Women's Employment and the Gain to Marriage: The Specialization and Trading Model

Valerie Kincade Oppenheimer

Annual Review of Sociology, Vol. 23 (1997), 431-453.

Stable URL:
http://links.jstor.org/sici?sici=0360-0572%281997%2923%3C431%3AWEATGT%3E2.0.CO%3B2-Z

Annual Review of Sociology is currently published by Annual Reviews.

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at http://www.jstor.org/about/terms.html. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at http://www.jstor.org/journals/annrevs.html.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is an independent not-for-profit organization dedicated to creating and preserving a digital archive of scholarly journals. For more information regarding JSTOR, please contact support@jstor.org.

http://www.jstor.org/
Tue Jan 18 08:08:27 2005

Annu. Rev. Sociol. 1997. 23:431–53
Copyright © 1997 by Annual Reviews Inc. All rights reserved

WOMEN'S EMPLOYMENT AND THE GAIN TO MARRIAGE: The Specialization and Trading Model

Valerie Kincade Oppenheimer
10345 Strathmore Drive, Los Angeles, California 90024; e-mail: valko@ucla.edu

KEY WORDS: women's independence effect, delayed marriage, marital instability, theory of marriage

ABSTRACT

This chapter critically examines the hypothesis that women's rising employment levels have increased their economic independence and hence have greatly reduced the desirability of marriage. Little firm empirical support for this hypothesis is found. The apparent congruence in time-series data of women's rising employment with declining marriage rates and increasing marital instability is partly a result of using the historically atypical early postwar behavior of the baby boom era as the benchmark for comparisons and partly due to confounding trends in delayed marriage with those of nonmarriage. Support for the hypothesis in multivariate analyses is found only in cross-sectional aggregate-level studies, which are poor tests of an individual-level behavioral hypothesis and which also present difficulty in establishing the appropriate causal direction. Individual-level analyses of marriage formation using longitudinal data and hazard modeling uniformly fail to support the hypothesis, while analyses of marital dissolution yield mixed results. Theoretically, the hypothesis also has severe limitations. The frequent tendency to equate income equality between spouses with women's economic independence and a lowered gain to marriage fails to distinguish between situations where high gains to marriage may be the result of income equality from situations where the result is a very low gain to marriage. Focusing on income ratios alone also tends to distract attention from the underlying causes of these ratios and their structural determinants. Finally, the independence hypothesis is based on a model of marriage that views the gain to marriage as a result of gender-role specialization and exchange. Historical evidence on the family indicates that this is a high risk and inflexible family strategy for independent nuclear families and one that is in strong contrast to contemporary family patterns.

0360-0572/97/0815-0431$08.00

INTRODUCTION

The economic role of American women, especially married women, has been undergoing a major transformation since World War II. These changes have inspired a large and varied literature, some of it focusing primarily on women's labor-market status and some on the familial implications of women's expanded work roles. This chapter emphasizes one facet of the latter body of work: the hypothesis that women's rising employment has led to a decrease in the desirability of marriage and hence is responsible for what is increasingly being called the "retreat from marriage" or, alternatively, the "decline of marriage." In the pages below I critically examine both the theoretical basis of this hypothesis and the empirical research it has inspired.

A long-standing and influential tradition in the social science literature is the importance of differentiated sex roles for a stable marriage system. In the early postwar period this idea was emphasized by Talcott Parsons (1949), who argued that sex-role segregation was a functional necessity for marital stability and even for the viability of society itself. More recently, this same theme has been elaborated somewhat differently in the economic theory of marriage by Gary Becker (1981). In an argument very similar to one Durkheim (1960) made over a century ago, Becker maintains that the major gain to marriage lies in the mutual dependence of spouses, arising out of their specialized functions—the woman in domestic production (and reproduction), the man in market work. Marriage then involves trading the fruits of these different skills. In response to economic growth and the rising wages it produces, however, women's market work also rises. The result is that women become less specialized and more economically independent, leading, in turn, to a decline in the desirability of marrying or of staying married.

Not all scholars necessarily agree with Becker's argument in its entirety. Nevertheless, an economic independence argument of one sort or another has had wide appeal among sociologists as well as economists and is currently one of the major contenders among attempts to explain recent marriage and family trends in the United States (Ross & Sawhill 1975, Cherlin 1979, 1992, Preston & Richards 1975, Waite & Spitze 1981, Fuchs 1983, Espenshade 1985, Goldscheider & Waite 1986, Farley 1988, Schoen & Wooldredge 1989, McLanahan & Casper 1995). One reason is that the model seems to have tremendous face validity. The notion of specialized sex roles fits in well with our views of how the traditional family historically functioned, and the rapid changes in marital behavior appear to have followed very closely upon the rapid rise in married women's employment, especially that of young women. Moreover, the theory has the elegance of simplicity; yet it can apparently explain a wide variety of complex changes and differentials in marriage and family

behavior—from delayed marriage to nonmarriage, marital instability, nonmarital cohabitation, female-headed households, declining fertility, and so forth.

This review examines several aspects of the research on the hypothesis that women's increasing market work has discouraged marriage formation and encouraged marital instability, hereafter referred to as the "independence hypothesis." The discussion deals first with the work relevant to the empirical status of the hypothesis and then critically examines the underlying theory—the specialization and trading model of marriage.

EMPIRICAL ISSUES

The following discussion investigates four major aspects of the empirical analysis of the independence hypothesis. The first examines how well simple time series data match the patterns predicted by the theory. The second investigates whether the marital behavior predicted by the theory is what is actually being observed. Next we consider the result of multivariate tests of the theory, distinguishing between aggregate- and individual-level analyses.

Evidence from Time Series

WORK AND MARITAL BEHAVIOR The apparently close correlation between the trends in married women's work and marriage behavior is cited by many scholars as providing general support for the independence hypothesis (Becker 1981, Davis 1985, Espenshade 1985, Farley 1988, Cherlin 1992, McClanahan & Casper 1995). And the changes are very impressive. On the one hand, although married women's employment had been slowly rising throughout the twentieth century, this shift was greatly accelerated in the postwar period. Most importantly, starting in the 1960s, the rise in the labor force participation of young married women really accelerated, and since then the age pattern of their employment has increasingly resembled men's, with proportions approaching 70% for women into their mid-fifties (Oppenheimer 1994). On the other hand, dating from the late 1960s, very substantial changes have occurred in marriage and family behavior. As a consequence, by the 1990s, age at marriage was much later than in the 1960s, and the proportions of those never marrying may be rising as well. For example, the proportions of women who were never married by age 25 rose from 14% in 1960 to 42% in 1990 (US Bureau of the Census 1991). All this is especially true for African Americans. For all, marital instability has also become much more prevalent, and although remarriage rates may be high, they are lower than in the past; female-headed families have been on the rise, again especially for African Americans. All these changes in marital and family behavior, on the one hand, and married women's employment behavior, on the other, tend to create the presumption that there must be a major

causal connection between the two, and the economic independence argument seems to provide one important possible explanation.

