marrying, childlessness within marriage, and child mortality have canceled one another out.

The second row (B) of Table 4 shows the percentage of elderly actually residing with children, as tabulated from the IPUMS. This has dropped steadily, from 58.6 percent in 1880 to 15.6 percent in 1980. Row C presents the propensity to reside with children, defined as the percentage of women with surviving children who resided with children. The propensity of elderly women to reside with children fell dramatically over the century, from 76.2 percent to 20.4 percent. My preliminary analysis of earlier data (Ruggles 1994) suggests that these dramatic changes did not begin in 1880: the propensity of the aged to reside with children was apparently even higher in the United States in 1850, and nearly universal in late eighteenth-century Maryland.

The availability of children is not the only demographic factor that affected coresidence of the elderly with children. There have been two compositional changes that contributed to the decline in multigenerational families among the elderly. First, the percentage of the elderly who are widowed has declined; since widows were especially likely to reside with children in all census years, we would expect this to have contributed to the decline of coresidence. Second, with the decline of fertility the average number of surviving children of elderly women has gone down substantially. The decline in the number of options for coresidence with children would be expected to have contributed to the downward shift in coresidential living arrangements. There is one countervailing demographic change, however: one would expect that the increasing age of elderly women would have led to a rise of dependent coresidence, all things being equal.

To sort out the effects of these compositional changes on the living arrangements of elderly women, I turned to demographic decomposition analysis. I used Das Gupta’s (1978) refinement of the method originally developed by Kitagawa (1955) to provide a means of partitioning a difference between two rates into components. Given two populations with differing rates and a set of factors, Das Gupta’s approach decomposes the difference between rates into the combined effect of factors, the effect of each factor, and a rate effect. In the three-factor case, the rate effect is considered to be:

$$\sum_i \sum_j \sum_k \frac{P_{ijk} + p_{ijk}}{2}(R_{ijk} - r_{ijk})$$

Where R_{ijk} and r_{ijk} are the rates for persons with characteristics i,j, and k in the two populations and P_{ijk} and p_{ijk} are the proportions of each population with those characteristics. The rate effect is the difference of rates in each cell weighted by the average of population proportions in each cell. This is identical to direct multiple standardization of the difference between the populations, using the average of population proportions as the standard.

The effect of factors is the complement of the rate effect:

$$\sum_i \sum_j \sum_k \frac{R_{ijk} + r_{ijk}}{2}(P_{ijk} - p_{ijk})$$

The effect of factors represents the difference in population rates that is entirely accounted for by differences in population distributions. The sum of the rate effect and the effect of factors is equal to the total difference between populations. The effect of factors is then decomposed into the effect of each of the four factors. This procedure is too complicated to explain here, but it involves repeated standardizations by every possible combination of marginal distributions to isolate the independent effects of each factor (Ruggles 1989).

Table 5 presents a decomposition of the change between 1900 and 1980 in the propensity of elderly women to reside with children. I chose 1900 rather than 1880 as the starting year because it provides individual-level information on child survival. For 1980, I estimated child mortality by means of the microsimulation method described above.

The results of Table 5 show the expected effects of compositional change on the living arrangements of the aged, but those effects are surprisingly small. Taken together, the changes in age structure, marital status, and number of surviving children can account for only a 2.9 percent drop in the propensity to reside with children. The modest impact of compositional change is significant for two reasons. First, it suggests a simple general strategy for the historical and comparative analysis of multigenerational family structure. If the living arrangements of the aged have been relatively unaffected by demographic change, then they are the ideal group for the comparative analysis of multigenerational family structure in populations with differing demographic regimes. Second, the results of Table 5 imply that we must look beyond demography—to economic or cultural changes—if we want to understand the dramatic decline of the multigenerational family.

CONCLUSION

This essay has two main points. The first is methodological. Comparisons of family structure should always consider the potential impact of differences in demographic behavior. Demography determines the composition of kin groups, and the composition of kin groups defines the context for residence decisions. The methods of historical family demography need to be developed much further, but I think the overall approach I have followed is sound. Elaborate demographic models loaded with acknowledged and unacknowledged assumptions are not adequate to assess the effects of demographic conditions on living arrangements; even if they happen to be approximately right, they will never persuade skeptics. We have to strip down the demographic analysis to its essentials and eliminate unrealistic assumptions whenever we can. This necessarily means abandoning measurement by households. We have to tailor our measures of living arrangements to the needs of demographic analysis, not the other way around. Household level analysis requires *a priori* assumptions about household formation, and inevitably means that we have to string multiple kin linkages together simultaneously. If we can narrow the problem to residence of particular types of people with particular types of kin, the demography is radically simplified. The particular methods we use don’t matter much; this essay is particularly eclectic in that regard, using life-table, microsimulation, and components analysis. But our goal should be clear: demographic analysis can provide denominators for the study of family structure, but only if we adopt individual-level measures and get the demography right.

