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Mothers but Not Wives: The Increasing Lag Between Nonmarital Births and Marriage

This study analyzed trends in marital behavior for unwed mothers who gave birth between 1960 and 2004. With nationally representative data on 15,353 White and Black unmarried mothers, results indicated that mothers who gave birth after 1989 were waiting much longer to marry than were mothers giving birth before 1968. The most pronounced delays were found immediately after a birth. Over the study period, the cumulative proportion of women who married within three years of a birth decreased for Whites by 27% and for Blacks by 60%. Findings underscore the separation that has developed between first births and first marriages in the United States, and they highlight the older ages at which children are experiencing a transition to marriage.

The marked increase in nonmarital births in the United States has been well documented. The percentage of births to unmarried mothers, which has doubled since 1980, is currently 40%; the number of out-of-wedlock births has tripled in the past 25 years and now stands at 1.6 million (Martin et al., 2009). Much of this increase has been concentrated among minority populations: Wu (2008) estimated that 61% of Black women born between 1965 and 1969 have a nonmarital birth, up from 25% for Black women born before 1925.

What has received far less attention, however, is whether the marital behavior of unmarried

mothers has changed over time and how transitions into marriage may vary by race and socioeconomic status. Research has found that an unwed birth decreased the likelihood that a mother married (Bennett, Bloom, & Miller, 1995; Graefe & Lichter, 2002) and that women of color were less likely to marry following a birth than were White women (Carlson, McLanahan, & England, 2004; Manning, 1993). Yet scant attention has been paid to trends in marriage among unwed mothers, as no study has followed multiple cohorts of women as they move from first birth to first marriage.

Data emerging from several qualitative and quantitative studies has suggested, though, that temporal changes in unwed mothers' marital behavior are likely to be profound. Recent analyses of family-formation behaviors have indicated that marriage and childbearing have become increasingly disconnected, both temporally and theoretically (Gibson-Davis, 2009). In part because of the emergence of norms that sanction sexual intimacy and childbearing outside of marriage (Thornton & Young-DeMarco, 2001), the once-strong connection between marriage and fertility has weakened considerably (Ellwood & Jencks, 2004). Couples who desire to have children or who face an unplanned pregnancy they do not wish to abort no longer face a strong normative deadline for legally marrying. Attitudes affirming the decoupling of marriage from childbearing have been found in several qualitative studies, which reported that low-income and working-class individuals view marriage and fertility as distinct processes, with different motivations and expectations (Edin & Kefalas, 2005; Gibson-Davis, Edin, & McLanahan, 2005; Smock, Manning, & Porter, 2005).

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This study is the first to analyze how the odds of marriage for unwed mothers have changed over time by examining the marital transitions of 15,353 non-Hispanic Black and non-Hispanic White mothers who gave birth between 1960 and 2004. Data come from seven panels of the U.S. Survey of Income and Program Participation (SIPP), a nationally representative sample. Using survival analysis techniques, this study analyzed changes in the marriage behavior of unmarried women by comparing the proportion of mothers who married for the first time within 15 years of a birth for different birth cohorts. The sample was classified both by race and by educational status at the time of the first birth.

This study concentrated on the marital behaviors of mothers rather than on the marital behavior of women more generally, in part because other scholars have documented how general marriage trends have changed over time (see, e.g., Ellwood & Jencks, 2004; Stevenson & Wolfers, 2007). More important, however, the marital behavior of unwed mothers is a matter of policy interest. Although the causal effect of marriage on child well-being remains a matter of dispute (Foster & Kalil, 2007), many programs have been developed to encourage marriage among unwed parents (Dion, 2005). Yet, assuming there are negative effects of living with unmarried parents on child well-being, we know little about the duration of children's exposure to unmarried parents, as we do not know how long children born to an unwed mother can expect to remain in an unmarried family. Longer duration in an unmarried family may influence child development in several ways. First, a longer elapsed time between birth and marriage increases the likelihood that a mother marries a man other than the biological father (Bzostek, Carlson, & McLanahan, 2009). Second, because unmarried mothers have higher poverty rates than married mothers (Lerman, 2002) and because poverty is thought to be particularly detrimental for young children (Duncan, Brooks-Gunn, Yeung, & Smith, 1998), children whose mothers marry when the child is older may be at particular risk for adverse outcomes. Third, duration in an unmarried family is likely positively correlated with family instability, which has been associated with detrimental outcomes for child well-being (Osborne & McLanahan, 2007).

