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BLACK AND WHITE MARRIAGE PATTERNS: WHY SO DIFFERENT?

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BLACK AND WHITE MARRIAGE PATTERNS: WHY SO DIFFERENT?

ABSTRACT

This paper examines the process of entry into first marriage in the United States for blacks and whites. These patterns are analyzed and compared using a statistical model suitable for the analysis of survey data on age at marriage for cohorts who have yet to complete their marriage experience. Estimates of this model reveal three main differences between the first marriage patterns of black women and white women: (1) lower proportions of blacks marry than whites, (2) the proportion of women who ever-marry has declined substantially across cohorts of black women but only modestly across cohorts of white women, and (3) increased education is associated with a reduced probability of ever-marrying for white women, but an increased probability for blacks. We then explore three alternative explanations for the observed differences in the marriage patterns of black and white women. Overall, we are able to demonstrate the consistency of the racial differences in nuptiality patterns with our three alternative explanations.

BLACK AND WHITE MARRIAGE PATTERNS: WHY SO DIFFERENT?[1]

Introduction

For some time there has been an awareness that marriage rates, and family formation in general, have differed for whites and blacks. In 1965, the Moynihan report saw black family structure disintegrating and the black community enmeshed in a "tangle of pathology". Moynihan and other proponents of this view (Bernard, 1966; Rainwater, 1966) found that many problems faced by blacks, such as crime, delinquency, and the lack of upward mobility were due to a matriarchal culture and high rates of illegitimacy and marital dissolution.

The main objections to this view were (1) to its attribution of the "pathological" behavior of lower-class black families to individuals rather than to defects in the social system, (2) to the view of family structure as the cause of black-white inequality (Rainwater and Yancey, 1967), and (3) to the adoption of an attitude of "blaming the victim" (Hill, 1972). Some sought to show that while some 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 when compared to the norms of the white middle class (Hill, 1972; Nobles, 1974), 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.

The first approach sees the greater tendency of black families to become extended and to rely on kin networks for financial and social support as a rational and creative response to difficult economic situations (Stack, 1974). However, some view the extended family as less a creative adaptation to poverty than as a fundamental institution of black culture (Aschenbrenner, 1973; Shimkin et al., 1978) whose importance is equally evident among middle-class and lower-class black families (McAdoo, 1978). Each of these perspectives suggests that within this type of family structure, there may be incentives and pressures not to form families along nuclear lines and in particular to reject marriage (Aschenbrenner, 1973; Stack, 1974; Martin and Martin, 1978).

Much contemporary research on the family is motivated by an awareness that patterns of marriage and family formation in the United States have changed dramatically in recent years. Trends such as the thirty percent decline in the first marriage rates of women during the twenty years between 1963 and 1982, the two-year increase in the median age at first marriage during the same period (National Center for Health Statistics, 1985), and the sharp decrease in the proportion of the population living in husband/wife families over the past twenty-five years have prompted some observers to argue that marriage as a social institution has been waning (Espenshade, 1985). Other scholars emphasize that marriage has remained an essential fact of American family life (Davis, 1972; Kitagawa, 1979; Rodgers and Thornton, 1985). Despite factors making single life more attractive--for example, the greater financial independence of women and changing mores regarding cohabitation--many researchers (Thornton and Freedman, 1983) argue that

marriage is unlikely to lose its preeminence as a form of union. Finally, there are those who note that many of these trends have been much more acute among blacks than whites. Rodgers and Thornton (1985) found that the decline in marriage probabilities among whites and blacks which began in the 1950s started earlier and lasted longer for blacks, resulting in markedly lower probabilities for them. Evidence such as this leads some to speculate that marriage maintains its centrality for most white Americans but does so to a lesser and lesser extent for blacks (Cherlin, 1981).

Recent concern with differences in black and white family organization is not expressed solely in the debate over whether demographic patterns such as differential rates of marriage are rooted in class position or cultural inheritances. Many have found it important to examine economic well-being in conjunction with family composition (Wilson, 1982; Moynihan, 1985). The decline in husband/wife families goes hand in hand with the explosive growth of female-headed families: By 1980, 12 percent of white families and 40 percent of black families were headed by women not currently married, representing a significant increase from figures a decade earlier (9 and 28 percent, respectively). Because such families tend to be most impoverished and are increasingly headed by single never-married women (Darity and Myers, 1983), it becomes imperative to examine the reasons behind declining rates of marriage.[2]

In the present paper, we consider questions about how black and white Americans structure their families and how the processes by which they do so differ. Our analysis reveals much sharper black-white differences than previously identified. Many prior analyses are

inadequate, as they rely on period 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 cycle or cohort perspective.

The Model

We apply the Coale-McNeil marriage model (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 statistics: the mean age at first marriage, the standard deviation of age at first marriage, and the proportion ever-marrying in the cohort. The wide variety of first marriage patterns that can be captured by the Coale-McNeil model is 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 who 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 (1985) have shown, using artificial truncation experiments in which the model is fit to several purposely abbreviated data sets, that the model performs well in extrapolation. Thus by fitting the model to recent survey data, we can determine how marriage patterns have changed across cohorts.

The Data

Our analysis of marriage patterns of American women is based on data from the June 1982 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 70,000 households during which information on a variety of demographic, social, and economic variables is recorded.