Impressive as the time-series data are, however, their support of the independence hypothesis may be more apparent than real. The problem is that if one follows the historical series back in time—before the 1950s—marriage and family behavior are no longer so nicely correlated with trends in women's employment. Central to the hypothesis is the idea that when the traditional family prevails, characterized as it is by marital sex-role specialization, and the gain to marriage is presumably high, age at marriage will be young, marriage will be universal, and marital instability low. However, age at marriage was by no means historically low in American society, any more than it was in Western European societies (Cherlin 1992, Oppenheimer 1994, Hajnal 1965, Goldstone 1986, Banks 1954). Age at marriage seems to have been quite young for American women around 1800 but subsequently rose and was relatively high and quite variable for late nineteenth century cohorts (Sanderson 1979, Thornton & Rodgers 1983). Age at marriage, as well as its variability, then declined, reaching a low for the cohorts marrying in the early post-World War II period. Since then, it has risen again to the levels exhibited by early twentieth century cohorts; in fact, as Cherlin (1992) points out, it appears that women's age at marriage has now risen even above that of late nineteenth century cohorts. However, this is probably not too significant since, compared to the present day, the delayed marriages of late nineteenth century cohorts existed despite much higher proportions of rural dwellers whose age at marriage was relatively young (Taeuber & Taeuber 1958).

In short, the early postwar period did not represent "typical" traditional marriage timing patterns. On the contrary it was most atypical in its young age at marriage and low variability in marriage timing. Nevertheless, that period has become the benchmark against which all subsequent behavior has been compared. More historically typical was a tendency for age at marriage to fluctuate, probably in response to changing circumstances, and long before one could establish a major causal role for women's economic independence (Thornton & Rodgers 1983, Oppenheimer 1994). In fact, age at marriage was dropping in the first half of the twentieth century at the same time that single women's market employment was rising (Goldin 1990).

With regard to marital instability, although the proportion of all marriages ending in divorce has risen substantially since the 1950s and 1960s, the trend toward increased marital instability is of long-standing in American society and greatly predates the postwar rise in married women's labor force participation (Preston & McDonald 1979). There is also some evidence that part of the rise in marital instability may be more apparent than real—at least for African Americans. Thus, in an analysis of the 1910 census public use sample, Preston

and his colleagues (1992) found evidence that, high though mortality was, there was also a considerable over-reporting of widowhood among African-American women with children, indicating that there was much more marital or union instability in this period than was directly reported in the census or than is commonly believed to be the case. Some evidence also suggests that the long-term increase in marital instability has leveled off and could possibly be reversing itself (Martin & Bumpass 1989, Schoen & Weinick 1993), but it is too soon to determine this conclusively, especially given the possible role of business-cycle fluctuations and shifts in the proportion of separations ending in divorces. However, the divorce rate peaked in 1979 at 22.8 per 1000 married women aged 15 years and over and has declined gradually since then, reaching 19.8 in 1995, the lowest rate since 1974 (National Center for Health Statistics 1990, 1995). Given the well-documented tendency of marriages formed at a young age to be unstable, the rise in delayed marriage may be contributing to the declines in marital instability.

One marriage-related trend that is of fairly recent origin is the rapid rise in cohabitation in the United States. Even descriptive data on cohabitation was very poor until the 1987–1988 National Survey of Family and Households provided valuable retrospective data on cohort shifts in cohabitation behavior (Bumpass & Sweet 1989). That study revealed that although only 3% of the 1940–1944 cohort of women had cohabited before age 25, 37% of the 1960–1964 cohorts had done so. However, the extent to which this enormous growth in cohabitation represents a "retreat" from marriage greatly depends on the extent to which cohabitation is a substitute for marriage or a stage in the courtship process. In this respect, cohabitation appears to be a heterogeneous phenomenon. An increasing proportion of first marriages start as cohabitations—rising from 9% for the first marriages formed in 1965–1974 to 39% for the 1980–1984 cohorts. Moreover, of first cohabitations started in the 1975–1984 period, 56% turned into marriages by the end of the fifth year. Hence, the rapid rise in cohabitation should be contributing to marriage delays, but for a substantial proportion of cohabitators it does not signify a rejection of marriage. In fact, Bumpass and his colleagues (1991) found that most of those currently cohabiting expected to marry their partners. Moreover, in his event-history analysis of young women's marriage formation from the NLSY (National Longitudinal Survey of Youth), Lichter (1992) found that the odds a woman married in a year were 66% higher if she was cohabiting at the previous interview. Hence, here cohabiting seemed to be operating as a proxy for being engaged.

In sum, trends in marital instability had their inception long before the rapid rise in married women's employment started. In the case of marriage formation, the historical record is characterized by considerable fluctuations, indicating a responsiveness to changing circumstances rather than the pattern of early and

universal marriage supposed to be characteristic of the specialization model of marriage. And while cohabitation is a relatively recent phenomenon, for a substantial segment of those who cohabit it obviously represents a stage in the courtship process rather than a retreat from marriage. In short, these patterns raise serious doubts about putting too much reliance on a truncated time series' apparent support of the independence hypothesis.

DELAYED MARRIAGE OR NONMARRIAGE? The independence hypothesis is essentially a theory of nonmarriage, for it is arguing that if, by their own endeavors, women can achieve approximately the same income as a prospective spouse, there is not much to gain by marrying and specializing in home production. However, to date, there has been little effort to articulate how this argument could lead to delayed instead of nonmarriage. If most of the changes we are observing are shifts in marriage timing rather than in nonmarriage, then the independence hypothesis is not really highly relevant. It will, in fact, be garnering far more empirical support than it analytically deserves if there is a serious confounding of delayed marriage with nonmarriage in the statistics. Moreover, a considerable delay in marriage may, even on its own, promote some nonmarriage, especially for women whose marriage-market position appears to deteriorate with age (Goldman et al 1984, Watkins 1984).

Aside from the confounding problem, nonmarriage and delayed marriage are two rather different phenomena. There are many reasons why varying numbers of people may want to or feel compelled to delay marriage but still wish to marry eventually—i.e. they still see a major gain from marriage. For example, economic factors, school enrollment, service in the military, getting established in a career, and so on, may all signify the necessity or advantage of delaying marriage without affecting the desirability of marriage per se. Hence, theories designed to explain nonmarriage may not be very pertinent if much of what is really happening is delayed marriage. Moreover, the particularly late age at which late marriers marry in a period of delayed marriages greatly increases the difficulty of interpreting whether or not currently observed trends signify a considerable rise in nonmarriage. This is especially the case for men, who usually marry later than women.