Because no study to date has used survival analysis methods to examine trends in unwed

mothers' marriage behavior, we do not know whether there is, in fact, an increasing separation between first births and first marriage in the United States. We also do not know whether children are likely to be older when their mothers marry. Both of these pieces of information are critical for a better understanding of American family-formation processes and for accurately addressing the needs of children born to unwed mothers.

BACKGROUND

Marriage behaviors among all women have changed dramatically over the past half century. Although the vast majority of women eventually marry (up to 90%, according to one recent estimate; Goldstein & Kenney, 2001), the age at first marriage has increased by more than 25% since 1960, from 20 to 25 years (U.S. Bureau of the Census, 2004). This delay in marriage most likely contributes to the decline in marriage rates, particularly for less well-educated and Black women, who have been found to be significantly less likely to marry than are better educated or White women (Ellwood & Jencks, 2004). In addition, marriage behaviors in response to a pregnancy have also changed. The increasing rate of nonmarital births attests to the willingness of individuals to have a birth outside of marriage (Martin et al., 2009). Fewer individuals marry in response to a birth (Gray, Stockard, & Stone, 2006; Schoen, Landale, & Daniels, 2007) as so-called shotgun marriages have become increasingly rare (Akerlof, Yellen, & Katz, 1996; Parnell, Swicegood, & Stevens, 1994).

Despite abundant evidence on the changing marriage behaviors of women in general, relatively little attention has been paid to marriage trends among unwed mothers themselves. The only evidence we have to date on marriage trends among unmarried mothers comes from the work of Ellwood and Jencks (2004), who found that 3% of mothers who married for the first time in 1960 had a child who was at least 36 months old. For mothers who had married for the first time in 1990, that percentage rose to 13%. Beyond this research, I am not aware of any study that has followed cohorts of unwed mothers as they transition to marriage.

Yet there is good reason to believe that changes in unwed mothers' marital behavior have taken place. An emerging sociocultural view about how contemporary families are

formed suggests that marriage and fertility have become increasingly disconnected (Cherlin, 2009; Edin & Kefalas, 2005; Gibson-Davis, 2009). In the United States of 50 years ago, when abortion was illegal, contraception was difficult for unmarried women to obtain, and societal norms censured out-of-wedlock sexual activity and childbearing, marriage and fertility were closely linked. Individuals who desired to live in a romantic relationship with an opposite-sex partner or who faced an unplanned pregnancy had little option but to marry. Today, the family-formation landscape is quite different, and fertility behaviors that were once considered the sole province of marriage (e.g., contraception, sexual intimacy, childbearing) are now normative outside the bounds of marriage. As a result, marriage and fertility have become increasingly disconnected, as one is no longer necessary for the other (Cherlin, 2004; Gibson-Davis, 2009).

Scholars have also noted that as the practical ties between marriage and fertility have weakened, the motivations and expectations regarding each have diverged (Cherlin, 2004; Edin & Kefalas, 2005; Gibson-Davis, 2009). As marriage has become less commonplace and its practical import has declined, it has taken on an increased symbolic importance that was absent in years past. Marriage has become associated with a set of relational and economic standards, including good jobs, significant savings, and enough money to afford a mortgage, and couples who marry publicly demonstrate that they have met or exceeded these standards. These standards have not been found to adhere for other family-formation activities, such as cohabitation or fertility. Research among low-income unwed mothers, in fact, has suggested that some mothers view economic resources as largely orthogonal to the decision to have a child (Edin & Kefalas, 2005). Instead, women had children because they had relatively few vocational or educational opportunities, and they looked to childbearing as a way to provide meaning to their lives. They therefore felt no need to delay childbearing, even as they put off marriage.