In the June 1982 CPS, the standard set of questions was supplemented with a retrospective marital history module. Included on the supplementary survey instrument was a question on age at first marriage that was asked of all women aged 18 to 75. Unfortunately, there are few retrospective covariates in the CPS that could sensibly be hypothesized to affect age at marriage. However, we have constructed the following two variables: race (black, white) and education at time of survey (for blacks, less than high school, high school, greater than high school; and for whites, because we have a greater number of observations, less than high school, high school, some college, and at least college). Although the CPS data set permits estimation of only two covariate effects, it is extremely useful in this study because (a) it refers to all women, (b) it includes an exceptionally large number of observations, and (c) it is quite recent.

Results

Table 1 reports parameter estimates associated with five cohorts of women for blacks and whites separately. For each cohort we allow the mean age at first marriage (μ) and the proportion who will ever-marry ($\underline{E}$) to vary with educational attainment.

The results indicate that differences exist between black and white

marriage patterns and that over time these differences have become substantial. Consider first the group of women with less than high school education at the time of the survey. The percentages expected to ever-marry have fallen across cohorts for both white and black women. Ninety-seven percent of white women aged 45 to 49 are expected to marry at least once in their lifetime, with a mean age of first marriage of 19.8 years. Approximately 93 percent of their 25 to 29 year-old counterparts 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 21.2 to 21.1 years. More importantly, however, the proportion of women expected to ultimately marry plummeted from 89 to 57 percent.

Education, as would be 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 marriage. White 25 to 29 year-old women who have had at least a college education are expected to marry 4.1 years later, on average, than those who have not graduated high school. Among blacks in this age group with more than a high school education, the association is similar, with a magnitude of 1.6 years.

Surprising, however, is our finding concerning the relationship between educational attainment and proportions ever-marrying. The magnitude is substantial for both races, however the direction is different. For the young white cohort, a college education is associated with fifteen percent fewer women (78 percent) expected to marry. The magnitude of this relationship has risen dramatically over

time, increasing from under seven percent for the 45 to 49 year-olds. Among black women, a high school education or beyond is consistently positively associated with proportions ever-marrying. The fact that all ten of the relevant coefficients for black women are positive (although only three are significantly so) suggests that black women follow a very different family formation pattern than their white counterparts.

It is further illuminating to use a life table approach to analyze these marriage patterns. Recognizing that marriage, rather than death, can serve as the decrement of interest, we can derive a set of marriage probabilities that are analogous to probabilities that arise from life table analyses. In particular, we derive the probability that a woman will ever-marry given that she has never married by exact age x. This is obviously analogous to the life table value q, except for the fact that some people never do marry, whereas everyone must eventually die. These life table probabilities are graphed in Figure 1 for various race-education combinations within the cohort of women aged 25 to 29 in 1982. It is clear, for example, that the probability of ever-marrying is lower for blacks than whites at all ages.

Table 2 presents these first marriage probabilities for selected ages. A few figures are worth noting. Among 25 to 29 year-old whites we see that from age 25 onward, marriage patterns are essentially identical for the two education groups. That is, the less-educated marry in significantly greater numbers than the more-educated in the early years, however after everyone passes their early twenties the probability that a woman not yet married will ultimately marry is invariant to educational attainment.

From the table it is apparent that 45 to 49 year-olds have higher marriage probabilities at every age than do their 25 to 29 year-old

counterparts. This reflects the fact that the proportions expected to ever marry are higher for the older groups.

Among 25 to 29 year-old white women, those who have attained their 25th birthday without ever-marrying still have a greater than 50 percent chance of marrying in the future. Among black women of the same age, the chances of the more educated women marrying are only one in four, and for the less educated marrying, only one in six. If a woman reaches age 45 and has not yet married, it is clear from Table 2 that her chances of ever-marrying are generally extremely slim.

Discussion

The profound black-white differences in nuptiality patterns revealed by the data raise three important questions: (1) Why, in general, do lower proportions of blacks marry than whites; (2) Why has there been a pronounced decline across cohorts of the percentage of black women who will ever-marry; and (3) Why is increased education associated with a reduced probability of women ever-marrying for whites but an increased probability for blacks?

We consider various arguments that might account for trends and differentials in nuptiality: those relating to the "marriage squeeze", out-of-wedlock childbearing, and economic well-being.

First, the issue of imbalances in male/female ratios provides a partial clue to understanding the different proportions marrying by race. 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. For white women, the imbalance begins around age thirty. For black women this occurs as much as a decade earlier in life, in part

reflecting the high rates of death and incarceration among young black men. Further compounding the squeeze is the fact that women have traditionally tended to marry men who are slightly older. This tendency is a greater problem among blacks because the black population has grown faster over time than the white population.[3] Those women who were born during the upward trend of births in the 1950's and early 1960's are now caught in a bind. There are simply too few men in the older cohorts. It should be the case that the marriage squeeze is most severe for women 30 to 34 in 1982. However, as Table 1 shows, we find that 25 to 29 year-old women, both white and black, are less likely to ultimately marry than 30 to 34 year-olds. Thus while the marriage squeeze undoubtedly is useful in explaining some of the differential in marriage rates between white and black women, it can only partially explain the recent, rapid decrease in the percentage who will ever-marry.