So far, the evidence indicates that, while there is considerable evidence of delayed marriage, nonmarriage will not rise markedly for white women and will remain at or below the proportions for late nineteenth century cohorts. For example, various estimates made in the 1980s suggest that about 9% of white women born in the early 1950s would never marry, up from the low of 5% for the cohorts born during the 1920s but below the 12% for the 1880 cohort. Marriage is so delayed among African Americans that predictions of the proportion never marrying are much riskier; however, these estimates

have ranged from about 25% to 30% (Rodgers & Thornton 1985, Bennett et al 1989). In sum, the independence argument may still be potentially useful in explaining the apparently sharp rise in nonmarriage among African Americans. However, unless the hypothesis can be made more explicitly relevant to the question of *delayed* marriage, it can explain little of the observed trends in marriage formation for white women despite the enormous postwar changes in their labor-market behavior and, more recently, in their marriage behavior as well.

Multivariate Analyses

The use of time series data in the investigation of the role of women's rising employment in changing marital behavior has been largely limited to illustrating the similarity among the two trends. A more rigorous approach involves the use of multivariate techniques to try to establish the causal connection between women's labor-market behavior and marital behavior. Basically two types of multivariate approaches have been used to test the independence hypothesis, each of which is usually applied with a different type of data. One is aggregate-level analyses, which typically use census data; the unit of analysis is a geographic area such as a metropolitan area or a labor market area. The second and larger group of studies consists of micro-level analyses of longitudinal data, where the individual is the unit of analysis. Micro-level analyses generally use samples that have longitudinal individual-level data, either of a retrospective nature or because they are panel studies, or they may include a combination of both sources of life-history data. A recent development is also to supplement the micro-level data with aggregate-level information in the form of contextual variables in order to provide information on the characteristics of the respondent's marriage market (Lichter et al 1992, Lloyd & South 1996).

AGGREGATE-LEVEL ANALYSES The major support for the independence hypothesis in the regression analyses of marriage formation has come from aggregate level analyses using census data (Preston & Richards 1975, Lichter et al 1991, Fossett & Kiecolt 1993, and McLanahan & Casper 1995). The dependent variables in these studies are all prevalence measures—for example, the proportion of women who are currently or recently married. The explanatory variables relevant to the independence hypothesis are usually measures of employment and of economic status—typically, earnings. Some also have educational attainment data, useful as an indicator of long-term labor-market position. In general, all these studies have found that earnings (or an SES indicator in the case of the Fossett & Kiecolt study on African Americans), employment, and schooling (where included) had a negative impact on the marital status composition of an area.

While these results appear to support the independence hypothesis, aggregate-level analyses of marriage timing have several serious drawbacks. One is that the hypothesis itself refers to individual-level behavior, and testing it with aggregate-level data can lead to misleading results because the same factors that produce area-level differences in the prevalence of married people do not necessarily produce the same kind and level of individual differences in the incidence of marriage. Moreover, it is not at all unusual to get opposite-sign results from macro- and micro-level analyses of approximately the same phenomenon, leading to what has been called the "ecological fallacy" (Robinson 1950, Achen & Shively 1995).

One reason why aggregate-level tests of the independence hypothesis may be misleading comes from the difficulty of establishing causal ordering between marital status and economic behavior by using cross-sectional census-type data. One cannot assume that the economic behavior and characteristics of women are necessarily the *determinants* of marriage characteristics because, in many circumstances, they may be the *consequences*. One of the usual "solutions" to the causal ordering problem in social research is to try to establish the appropriate time order of the variables. However, with census data, most of the variables are measured at the time of the census or, at best, during the previous year. Moreover, the dependent variable is a prevalence rather than an incidence variable. The proportion who are currently married in any particular area is a residual of those who were married at some unspecified time prior to the census and who did not separate, divorce, or become widowed before the census or, if they did, had remarried. And for an unknown number of women, none or only a few of these events may even have occurred in the area in which they were living at the time of the census.[1] In short, the proportion married in an area at the date of a census is a complex variable, resulting from a number of processes that have occurred over an unspecified length of time and in unspecified locations, making it very difficult to determine time order or the spatial connections essential to establishing causal connections.

One recent analysis well illustrates some of these problems. Using metropolitan areas in the 1970–1990 censuses as the unit of analysis, McLanahan & Casper (1995) regressed the percentage of women aged 25–29 who were married on, among other variables, the percentage of women, also aged 25–29, who were working full-time year-round. They found that employment experience had an apparently large negative effect on marital status and interpreted this as support for the independence hypothesis. However, the true causal direction is very likely to be from marital-status composition to employment composition,

[1]Thus in their analysis of labor market areas (LMA) in the 1980 census, Lichter and his colleagues (1991) found that, on average, 33% of currently married women, aged 20–29, had in-migrated into the LMA in the previous five years.

rather than the reverse. Married women in the 25–29 age group are in the midst of their reproductive period and likely to have young children; we also know from individual-level data that such women are less likely to work year-round full-time than other women in that age group. For example, in 1990, for the United States as a whole, although 68% of mothers of children under six had some work experience during the previous year, only 28% worked year-round full-time (Bianchi 1995, p. 125). Moreover, married women, especially those with young children, were even less likely to be so employed in previous censuses. Hence, if there is a higher proportion of women aged 25–29 who are married in some areas rather than others or married with young children, the proportions working year-round will be greatly depressed in those areas. Similarly, metropolitan areas with a higher proportion of single or separated/divorced women are likely to have considerably higher proportions working year-round full-time because these women usually have to work to support themselves. In sum, given the difficulty of unambiguously establishing causal ordering in such analyses, combined with a frequently strong argument for a causal direction that is the reverse of that hypothesized, aggregate-level analyses of this nature offer a poor empirical test of the independence hypothesis.

However, an entirely different approach from the regression analyses discussed above has been developed by Schoen (1988), and it comes up with rather different conclusions. Schoen's approach is basically a marriage market analysis and has the advantage of including both sexes and hence can distinguish between the effect of changes in the availability of partners with certain characteristics and the desirability of these partners—what Schoen has called the "force of attraction." Using *Current Population Survey* data, Qian & Preston (1993) applied this model to changes in white marriage behavior from 1972–1979–1987 by age and educational attainment. Among other things, they found that marriage propensities rose among college educated women over age 25 in the 1979–1987 period, despite a decline in the availability of college educated men in the appropriate age groups, indicating that women in the presumably most favorable labor-market position were not using their economic independence to avoid marriage and were sufficiently attractive marriage prospects that they were able to overcome a marriage squeeze situation.[2] In addition, Qian & Preston observed a sharp rise in the "force of attraction" for older women compared to younger between 1979 and 1987, suggesting that delayed rather than nonmarriage was occurring.

[2]These findings were in strong contrast to a study by Bennett & Bloom that was widely reported in the popular press but never published in a peer-reviewed journal. They estimated that college-educated white women who were still single at age 30 would have only a 20% chance of ever marrying. For a discussion of the popular and scientific controversy surrounding these estimates, see Cherlin 1990.

MICRO-LEVEL ANALYSES In contradistinction to the results from aggregate level analyses, multivariate studies of the marriage formation behavior of individuals have rarely provided any support for the independence hypothesis. Most of these studies utilize longitudinal data and were thus able to establish time order between the explanatory and dependent variables; hence they can make a better case for causal ordering, although time order is not always a reliable criterion. Most also are event-history analyses of one sort or another and hence are able to avoid the inherent selectivity biases that used to characterize analyses of the age at marriage of samples of relatively young ever-married people (Yamaguchi 1991).