Scholars have also suggested that changes in unwed mothers' marital behaviors have arisen because the economic gains to marriage have declined. The wages of men, particularly those with less education, have decreased in real value (Lichter, McLaughlin, & Ribar, 2002). Traditional models of family formation, as Becker (1981) first laid out, predicted that this

decline in real wages should lead to a decrease in marriage rates, as men with lower earnings were less able to provide market goods to their families. In addition, participation in the welfare system could alter marriage trends among unwed mothers. The Aid to Families with Dependent Children (AFDC) program, which began to accept large numbers of unwed mothers in the mid-1960s, discouraged marriage by greatly restricting eligibility for two-parent married households and by counting the resources of any nonbiological cohabiting man against the mother's cash grant (Moffitt, 2002). Temporary Aid to Needy Families (TANF), the policy that replaced AFDC in the welfare reform act of 1996, eased eligibility restrictions for two-parent households. Even under TANF, though, marriage disincentives remain in place, insofar as two-parent families receive less benefits than they would as two single adults (Moffitt, 2002).

The explanatory power of men's earnings and welfare participation on unwed mothers' marriage behavior remains a matter of scholarly debate. Although male earnings correlate positively with marriage rates, the decline in marriage far outweighs what a decline in male earnings alone can account for (Ellwood & Jencks, 2004). Studies of AFDC have reported either very small or null effects of welfare participation on marriage behavior (for reviews, see Moffitt, 1992, 1998). Moreover, research has found that poor unmarried mothers were not any more likely to marry under TANF than they were under AFDC (Graefe & Lichter, 2008), which suggests that cash welfare policies have had little effect on their marital behavior.

Nevertheless, all these factors—marriage and fertility as distinct end points, declining economic benefits to marriage, and welfare participation—suggest that unmarried mothers are less likely to marry than they were in the past. There may also be an increased delay in marriage if mothers are waiting longer to marry until they have achieved the economic prerequisites of marriage. In addition, differences across time are likely to be larger in magnitude for mothers with low levels of human capital. As noted above, less well-educated women have had greater declines in their marriage rates than have better educated women (Goldstein & Kenney, 2001). Declines in marriage rates for mothers, who face a particularly proscribed marriage pool (Lichter & Graefe, 2007), may be even more pronounced. Racial differences may also exist, insofar as

race and class are closely correlated. Moreover, the decline in financially viable men has been particularly acute in the Black community (Harknett & McLanahan, 2004; Wilson, 1987), and Black women may have more difficulty than White women in locating suitable matches.

This study investigates whether the marital behavior of mothers has changed over time, and in particular, if there is an increased time lapse between first birth and first marriage. On the basis of evidence suggesting a weakened connection between marriage and fertility, I hypothesize that the unwed mothers of today are less likely to marry than were unwed mothers of 40 years ago and that the time between first birth and first marriage has increased substantially. I also hypothesize that declines and delays are more pronounced for Black and less well-educated women; it is unclear, however, whether educational differences will be greater than racial differences. Models also control for woman's age at birth, as teenage mothers may be less likely to marry (Graefe & Lichter, 2002), and age is positively correlated with marriage (Manning, 1993).

It should be noted that, because of relatively high rates of cohabitation, many of today's unwed mothers are likely to live with the father of the child. Approximately half of all nonmarital births in the United States are to cohabiting parents, with larger fractions for women of color and mothers older than age 20 (Kennedy & Bumpass, 2008). Scholars believe, however, that in the U.S. context, cohabitation is not a substitute for marriage, insofar as it has not been associated with the same advantages for children (Popenoe, 2009). Higher levels of instability, lower quality relationships, and lower levels of financial resources mark cohabiting unions, as compared to marriages (Brown, 2000; Lerman, 2002). Perhaps it is not surprising, then, that promoting marriage—and not just two-parent households—remains the primary objective of policy makers concerned about family formation.

In addition to being the first study to provide descriptive evidence about the marriage patterns of unwed mothers over time, this study is also meant to inform the ongoing debate about the benefits of marriage for children. From the child's perspective, the timing of marriage may be just as important as the event of marriage. If a mother marries several years after her child is born, then this increases the chances that she will

marry someone other than the child's biological father (Bzostek, Carlson, & McLanahan, 2009). Living in a stepfather household is generally associated with lower levels of child well-being than is living in a biological father household (Hofferth & Anderson, 2003). Moreover, unmarried households do not have the same levels of assets and income as do married parent households (Lerman, 2002), and children born into unmarried households are more likely to experience multiple family transitions (Osborne & McLanahan, 2007). Therefore, a child whose mother marries several years after the birth may have spent more time in an impoverished, transitory environment than a child whose mother marries soon after the birth. Given that the effects of poverty and family instability appear to be particularly detrimental for young children (Cavanagh & Huston, 2008; Duncan et al., 1998), this could mean that children who transition into a married-parent home at an older age may not have the same positive associations with marriage as do younger children (Hill, Yeung, & Duncan, 2001).

