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Working Paper

The Divergence of Black and white Marriage Patterns

Center Discussion Paper, No. 583

Provided in Cooperation with:

Yale University, Economic Growth Center (EGC)

Suggested Citation: Bennett, Neil G.; Bloom, David E.; Craig, Patricia H. (1989) : The Divergence of Black and white Marriage Patterns, Center Discussion Paper, No. 583, Yale University, Economic Growth Center, New Haven, CT

This Version is available at:

<https://hdl.handle.net/10419/160505>

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CENTER DISCUSSION PAPER NO. 583

THE DIVERGENCE OF BLACK AND WHITE MARRIAGE PATTERNS

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September, 1989

Notes: Center Discussion Papers are preliminary materials circulated to stimulate discussion and critical comments.

This paper is forthcoming in the American Journal of Sociology,
Volume 95, Number 3, November 1989.

THE DIVERGENCE OF BLACK AND WHITE MARRIAGE PATTERNS

Abstract

Our purpose in this paper is first, to examine patterns of first marriage among black and white women in the United States, and then, to assess the various factors that underlie these patterns. Three major differences exist between the first marriage patterns of black and white women: lower proportions of blacks marry than whites, the proportion of women who ever marry has declined substantially across cohorts of black women but comparatively modestly across cohorts of white women, and increased education is associated negatively, if only slightly, with the probability of ever marrying among white women, but is associated positively among black women. The observed racial divergence of marriage patterns is demonstrated to be consistent with three factors differentially experienced by blacks and whites: the marriage squeeze, labor market success, and out-of-wedlock childbearing.

Our analysis of the marriage squeeze indicates that, given the traditional range of age differences between spouses, there is a greater mismatch in terms of sheer numbers of women and men among blacks than among whites for cohorts born prior to the late 1950s. Along economic lines, we find that an individual's employment status is positively associated with the propensity to marry and that the labor market situation of less-educated young black men and women is generally poor and has deteriorated significantly with the passage of time in comparison to other groups in the United States. Last, we provide evidence that having an out-of-wedlock child at an early age is strongly negatively associated with the likelihood that a woman will ultimately marry.

INTRODUCTION

For some time there has been an awareness that marriage rates, and family formation in general, have differed between whites and blacks. In 1965, the Moynihan report touched off a lengthy debate concerning the nature of differences between white and black families. It saw black family structure disintegrating and the black community enmeshed in a "tangle of pathology" (Moynihan 1965).

There were a number of objections to this view, including (a) its attribution of the "pathological" behavior of lower-class black families to individuals rather than to defects in the social system, (b) the view of family structure as the cause of black-white inequality (Rainwater and Yancey 1967), and (c) the adoption of an attitude of "blaming the victim" (Hill 1972). Some sought to show that although differences between white and black family structure exist, these are small when one controls for socioeconomic differences (Heisse 1975). Stressing the basic sameness of black and white families, this approach assumes that marriage is valued to a high degree among blacks but factors such as higher rates of unemployment prevent marriages from taking place or contribute to their dissolution. Another perspective holds that black families ought not to be viewed as deficient simply because their structures tend not to conform to the norms of the white middle class (Hill 1972; Nobles 1979), but instead ought to be seen as a unique cultural form valid on its own terms. Both of these approaches question the use of the nuclear family as a standard against which black families ought to be compared. Rather, to a certain extent each argues that the extended family characterizes many families and therefore merits attention in its own right.

Each of the perspectives rejects the pathology model of black families and argues that within the extended family structure there may be incentives and pressures not to form families along nuclear lines and, in particular, to reject marriage (Aschenbrenner 1973; Martin and Martin 1978; McAdoo 1978; Stack 1974).

Although there has been a resurgence of interest in comparing black and white family structure, discussion has moved away from the debate over the "pathology" of black families. Some claim it has been resolved in favor of a position that views them as resilient and creative in the face of adversity (Farley and Allen 1987). Wilson and Neckerman (1986) note that the focus during the 1970s on refuting the pejorative characterizations of the black family, while important, effectively diverted scholarly attention from the effects of larger economic processes on family structure — effects, they argue, that must now be addressed.

In general, the impetus behind contemporary research on black-white differentials comes from two sources. Patterns of marriage and family formation have changed dramatically in recent years. Many of the trends — such as the declining rates of first marriage of women over the past 25 years or so, or the sharp decrease in the proportion of the population living in husband-wife families during that same period (see, e.g., Espenshade 1986) — have been much more acute for blacks than whites. These changes raise questions about whether marriage as a social institution continues to hold its preeminence in American family life and whether its importance differs for whites and blacks.

In addition, a concern of much current work on the family is the connection between family composition and economic well-being (e.g., Moynihan 1986; Weitzman 1985; Wilson and Neckerman 1986). Again, certain patterns disproportionately characterize blacks. Many observers, for example, are alarmed at the rising proportion of children born out of wedlock and the rapid growth of female-headed families. Because members of such families are at high risk of being poor, many authors argue that it is imperative to examine the causes behind these trends (Bane 1976; Edelman 1987; Wilson 1987). Here, it may be especially illuminating to consider declining marriage rates and the reasons behind them because these families are increasingly headed by single, never-married women, rather than divorced, widowed, or separated women (Darity and Myers 1983).

In the present paper, we consider questions about how black and white Americans differ with respect to patterns of entry into first marriage and how various social, economic, and demographic factors give rise to the racial differences observed. Our analysis focuses on marriage rates and reveals much sharper black-white differences than previously identified. Many prior analyses are inadequate because they rely on period or cross-sectional measures, which provide little insight into the behavioral patterns that they presumably summarize. These measures fail to describe the marriage process from its most natural perspective, namely, the life course or cohort perspective.

THE MODEL

We apply the Coale-McNeil marriage model (Coale and McNeil 1972; described in detail in the Appendix) to cohort data on marriage patterns of black and white women of various educational attainment levels. Coale (1971) observed the existence of an empirically regular structure in the pattern of entry into first marriage for female cohorts in a wide range of countries and time periods. In addition, Coale showed that the structure of these patterns could be well summarized by three parameters: the mean age at first marriage (μ), the standard deviation of age at first marriage (σ), and the proportion ever-marrying in the cohort (E). Examples of the wide variety of first marriage patterns that can be captured by the Coale-McNeil model are displayed in Figure 1.

By applying this model, we are able to infer the mean age at marriage and the proportion of women who will ultimately marry from survey data on cohorts that have yet to complete their marriage experience. That is, because the model is parametric, we can fit the model to the marital history experienced to date by a young cohort and then extrapolate the remainder, or the future course, of that cohort's marital history. Bloom and Bennett (1988) have shown, using artificial truncation experiments in which the model is fit to several

purposely age-abbreviated data sets, that the model performs well in extrapolation. Thus by fitting the model to recent survey data, we can estimate how marriage patterns have changed across cohorts.

THE DATA

Our analysis of marriage patterns of American women is based on data from the June 1985 Current Population Survey (CPS). The CPS is a nationwide sample survey conducted monthly by the Bureau of the Census. It involves detailed personal interviews in about 60,000 households during which information on a variety of demographic, social, and economic variables is recorded.

In the June 1985 CPS, the survey included a marriage and fertility history supplement. Included on the supplementary survey instrument was a question on age at first marriage that was asked of all women aged 18 and above. Unfortunately, there are few covariates in the CPS that could sensibly be hypothesized to be associated with age at marriage. However, we have coded the following two variables: race (black, white)² and education at the time of the survey (less than high school, high school graduate, more than high school). Although the CPS data set permits estimation of only two covariate effects, it is extremely useful in this study because it refers to a nationally representative sample of all women and includes an exceptionally large number of observations.

THE DIFFERENTIAL EXPERIENCE OF MARRIAGE IN THE LIFE COURSE

In Table 1 we demonstrate that American patterns of marriage differ critically depending upon whether one is focusing on blacks or whites and, furthermore, that these patterns have not been stable over time. Among white women, the proportion of those born in the late 1930s (i.e., those in their late forties at the time of the survey) who could expect

never to marry was approximately five percent. This proportion has nearly doubled for the corresponding cohort of women born fifteen years later, to a level of about nine percent. The mean age at which these cohorts of women could expect to first marry increased from 21.0 to 21.9 years of age.

Among black women, the likelihood of marriage also decreased, but to a much greater degree. Approximately 11 percent of those born in the late 1930s are expected never to marry. That proportion has increased dramatically to one-quarter for the cohort born in the early 1950s. The corresponding increase in the mean age at first marriage for these cohorts, from 21.7 to 22.5 years of age, is similar to that among white women.

We would be mistaken if we were to believe that all individuals within a particular race behave similarly with respect to their propensity to enter into marriage or the time at which they do so. Table 2 again reports parameter estimates associated with four cohorts of women for blacks and whites separately. However, for each cohort we allow the mean age at first marriage, the standard deviation of the age at first marriage, and the proportion who will ever marry to vary with educational attainment.

Once again, differences exist between black and white marriage patterns and over time these patterns have tended to diverge. Consider first the group of women who did not have a high school degree at the time of the survey. The percentages expected to ever marry have fallen across cohorts for both white and black women. Ninety-five percent of white women born in the late 1930s are expected to marry at least once in their lifetime, with a mean age at first marriage of 20.0 years. Approximately 91 percent of their counterparts born 15 years later are expected to marry and, on average, at roughly the same age, 19.7 years. The same comparison for black women yields the following figures: The mean age at first marriage decreased across cohorts only trivially, from 21.0 to 20.8 years. More importantly, however, the proportion of women ultimately expected to marry plummeted

from 84 to 69 percent.