A second argument which helps to explain race differences in marriage patterns centers on the higher rates of out-of-wedlock childbearing among blacks. Typically, marriage has been considered one of the steps in the life cycle that signifies the transition to adulthood (Hogan and Kitagawa, 1985). Its decline, particularly among blacks, may signal a turn towards alternative paths, in particular towards single parenthood.

Some contend that high illegitimacy rates among blacks is partly the result of lower stigma attached to out-of-wedlock childbirth (Bernard, 1966; Furstenberg, 1981). It is also worth noting that black women are more likely to have children at younger ages than white women (Bloom, 1982; Bloom and Trussell, 1984). This is related to the younger age at which black women initiate sexual intercourse. By age 15, about

one-eighth of white women are sexually experienced as compared with almost 40 percent of their black counterparts (Zelnik and Kantner, 1977). Furstenberg (1981) estimates that black women begin sexual activity about three years earlier than whites. Because black women are younger when they begin sexual relations, they are less likely to use contraception and thus are more likely to become pregnant. The earlier timing of the first birth among blacks may be significantly related to the timing and incidence of marriage insofar as it diminishes her opportunities for marriage.

Mothers under 18 are much more unlikely than 18 or 19 year-olds to legitimate their births by marriage because they are unprepared for that adult role; either they are emotionally unready or they lack the financial resources for a viable marriage. Among black teenagers, the majority of births occur to the youngest group, those 15 to 17 years of age, while for white teenagers births are found overwhelmingly among the 18 to 19 year-olds. The latter age group coincides with a number of transitions in the life cycle, such as leaving school, and acquiring a first job (Teachman and Polonko, 1984); therefore, those in this age group are more likely than those younger to legitimate their births. Finally, Furstenberg and Crawford (1978) find that teenage mothers who do not marry are economically better off than those who do. In concurrence with Stack (1974), they suggest that the teenage mother who leaves home to some extent sacrifices the emotional and financial support available from her family.

Although these arguments provide some explanations of why blacks may be more likely or find it more acceptable than whites to forego marriage, it is important to note that one cannot use declining legitimation ratios to explain declining marriage rates; they are simply

two perspectives of the same underlying phenomenon. Thus we must search for independent explanations of the marriage decline.

Economic analysis plays an important role in explaining differences in patterns of marriage, recognizing that a woman may choose, or be forced into, any one of a number of marital statuses according to her economic resources. A particularly promising area of inquiry focuses on the relative levels of white and black male unemployment. For example, black employment relative to white employment has declined, as has the ratio of black to white family income (Munnell, 1978; McQueen, 1978). Many authors have found that the lower rate of participation of black men in the labor force is reflected in the lower incidence of marriage among blacks (Stack, 1974; Glick, 1981; Reid, 1982) and in the rapid growth of black families headed by women (Center for the Study of Social Policy, 1984). Certainly, unemployment is a reason for deferring marriage and the longer people postpone marrying, the more likely they are to forego it entirely, whether voluntarily or involuntarily.

Although the above studies are suggestive of a deteriorating economic situation among blacks, the fact that educational attainment is not accounted for implicitly assumes homogeneity within racial groups. 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 trends and differentials in race differ by educational attainment. Economic data are obtained from the March Current Population Surveys of 1968 through 1984. In particular, we examine three dependent variables: (1) unemployment rates (U), (2) expected annual per capita earnings of those employed full-time year-round (E), and (3) a crude measure of expected per capita earnings of

all members of the labor force, that is, those employed and unemployed, were all to work full-time year round (the product of E and 1-U).

Table 3a focuses on 20 to 24 year-olds since these are the years of peak marriageability. Three sets of regression coefficients are reported for each sex, corresponding to the three 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 capture business cycle effects, 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 decreasing over time more for blacks and for those less-educated than for other groups. Less-educated women of both races are singled out for lower earnings, although no decline over time is apparent. 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 are doubly jeopardized by their race and educational status. Their relative economic circumstances are generally poor and have deteriorated significantly with the passage of time.[4]

Taken together, the rising rate of out-of-wedlock childbearing and the worsening labor market experience among less-educated blacks may be seen as evidence of growing differentiation of blacks by class. Numerous others have observed this segregation as a movement into an

underclass--those permanently consigned to poverty and with little hope of upward mobility--and the working and middle classes (Munnell, 1978; Glasgow, 1981; Auletta, 1982; Farley and Bianchi, 1983; Hogan and Kitagawa, 1985).

For the underclass, which has been estimated to comprise almost one-third of the black population, movement out of poverty is becoming less likely because educational criteria are increasingly important for mobility and because structural changes in the post-war economy prevent blacks from following typical patterns of upward mobility (Wilson, 1978; Harrington, 1985). An expanding underclass, then, whose members are unable to accumulate sufficient resources for marriage, helps to explain the sharply declining rates of marriage among black women.

The issue of marriage avoidance may be directly related to class, in particular, an underclass (Kelly, 1985). Stress associated with the persistent poverty experienced by members of this group may lead both to a reliance on kin networks and to the foregoing of marriage. In addition, even after controlling for education and other background characteristics, blacks have substantially higher rates of marital dissolution than whites (Menken et al., 1981). A woman who sees divorce as common among her friends may interpret her prospects as discouraging enough to dissuade her from marrying. The higher dissolution rates may, in turn, be due to relatively difficult economic circumstances faced by blacks and to the availability of supportive kin networks. Black women seeking a more stable type of familial organization may rely on, rather than marriage, a network of kin which pools and exchanges economic and financial resources (Aschenbrenner, 1973; Stack, 1974). If her potential marriage cannot offer a young woman more security than can her

present kin network, then she may see little reason to marry (Martin and Martin, 1978).