METHOD

Data came from the 1990, 1991, 1992, 1993, 1996, 2001, and 2004 panels of the Survey of Income and Program Participation (SIPP), a nationally representative data set of the non-institutionalized U.S. population. Although the primary focus of the SIPP is on economic well-being and program participation, the SIPP also collected retrospective data on marriage and fertility. This retrospective data, collected in a special topical module during the second wave of the survey, asked women (but not men) about their marital and fertility histories, including the date of their first marriage and the date of their first birth. The survey also collected basic demographic data, such as race, ethnicity, education, and mother's age at the time of marriages and births.

The SIPP asked only women between the ages of 14 and 64 about their fertility history. Therefore, the earliest possible year that a woman could be born and still have a birth in the study was 1926 ($1990 - 64 = 1926$). This raised the issue of truncation bias (Rindfuss, Palmore, & Bumpass, 1982), as births that occurred to women in the 1940s and 1950s will be skewed to those who had early births (e.g., the only births observed in 1940 will be to women who were

14; in 1941, to women who were 14 and 15; in 1942, women who were 14–16, and so on). To lessen the problem of truncation bias, I limited the sample to births that occurred after 1960 and to women who were 35 years or younger.

Data were pooled cross-sectionally across the seven panels, and women giving birth in different years came from different panels. Across all seven panels, there were 83,241 mothers who reported births. Of these, 21,425 were to women who were unmarried at the time of the birth. From the sample of 21,425 unmarried mothers, I deleted cases who reported births before 1960 ($n = 1,734$) and were older than 35 ($n = 172$). Because of the focus on within-race and ethnic comparisons, I also deleted mothers who reported being of a race and ethnicity other than non-Hispanic White or Black ($n = 4,166$), as there were too few mothers of other racial and ethnic groups to make meaningful comparisons over time. As complete information was available for almost all cases, no observations had to be dropped because of missing data on the outcomes or covariates. The final sample size was 15,353 mothers, representing 119,606 person-years of data. All mothers 35 and younger were included in the analysis. Fewer than 1% of observed births, however, occurred to women younger than 14 years old. Excluding those young mothers did not change the results.

In preliminary models, I considered the marital transitions of unmarried Hispanic women, but too few Hispanics were observed in the sample to produce reliable estimates for Hispanic births that occurred before 1970. It is also likely that the nature and composition of the Hispanic population has changed dramatically over the study period. Additional models, not shown, suggested that patterns of marriage among native-born Hispanics had similar marital probabilities as non-Hispanic Whites, whereas foreign-born Hispanics were more likely to marry than were non-Hispanic Whites or Blacks. Too few Hispanics existed in the sample to classify them by educational status or to consider specific ethnicities such as Mexican or Cuban.

A first birth was classified as nonmarital if it occurred in a calendar year before a first marriage. The SIPP does not publicly release information on the months of marriages or births, so it was not possible to determine more specifically the relative timing of a birth to a marriage. A birth that occurred in the same calendar year as a marriage was classified as

marital. It is possible that some nonmarital births were classified as marital (e.g., this study categorized births that occurred in January followed by a marriage in June as marital, even though the birth was nonmarital). The number of misclassified births is unknown, but because evidence has suggested that the relative timing of births has not changed substantially over time (e.g., there has not been a shift in births occurring in January as opposed to those occurring in June; Buckles & Hungerman, 2008), the number of misclassifications should remain relatively constant over the study period.