Education, as expected, bears an important relationship to the parameters of the marriage distribution. For both blacks and whites, higher education is associated with a higher mean age at first marriage among those who eventually marry. White women born in the early 1950s who have had more than a high school education are expected to marry at 23.3 years of age or 3.7 years later, on average, than those who have not graduated high school. Among blacks of this birth cohort, the direction of the association is the same, with a difference between the groups of 2.6 years. The magnitude of the difference in timing between the educational groups is generally less among blacks than whites.

A surprising finding, however, concerns the relationship between educational attainment and proportions ever-marrying. For the most educated group of women, education is consistently positively associated with proportions marrying among blacks, but negatively associated among whites. Furthermore, the race differential in the magnitude of the education—marriage incidence relationship is just the reverse of that found in the education—marriage timing relationship. The magnitude of education differentials among whites is small,³ while it is quite a bit larger among blacks. For example, there is only a three percentage point difference between the least- and most-educated white women born in the late 1930s, in contrast to the ten point difference among black women.

THE INCREASING SIGNIFICANCE OF RACE

Traditionally, marriage has been considered one of the steps in the life-cycle that signifies the transition to adulthood (Hogan and Kitagawa 1985). However, it appears that for certain groups of women, the path to adulthood is now less likely to be characterized by marriage than it was previously. Black women are less likely to marry than white women, particularly among the least-educated. Furthermore, we find a divergence in marriage

patterns between the races as time progresses.

These results raise two important questions: (1) How can we account for the lower rate of marriage found among black women, and (2) Why have marriage rates declined faster among blacks than whites, thus giving rise to the divergence of marriage patterns? In order to address these issues, we consider various arguments that might account for trends and differentials in nuptiality.

The Marriage Squeeze

First, the issue of imbalances in male-female ratios provides a partial clue to understanding the racial differences in proportions marrying. Declining marriage rates for both white and black women are commonly attributed to a marriage squeeze. One aspect of the squeeze relates to the fact that at some age women begin to outnumber men in the population. The sex ratio imbalance occurs several years earlier in life among black women than among white women, in part reflecting not only a sex ratio at birth among blacks that is lower than that among whites, but also the relatively high rates of death and incarceration among young black men. Further compounding the squeeze is the fact that women have traditionally tended to marry slightly older men.

The squeeze is exacerbated among blacks because the black population has grown faster over time than the white population. If we examine the time series of births for blacks and for whites during the period 1945 to the peak of the baby boom, 1957, we find that white births increased at a continuous rate of about 2.1 percent per year while the rate was almost twice that for black births, 3.8 percent per year. For those women who were born during the upward trend of births in the early and mid-1950's, there are simply too few men in the older cohorts comprising the traditionally-defined pool of potential marriage partners. The results of Table 1 are consistent with what we might expect in the presence of a baby-boom induced

marriage squeeze. We would expect, and indeed do find, fewer women marrying in the cohorts we observe who were born after the Second World War (those in their thirties at the time of the survey) as compared with those women who were born just prior to the war (those in their late forties at the time of the survey) when the trend in births was essentially flat.

It further clarifies matters to briefly examine the 1980 census counts of blacks and whites. For illustrative purposes, suppose that women consider men two years older than themselves to be "marriageable" partners. Thus, 20 year-old women would look toward the pool of 22 year-old men for their potential spouses. Figure 2 shows the ratio in 1980 of men aged $x+2$ to women two years younger, at age x . (We have adjusted the census counts for estimated enumeration errors.) At virtually all ages 35 and under among whites, there exists either an approximate balance of men and women or a relative surplus of men. In contrast, however, among blacks there appears to be a significantly skewed sex ratio for women over 18 years of age. Indeed, the ratio of males to females is higher among whites for all but three of the single-year ages between 0 and 40 (2 to 42 among males).

An alternative approach is to examine the size of a male birth cohort relative to the female cohort arriving two years later. In other words, what is the ratio of the number of male births occurring in year t (the future pool of potential husbands) to the number of female births occurring in year $t+2$ (the future pool of potential wives)? Figure 3 shows this ratio for the period spanning 1946 through 1973 for the cohorts reflecting (albeit only very roughly) the future husbands, and the corresponding birth years reflecting the cohorts of future wives (i.e., births taking place in 1948 through 1975). We calculate this ratio separately for whites and blacks.

As anticipated, there is a greater mismatch in terms of sheer numbers of women and men among blacks than among whites for these cohorts. We see that black women born

prior to the late 1950s generally face a dearth of black men.⁴ Parenthetically, one might note that, should current norms regarding the age difference between spouses continue, there generally will be a "surplus" of men in the marriage market for women born between 1960 and 1975.

We should emphasize that the above analysis does not take into account the known fact that there is a wide range of differences between the ages of wives and husbands. However, despite the obvious crudity of this exercise, we may conclude that black women face a shortage of men that is considerably more severe than that experienced by white women.

Others have used different means to estimate the number of potential mates that exist in a population. Wilson (1987) assumes that men must be employed to marriageable. Using a "male marriageable pool index", defined as the number of employed men per one hundred women of the same age and race, he finds that for white women the ratios of available men remained roughly the same between 1960 and 1980. This held true for all four regions of the country. For black women, however, the ratios declined significantly for all ages everywhere except in the West. While having a job may be somewhat too stringent a criterion when considering the number of eligible males in the population, the index is undoubtedly useful in helping to explain the rapid decline in black female marriage rates. It also highlights the fact that there is a social and economic element to the marriage squeeze in addition to the purely demographic component.

The Relative Economic Situation of Blacks and Whites

Economic variables can play an important role in explaining patterns of marriage. Many have explored the existence of a causal link between male unemployment and lower marriage rates (Center for the Study of Social Policy 1984; Edelman 1987; Glick 1981;

Moore, Simms, and Betsey 1986; Reid 1982; Stack 1974).

The relative levels of black and white male unemployment and earnings is a particularly promising area of inquiry. However, many of the studies that attempt to examine unemployment patterns of blacks and whites do not account for variation in educational attainment and thus assume homogeneity within racial groups. This limits their value in trying to assess whether changes in unemployment can help to explain the lower marriage rates of black women, especially those with a lower level of education.

We estimate a few simple regression models in order to determine not only how blacks have fared economically relative to whites in recent years, but also whether economic trends and differentials by race covary with educational attainment. Economic data are obtained from the March Current Population Surveys of 1968 through 1986. In particular, we examine two dependent variables: (1) unemployment rates, U , and (2) average annual per capita earnings of those employed full-time year-round, E (in natural logarithms).

Table 3a focuses on 20 to 24 year-olds since these are the years during which a large proportion of women and men marry. Two sets of regression coefficients are reported for each sex, corresponding to the two dependent variables. The independent variables in all models include all main effects, and two-way and three-way interaction effects of race (black=1, white=0), education (less than, equal to, and more than high school graduate), and time. Dummy variables for all but one year were incorporated in the model as well in order to control for business cycle effects, secular trends, etc., although the corresponding coefficients have been omitted from the table.

It is apparent that, for both sexes, unemployment has increased substantially over time among blacks and the less-educated, relative to whites and those who are better-educated. Similarly, expected annual earnings of all males in the labor force are increasingly losing ground among blacks and those less-educated relative to other groups. Less-educated

women of both races have lower earnings, although no decline over time is apparent. Less-educated black men appear to be singled out for particularly low earnings, invariant to time. As shown in Table 3b, supplementary regression analyses referring to 25 to 29 year-olds paint much the same picture. In short, Table 3 tells a dramatic story: Less-educated young black men and women appear to be doubly jeopardized by their race and educational status. Their relative economic circumstances are generally poor and have deteriorated significantly with the passage of time.⁵

A growing body of literature suggests that these young men and women who are most disadvantaged in terms of education and employment form part of a black "underclass". This is an urban population that is lacking in skills, education, and employment, is permanently disaffected from the mainstream labor market, and has little hope of upward mobility (Auletta 1982; Edelman 1987; Hogan and Kitagawa 1985; Wilson and Neckerman 1986). Typical avenues of advancement are closed off to this group because educational criteria are increasingly important for mobility and because structural changes in the post-war economy have entailed declining employment prospects, especially in the manufacturing sector, in central cities where blacks are concentrated. Such a dynamic prevents this group from moving out of poverty (Harrington 1984; Wilson 1978 1987). An expanding underclass, then, whose members are unable to accumulate sufficient resources for marriage, would contribute heavily to explaining the sharply declining rates of marriage among black women.

The impoverished situation of the underclass is posited to lead to family structures that are alternatives to marriage. In particular, the reliance on kin networks and extended families, and the incidence of out-of-wedlock births, although generally more prevalent among black women than white, are more common among the poorest black women than those of higher classes. These factors in turn may explain part of the decline in marriage among black women.

Black women seeking a stable form of familial organization may rely on a network of kin that pools and exchanges economic resources rather than on marriage (Aschenbrenner 1973; Stack 1974). If a young woman's potential marriage cannot offer her more security than can her present kin network, then she may see little reason to marry (Martin and Martin 1978). Stack's (1974) study of a midwestern black community noted that while participation in help networks was an important way of coping with extreme poverty, it sometimes was not conducive to marriage. The study cited the example of women who in each case were dissuaded from marriage by members of networks who were fearful that it would mean losing the resources and contributions of the woman considering marriage.