It is not, however, simply the person marrying who considers the economic advantages. Stack's (1974) study of a midwestern black community discusses the potential conflicts that exist between marriage and loyalty to kin. Citing the example of a young woman who received great pressure from her network not to marry, Stack shows that members of kin groups may fear losing the resources and contributions of a member and thus oppose a marriage that would take her out of the network.

Arguments presented above lead some to the conclusion that for blacks, kinship ties are a more important family bond than ties to the nuclear family and that the extended family structure has become appreciably more important relative to the nuclear family structure over the past twenty years (Cherlin, 1981). Extensive and growing commitment to extended families could also explain part of the difference we found by race in marriage rates. However, some researchers take the position that extended families are, in fact, a declining form (Bianchi and Farley, 1979).

The disagreement over the relative importance of the extended family appears to stem from differences in which segments of the population are under consideration and how extension is measured. We have already suggested that extension is a phenomenon associated with the underclass. Others hold that the extended family network has become a characteristic, cultural feature of all black families (Aschenbrenner, 1973; McAdoo, 1978). There is, however, some indication that the degree of extension varies by class, and in particular, that within networks, requests placed and demands received are less numerous for those who

have belonged to the middle class for over a generation (McAdoo, 1978). This suggests a lesser commitment to the extended form among the middle class. Evidence provided by Tienda and Angel (1985), demonstrating that extension appears to be more common among female-headed families of all races while increasing educational attainment works to discourage extension, lends support to this perspective. This view suggests that while extension may be declining overall, for the poorest individuals it remains an important way of coping with poverty.

The question still remains: Why is increased education associated with lower proportions of women ever-marrying among whites but higher proportions among blacks? Clearly, education has a particularly strong effect on the propensity to marry. For highly educated white women, it appears that this trend of marriage deferral is becoming one of foregoing marriage entirely. When educational levels are considered, Cherlin's (1981) statement, "it is unlikely that the lifetime proportions (of young adults) marrying will fall below the historical minimum of 90 percent" must be qualified. As noted above, for the youngest white group with at least a college education, the proportion expected to marry is just 78 percent. Increased education may open career opportunities that are viewed as alternatives to marriage. Because women may now expect to work throughout their adult lives, they may postpone marriage in order to invest in the education that will allow them to obtain better jobs in the future. However, marriage foregone among black women is related to a very different set of circumstances.

It is important to take note, once again, of the economic disparity between less- and more-educated blacks that was revealed in Table 3.

The severe economic distress, as measured by unemployment and earnings, that is associated with less-educated blacks most likely plays a part in preventing marriage in this group from occurring (Rodgers and Thornton, 1985).

While out-of-wedlock childbearing, as discussed above, doubtless reduces a woman's marriageability, here too it is elucidating to examine the prevalence of illegitimacy by class. For example, does premarital childbearing occur disproportionately among women whose parents were less-educated? Table 4 shows, of those women whose mothers achieved less or more than a high school education, the percentage from various cohorts who premaritally gave birth. The results clearly indicate[5] that premarital childbearing is closely related to class, to the extent, of course, that parent's education correlates with class. This is consistent with the findings by Hogan et al. (1985), which reveal that use of contraception at first intercourse by black adolescents varies strongly by social class. Adolescents of higher social class are much more likely to contracept than others and are consequently more likely to be effective users in the future.

Economic hardship and premarital childbearing, then, both of which have a negative impact on the propensity to marry, are concentrated among the less-educated black population. Thus the positive coefficient, seen in Table 1, relating to proportions ever-marrying among better-educated blacks is primarily a reflection of the extraordinarily poor marriage prospects of their less-educated counterparts.

Some have argued that patterns of family formation among middle-class black women are likely to have more in common with those of white women than with those of lower status blacks (Ryder and Westoff, 1971;

Johnson, 1979). To the extent that education can serve as a proxy for class, this argument is borne out in our analysis. We observe a partial convergence of marriage patterns among blacks and whites of the higher education groups. For the better-educated black women, chances of marriage are generally greater than those for their less-educated counterparts. How then do we account for the still substantial difference that exists among black and white better-educated women?

For some time, scholars have noted the shortage of black men relative to black women (Jackson, 1971; McQueen, 1978) and many have argued that the shortage of black men eligible for marriage is one of the reasons behind lower black marriage rates (Cox, 1940; Reid, 1982; Guttentag and Secord, 1983). This may provide a partial explanation of lower marriage rates among better-educated black women compared to their white counterparts.

Cultural assumptions by both men and women about the desirable educational level of a spouse may also be part of the answer. If it is felt that wives should have a lower educational status than their husbands, some among the growing numbers of highly educated women of both races may be becoming, in some sense, less marriageable. For white women, the proportion with a college education has been increasing since the 1960's while the figure for white men has been fluctuating but declining overall. By the mid-1980's, parity will be achieved between the number of men and women receiving degrees (Farley, 1984). Black women, on the other hand, continue to outnumber black men in the number of college degrees received although the differential peaked in 1980 (McGhee, 1984). Both white and black women with a college education appear to be experiencing a scarcity of a suitable partners, but the

situation is worse among black women. It is possible, however, should either (a) the recent trend towards greater parity in black male and female college enrollment continues or (b) norms, such as those concerning interracial marriage or "marrying down" in educational terms, change, that larger proportions of highly educated black women will marry.