The primary predictor variable of interest was the year of the child's birth. Child's birth year was divided into five ranges: 1960–1967, 1968–1974, 1975–1981, 1982–1988, and 1989–2004 (these groupings are referred to as birth cohorts in the text that follows). These ranges were chosen as each cohort represents roughly 20% of the sample (for both Blacks and Whites), and with the exception of the last cohort, covered roughly the same number of years. Additional year intervals for categorizing the child's birth year were considered (e.g., in 5- or 10-year increments) but had little substantive effect on the results. Other variables included the age of the mother at the time of the birth (14–19 [omitted category], 20–24, 25–29, and 30–35), the mother's educational attainment at the time of the birth (no high school diploma [omitted category], high school diploma, some college, or college graduate), and a dichotomous indicator for the SIPP panel in which women participated. Models were also broken down by educational status at the time of the birth. "Low" educated women were those who had not graduated from high school at the time of the birth. "High" educated women were those who had at least some postsecondary training (too few cases existed to restrict the high education group to women with a bachelor's degree or more). Because the relative meaning of educational attainment has changed over time, I also classified educational status by comparing a woman's educational attainment at the time of the birth to same-race women who had either a marital or nonmarital birth at the same time period. This method produced substantially the same results as those discussed below.

I used Kaplan-Meier estimates and Cox regressions to describe the elapsed time between first birth and first marriage. All estimates were done using Stata Version 11 (StataCorp, 2009).

For both the Kaplan-Meier estimates and Cox regressions, the dependent variable, also known as the event variable, was the year of the marriage and was constructed with two pieces of information: the event itself and the years that had elapsed between the first birth and the marriage. The years that elapsed between the first birth and first marriage are known as the duration variable, which measures duration to the event (marriage).

Mothers were first observed (e.g., entered the risk pool) the year they have a nonmarital birth. They contributed a person-year of data until they marry, they reach the age of 64 (the oldest age at which a mother could be observed), or the SIPP panel ended. As an example, a mother in the 2001 SIPP panel with a nonmarital birth in 1990 was observed from 1990 until she married or until 2001, at which point the observation was right censored. Right censoring refers to events that were not observed but could occur after the study period (in this case, after the year 2001). Random censoring, in which individuals leave the risk pool for a reason unrelated to the event of interest (e.g., because of death or attrition), is unlikely to be a problem in this analysis, as data were collected at one point in time. All mothers reported their retrospective fertility and marriage histories, and mothers who had died or attrited from the SIPP before the second wave of the survey never entered the risk pool. Left censoring, which refers to events that happen at some unknown time period before the subject comes under observation, was not an issue in this study as all subjects enter the risk pool at the same relative time point. To address the problem of right censoring, I employed Kaplan-Meier estimates and Cox regressions; estimates should not be biased even though mothers are observed for different lengths of time following a birth (Allison, 1984). All estimates were weighted using person-specific weights developed by SIPP to correct for sample selection and nonresponse bias (unweighted analyses provide substantially the same results as those presented here).

The SIPP, though not traditionally used in estimates of nonmarital fertility, is an important source of contemporary information about the marital behavior of unwed mothers. The June Current Population Survey (CPS) stopped collecting information on a woman's first out-of-wedlock birth in May 1995. Subsequent to 1995, the June CPS asks only about a woman's latest pregnancy, which may or may not be her first birth. The National Survey

of Family Growth (NSFG) collects detailed information on all pregnancies but does not contain information on a mother's educational status at the time of the birth and has a much smaller sample size than the SIPP. Therefore, to construct contemporary race-by-education estimates for unwed mothers who marry, it is necessary to use the SIPP.

Although offering an important source of information on births that span more than 4 decades, the SIPP has its limitations. The SIPP does not collect information on whom the mother married. It was therefore not possible to know whether the marriages observed involve two biological parents or a biological mother and a stepfather. In addition, the SIPP panel did not obtain data on cohabitation. As mentioned above, it is likely that many of the unwed births observed in the later years of this study were to cohabiting couples. Nevertheless, the formation of marriages (and not just two-parent households) remains a matter of substantial policy and academic interests.