My second point is substantive. The finding of Peter Laslett and others that nuclear family structure was preferred in the West before the industrial revolution is an artifact of demography. Only a small minority of households in the United States in 1880 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 in the context of a residence rule that prohibited joint families meant that few multigenerational households were possible. Although there were far too few elderly in nineteenth century America to create a majority of multigenerational families, their coresidence with the younger generation was clearly a social norm. In preindustrial Northwestern Europe, with substantially earlier death and later marriage, the demographic constraints on multigenerational families were even more severe (Ruggles 1987). We can be confident that only a small minority of the eighteenth-century English population had the opportunity to reside in a multigenerational family.

In the twentieth century, the demographic constraints on multigenerational family structure relaxed. Because of declining fertility, increasing life expectancy, and a shortening of generations, by the late twentieth century the opportunities to form multigenerational families had increased dramatically. By 1980, only a small minority of potential multigenerational families existed.

The magnitude of change in the family has been obscured by changing demographic constraints, so analysts of family history generally adopted the view that family structure has been stable for centuries in Northwestern Europe and the United States. This revisionist thesis of long-run stability in Western family structure has become the new orthodoxy in the fields of social history, sociology, and family demography. When changes in family structure are acknowledged at all, it is usually stressed that they began recently. But this apparent long-run stability in extended family structure is simply a reflection of countervailing demographic change. Viewed in terms of residential preferences, the thesis that family structure has been stable over the long run cannot be sustained: the past century has witnessed a radical transformation of residential preferences, a transformation that began in the nineteenth century or perhaps earlier. Indeed, multigenerational living arrangements have been through a transition of magnitude comparable to the demographic transition itself, and that change is sharply at odds with the revisionist interpretation of family history.

If the revisionist orthodoxy is wrong, then our work is cut out for us. Was coresidence of the generations a stem family pattern, as suggested by Berkner, or was it a system of old-age assistance? Should the decline of the multigenerational family be explained by the declining significance of inheritance, increasing economic independence of the elderly, rising geographic and social mobility, urbanization, industrialization, or simply by the rise of individualism? How is it connected to other changes in family structure, such as single parenthood, divorce and separation, and the rise of the primary individual? As we further develop methods for stripping away the veil of demographic constraints to uncover change in residence decisions, we will increasingly be able to address these fundamental questions.

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Table 1. Actual and potential percentages of households with coresiding elderly kin: United States whites, 1880-1980

	1880	1910	1940	1960	1980
A. Actual percentage	11.1	11.7	11.9	8.9	5.2
B. Potential percentage	15.7	18.0	23.2	28.0	31.7
C. Actual as a percent of potential (A/B)	70.7	64.9	51.3	31.8	16.4
Number of actual households	84398	70375	62641	47825	66167

Table 2. Effects of demographic change on residence with parents:

United States whites aged 40-44, 1880-1980

	1880	1910	1940	1960	1980
A Estimated percentage with surviving:					
Mothers	33.4	40.1	49.6	61.3	72.6
Fathers	18.9	24.4	32.8	38.2	45.2
B. Estimated size of surviving married sibling set :					
	3.6	2.9	2.5	2.2	2.2
C. Number of surviving parents per 100 surviving married siblings (A/B)					
Mothers	9.2	14.0	22.3	24.9	33.5
Fathers	5.2	8.5	14.8	15.5	20.8
D. Observed percentage residing with :					
Mothers	6.4	7.7	8.2	5.9	3.5
Fathers	3.5	4.0	4.4	2.9	1.7
E. Propensity to reside with parents (D/C)					
Mothers	69.6	55.0	36.7	23.7	10.4
Fathers	67.3	47.1	29.7	18.7	8.2
N	20414	17883	15192	10187	9403

Table 3. Components of change in the demographic opportunity to reside with parents: United States whites aged 40-44, 1880-1990

	Mothers	Fathers
Percent of total change in surviving parents per 100 surviving siblings explained by change in:		
Survival of Parents	59.4	61.9
Parental mortality	47.6	41.4
Generation Length	11.8	20.5
Size of surviving married sibling set	40.6	38.1
Fertility	55.6	52.2
Sibling mortality	-9.8	-9.2
Proportion of sibling set married	- 5.2	-4.9
Total	100.0	100.0

Table 4. Effects of availability of children on residence with children:

United States white women aged 65 or older, 1880-1980

	1880	1910	1940	1960	1980
A. Estimated percentage with surviving children	76.9	82.7	80.7	74.7	76.4
B. Observed percentage residing with children	58.6	57.9	45.3	28.1	15.6
C. Propensity to reside with children (A/B)	76.2	70.0	56.1	37.6	20.4
N	10534	9709	10905	10168	15129

Table 5. Components of change in the propensity of elderly women to reside with children: United States white women aged 65 or older with surviving children, 1900-1980

Percentage residing with children	
1900	71.87
1980	20.14
Total decline in coresidence (1900-1980)	51.72
Effects of factors:	
Age	-0.97
Marital Status	1.61
Number of surviving children	2.21
Combined effect of factors	2.85
Rate effect	48.88