Summary and Conclusions

The analysis presented here 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--demographic, economic, and cultural--that play a part in explaining differences in marriage patterns, but these do not affect all women identically.

Black women seeking to marry are 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 of peak marriageability. High death rates and incarceration of young black men contribute to the sex ratio imbalance and most likely disproportionately affect the poorest, less-educated groups. For better-educated black women, a scarcity of suitable partners is partially the result of greater numbers of black women than men completing higher education.

The relationship between educational attainment and marriage rates is particularly notable. For better-educated black and white women there is a tendency toward convergence in marriage patterns. Among the youngest cohort of college-educated white women, fully 15 percent fewer

will ever-marry (a remarkably low 78 percent) than will white women with less than high school education. On the other hand, better-educated black women of all cohorts tend to be more likely to ever-marry than blacks who do not graduate high school. This is consistent with observations by some that the cultural habits of middle-class blacks are more similar to those of the white middle class than to those of other blacks in general. However, the positive relationship between education and propensity to marry among blacks may be viewed, in large part, as stemming from the exceptionally poor marriage prospects of less-educated blacks.

Among women with less education, the percentages who will ever-marry sharply differ by race. The proportion of white women expected to ever-marry has decreased only slightly from 97 to 93 percent for the oldest and youngest cohorts, respectively. Across cohorts of black women, however, the propensity to ever-marry has fallen precipitously across cohorts. Only 58 percent among the youngest cohort can expect to marry. This is 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, discouraging women from marrying unless marriage can offer them greater economic security.

Our economic analysis reveals that unemployment and expected 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.

Firm evidence that would enable us to conclusively determine whether low marriage rates among blacks reflect a shift in attitudes toward the institution of marriage (i.e., a voluntary shift) or, rather, a forced rejection of marriage is not currently available. Efforts should be made to collect direct data that would focus on a young woman's decision to marry and bear children--exploring with her the various options that she may have had at critical junctures in her life. Our study, however, strongly suggests the involuntary nature of the decreasing propensity to marry.

We began this paper by considering a number of reflections on the centrality of marriage in American life. The analysis presented here indicates that it is not possible to make either a categorical statement that marriage remains a state that most women will enter at some point in their adult lives or that Americans are abandoning marriage as a social institution. Rather, it appears that for many women, especially those who are white or better-educated and black, marriage continues to play a significant role in the transition to adulthood. Less-educated black women present a much different story. For this group, it appears that marriage occupies increasingly little place in the life cycle. In addition to the lack of suitable partners, which to a varying extent affects all women, poorly educated black women face a unique set of circumstances. First, the economic situation of many of these women effectively prevents marriage from occurring. Second, the earlier age at which they initiate sexual intercourse and the concomitant higher level of early out-of-wedlock childbearing diminishes the likelihood of ever-marrying. For this group, it is not likely that marriage will

regain its primacy unless childbearing is delayed and prospects for employment among young black men and women brighten.

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 be 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. The particular form of the model that we shall use, which characterizes any observed distribution, was derived by Rodriguez and Trussell (1980):

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

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 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 arises as the convolution of an infinite number of mean-corrected exponential distributions whose parameters increase in arithmetic sequence. Moreover, Coale and McNeil 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 (e.g., between the commencement of dating and meeting one's ultimate spouse, between meeting the spouse and engagement, and between engagement and marriage); the normal distribution describes the age at 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 has done little to confirm or deny the behavioral interpretation of the model althougn a number of studies have provided additional support for the ability of the model to fit first marriage data (see, e.g., Ewbank, 1974; Rodriguez and Trussell, 1980; Trussell, 1980; Trussell and Bloom, 1983; Bloom and Bennett, 1985). 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 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 estimate μ, σ, and $\underline{E}$ by maximizing the following log likelihood function:

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

where a_i^m is age at first marriage for those individuals who have married (the set M), a_i^s is age at the time of survey for never-married individuals (the set $\bar{M}$), and $G(\cdot)$ is the cumulative distribution function for the density function $g(\cdot)$ expressed in equation (1). Observe that 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 the covariates. For example, we may specify these relationships in linear form as follows:

$$\mu_i = X_i'\alpha$$
$$\sigma_i = Y_i'\beta$$
$$E_i = W_i'\gamma \ ,$$

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

NOTES

[1]Earlier versions of this paper were presented at the annual 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 Arland Thornton for helpful comments and McKinley Blackburn, Margaret Greene, Cecilia Rouse, and Paul Wolfson for excellent research assistance.

[2]A focus of many analyses is the economic factors that give rise to the growth of female-headed households. Census Bureau data show that the greatest increases in female-headed families have come from never-married women. In 1970, such households made up 0.3 percent of all white families with children under eighteen in the home; in 1980, 1.4 percent, and by 1984, 2.7 percent. To be sure, these are substantial increases, and in proportionate terms, of greater magnitude than changes in the figures for black families. Yet families with never-married parents represent a very small minority of white families. By contrast, a large proportion, 28.1 percent, of black families in 1984 were headed by never-married women; this figure also represents a dramatic increase from 1980 and 1970 levels of 16.3 and 5.4 percent, respectively (Bureau of the Census, 1984).