While the independence argument would lead to the prediction that, net of school enrollment, more educated women should be more economically independent of marriage, these micro-level regression analyses show that they have a higher rather than a lower propensity to marry (Cherlin 1980, Goldscheider & Waite 1986, Mare & Winship 1991, Lichter et al 1992, Oppenheimer & Lew 1995, Oppenheimer et al 1995). Moreover, there is some evidence that the positive effect of schooling on marriage formation has even been increasing over time (Oppenheimer et al 1995). Educational attainment can also be an important factor in remarriage. Using the National Survey of Family and Households (NSFH), Smock (1990) found that although, compared to white women, African Americans generally had a much lower likelihood of remarriage, schooling had a very strong positive effect on remarriage probabilities for African American women whereas it had little impact for whites.

With regard to the effects of employment, the findings also do not support the independence hypothesis (Cherlin 1980, Goldscheider & Waite 1986, Bennett et al 1989, Lichter et al 1992, Oppenheimer & Lew 1995). One exception was Mare & Winship's 1991 micro-level analysis of 1940–1980 census public use sample data, which found a generally negative effect of employment on marriage formation (for white women). However, the employment variable used was constructed rather than observed and hence may not be an entirely unbiased indicator.[3] Women's earnings are also almost always found to have a positive effect on the likelihood of marriage, again the reverse of what is predicted by the independence hypothesis (Goldscheider & Waite 1986, Mare & Winship 1991, Lichter et al 1992, and Oppenheimer & Lew 1995). Moreover, the Oppenheimer & Lew study found that the positive effect of earnings only showed up for women in their mid-to-late twenties rather than among younger women, for whom no effect was observed—a pattern that is the opposite of what would be true if greater economic independence increased the

[3]Because it is generally impossible to determine the time order of variables in the census, Mare & Winship estimated "expected" employment but the variables used to develop these predictions were also measured in the same year as the marriage occurred.

likelihood of never marrying. Oppenheimer & Lew also looked at the effect of occupational level to see whether women in professional and managerial occupations would be any less likely to marry than those in lower-level white-collar occupations—traditionally more typical women's occupations that might be more easily combined with marriage. They found no significant effect except for a negative one for unskilled workers. One micro-level panel study found no effect of weekly earnings (Teachman et al 1987); however, only weekly earnings in the first week in October of each year were available to use, and this may have distorted the results.

A characteristic of virtually all these micro-level analyses of marriage formation is that they use employment and earnings data of the recent past—typically referring to the time of the interview or the year just before each year at risk. This raises several conceptual and measurement problems. First, employment has been both the statistical and social norm for single out-of-school women for over 50 years (Goldin 1990). Aside from the nonemployment that can be attributed to business cycles, those who are not employed should therefore be a highly select group. Hence, it is unclear what the employment status of single women is really measuring; it certainly is not distinguishing between "traditional" and "nontraditional" women. Second, if what we want to get at is the likely long-term labor-market position of women to assess their "independence" of the marriage state, the recent earnings or employment patterns of respondents may be very poor indicators of this, especially given the low earnings and employment instability characteristics of young people, males as well as females. Hence, it is not too surprising that these variables have no negative impact on marriage formation. Probably the best indicator of long-run labor-market position used to date is educational attainment; however, this too has not exhibited a negative effect on women's marriage formation.

In sum, several aggregate-level studies found that women's education, employment, and earnings were negatively related to the proportions married in an area. However, studies of this type generally have serious methodological drawbacks as a vehicle for the analysis of individual-level phenomena and are usually incapable of establishing causal ordering. Moreover, life-history analyses at the more appropriate micro-level, and which typically employ more sophisticated methodologies, have found that similar indicators of labor market position have either little effect or a positive one on marriage formation. These results may reflect offsetting factors at work and hence do not necessarily mean there is no such thing as an independence effect. However, they do indicate that it is unlikely that the independence effect is the driving force behind recent trends in marriage formation.

The analysis of marital instability also provides an opportunity for testing the independence hypothesis. Moreover, if one has information on both partners,

it is possible to study not only whether couples with higher-income wives are more likely to separate but, in addition, whether women's relative earnings are an important factor in marital stability. Given the availability of data on husbands, therefore, most panel studies during the past 25 years have included both husbands' and wives' economic behavior in their analyses of the effect of wives' employment on marital instability. Generally, the problem has been formulated in terms of "income" and "independence" effects (Ross & Sawhill 1975, Cherlin 1979). The idea is that a higher income (whatever the source) improves the quality of family life, thereby contributing to family stability. Since the husband has typically been the source of most of the family's income, his labor-market position should have an important effect on marital stability. Husband's economic position has usually been conceptualized in terms of both employment characteristics and earnings in recognition of the possibility that it is the stability of a man's income as well as its size that may affect marital outcomes. A wife's earnings can also have an income effect, but offsetting this is the hypothesized independence effect of her earnings as well as of other sources of income such as AFDC.

By and large, the results of investigations of the independence and income effects on marital stability have been mixed. Some studies have found evidence of an independence effect (Ross & Sawhill 1975, Hannan & Tuma 1978, Cherlin 1979, Moore & Waite 1981, Tzeng 1992), whereas others have come up with negative results (Bumpass, Martin & Sweet 1991, Hoffman & Duncan 1995,[4] Greenstein 1990, 1995, South & Lloyd 1995, and Tzeng & Mare 1995).[5] There are a number of possible reasons for these conflicting findings, including differences in the data sets analyzed, variations in the conceptualization of the problem and in the variables included in the model. A few issues are important to mention, however.

Analyses of marital dissolution are best conducted by taking the marriage at its start and studying the factors affecting it over several years' duration. Otherwise, the sample is increasingly biased across marital durations due to the selective withdrawal of the more divorce prone and those who may have dissolved their marriages for the very reasons the investigator is studying. However, studies using many of the earlier data sets were hampered by serious left-censoring:

[4]The generalizability of this study is somewhat limited, however. The major interest of the researchers was to measure the influence of welfare benefits on marital disruptions; hence they limited the sample to couples with children. The analysis may therefore underestimate an independence effect, should it exist.

[5]Tzeng & Mare's results were actually somewhat mixed. They found that the combined income of the couple had no effect on the odds of a marital disruption and neither did the difference between the earnings of the partners—all of which failed to support the independence argument. However, an increase in the wife's earnings over the marriage did have a small positive effect on the likelihood of a marital disruption.

i.e. marriages of varying durations were picked up in the sample and, although followed from that point on, it was not possible to reconstruct the entire history of a marriage and most particularly the history of the explanatory variables before the panel started. This was the case with the PSID (Panel Study of Income Dynamics) used by Ross & Sawhill (1975) and the NLS panel of women aged 30–44 at the first interview (Cherlin 1979). Hence, there is bound to be a certain amount of selectivity bias in these samples, and it is difficult to determine how this affected the results although it probably biases coefficients downward. Moreover, the methodology of analyzing longitudinal data has greatly improved in recent years and now usually involves hazard modeling of one sort or another. Except for the pioneering methodological work of Hannan & Tuma (1978), these methods were not yet generally available for the earlier studies, and it is these studies that have tended to show that women's market position is likely to lead to marital disruption.