Empirically speaking, the connection that we have drawn thus far between an individual's employment and earnings status and his or her marriage prospects has been merely implicit in nature. In order to verify this connection, we compare annual probabilities of marriage in a given year among women and men who were employed full-time year-round, and those who were unemployed for any duration, in the prior year (including "discouraged workers"). This comparison is made using data referring to the 1979 Youth Cohort of the National Longitudinal Surveys of Labor Market Experience. The baseline sample consisted of 12,686 individuals aged 14 to 21 years on January 1, 1979, nearly all of whom were surveyed annually through 1986. Individuals who were in school the preceding year or who were ever-married by December 31 of that prior year are excluded from the analysis.

In Figure 4 we show the proportion of never-married, out-of-school, 19 to 22 year-olds who married in 1980 classified by whether they experienced some time either unemployed or involuntarily out of the labor force in 1979. Next, we follow that cohort and determine the proportions marrying in 1981 among those who were still never-married as of December 31, 1980 and who did and did not experience some time unemployed or out of the labor force in 1980. This analysis is carried out through 1985.

Figure 4 indicates that an individual's employment status is positively associated with whether he or she marries. Furthermore, the incidence of marriage is more sensitive to employment status for blacks than for whites. As an example, among black men who were employed full-time year-round, the annual probability of marriage (conditional upon being never-married at the beginning of the year) during the period 1980 through 1985 averaged .070. In contrast, the probability of marriage among black men experiencing some spell of unemployment or time out of the labor force averaged only .036. The corresponding pair of probabilities pertaining to white men are .097 and .088. It might be noted that Wilson's male marriageable pool index implicitly assumes that it is the man's economic circumstances that drive the marriage process. The present analysis suggests that a woman's current employment status, as well as that of a man, bears importantly on her subsequent marital status.

Individuals who wish to marry and who fare poorly in the labor market may have lower marriage rates because, among other possible reasons, they are perceived to be relatively undesirable marriage partners or because they are less able to establish their own households. Alternatively, some argue that their lower marriage rates are the result of some low-income women with young children avoiding formal marriage in an effort to maintain their welfare eligibility. For example, eligibility for Aid to Families with Dependent Children (AFDC) is generally restricted to low-income female-headed families with children under age 18. Ellwood and Bane (1985) have presented evidence indicating that AFDC allows women who are not currently married but who do have children to set up their own households. However, without estimates of a formal model of the impact of AFDC on the likelihood of first marriage — which surprisingly has not been addressed in the literature on the connection between AFDC and family structure (see Blackburn and Bloom 1987 or Hoffman 1988 for detailed reviews of this literature) — it is not possible to distinguish between these alternative

views. Currently, there is no direct evidence that would suggest that AFDC serves, in effect, as a surrogate husband, thereby depressing marriage rates.

Out-of-Wedlock Childbearing

The role of out-of-wedlock childbearing in the decline of marriage rates must also be considered. Although there is ample evidence in the literature that both out-of-wedlock childbearing and decreasing marriage rates are a consequence of the declining ability of young men to support families (Wilson and Neckerman 1986), we examine out-of-wedlock births here to assess explicitly their association with marriage propensities. We hypothesize that a woman who has an out-of-wedlock birth is less likely ever to marry than one who does not. To many individuals, one reason for marrying is to start a family; if a woman already has children, then this impetus to marry may be lessened, or even removed. Alternatively, a woman will have children outside of marriage if she perceives marriage as having insignificant net benefits. In addition, potential spouses may be less likely to consider marrying a woman with children because of the added emotional and financial burdens such a marriage may entail.

Using data from Cycle III of the National Survey of Family Growth, we show in Figure 5 the proportion of women aged 30 to 44 in 1982 who were never-married and childless at age x (each of the single-year ages from 14 through 19) and who eventually married by age 30, classified into two categories: (1) those who had an out-of-wedlock first birth at age x , and (2) those who did not. Clearly, never-married women who had an out-of-wedlock first birth at ages 14 through 19 were considerably less likely to be married by age 30 than those who had not. For example, about 11 percent of never-married 16 year-olds who did not have an out-of-wedlock birth at that age had not married by age 30. Among never-married 16 year-olds who had an out-of-wedlock first birth at age 16, almost three of ten had

not married by age 30.

Given that having children outside of marriage is associated with a lower likelihood that women will marry, it is instructive to look at the patterns of childbearing that characterize black and white women. Black women have always been more likely to give birth outside of marriage, although recently the gap between the two groups has narrowed as the out-of-wedlock birth rate for whites has increased at every age while it has fallen for black women. However, the gap between the two groups remains substantial. For example, in 1982, the rate of out-of-wedlock births per thousand women was 22.2 for white women aged 25 to 29, while the corresponding figure among black women was 85.5 (Moore, Simms, and Betsey 1986).

Out-of-wedlock childbearing, like extension among families, is more common among blacks than whites. Here again, however, there are substantial class differences. Women of the black underclass are more likely to have an out-of-wedlock birth (Evans 1986; Wilson 1987). As we show in Figure 6, premarital childbearing disproportionately occurs among women of less-educated parents.⁶ For example, about 22 percent of black women aged 15 to 19 whose mothers were not high school graduates had a premarital first birth versus only five percent of the corresponding group of women whose mothers had more than a high school education. Insofar as parent's education correlates with class, the results indicate that having a child out of wedlock is closely related to class. This is consistent with the findings of Hogan and Kitagawa (1985) indicating that lower class black women are more likely to have such a birth than those of the middle and upper classes and with the work of Moore, Simms, and Betsey (1986) who found that black women with less than a high school education are more likely to give birth premaritally than those with high school or more education.

There are a number of reasons, in addition to the economic arguments, why out-of-wedlock births may be more common among the underclass. Having goals for the future is

inversely related to early fertility (Moore, Simms, and Betsey 1986) and the poor quality of schools in ghetto neighborhoods may not be conducive to cultivating high aspirations (Hogan and Kitagawa 1985). Some contend that higher rates of illegitimacy among black women are related to lower stigma attached to out-of-wedlock childbearing (Bernard 1966; Furstenberg 1976), with those of lower class backgrounds having a less negative attitude than others (Zelnik, Kantner, and Ford 1981).

The timing of first intercourse also plays a role. Those who initiate sexual activity at very early ages are less likely to be efficient contraceptors than women who are older when they first have sexual relations. Although the gap between the age at first intercourse between black and white teenagers is narrowing, black teenagers are still somewhat more likely to be sexually active than their white counterparts (Hofferth, Kahn, and Baldwin 1987). Black teenagers of lower social class begin having sex earlier than those of higher class backgrounds. In addition, Hogan and Kitagawa (1985) show that upper class black teenagers are more likely to be efficient contraceptors; they are more likely to use contraception at first intercourse and are more likely to use it subsequently.

THE BETTER-EDUCATED WOMAN

A number of other factors come into play when we consider the declining marriage rates of better-educated women. Work has become more central to the lives of women, both single and married, than it previously was. Most young women today can expect to work throughout their adult lives. Recognizing this, they may postpone marriage in order to attain the education and resources needed for advancement in the labor market.

For a variety of reasons, postponing marriage may induce more women to remain single. Leaving the family home in favor of an independent existence, which is related to delayed marriage, may reduce women's orientations to family roles as they begin to enjoy the

independence afforded by living on their own (Waite, Goldscheider, and Witsberger 1986). Women pursuing employment may begin to perceive trade-offs between marriage and their careers even if they are initially inclined toward marriage (Cherlin 1980). Work and education are also strong predictors of nontraditional attitudes toward sex roles and the division of household labor (Mason, Czajka, and Arbor 1976; Parelius 1975; Regan and Roland 1985). If women with such attitudes are unable to find spouses with compatible views, they may decide to remain single.

Working for pay also allows women the financial option not to marry. Lower rates of marriage among women with great resources (education, income, etc.) may indicate that such women use their resources to "buy out" of marriage (Goldscheider and Waite 1986).

Cultural assumptions by both men and women about the desirable educational level of a spouse may also be informative. If men and women feel that wives should have a lower educational status than their husbands, then some among the growing numbers of highly educated women of both races may be becoming either less willing to marry or, in some sense, less marriageable.

For relatively well-educated women of both races, the arguments outlined above may explain why they have experienced lower marriage rates in the younger cohorts. However, the question still remains: Why do black women in this group have substantially lower marriage rates than similarly educated white women, yet higher rates than less-educated black women?

Black women with higher levels of education are still affected by the same shortage of black men that was noted in our discussion of less-educated black women. Numerous studies have argued that this is a cause of lower black marriage rates (Cox 1940; Guttentag and Secord 1983; Reid 1982). For highly educated black women there may be a shortage of "suitable" partners, insofar as emphasis is placed on similar levels of educational attainment.

Recall our argument that holding traditional assumptions about the appropriate education level of a spouse may put well-educated women at a disadvantage in terms of marrying. It is notable that black women have been more likely to be affected by such a dynamic than white women. Historically, among whites, men have outnumbered women with respect to the number of those who receive college degrees. College degree recipients among black women, however, have long outnumbered those among black men. It is only recently, by the mid-1980s, that parity between the sexes within each race has been achieved (U.S. Bureau of the Census 1988).

The issues of extended families and out-of-wedlock childbearing, which we showed to be negatively associated with marriage rates, are also pertinent to the discussion of better-educated black women. Although these phenomena may, in part, be an adaptive response to poverty, some contend that they also are driven by cultural forces. Thus, while they are most common among less-educated black women, they are also more prevalent among middle class black women than white women (Farley and Allen 1987; Moore, Simms, and Betsey 1986). For example, the number of births per thousand unmarried women aged 18 to 44 in 1981 for those with more than a high school education was 34.0 among blacks but 5.8 among whites; at incomes in excess of \$20,000 per year, the rates were 48.3 and 8.6 for black women and white women, respectively (Moore, Simms, and Betsey 1986).