One issue that has dominated the literature on increases in female-headship is the role of government transfer payments, notably AFDC. Such studies suggesting that welfare contributes to changes in family structure are at best only partially successful. Danziger et al. (1982) concluded that actual increases in female-headship between 1968 and 1975 were much larger than could be explained by financial aspects, including welfare benefits, that might affect the economic well-being of female heads.

Ross and Sawhill (1975) found that expanded welfare benefits have a positive but small effect on the proportion of non-white women who head households. They also noted that, of women who remarry, blacks take one and a half times as long as their white counterparts to find a new partner. To the extent that the reasons for delaying remarriage operate to delay first marriages as well (i.e., women can afford not to be married), then we might argue that increases in welfare benefits could have slight long-term consequences for the number of women who marry, whether directly or indirectly.

[3]For example, the black population grew almost twice as fast as the white population between 1970 and 1980 (approximately 1.7 versus 0.9 percent annually).

[4]It should be noted that all of these dependent variables relate 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 re-estimating models, including school enrollment rates as an independent variable. However, we found no support for this hypothesis.

[5]The story behind Table 4 is much the same when we look at father's education.

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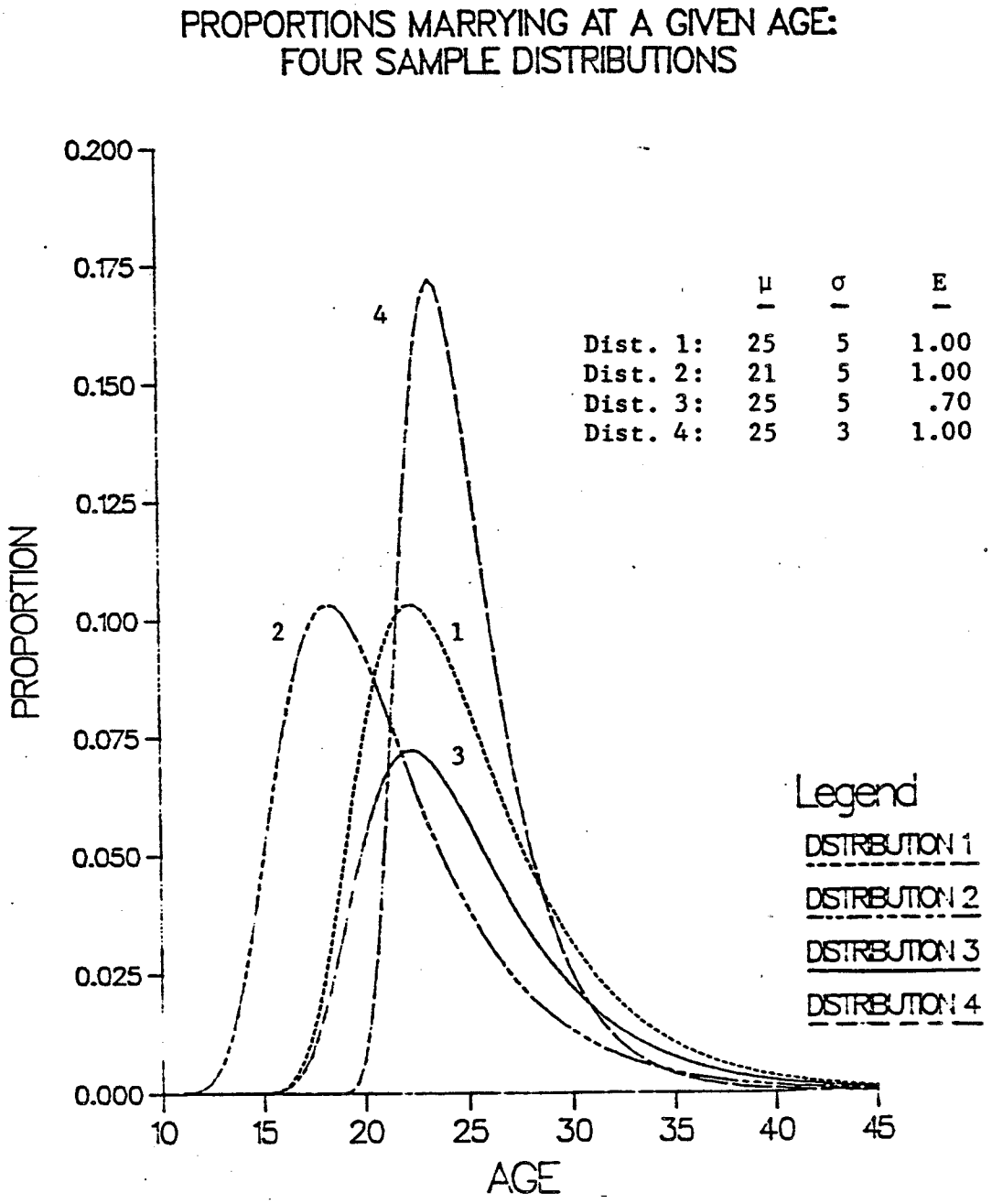