Two additional factors may produce different results among studies, and these refer more to how the independence effect is conceptualized and measured. Some studies use absolute income while others use some measure of relative income. While the hypothesis implies that the relative earnings of wives might be an important factor in the gain to marriage and hence should be directly modeled, using the ratio of wives' to husbands' income alone can lead to ambiguous results. Thus, one study found that the higher the ratio of wife's/husband's income, the greater the likelihood of a separation (Cherlin 1979). But there are two very different explanations of why relative income might be higher for some families than others. One is that the wife's earnings in some families are higher compared to others, reflecting a better labor-market position and, consequently, indicating a greater financial independence of her husband. However, the ratio could also be high because the husband's earnings are low compared to other men, while the wife herself may be also in a very weak labor-market position. This latter situation does not really seem to fit the original conceptualization of the independence effect. Furthermore, given the sex differentials in earnings, husband's earnings are likely to be quite low when the ratio is high indicating that the "independence" and "income" effects may be confounded. Hence, the income of the husband also needs to be controlled in some fashion.

A second problem, characteristic of almost all studies of women's economic role in marital instability, is the difficulty of establishing causal direction. This is one case where time order is not really a reliable indicator of causal ordering. Finding out that the likelihood of a separation in any given year increases when a woman's earnings or employment position were more favorable in the previous year does not necessarily support the independence hypothesis; this is because women who believe their marriage is in trouble may increase their work effort,

and hence their earnings, in anticipation of a breakup. A number of researchers have suggested this possibility, and at least two empirical analyses have found some evidence that this is the case (Johnson & Skinner 1986, Peterson 1989). This possibility of a reverse causal direction suggests that the general practice of limiting regression models to information on the behavior and characteristics of respondents in the immediate past may not provide enough data for an adequate evaluation of the independence hypothesis (Spitze 1988). In fact, studies of marriage formation are also generally weak in building in information on the individual's life course and tend to limit themselves to data on the very recent past. Furthermore, few studies follow young people long enough to capture life-cycle changes in explanatory variables or long enough for a relatively large proportion to have made the transition to marriage. Hence right-censoring may be a particular problem in this period of delayed marriage.

THEORETICAL ISSUES

Income Equality and the Gain To Marriage

Although much used, "economic independence" is really a rather vague concept whose ambiguities need to be more clearly recognized in assessing the effect of women's market work on marriage behavior. A relatively small amount of earnings may actually provide a married woman with the ability to act independently in the sense of making a variety of consumption decisions on her own and increasing her influence in joint consumption decisions. And many women could, with much less income than a prospective spouse, live at a level comparable to families with only the husband-father working. Whether this would also be true for mothers heading their own households is somewhat less clear and partly depends on how much the cost of childcare offsets the greater expense of a two-adult household. In any event, a lot of independence can be bought with earnings that are well below those of similar males who are supporting a family on their earnings alone. This, of course, has always provided the rationale for labor market discrimination against women. Multivariate analyses that use women's absolute earnings may implicitly be getting at this sort of independence.

However, a recurrent theme in sociological discussions of the independence hypothesis is the notion that a woman's economic independence is defined in terms of income equality with her husband and that, furthermore, the gain to marriage is much less with economic independence defined in this manner (Cherlin 1979, Espenshade 1985, Farley 1988, McLanahan & Casper 1995, Sørensen 1995). While this might be considered the logical conclusion of Becker's theory, it is an approach that may often confuse rather than help clarify the nature of the social processes we are trying to study. Neither economic

independence nor low gains to marriage necessarily follow from income equality; moreover, income equality may lead to low gains to certain marriages but not because economic independence has been achieved. Basically, the issue revolves around the question: What is economic independence, and what does it have to do with income equality and the gain to marriage? I briefly consider some of these issues below.

Using 1940–1980 census data, Sørensen & McLanahan (1987) addressed the problem of how to measure the extent of married women's dependency (on their husbands) and how this has changed over time. The measure they developed assumed that husbands and wives pool all their economic resources and share them equally; economic dependency is then defined as the difference between the husband's and wife's relative contribution to their combined income. If the wife's income is equal to the husband's then there is no dependence. As expected, given women's rising employment, they found that their indicator of married women's dependency decreased over time. However, it seems very likely that the measure does not just reflect degrees of dependency but also taps differences in the nature of the dependency involved. Two-earner families where the couple pool their resources are families whose level of living is based on their combined income. When the income contribution of each spouse is equal, given economies of scale, neither partner could live as well on his/her own or save and invest as much. Hence if, under the pooling assumption, each is dependent on their joint income, what is really being measured is how symmetrical the economic dependency is. A wife (or husband) who has little or no income exhibits a very asymmetrical as well as a large income dependency and presumably must make other important types of contributions to the marriage for there to be a gain to both partners. This is the classical picture of the specialization and trading model of marriage.

Couples with equal earnings also exhibit dependence, however—a symmetrical dependency in this case. Although increasing symmetrical dependency should improve women's status and bargaining position in the family, marriage still involves important economic interdependencies, and there should still be a substantial economic gain to marriage for this reason alone.[6] What this may also indicate is that the combined income of the two-earner family has come to form the social standard, rather than the husband's income alone. To the extent this is the case, it becomes increasingly difficult for single earners and married couples with a more traditional division of labor to achieve the same level of living as the two-earner family. Hence, the mutual dependence of the two-earner family may not only contribute to their own gain to marriage but

[6]However, even if women achieved economic equality with men in the labor market, this would not necessarily translate to income equality in a marriage. That depends on assortative mating patterns as well as family decisions on how much the woman works over the family life cycle.

may also reduce the relative gain to being single and to marriages characterized by a specialized division of labor (Oppenheimer 1982).

An unfortunate concomitant of defining economic independence in terms of earnings equality is that the significance of the absolute amount of earnings involved and of earnings adequacy almost drops out of the picture. Take, for example, the argument that

> the hypothesis about the decline in marriageable males is really an extension of the women's independence argument, since women's independence is a function of women's earning power relative to men's earning power. Women's independence can increase either because women's earning power goes up faster than men's or because it goes down more slowly than men's ... In principal, the independence argument can account for declines in marriage among men and women at all points in the income distribution (McLanahan & Casper 1995, pp. 34–35).