SUMMARY AND DISCUSSION

The analysis presented herein indicates that there is no simple explanation for declining marriage rates of women across cohorts and for differences in rates by race. Across every cohort-education group for which we can compare whites and blacks, the proportion of black women who are expected to ever marry is smaller than the corresponding proportion of white women. There are a number of factors — social, demographic, economic, and perhaps

cultural — that play a part in explaining differences in marriage patterns, but these do not affect all women in the same fashion.

Black women seeking to marry may be hindered simply by sheer numbers of available men. A marriage squeeze that is more severe for blacks than whites results from a depressed sex ratio in the ages at which marriages tend to occur. High rates of death and incarceration of young black men contribute to the sex ratio imbalance and most likely disproportionately affect the poorest and least-educated groups. For better-educated black women, a scarcity of “suitable” partners may be partially the result of greater numbers of black women than men completing higher education.

The relationship between educational attainment and marriage rates is particularly noteworthy. There is a negative, if only slight, association between education and marriage among white women. On the other hand, better-educated black women tend to be more likely to ever marry than blacks who do not graduate high school. However, the positive relationship between education and the propensity to marry among blacks may be viewed, in large part, as stemming from the exceptionally low marriage rates of less-educated blacks.

Among women with less education, the percentages who will ever marry differ sharply by race. The proportion of white women expected to ever marry has decreased from 95 to 91 percent for the oldest and youngest cohorts, respectively. Across cohorts of black women, however, the likelihood of ever marrying has fallen precipitously. Only 69 percent among the youngest cohort are already married or can expect to marry. This may be partly a reflection of the poverty experienced by many blacks in this group, which makes it more difficult to enter into a secure marriage. The extended family structure may be a more stable form of familial organization for many poor black families than the nuclear structure, which, in effect, may discourage women from marrying unless marriage can offer them greater economic security.

Our economic analysis reveals that unemployment and average annual earnings are worsening among less-educated black men and women in recent years relative to other subgroups of the population. This deteriorating economic situation hints at the expansion of a black underclass, whose members would most likely find it difficult to afford marriage. The erosion of economic opportunity among less-educated blacks is consistent with the sharply declining marriage rates that we observe. Indeed, we demonstrate that a never-married individual who is unemployed or involuntarily out of the labor force for any duration in a given year is substantially less likely to marry in the subsequent year than a counterpart who has been employed full-time year-round.

The analysis presented here allows us to consider a number of issues concerning the centrality of marriage in American life. For many young women, it appears that marriage plays a less significant role in the transition to adulthood than it did just one generation ago. It is thus not possible to make a categorical statement that marriage remains a state that most women will enter at some point in their adult lives. The prevalent view that 90 percent is a historical minimum of the proportion of adults who will eventually marry (Cherlin 1981) must be qualified. Neither is it possible, however, to say that Americans are abandoning marriage as a social institution. Survey data indicate that the overwhelming majority of Americans continue to feel that marriage is desirable. On balance, we would agree with those who see formal marriage as a weaker institution than it once was (e.g., Davis 1986) and as occupying a less central place for blacks than for whites (Rodgers and Thornton 1985).

Broad statements about the role of marriage in society today fail to acknowledge the very different paths by which various groups of women have come to remain unmarried. Nor do they tell us whether those paths have been taken by choice or have been involuntarily imposed. Resolving these issues is critical if we are to have a better sense of whether trends toward lower marriage rates will continue or will reverse themselves; in turn, we shall better

understand the ramifications of these trends.

It is apparent from our analysis that the transition that has taken place in the marriage patterns of American women over the past few decades is not likely to proceed smoothly into the future. First, the relative scarcity of males that has contributed to the female marriage squeeze has begun to reverse itself — both for blacks and whites. Thus, “marriageable men” will become increasingly abundant, which should tend to boost female marriage rates. Second, the United States economy is just beginning to undergo a major transition from being a labor surplus economy to being a labor shortage economy. This transition is partly a consequence of the baby bust generation coming of working age and partly a consequence of the inevitable slowdown in the growth of women’s labor market activity. As labor markets tighten over the remaining years of this century, unemployment rates should decline and workers should be able to command higher wage and salary compensation. As the economic outlook for men and women brightens, an important barrier to marriage for many will be removed. Consequently, marriage rates may be expected to increase as the labor market becomes more of a sellers’ market.

The fact that the demographic and economic factors that seem to have been responsible in part for the transition over the past few decades in American marriage patterns are now shifting gear provides a sound basis for thinking that further changes will yet occur. Along these lines, one might actually expect there to be some return to pre-baby boom marriage patterns.

However, it is important to recognize that neither demography nor economy should be deemed to be destiny. Other factors surely impinge on the marriage process. We should note that (a) as men adapt to the new roles of women and, in particular, adopt a more accepting, egalitarian view towards the workforce participation of women, and (b) as the public and private sectors recognize the need to accommodate the changing nature of

American families (e.g., by way of the provision of child care and parental leave), some of the existing disincentives associated with marriage may be diminished. On the other hand, we may witness more and more women rejecting marriage in favor of other paths now open to them.

Last, we must underscore the fact that post-war changes in norms and expectations regarding marriage, out-of-wedlock childbearing, and family structure, and the extent to which the underclass is insulated from the demographic and economic changes that are now taking place, act in concert to confound our effort to predict the direction of trends in marriage, much less the extent and speed with which a transition will take place. The issue of whether and how fast marriage behavior changes is an important one. Further research will help us to determine the relative strength of each of the several forces that influence this behavior, and only then will we be able to better assess the future course of American marriage patterns.

APPENDIX: The Coale-McNeil Marriage Model

The Coale-McNeil marriage model is based on the observation by Coale (1971) that age distributions of first marriages are structurally similar in different populations. As shown by Coale, these distributions tend to smooth, unimodal, skewed to the right, and have density close to zero below age fifteen and above age fifty.

Coale also observed that the differences in age-at-marriage distributions across female populations are largely accounted for by differences in their means, their standard deviations, and their cumulative values at the older ages, for example, age 50. The particular form of the model that we shall use, which characterizes any observed distribution, was derived by Rodriguez and Trussell (1980):

$$g(a) = \frac{E}{\sigma} 1.2813 \exp \left\{ -1.145 \left[\frac{a-\mu}{\sigma} + 0.805 \right] - \exp \left[-1.896 \left(\frac{a-\mu}{\sigma} + 0.805 \right) \right] \right\}, \quad (1)$$

where $g(a)$ is the proportion marrying at age a in the observed population and μ , σ , and E are, respectively, the mean and standard deviation of age at first marriage (for those who ever marry) and the proportion ever marrying.

It is interesting to note that Coale and McNeil's model distribution of first marriage by age (e.g., equation (1)) arises as the convolution of an infinite number of mean-corrected exponential distributions whose parameters increase in arithmetic sequence. Moreover, Coale and McNeil (1972) have shown that this distribution is very closely approximated by the convolution of the three exponential distributions with the largest exponents (in the infinite sequence) and a normal distribution. This latter property of the Coale-McNeil model gives rise to an appealing behavioral interpretation of the model. According to this interpretation, each of the three exponential distributions characterizes the waiting time between two

premarital stages (i.e., between the commencement of dating and ultimately meeting one's spouse, between meeting the spouse and engagement, and between engagement and marriage); the normal distribution describes the age of entry of women into the marriage market. This interpretation received some empirical support in the original paper by Coale and McNeil in a direct test using data on the length of time that a sample of French husbands and wives knew each other before marrying.

Subsequent research, however, has done little to confirm or deny the behavioral interpretation of the model. Nevertheless, a number of studies have provided additional support for the ability of the model to fit first marriage data (see, e.g., Bloom and Bennett 1988; Ewbank 1974; Rodriguez and Trussell 1980; Trussell 1980; Trussell and Bloom 1983). To some extent, the good fit may be due to the flexibility of three-parameter models to fit distributions that are smooth, unimodal, and skewed to the right. It is also likely that the Coale-McNeil model performs well because it is based on the marriage rates for an actual population. In other words, even though the true model generating a given distribution of marriage rates is unknown, the Coale-McNeil model may fit well (and better than a purely theoretical model such as that due to Hernes (1972) or a purely ad hoc empirical model such as that due to Keeley (1979)) because the true model is captured implicitly in the rates on which it (i.e., the Coale-McNeil model) is based.

The parameters of the above equation may be estimated in a variety of ways depending on the nature of the available data. In the present application we work with survey data on age at first marriage for individual women and use a maximum likelihood estimator. Thus, for our sample of all women (i.e., a random sample of ever-married and never-married women in a cohort), we will estimate μ , σ , and E by maximizing the following log likelihood function:

$$\log L_A = \sum_{i \in M} \log g[a_i^m | \mu, \sigma, E] + \sum_{i \in M} \log [1 - G(a_i^s | \mu, \sigma, E)] \quad , \quad (2)$$

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where a_i^m is the age at first marriage for each individual, i , who has married (the set M), a_i^s is the age at the time of the survey for each never-married individual (the set \bar{M}), and $G(\cdot)$ is the cumulative distribution function for the density function $g(\cdot)$ expressed in equation (1). The second summation on the right hand side of equation (2) accounts for censoring which will be present to the extent that not all women who ultimately do marry will have done so by the time of the survey.