PROPORTIONS MARRYING AT A GIVEN AGE:
FOUR SAMPLE DISTRIBUTIONS
PROPORTION
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025
0.000
10
15
20
25
30
35
40
45
AGE
μ σ E
Dist. 1: 25 5 1.00
Dist. 2: 21 5 1.00
Dist. 3: 25 5 .70
Dist. 4: 25 3 1.00
1
2
3
4
Legend
DISTRIBUTION 1
DISTRIBUTION 2
DISTRIBUTION 3
DISTRIBUTION 4

FIGURE 1

Table 1 -- Parameter estimates of the Coale-McNeil model: June 1982 Current Population Survey

		Cohorts									
		White					Black				
		25-29	30-34	35-39	40-44	45-49	25-29	30-34	35-39	40-44	45-49
μ	Constant	19.71	19.78	19.74	19.61	19.84	21.06	20.25	21.04	21.60	21.23
	Ed = HS	1.58	1.23	1.31	1.19	1.37	1.15	1.08	1.17	.57*	1.61
	Ed > HS						1.56	1.82	2.02	1.58	2.11
	HS < Ed < College	2.56	2.17	2.09	1.59	1.79					
	Ed ≥ College	4.13	3.34	3.09	3.05	3.11					
σ	Constant	3.86	3.57	3.77	3.53	3.67	4.46	4.07	4.61	5.33	5.00
E	Constant	.931	.937	.945	.951	.973	.568	.764	.807	.888	.888
	Ed = HS	.001*	.017*	.022	.023	.004*	.096	.005*	.043*	.028*	.036*
	Ed > HS						.042*	.066*	.126	.046*	.069
	HS < Ed < College	- .058	- .029	.008*	.003*	- .015*					
	Ed ≥ College	- .152	- .095	- .029	- .039	- .067					

*Coefficient not significant at the .05 level.

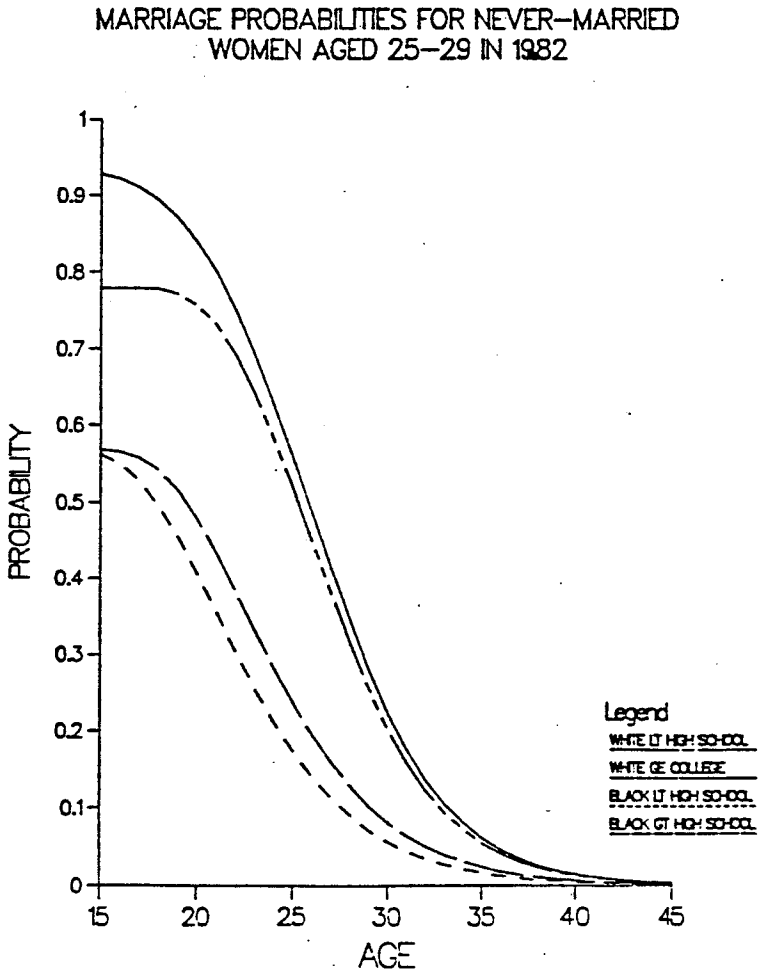


FIGURE 2

Table 2 -- Probability that a woman who has never married by exact age x will ultimately marry for women aged 25-29 and 45-49 in 1982

25-29

	White		Black	
Age x	Ed<HS	Ed≥College	Ed<HS	Ed>HS
15	.928	.779	.562	.568
20	.838	.756	.405	.477
25	.557	.517	.174	.237
30	.223	.202	.056	.081
35	.061	.054	.016	.024
40	.014	.013	.004	.007
45	.003	.003	.001	.002

45-49

	White		Black	
Age x	Ed<HS	Ed≥College	Ed<HS	Ed>HS
15	.972	.906	.884	.957
20	.935	.885	.805	.942
25	.765	.690	.595	.867
30	.408	.324	.321	.682
35	.126	.092	.131	.406
40	.029	.021	.045	.176
45	.006	.004	.014	.060

TABLE 3 -- Trends and Differentials in Black and White Unemployment and Earnings Experience**