Following this logic, it is sometimes suggested that the main reason that African Americans are married in much smaller proportions than whites is not their generally poorer and more unstable economic position compared to whites. Rather, the relative earnings of African American women are much higher than those of white women (Farley 1988).[7] Similarly, measuring independence in the analysis of marital instability with earnings ratios alone, without also including some measure of absolute income, tends to equate earnings equality with women's economic independence, no matter how low the income of each partner is. Moreover, emphasizing income ratios per se obscures the underlying determinants of these ratios and discourages research into them and hence impedes the achievement of a greater understanding of the dynamics of social change and socioeconomic differentials. This emphasis also goes against the original rationale of the independence hypothesis, which was that women's increasing earning power increased their economic independence of men thereby reducing the gain to marriage (Becker 1981). It was not that the deteriorating labor-market position of men somehow increased women's economic independence, even if the women involved were themselves in an extremely weak labor-market position. If not dependent on their husbands or another partner, many women with very poor labor market prospects will still be partly or wholly financially dependent on other sources of income—family support or welfare transfers, for example. This seems to be a situation where

[7]This perspective also promotes such rhetorical questions as: "If the earnings of white women rise, compared with those of white men, will we find that white families increasingly resemble current black families? Two decades from now, will the majority of white children be born to unmarried women and raised in families headed by their mothers? Will 30% or 40% of white children live below the poverty line?" (Farley 1988, p. 491). This seems like an exceedingly strange outcome to posit for a rational choice model.

equality at a very low level reduces the gain to marriage but not because it signifies a woman's independence—certainly not in the sense of indicating economic self-sufficiency. In addition, the argument attributes far more power to women in the decision to marry than they actually possess. Many women in a poor labor-market position will not be very attractive marriage prospects themselves—either to men in a better labor-market position or to those in an equally poor position.

Coping with Risk and Change

Most theories, and perhaps economic theories most of all, make certain simplifying assumptions in order to facilitate the process of theory construction and empirical testing. These assumptions, however, can often provide the Achilles heel of a theory. In the case of the specialization model of marriage, the family's environment generally seems to be considered unvaryingly benign, and a family's needs and goals are assumed to be relatively constant over its developmental cycle. Questioning these assumptions, however, raises major doubts about some of the presumed "efficiency" of the specialization model of marriage. For example, although rarely considered in explications of the theory, historical research on the family indicates that extreme sex-role specialization in marriage is essentially a high-risk and inflexible family strategy unless accompanied by supplementary support mechanisms. Even with such supports, specialization often entailed considerable individual and social costs. An inherent problem is that the temporary or permanent loss of one specialist in a family can mean that functions vital to the well-being of the complementary specialist and children are not being performed. Husbands/fathers can die or become ill or disabled; they can lose their jobs and have difficulty finding another one; they could desert the family for a variety of reasons or become an alcoholic; and so on. The result is that the family is left without its major source of income. Except for employment-related shifts, there are similar problems involving the wife-mother specialist. In that case, there could be no one to take care of the children or the home. Specialization may be a feasible strategy in a large extended family household where no particular individual is indispensable because of the redundancy in personnel that can characterize such a system. However, for independent nuclear families and their individual members, specialization entails considerable risks.

Extreme sex-role specialization is also not a very flexible way to deal with the varying needs of nuclear families over their developmental cycle. Since individuals' consumption needs and productive capabilities vary markedly by age, a basic feature of nuclear families is that the ratio of consumers to producers, and hence the family's level of living, can vary substantially over the family's

developmental cycle (Berkner 1972, Oppenheimer 1982, Lee 1983). Hence, specialization involves a potentially serious inflexibility in dealing both with changes in a family's internal composition and with the stresses posed by its environment.

The large literature on family history in Western societies indicates that a variety of strategies were developed to maintain economic stability over the family's developmental cycle and in the event of the temporary or permanent loss of specializing parents (Oppenheimer 1982, Ch. 9, Lee 1983). In the past, many of these strategies involved utilizing the productive labor of children, daughters as well as sons (Rowntree 1922, Anderson 1971, Haines 1979, Goldin 1981, Tilly & Scott 1978). The evidence also indicates that utilizing the labor of one's children could exact substantial costs. A sufficient number of children old enough to make an economic difference was generally not available until the middle or later stages of the family cycle. Families who temporarily or permanently lost the contribution of the father early in the family cycle were not greatly helped by such a strategy. And if the mother was lost when the children were young, the family might break up, with children being parcelled out among relatives or even going to orphanages. In general, this economic reliance on one's offspring often led to a pattern of "life cycle poverty" where periods of poverty and comparative plenty alternated over the life cycle of workers (Rowntree 1922). Another well-known disadvantage to the extensive employment of children to supplement their family's income was that it tended to discourage schooling and hence had a negative effect on children's adult socioeconomic status (Perlmann 1988, Goldin 1981, Parsons & Goldin 1989).

Even aside from the drawbacks of using children's work, the economic advantages of this strategy were eventually bound to decline during industrialization. As the structure of demand shifted to a much more skilled labor force and adult male earnings correspondingly rose, the potential relative contribution of the unskilled labor of the family's children declined, particularly in middle class families. This suggests that other equilibrating mechanisms were likely to develop. Hence, from an historical perspective, the rise in married women's employment might be viewed as a functional substitute for the work of their children, facilitating the more extensive schooling of the next generation and thereby fostering intergenerational upward social mobility. In addition, wives' employment is not limited to the later stages of the family's developmental cycle, and wives, as adults, usually have educational attainments roughly similar to those of their husbands, and hence can command much higher wages than can their unskilled children. Moreover, recent research indicates that wives' employment currently plays an important role in offsetting a less favorable earnings position of their husbands (Cancian et al 1993, Levy 1996).

CONCLUSION

Although the popularity of the women's economic independence explanation of marriage behavior remains strong in the 1990s, this review of the literature found little real empirical support for the hypothesis. Micro-level event-history analyses that follow cohorts throughout their young adulthood generally show that women's educational attainment, employment, and earnings either have little or no effect on marriage formation or, where they do have an effect, find it to be positive, the opposite effect of that hypothesized. The only support for the hypothesis from multivariate analyses is found in aggregate-level studies. However, aggregate-level analyses have serious drawbacks for investigating this micro-level hypothesis, not the least of which is establishing a convincing causal ordering.

The juxtaposition of time series data of marriage behavior with women's employment appears to provide convincing evidence for the hypothesis, but upon closer examination this evidence becomes much less persuasive. In the case of marriage formation, a large part of the support for the hypothesis results from the confounding of delayed marriage with nonmarriage. The independence hypothesis is basically an argument about nonmarriage but, for white women at least, the major trend has been an increase in delayed marriage. The hypothesis could presumably be modified to say that the gain to marriage increases with age, but it is bound to lose a lot of its punch if, instead of making predictions about the gain to marriage in general, it is reduced to making predictions about the gain to marrying at age 22 versus age 20. But, in any event, that case has never even been made.

An additional major problem is that the apparently high correlation of the various time-series trends is largely a function of the starting point chosen. This is almost invariably sometime in the 1950s or early 1960s—i.e. the era that produced the baby-boom, early and universal marriage, lowered divorce rates, and so on. However, when one pushes the time series farther back, it is obvious that the divorce rate had been rising for many decades before married women's employment started its rapid rise. And as far as marriage timing is concerned, the period before World War II exhibited long-term fluctuations in age at marriage and in its variability, all within the era when sex-role specialization in marriage was typical. Hence, the decision to use the benchmark of the 1950s and early 1960s was critical for how the linked time series have been evaluated.