Following Trussell and Bloom (1983), we extend this model to allow for covariate effects by specifying a functional relationship between the parameters of the model distribution and a set of covariates. For example, we may specify these relationships in linear form as follows:

$$\mu_i = X_i' \alpha$$

$$\sigma_i = Y_i' \beta$$

$$E_i = W_i' \gamma \quad ,$$

where X_i , Y_i , and W_i are the vector values of characteristics of individual, i , that determine respectively, μ_i , σ_i , and E_i , and where α , β , and γ are the associated parameter vectors to be estimated.

NOTES

¹An earlier version of this paper was presented at the meetings of the American Sociological Association, Washington, DC, 28 August 1985, and the Population Association of America, Boston, MA, 30 March 1985. We would like to thank Robert Fay, Sanders Korenman, Kathy London, Martin O'Connell, Paul Schultz, Arland Thornton, and three anonymous reviewers for their helpful comments and McKinley Blackburn, William Cunningham, Margaret Greene, Susan Kelley, and Cecilia Rouse for excellent research assistance. This work has been supported in part by a grant from the Rockefeller Foundation's Gender Roles Program.

²There are too few women of other races in the 1985 Current Population Survey to adequately analyze their marriage patterns.

³Due to the relatively small sample size of black women with a college degree, we employ the category, education greater than a high school degree. For the sake of comparability, we use the same categorization for white women, although it should be noted that such a classification strategy does mask group variation in marriage rates among women with more than a high school degree.

⁴If the increase in births taking place during the 1950s were operating alone, that is, without the discrepancy in the number of males and females that exists at the time of birth, then white females born in a given year over this period would have outnumbered their male counterparts born two years earlier. However, the sex ratio at birth among whites

(approximately 1.05) offsets this would-be majority of females.

⁵It should be noted that these dependent variables refer to individuals in the labor force. If educational attainment of blacks relative to whites improved over time, and if those individuals with the best labor market prospects were those attending school, then the estimates in Table 3 would be misleading. We explored this possibility by estimating models that included school enrollment rates as an independent variable, but found no support for this hypothesis.

⁶The story behind Figure 6 is much the same when we examine father's education.

REFERENCES

- Aschenbrenner, Joyce. 1973. "Extended Families among Black Americans." Journal of Comparative Family Studies 4: 257-68.
- Auletta, Ken. 1982. The Underclass. New York: Random House.
- Bane, Mary Jo. 1976. Here to Stay: American Families in the Twentieth Century. New York: Basic Books.
- Bernard, Jessie. 1966. Marriage and Family among Negroes. Englewood Cliffs: Prentice-Hall.
- Blackburn, McKinley, and David E. Bloom. 1987. "The Effect of Welfare on Family Structure." Unpublished manuscript.
- Bloom, David E. 1982. "What's Happening to the Age at First Birth in the United States?" Demography 19: 351-70.
- _____, and Neil G. Bennett. 1988. "Modeling American Marriage Patterns." Unpublished manuscript.
- Center for the Study of Social Policy. 1984. "The 'Flip-Side' of Black Families Headed by Women: The Economic Status of Black Men." Washington, DC.
- Cherlin, Andrew J. 1981. Marriage, Divorce, Remarriage. Cambridge: Harvard University Press.
- _____. 1980. "Postponing Marriage: The Influence of Young Women's Work Expectations." Journal of Marriage and the Family 42: 355-65.
- Coale, Ansley J. 1971. "Age Patterns of Marriage." Population Studies 25: 193-214.
- _____, and Donald R. McNeil. 1972. "The Distribution of Age at First Marriage in a Female Cohort." Journal of the American Statistical Association 67: 743-49.
- Cox, Oliver. 1940. "Sex Ratios and Marital Status among Negroes." American Sociological Review 5: 937-47.
- Darity, William Jr. and Samuel Myers, Jr. 1983. "Changes in Black Family Structure: Implications for Welfare Dependency." American Economic Review 73: 59-64.
- Davis, Kingsley. 1986. "The Future of Marriage." In Contemporary Marriage: Comparative Perspectives of a Changing Institution, edited by Kingsley Davis with A. Grossbard-Schechtman. New York: Russell Sage Foundation.

- Edelman, Marian Wright. 1987. Families in Peril: An Agenda for Social Change. Cambridge, MA: Harvard University Press.
- Ellwood, David T., and Mary Jo Bane. 1985. "The Impact of AFDC on Family Structure and Living Arrangements." In Research in Labor Economics, edited by Ronald Ehrenberg. Greenwich, Connecticut: JAI Press.
- Espenshade, Thomas. 1986. "The Recent Decline of American Marriage: Blacks and Whites in Comparative Perspective." In Contemporary Marriage: Comparative Perspectives of a Changing Institution, edited by Kingsley Davis with A. Grossbard-Schechtman. New York: Russell Sage Foundation.
- Evans, M. D. R. 1986. American Fertility Patterns: A Comparison of White and Nonwhite Cohorts Born 1903-56. Population and Development Review 12: 267-93.
- Ewbank, Douglas. 1974. An Examination of Several Applications of the Standard Pattern of Age at First Marriage. Unpublished Ph.D. Dissertation, Princeton University.
- Farley, Reynolds. 1984. Blacks and Whites: Narrowing the Gap? Cambridge: Harvard University Press.
- _____, and Walter Allen. 1987. The Color Line and the Quality of Life in America. New York: Russell Sage Foundation.
- Furstenberg, Frank F., Jr. 1976. Unplanned Parenthood. New York: Free Press.
- Glick, Paul. 1981. "A Demographic Picture of Black Families." In Black Families, edited by Harriette McAdoo. Beverly Hills: Sage Publications.
- Goldscheider, Frances Kobrin and Linda J. Waite. 1986. "Sex Differences in the Entry into Marriage." American Journal of Sociology 92: 91-109.
- Guttentag, Marcia, and Paul F. Secord. 1983. Too Many Women? The Sex Ratio Question. Beverly Hills: Sage Publications.
- Harrington, Michael. 1984. The New American Poverty. New York: Holt, Rinehart and Winston.
- Heise, Jerold. 1975. The Case of the Black Family: A Sociological Inquiry. New York: Columbia University Press.
- Hernes, Gudmund. 1972. "The Process of Entry into First Marriage." American Sociological Review 37: 173-82.
- Hill, Robert B. 1972. The Strength of Black Families. New York: Emerson Hall.
- Hofferth, Sandra L., Joan R. Kahn, and Wendy Baldwin. 1987. "Premarital Sexuality Activity among U.S. Teenage Women over the Past Three Decades." Family Planning Perspectives 19: 46-53.
- Hoffman, Saul D. 1988. "Do AFDC Benefits Affect Family Structure? A Review of Recent Evidence." Unpublished manuscript.

- Hogan, Dennis P. and Evelyn Kitagawa. 1985. "The Impact of Social Status, Family Structure, and Neighborhood on the Fertility of Black Adolescents." American Journal of Sociology 90: 825-55.
- Keeley, Michael C. 1979. "An Analysis of the Age Pattern of First Marriage." International Economic Review 20: 527-44.
- Martin, Elmer and Joanne Mitchell Martin. 1978. The Black Extended Family. Chicago: The University of Chicago Press.
- Mason, Karen Oppenheim, John L. Czajka, and Sara Arbor. 1976. "Change in U.S. Women's Sex-Role Attitudes, 1964-1974." American Sociological Review 41: 573-96.
- McAdoo, Harriette (ed.). 1978. "Factors Related to Stability in Upwardly Mobile Black Families." Journal of Marriage and the Family 40: 761-76.
- Moore, Kristin, Margaret C. Simms, and Charles L. Betsey. 1986. Choice and Circumstance: Racial Differences in Adolescent Sexuality and Fertility. New Brunswick, NJ: Transaction Books.
- Moynihan, Daniel Patrick. 1986. Family and the Nation. New York: Harcourt Brace Jovanovich.
- _____. 1965. The Negro Family: The Case for National Action. Washington, DC: Office of Policy Planning and Research, U.S. Department of Labor.
- Nobles, Wade. 1979. "Toward an Empirical and Theoretical Framework for Defining Black Families." Journal of Marriage and the Family 40: 679-690.
- Parelius, Ann P. 1975. "Emerging Sex-Role Attitudes, Expectations and Strains among College Women." Journal of Marriage and the Family 37: 146-153.
- Rainwater, Lee and William L. Yancey. 1967. The Moynihan Report and the Politics of Controversy. Cambridge: The M.I.T. Press.
- Regan, Mary C. and Helen E. Roland. 1985. "Rearranging Family and Career Priorities: Professional Women and Men of the Eighties." Journal of Marriage and the Family 47: 985-92.
- Reid, John. 1982. "Black America in the 1980's." Population Bulletin 37. Washington, DC: Population Reference Bureau.
- Rodgers, Willard C. and Arland Thornton. 1985. "Changing Patterns of First Marriage in the United States." Demography 22: 265-79.
- Rodriguez, German and James Trussell. 1980. "Maximum Likelihood Estimation of the Parameters of Coale's Model Nuptiality Schedule from Survey Data." Technical Bulletin No. 7. London: World Fertility Survey.
- Stack, Carol B. 1974. All Our Kin. New York: Harper and Row.

Trussell, James. 1980. "Illustrative Analysis: Age at First Marriage in Sri Lanka and Thailand." Scientific Reports No. 13. London: World Fertility Survey.

_____, and David E. Bloom. 1983. "Estimating the Covariates of Age at Marriage and First Birth." Population Studies 37: 403-16.

U.S. Bureau of the Census. 1988. "Educational Attainment in the United States: March 1987 and 1986." Current Population Reports, P-20, No. 428.