A. 20-24 year-olds

	U		log E		log[E(1-U)]	
	Males	Females	Males	Females	Males	Females
Intercept	.0577* (3.26)	.0474* (2.37)	9.60* (340)	9.37* (159)	9.47* (257)	9.26* (144)
Race=Black	.0299 (1.39)	.0170 (.69)	-.0097 (-.28)	-.107 (-1.49)	.0170 (.37)	-.0974 (-1.22)
Ed<HS	.0219 (1.02)	.0685* (2.81)	-.127* (-3.68)	-.409* (-5.70)	-.137* (-2.99)	-.483* (-6.06)
Ed=HS	-.0088 (-.41)	.0046 (.19)	.0150 (-.44)	-.134+ (-1.86)	.0292 (.64)	-.147+ (-1.85)
Race x Ed<HS	-.0379 (-1.25)	.0867* (2.51)	-.270* (-5.56)	-.0232 (-.23)	-.262* (-4.06)	-.0753 (-.67)
Race x Ed=HS	-.0243 (-.80)	.0319 (.92)	-.138* (-2.83)	.0187 (.18)	-.160* (-2.47)	-.0286 (-.25)
Race x Time	.0070* (3.35)	.0088* (3.69)	-.0180* (-2.97)	.0066 (.94)	-.0261* (-5.51)	-.0059 (-.72)
Ed<HS x Time	.0089* (4.25)	.0059* (2.49)	-.0052 (-1.56)	.0084 (1.19)	-.0180* (-3.80)	.0015 (.18)
Ed=HS x Time	.0043* (2.03)	.0027 (1.12)	-.0047 (-1.40)	.0003 (.05)	-.0105* (-2.23)	-.0019 (-.23)
Race x Ed<HS x Time	.0051+ (1.71)	.0005 (.14)	.0110* (2.32)	-.0024 (-.24)	.0092 (1.38)	-.0135 (-1.16)
Race x Ed=HS x Time	.0020 (.67)	-.0009 (-.27)	.0039 (.82)	-.0054 (-.54)	.0073 (1.08)	-.0043 (-.37)
R^2	.930	.936	.986	.953	.974	.947

B. 25-29 year-olds

	U		log E		log[E(1-U)]	
	Males	Females	Males	Females	Males	Females
Intercept	.0371* (2.82)	.0417* (2.23)	9.93* (360)	9.70* (301)	9.80* (265)	9.62* (222)
Race=Black	-.0124 (-.77)	-.0023 (-.10)	-.194* (-5.76)	-.0722+ (-1.84)	-.0170* (-3.70)	-.450 (-.84)
Ed<HS	.0218 (1.36)	.0462* (2.03)	-.292* (-8.67)	-.467* (-11.9)	-.302* (-6.58)	-.510* (-9.47)
Ed=HS	-.0088 (-.55)	.0146 (.64)	-.138* (-4.11)	-.244* (-6.22)	-.119* (-2.59)	-.268* (-4.97)
Race x Ed<HS	.0086 (.38)	-.0056 (-.18)	-.116* (-2.44)	-.173* (-3.12)	-.138* (-2.12)	-.183* (-2.40)
Race x Ed=HS	.0291 (1.28)	.0060 (.19)	-.0211 (-.44)	-.0738 (-1.33)	-.0629 (-.97)	-.0625 (-.82)
Race x Time	.0072* (4.57)	.0053* (2.41)	.0021 (-.64)	-.0004 (-.10)	-.0067 (-1.42)	-.0083 (-1.48)
Ed<HS x Time	.0070* (4.48)	.0054* (2.42)	-.0024 (-.73)	-.0010 (-.27)	-.0120* (-2.53)	-.0056 (-1.01)
Ed=HS x Time	.0042* (2.68)	.0018 (.80)	.0018 (.54)	.0025 (.64)	-.0038 (-.81)	.0015 (.27)
Race x Ed<HS x Time	-.0008 (-.35)	.0067* (2.12)	.0022 (.46)	.0139* (2.56)	.0039 (.59)	.0063 (.80)
Race x Ed=HS x Time	-.0017 (-.78)	.0018 (.56)	.0008 (.18)	.0075 (1.39)	.0033 (.49)	.0034 (.43)
R^2	.933	.898	.988	.987	.976	.976

**Data drawn from the 1968-1984 March Current Population Surveys; ordinary least squares estimates; t-statistics in parentheses.

*Coefficient significant at the .05 level.

+Coefficient significant at the .10 level.

Table 4--Percentage of women (classified by age and race), with mother of educational attainment less than or more than high school, who had a premarital first birth.*

	Black		White	
	Ed<HS	Ed>HS	Ed<HS	Ed>HS
15-19	1.6	-0-	4.0	0.5
	(244)	(119)	(300)	(368)
20-24	16.7	8.8	9.0	3.5
	(276)	(125)	(199)	(228)
25-29	28.2	18.8	6.8	1.9
	(376)	(101)	(236)	(160)
30-34	29.3	13.1	7.7	4.9
	(334)	(84)	(271)	(143)
35-39	25.3	22.2	6.5	3.2
	(245)	(27)	(216)	(93)
40-44	32.7	26.1	3.3	2.8
	(223)	(23)	(239)	(72)

*Percentages are derived from Cycle III of the National Survey of Family Growth, conducted in 1982. The number of mothers in each educational attainment category is reported within parentheses.