While it is widely recognized that the marriage behavior of the early postwar period is statistically atypical of American historical patterns, it has nevertheless achieved a moral stature that seems to justify its use as the model against which more recent family behavior is evaluated, often in a pejorative light. For example, the desirability of an early marriage is implicit when delayed

marriages are described as a "retreat" from marriage or a "decline" in marriage. However, during the period when age at marriage actually was early, there was no such universal approval of it,[8] and it is well known that marriages of the young are much more unstable than marriages formed at older ages.

At the same time that the empirical support for the hypothesis is weak, its theoretical underpinnings are by no means immune from questioning. First, the notion of the efficiency of specialization and exchange as a basis of the marital relationship largely depends on certain assumptions regarding the stability and benevolence of the environment. However, real-world conditions indicate that specialization can be a risky and inflexible strategy for maintaining a family's economic well-being over time; achieving this has often been a result of having more than one earner in the household. What has changed is the identity of the additional earner(s)—now it is the wife, whereas historically it was more likely to be the family's children. Another major problem lies in the tendency to equate independence with equality of earnings. However, this approach fails to appreciate the economic gains to marriage where earnings are approximately equal, and the low gains that may result from a weak labor-market position, whether or not earnings are equal. Moreover, the underlying causes of low gains to marriage may be obscured when earnings ratios become the major focus rather than the conditions producing these ratios.

In sum, this review of the economic independence argument provides little support for the extensive explanatory claims made for the hypothesis. The idea that specialization creates the gain to marriage, and hence that the desirability of marriage tends to disappear once women can earn a living wage, reflects a rather simplistic view of the basis of the marital relationship. Married women's employment undoubtedly has an effect on marriage, but we are more likely to understand that effect if a model of marriage is developed that is more multidimensional and flexible in its view of social roles. Certainly the fact that almost 70% of married women now work and thus play an important part in their family's economic welfare suggests that a model of marriage needs to be developed to reflect observed behavior rather than the marital role behavior of the nineteenth century.

ACKNOWLEDGMENTS

Research support for this paper was provided by NICHD Grant R01HD27955.

[8]For example, the rationale that Preston & Richards provide for their 1975 article investigating the relationship of women's employment and marriage timing is to understand factors that might raise the age at marriage because of the "deleterious effects of its [the population's] early marrying" at that time (p. 209).

Visit the *Annual Reviews home page* at
http://www.annurev.org.

Literature Cited

Achen CH, Shively WP. 1995. *Cross-Level Inference*. Chicago: Univ. Chicago Press

Anderson M. 1971. *Family Structure in Nineteenth Century Lancashire*. Cambridge, Eng: Cambridge

Banks JA. 1954. *Prosperity and Parenthood*. London: Routledge & Kegan Paul

Becker GS. 1981. *A Treatise on the Family*. Cambridge: Harvard Univ. Press

Bennett NG, Bloom DE, Craig PH. 1989. The divergence of black and white marriage patterns. *Am. J. Sociol.* 95:692–722

Berkner L. 1972. The stem family and the developmental cycle of the peasant household: an 18th century Austrian example. In *The American Family in Social-Historical Perspective*, ed. M Gordon, pp. 34–58. New York: St. Martins

Bianchi SM. 1995. Changing economic roles of women and men. In *State of the Union*, ed. R Farley, 1:107–54. New York: Russell Sage Found.

Bumpass LL, Martin TC, Sweet JA. 1991. The impact of family background and early marital factors on marital disruption. *J. Fam. Issues* 12:22–42

Bumpass LL, Sweet JA. 1989. National estimates of cohabitation. *Demography* 26:615–25

Bumpass LL, Sweet JA, Cherlin A. 1991. The role of cohabitation in declining rates of marriage. *J. Marriage Fam.* 53:913–27

Cancian M, Danziger S, Gottschalk, P. 1993. Working wives and family income inequality among married couples. In *Uneven Tides: Rising Inequality in America*, ed. S Dansiger, P Gottschalk, pp. 195–221. New York: Russell Sage Found.

Cherlin AJ. 1979. Work life and marital dissolution. In *Divorce and Separation*, ed. G Levinger, O Moles, pp. 151–66. New York: Basic Books

Cherlin AJ. 1980. Postponing marriage: the influence of young women's work expectations. *J. Marriage Fam.* 42:355–65

Cherlin AJ. 1990. The strange career of the "Harvard-Yale" study. *Public Opinion Q.* 64:117–24

Cherlin AJ. 1992. *Marriage, Divorce, and Remarriage*. Cambridge: Harvard Univ. Press

Davis K. 1985. The future of marriage. In *Contemporary Marriage*, ed. K Davis, pp. 25–52. New York: Russell Sage Found.

Durkheim E. 1960 [1893]. *The Division of Labor in Society*. Glencoe, IL: Free Press

England P, Farkas G. 1986. *Household, Employment, and Gender*. New York: Aldine

Espenshade TJ. 1985. Marriage trends in America: estimates, implications, and underlying causes. *Pop. Dev. Rev.* 11:193–245

Farley R. 1988. After the starting line: blacks and women in an uphill race. *Demography* 25:477–95

Fossett MA, Kiecolt KJ. 1993. Mate availability and family structure among African-Americans in U.S. metropolitan areas. *J. Marriage Fam.* 55:288–302

Fuchs V 1983. *How We Live: An Economic Perspective on Americans from Birth to Death*. Cambridge: Harvard Univ. Press

Goldin C. 1980. Family strategies and the family economy in the late nineteenth-century: the role of secondary workers. In *Philadelphia: Work, Space, Family, and Group Experience in the Nineteenth Century*, ed. T Hershberg, pp. 277–310. New York: Oxford Univ. Press

Goldin C. 1990. *Understanding the Gender Gap: An Economic History of American Women*. New York: Oxford Univ. Press

Goldman N, Westoff CF, Hammerslough C. 1984. Demography of the marriage market in the United States. *Pop. Index* 50:5–26

Goldscheider FK, Waite LJ. 1986. Sex differences in the entry into marriage. *Am. J. Sociol.* 92:91–109

Goldstone JA. 1986. The demographic revolution in England: a re-examination. *Pop. Stud.* 49:5–33

Greenstein TN. 1990. Marital disruption and the employment of married women. *J. Marriage Fam.* 52:657–76

Haines M. 1979. Industrial work and the family life cycle, 1889–1890. *Res. Econ. Hist.* 4:449–95

Hajnal J. 1965. European marriage patterns in perspective. In *Population in History*, ed. DV Glass, DEC Eversley, pp. 101–38. Chicago: Aldine

Hannan MT, Tuma NB. 1978. Income and independence effects on marital dissolution: results from the Seattle and Denver income-maintenance experiments. *Am. J. Sociol.* 84:611–33