Waite, Linda J., Frances Kobrin Goldscheider, and Christina Witsberger. 1986. "Nonfamily Living and the Erosion of Traditional Family Orientations among Young Adults." American Sociological Review 51: 541-54.

Weitzman, Lenore J. 1985. The Divorce Revolution: The Unexpected Social and Economic Consequences for Women and Children in America. New York: Free Press.

Wilson, William J. 1978. The Declining Significance of Race. Chicago: The University of Chicago Press.

_____. 1987. The Truly Disadvantaged. Chicago: The University of Chicago Press.

_____, and Kathryn M. Neckerman. 1986. "Poverty and Family Structure: The Widening Gap between Evidence and Public Policy Issues." In Fighting Poverty: What Works and What Doesn't, edited by Sheldon H. Danziger and Daniel H. Weinberg. Cambridge, MA: Harvard University Press.

Zelnik, Melvin, John F. Kantner, and Kathleen Ford. 1981. Sex and Pregnancy in Adolescence. Beverly Hills, CA: Sage Publications.

Table 1: Parameter estimates using the Coale-McNeil marriage model based on data referring to black women and white women, June 1985 Current Population Survey.*
(Standard errors are in parentheses.**)

	<u>White</u>				<u>Black</u>			
			<u>Period of Birth</u>					
	<u>Early</u> <u>1950s</u>	<u>Late</u> <u>1940s</u>	<u>Early</u> <u>1940s</u>	<u>Late</u> <u>1930s</u>	<u>Early</u> <u>1950s</u>	<u>Late</u> <u>1940s</u>	<u>Early</u> <u>1940s</u>	<u>Late</u> <u>1930s</u>
μ Constant	21.86 (.07)	21.62 (.06)	21.24 (.07)	20.99 (.07)	22.51 (.25)	21.95 (.20)	22.88 (.29)	21.73 (.27)
σ Constant	4.26 (.06)	4.12 (.06)	3.88 (.05)	3.96 (.06)	5.17 (.24)	4.44 (.17)	5.66 (.25)	5.38 (.24)
E Constant	.907 (.005)	.937 (.004)	.957 (.003)	.951 (.004)	.750 (.018)	.814 (.016)	.869 (.015)	.885 (.015)

* μ refers to the mean age at first marriage for those in the cohort who ever marry; σ , to the standard deviation of the age at first marriage; and E, to the proportion of women in the cohort who are expected to ever marry.

** All coefficients significant at the .05 level.

Table 2: Parameter estimates using the Coale-McNeil marriage model with covariates, June 1985 Current Population Survey. (Standard errors are in parentheses.)

	<u>White</u>				<u>Black</u>			
			<u>Period of Birth</u>					
	<u>Early</u> <u>1950s</u>	<u>Late</u> <u>1940s</u>	<u>Early</u> <u>1940s</u>	<u>Late</u> <u>1930s</u>	<u>Early</u> <u>1950s</u>	<u>Late</u> <u>1940s</u>	<u>Early</u> <u>1940s</u>	<u>Late</u> <u>1930s</u>
Constant	19.66** (.15)	19.81** (.15)	19.63** (.14)	19.97** (.15)	20.81** (.47)	21.58** (.49)	21.91** (.47)	21.02** (.43)
μ Ed = HS	1.22** (.17)	1.02** (.17)	1.14** (.16)	.65** (.17)	1.66** (.60)	.05 (.57)	1.18* (.64)	.73 (.57)
Ed > HS	3.66** (.19)	3.10** (.18)	2.87** (.18)	2.42** (.21)	2.57** (.73)	.92 (.58)	1.57** (.65)	1.56** (.69)
Constant	3.48** (.14)	3.74** (.13)	3.60** (.13)	3.89** (.13)	4.48** (.46)	4.83** (.43)	5.30** (.43)	5.19** (.39)
σ Ed = HS	.04 (.15)	-.36** (.15)	-.28** (.14)	-.46** (.15)	.47 (.56)	-.68 (.49)	.42 (.59)	-.06 (.63)
Ed > HS	1.08** (.17)	.68** (.16)	.51** (.16)	.66** (.18)	1.06 (.67)	-.43 (.51)	.45 (.59)	.68 (.63)
Constant	.913** (.012)	.927** (.010)	.948** (.009)	.951** (.008)	.689** (.041)	.752** (.037)	.824** (.031)	.843** (.032)
E Ed = HS	.016 (.014)	.031** (.011)	.023** (.010)	.018** (.009)	.089* (.049)	.040 (.044)	.062 (.039)	.045 (.040)
Ed > HS	-.028* (.015)	-.006 (.012)	-.003 (.011)	-.029** (.012)	.059 (.053)	.131** (.043)	.068* (.040)	.097** (.040)

*Coefficient significant at the .10 level.

**Coefficient significant at the .05 level.

Table 3: Trends and differentials in the proportions unemployed (U) and the log earnings (E) among blacks and whites. (Data are drawn from the 1968-1986 March Current Population Surveys; ordinary least squares estimates; t-statistics in parentheses.)

A. 20-24 year-olds

	<u>U</u>		<u>log E</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
Intercept	.0428** (2.49)	.0247 (1.21)	9.70** (306)	9.45** (169)
Race = Black	.0296 (1.44)	.0246 (1.01)	-.0104 (-0.27)	-.054 (-0.80)
Ed < HS	.0247 (1.20)	.0666** (2.73)	-.123** (-3.24)	-.388** (-5.80)
Ed = HS	-.0067 (-0.32)	.0055 (0.23)	.0155 (-0.41)	-.135** (-2.02)
Race x Ed < HS	-.0382 (-1.31)	.0948** (2.75)	-.227** (-4.22)	-.0371 (-0.39)
Race x Ed = HS	-.0182 (-0.63)	.0244 (0.71)	-.144** (-2.68)	.0035 (-0.04)
Race x Time	.0071** (3.73)	.0076** (3.37)	-.0079** (-2.26)	.0001 (0.01)
Ed < HS x Time	.0085** (4.47)	.0062** (2.77)	-.0058* (-1.66)	.0056 (0.91)
Ed = HS x Time	.0039** (2.07)	.0025 (1.12)	-.0051 (-1.46)	-.0001 (-0.02)
Race x Ed < HS x Time	.0051* (1.91)	-.0008 (-0.25)	.0037 (0.74)	.0027 (0.31)
Race x Ed = HS x Time	.0010 (0.38)	.0003 (0.09)	.0027 (0.54)	-.0029 (-0.34)
R ²	.934	.932	.981	.955

Table 3 (cont'd): Trends and differentials in the proportions unemployed (U) and the log earnings (E) among blacks and whites. (Data are drawn from the 1968-1986 March Current Population Surveys; ordinary least squares estimates; t-statistics in parentheses.)

B. 25-29 year-olds

	<u>U</u>		<u>log E</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
Intercept	.0153 (1.10)	.0239 (1.30)	10.06** (340)	9.78** (295)
Race = Black	-.0078 (-0.47)	-.0049 (-0.22)	-.185** (-5.23)	-.0315 (-0.79)
Ed < HS	.0269 (1.62)	.0445** (2.02)	-.263** (-7.41)	-.457** (-11.5)
Ed = HS	-.0064 (-0.39)	.0150 (0.68)	-.121** (-3.40)	-.241** (-6.07)
Race x Ed < HS	-.0085 (-0.36)	.0071 (0.23)	-.119** (-2.37)	-.171** (-3.04)
Race x Ed = HS	.0275 (1.17)	.0085 (0.27)	-.0114 (-0.23)	-.0626 (-1.11)
Race x Time	.0064** (4.18)	.0058** (2.83)	.0013 (0.39)	-.0051 (-1.39)
Ed < HS x Time	.0062** (4.04)	.0056** (2.77)	-.0068** (-2.09)	-.0001 (-0.04)
Ed = HS x Time	.0038** (2.49)	.0017 (0.84)	-.0005 (-0.16)	.0016 (0.44)
Race x Ed < HS x Time	.0020 (0.91)	.0047 (1.61)	.0020 (0.44)	.0126** (2.43)
Race x Ed = HS x Time	-.0015 (-0.67)	.0014 (0.47)	-.0017 (-0.36)	.0067 (1.29)
R ²	.929	.899	.986	.986

*Coefficient significant at the .10 level.

**Coefficient significant at the .05 level.

Figure 1



— Mean=25; SD=5; E=1.0

- - - Mean=25; SD=5; E=0.7

— Mean=21; SD=5; E=1.0

— Mean=25; SD=3; E=1.0

Figure 2

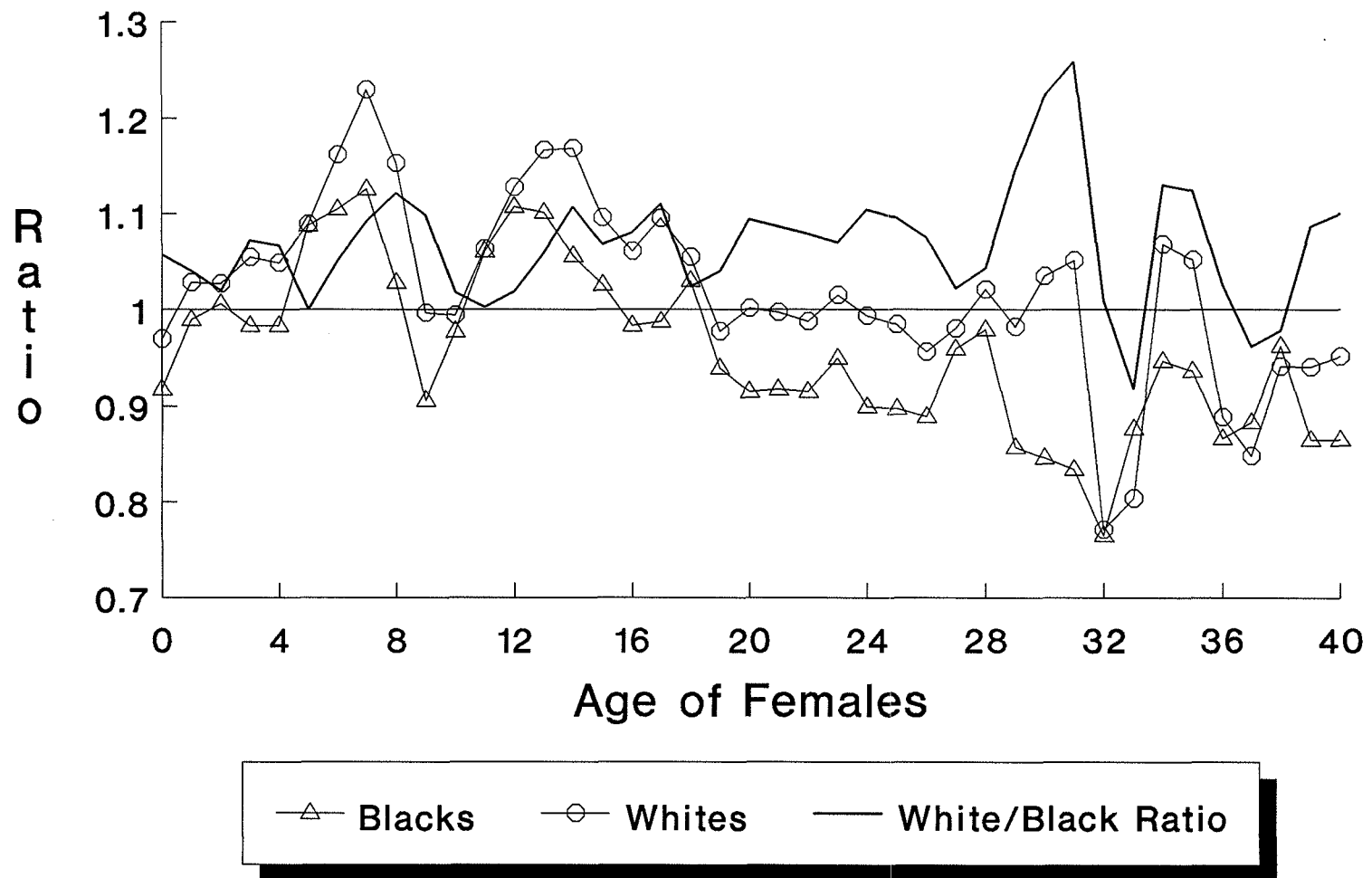
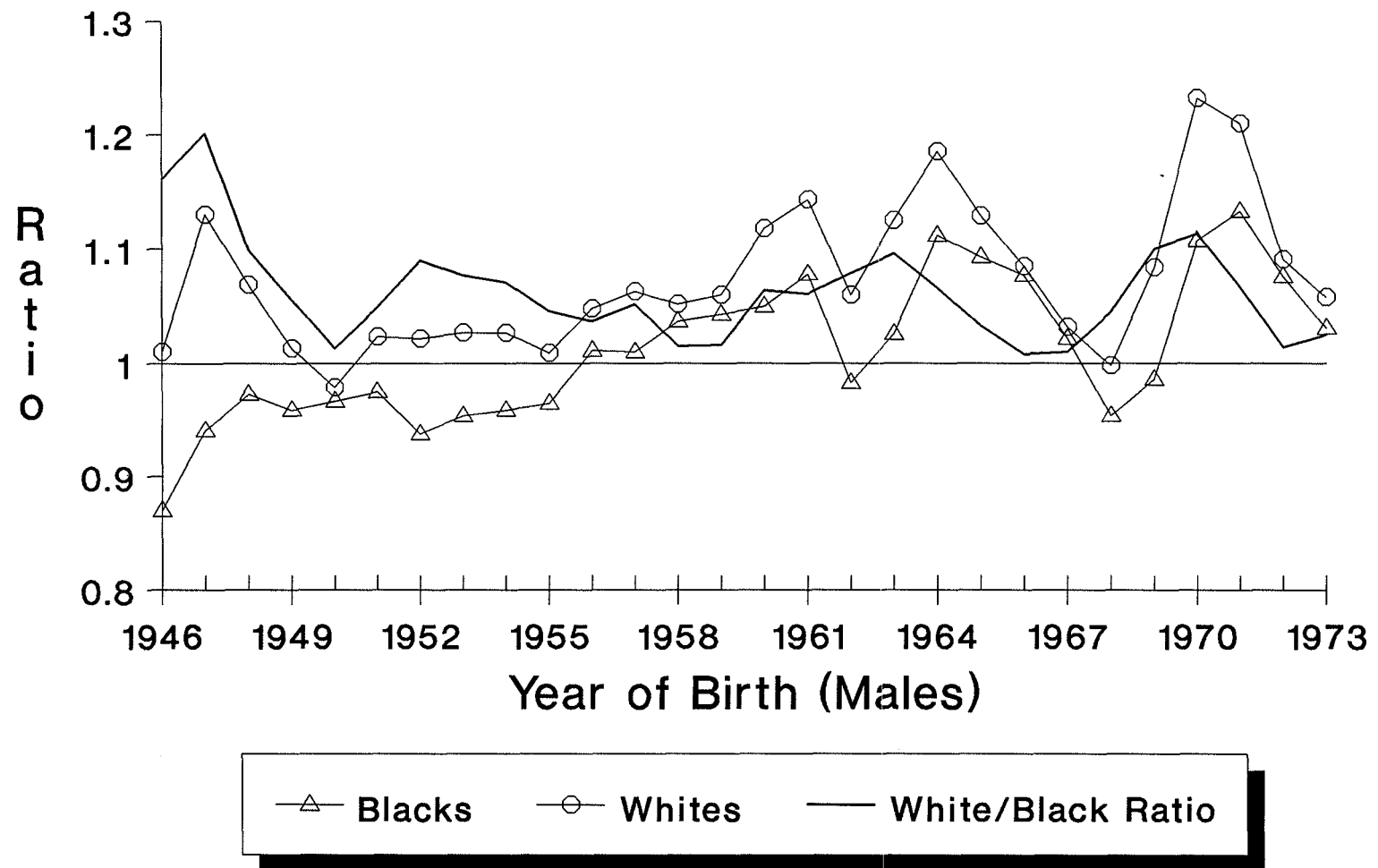
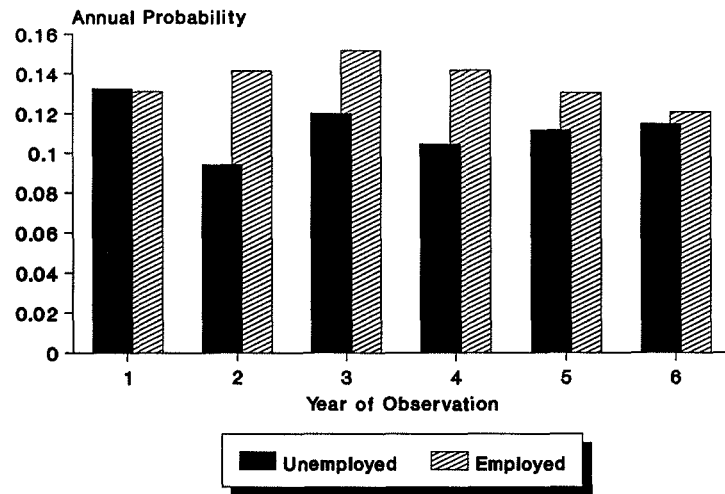