Hoffman SD, Duncan GJ. 1995. The effect of incomes, wages, and AFDC benefits on

marital disruptions. *J. Hum. Resourc.* 30:19–41
Johnson WR, Skinner J. 1986. Labor supply and marital separation. *Am. Econ. Rev.* 76:455–69
Lee RD. 1983. Economic consequences of population size, structure and growth. *Int. Union for Sci. Stud. Pop. Newsletter* 17:43–59
Levy F. 1996. *Where did all the money go? A layman's guide to recent trends in U.S. living standards.* Presented at Annu. Meet. Pop. Assoc. Am., New Orleans
Lichter DT, Le Clere FB, McLaughlin DK. 1991. Local marriage markets and the marital behavior of black and white women. *Am. J. Sociol.* 96:843–67
Lichter DT, McLaughlin DK, Kephart G, Landry DJ. 1992. Race and the retreat from marriage: a shortage of marriageable men? *Am. Sociol. Rev.* 57:781–99
Lloyd KM, South SJ. 1996. Contextual Influences on young men's transition to first marriage. *Soc. Forc.* 74:1096–1119
Mare RD, Winship C. 1991. Socioeconomic change and the decline of marriage for blacks and whites. In *The Urban Underclass*, ed. C Jencks, PE Peterson, pp. 175–202. Washington, DC: Brookings Inst.
Martin, TC, Bumpass LL. 1989. Recent trends in marital disruption. *Demography* 26:37–51
McLanahan S, Casper L. 1995. Growing diversity and inequality in the American family. In *State of the Union: America in the 1990s*, ed. Reynolds Farley, 2:1–45. New York: Russell Sage Found.
Moore K, Waite L. 1981. Marital dissolution, early motherhood, and early marriage. *Soc. Forc.* 60:20–40
National Center for Health Statistics. 1990. Advance report of final divorce statistcs, 1987. *Monthly Vital Statist. Rep.* 38(12)
National Center for Health Statistics. 1995. Births, marriages, divorces, and deaths for 1995. *Monthly Vital Statist. Rep.* 44(12)
Oppenheimer VK. 1982. *Work and the Family: A Study in Social Demography*. New York: Academic
Oppenheimer VK. 1994. Women's rising employment and the future of the family in industrial societies. *Pop. Devel. R.* 20:293–342
Oppenheimer VK, Blossfeld HP, Wackerow A. 1995. New developments in family formation and women's improvement in educational attainment in the United States. In *Family Formation in Modern Societies and the New Role of Women*, ed. HP Blossfeld, pp. 150–73. Boulder, Col.: Westview
Oppenheimer VK, Lew V. 1995. American marriage formation in the eighties: How important was women's economic independence? In *Gender and Family Change in Industrialized Countries*, ed. KO Mason, AM Jensen, pp. 105–38. Oxford: Clarendon
Parsons DO, Goldin C. 1989. Parental altruism and self-interest: child labor among late nineteenth-century American families. *Econ. Inquiry* 27:637–59
Parsons T. 1949. The social structure of the family. In *The Family: Its Function and Destiny*, ed. R Anshen, pp. 173–201. New York: Harper & Brothers
Perlmann J. 1988. *Ethnic Differences: Schooling and Social Structure among the Irish, Italians, Jews, and Blacks in an American City, 1880–1935*. New York: Columbia Univ. Press
Peterson RR. 1989. *Women, Work, and Divorce*. Albany, NY: State Univ. of New York Press
Preston SH, Lim S, Morgan SP. 1992. African-American marriage in 1910: beneath the surface of census data. *Demography* 29:1–15
Preston SH, McDonald J. 1979. The incidence of divorce within cohorts of American marriages contracted since the Civil War. *Demography* 16:1–25
Preston SH, Richards AT. 1975. The influence of women's work opportunities on marriage rates. *Demography* 12:209–22
Qian Z, Preston SH 1993. Changes in American marriage, 1972 to 1987: availability and forces of attraction by age and education. *Am. Sociol. Rev.* 58:482–95
Robinson WS. 1950. Ecological correlations and the behavior of individuals. *Am. Sociol. Rev.* 15:351–57
Rodgers W, Thornton A. 1985. Changing patterns of first marriage in the United States. *Demography* 22:265–79
Ross HL, Sawhill IV. 1975. *Time of Transition: The Growth of Families Headed by Women*. Washington, DC: Urban Inst.
Rowntree BS. 1922. *Poverty: A Study of Town Life*. London: Longmans, Green
Sanderson WC. 1979. Quantitative aspects of marriage, fertility and family limitation in nineteenth century America: another implication of the Coale specifications. *Demography* 6:339–58
Schoen R. 1988. *Modeling Multigroup Populations*. New York: Plenum
Schoen R, Weinick RM. 1993. The slowing metabolism of marriage: figures from 1988 U.S. marital status life tables. *Demography* 30:737–46
Schoen R, Wooldredge J. 1989. Marriage choices in North Carolina and Virginia, 1969–71 and 1979–81. *J. Marriage Fam.* 51: 465–81
Smock PJ. 1990. Remarriage patterns of black and white women: Reassessing the role of educational attainment. *Demography* 27:467–73

Sørensen A. 1995. Women's education and the costs and benefits of marriage. In *Family Formation in Modern Societies and the New Role of Women*, ed. HP Blossfeld, pp. 229–35. Boulder, CO: Westview

Sørensen A, McLanahan S. 1987. Married women's economic dependency, 1940–1980. *Am. J. Sociol.* 93:659–87

South SJ, Lloyd K. 1995. Spousal alternatives and marital dissolution. *Am. Sociol. Rev.* VOL:21–35

Spitze G. 1988. Women's employment and family relations. *J. Marriage Fam.* 50:595–668

Taeuber CA, Taeuber IB. 1958. *The Changing Population of the United States*. New York: Wiley

Teachman JD, Polonko KA, Leigh GK. 1987. Marital timing: race and sex comparisons. *Soc. Forc.* 66:239–68

Thornton A, Rodgers WL. 1983. *Changing patterns of marriage and divorce in the United States. Final Report, Contract No. N01-HD-02850*. Bethesda, MD: Natl. Inst. Child Health Hum. Dev.

Tilly LA, Scott JW. 1978. *Work and the Family*. New York: Holt, Rinehart & Winston

Tzeng JM, Mare RD. 1995. Labor market and socioeconomic effects on marital stability. *Soc. Sci. Res.* 24:329–51

Tzeng MS. 1992. The effects of socioeconomic heterogamy and changes on marital dissolution for first marriages. *J. Marriage Fam.* 54:609–19

US Bureau of the Census. 1991. Marital status and living arrangements: March 1990. *Current Population Reports. Series P-20, No. 450*. Washington, DC: USGPO

Waite L, Spitze GD. 1981. Young women's transition to marriage. *Demography* 18:681–94

Watkins SC. 1984. Spinsters. *J. Fam. Hist.* 9:310–25

Yamaguchi K. 1991. *Event History Analysis*. Newberry Park, CA: Sage