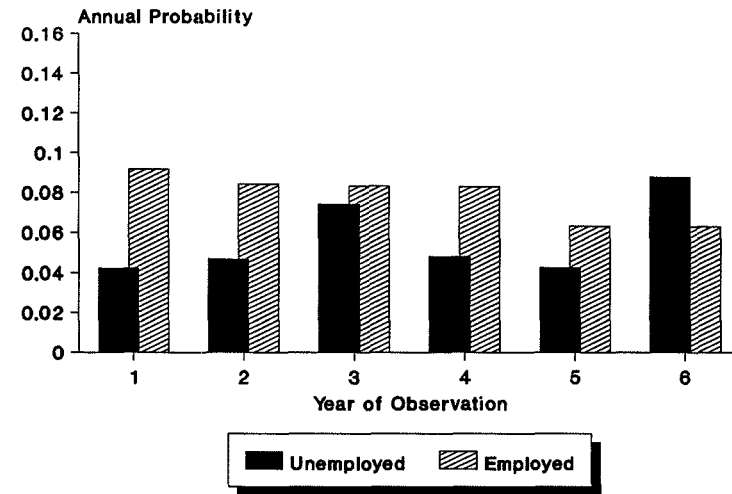
Figure 3



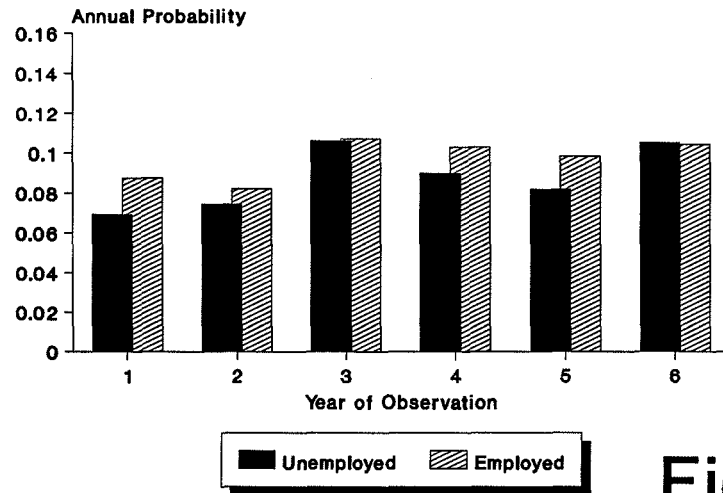
White Women



Black Women



White Men



Black Men

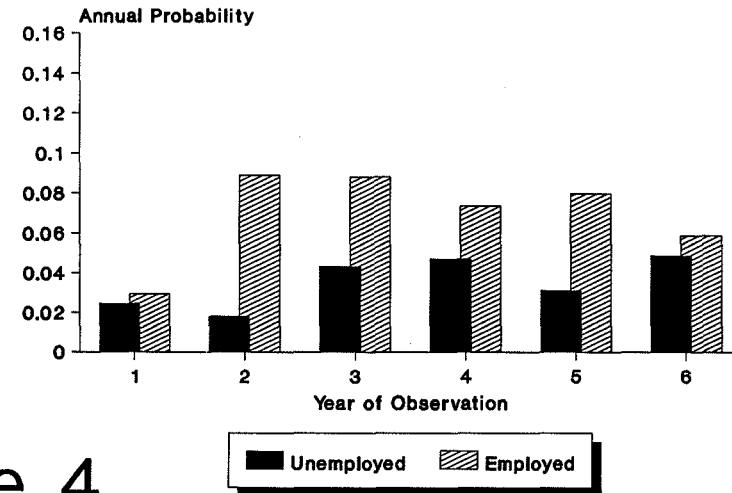


Figure 4

Figure 5

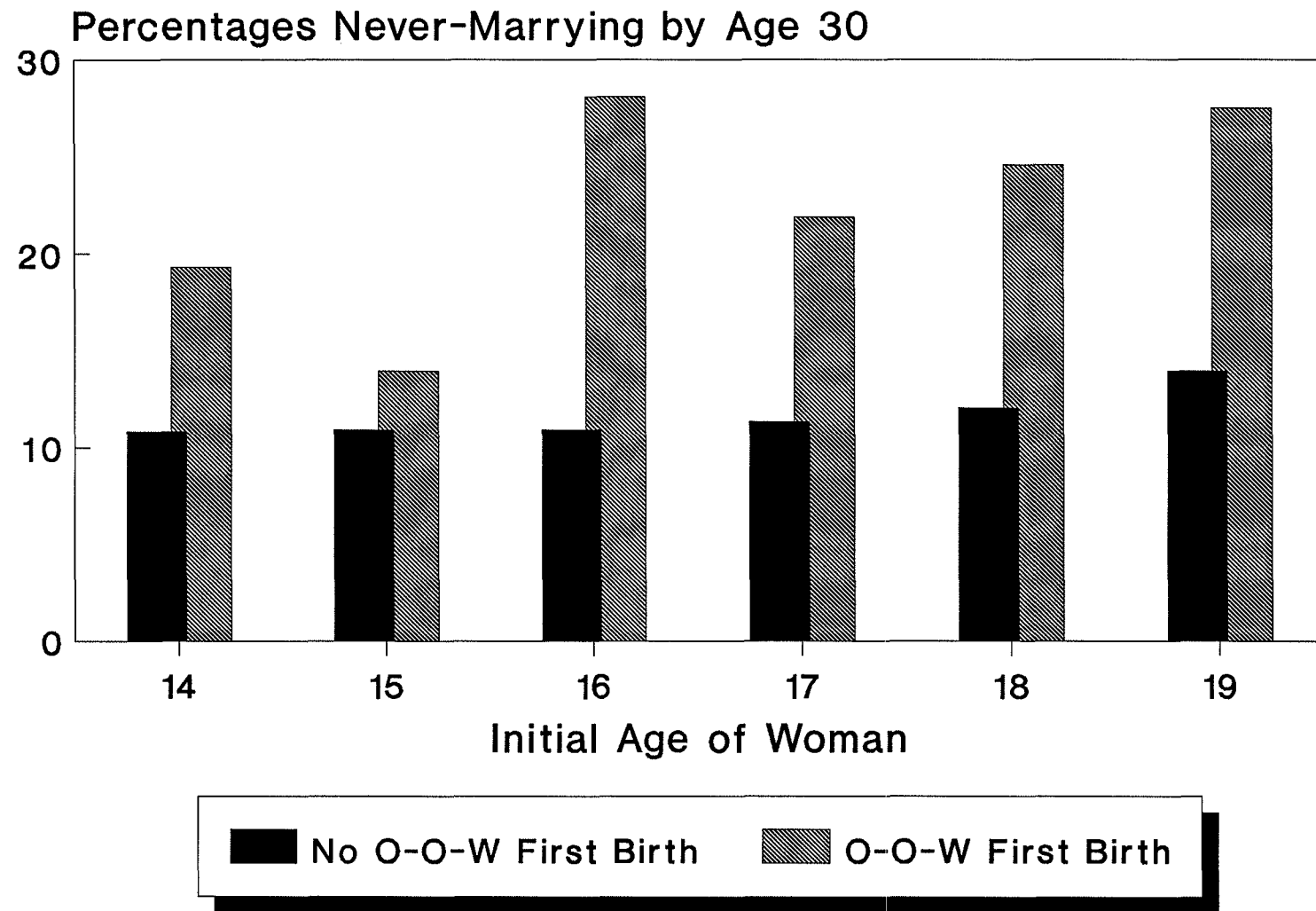
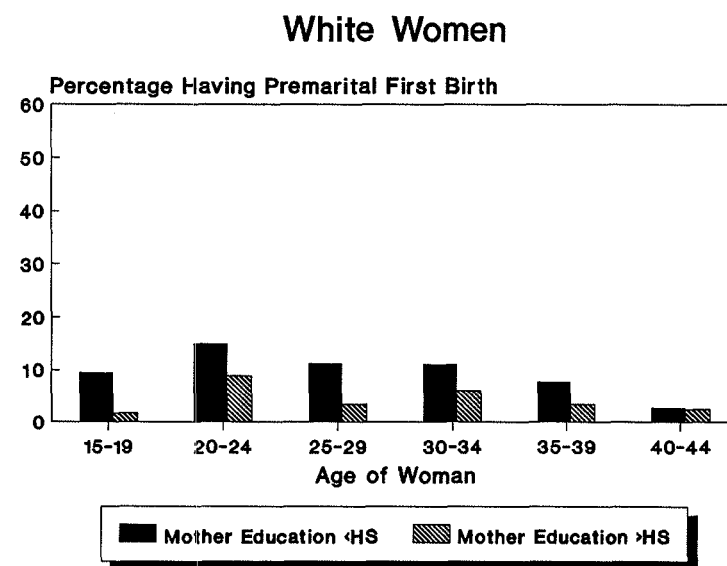
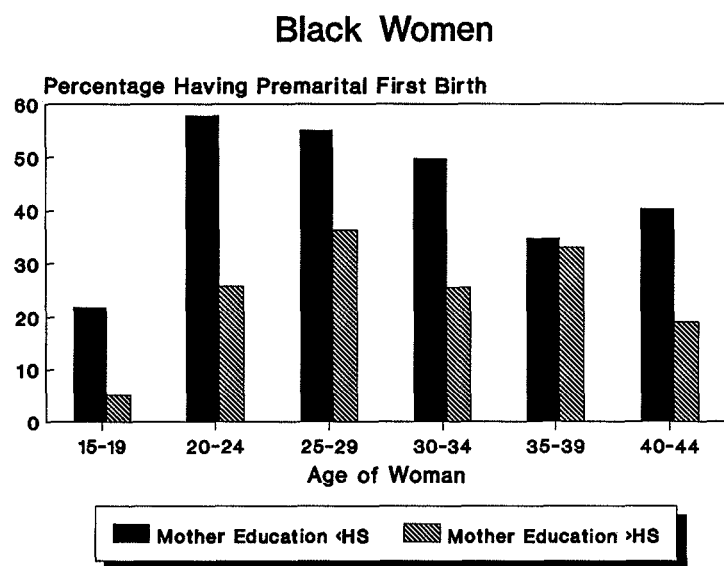


Figure 6



TITLES FOR FIGURES 1-6

Figure 1. The Coale-McNeil marriage model: Sample model schedules.

Figure 2. Ratio of males of a given age ($x+2$) to females two years younger (x) in 1980. (Data are adjusted for underenumeration.)

Figure 3. Ratio of the number of male births in a given year (t) to the number of female births two years later ($t+2$). (Births are adjusted for underregistration.)

Figure 4. Annual probabilities of first marriage classified by whether an individual was employed full-time year-round or had experienced some spell either unemployed or involuntarily out of the labor force in the prior year. (Data pertain to the 1979 Youth Cohort of the National Longitudinal Surveys of Labor Market Experience.)

Figure 5. Percentage of never-married teenage women (initially observed at single years of age 14 through 19) who married by age 30, classified by whether a woman had an out-of-wedlock birth in the year of age at which a woman was initially observed. (Data are from Cycle III of the National Survey of Family Growth.)

Figure 6. Percentage of women aged 15-19 through 40-44 in 1982 who ever had a premarital first birth, classified by a woman's mother's educational level. (Data are from Cycle III of the National Survey of Family Growth.)