A final limitation of the SIPP is that relatively little information is available about the mother at the time of the birth; beyond basic demographic data (age, race and ethnicity, marital status, and education) little else is known. Additional variables, such as welfare participation, earnings, employment, and family structure at the time of the birth, are likely correlated with marriage behavior, but their effects cannot be estimated. Similarly, it is also likely that the types of women who select into unwed motherhood have changed over time, and the changing demographic pool of unwed mothers may confound estimates of the elapsed time between marriage and first birth over the study period. Yet data from this study suggest that contemporary unwed mothers were relatively less disadvantaged as compared to midcentury unwed mothers. Given that disadvantaged mothers have been found to be less likely to marry (Goldstein & Kenney, 2001), the estimates presented here may actually understate the drop off in marriage. To partially address the selection issue, the Cox models compared the likelihood of marriage for two recent periods (births between 1982 and 1989 with births between 1989 and 2004). It is likely that bias arising from selection issues is less of a problem when comparing births in the 1980s with births in the 1990s.

RESULTS

Table 1 presents descriptive statistics for nonmarital first births, by birth cohort. The first row of the table indicates the proportion of all first births that these nonmarital births represent. Consistent with national estimates (Martin et al., 2009), the proportion of births that were nonmarital births rose over the study period. The proportion more than doubled for Whites and increased by two-thirds for Blacks. Consonant with past work (Smith, Morgan, & Koropeczy-Cox, 1996; Wu, 2008) that has shown nontrivial amounts of out-of-wedlock births in previous generations, the proportion of nonmarital births for Blacks was relatively high (50%) even at the earliest observed period. The rest of Table 1 indicates that the relative age and educational level at time of first birth also rose over time. The average age at first birth increased by two to three years, indicating that most women were no longer teenagers when they first gave birth. There was also a decline in the percentage of mothers who did not have a high school diploma at the time of the first birth. For Blacks, for example, 32% of mothers in the earliest cohort were not high school graduates, compared to 20% of mothers in the latest cohort.

Table 2 presents the cumulative proportion of unwed mothers who marry within 15 years of a birth, by racial group. For Whites and Blacks, two time periods are presented: those who gave birth before 1968 (referred to as the early cohort) and those who gave birth after 1982 (the later cohort). For this analysis, I combined births that occurred between 1982 and 1988 with births that occurred between 1989 and 2004 to increase the number of cases observed for at least 15 years. Table 2 also presents, for each racial group, the relative difference between the early and late cohorts in the cumulative portion married.

Results indicate pronounced declines in marriage rates within 15 years for Blacks but only modest declines for Whites. White mothers in the later cohort were only slightly less likely to marry than White mothers in the earlier cohort (82% compared to 86%). The proportion of Blacks who married, conversely, showed marked declines, as the percentage who married within 15 years decreased by nearly a third (from 67% to 47%).

For both races, a noticeable decline existed in the number of marriages that happened within a few years of the child's birth. For Whites who gave birth before 1968, 45.3% had married by

the time the child was age 3. For Whites who gave birth after 1982, only 32.9% had married within the same time frame, a 30% decline. For Blacks, the decline in early marriages was even steeper: the marriage rate for mothers within 3 years of the child's birth fell from 31.8% to 12.8%. The decline in marriage for Blacks was evident immediately after the birth, as only 4.7% of Black mothers in the later period married in the first year of the child's life, compared to 13.1% in the early period, a 64% decline.

The next set of results presents the cumulative proportion of mothers who marry, by race, for those in the low education group (Figure 1) and high education group (Figure 2). The figures compare first marriages that occurred within 15 years for births that happened before 1968 to those that happened after 1982. I also conducted chi-square tests to analyze significant differences across the hazard curves.

Figures 1 and 2 depict several results. First, although differences by educational status existed, differences in the hazards of marriage were more pronounced by race than by educational level. Among Whites, the hazard curves for better educated Whites were quite similar across the two time periods and statistically indistinguishable ($\chi^2 = .040$; $Pr > \chi^2 = .528$). Less well-educated Whites who gave birth after 1982 had slightly lower cumulative marriage rates (89%) than their peers who gave birth before 1968 (85%), and their hazard curves differed significantly ($\chi^2 = 22.39$; $Pr > \chi^2 = .000$). Overall, though, differences in cumulative marriage rates for Whites were fairly minimal, regardless of education level.

In contrast to Whites, Blacks exhibited significant declines in hazards of marriage within both education groups. Less well-educated Blacks had large decreases in their cumulative marriage rates, which dropped by 32% from 62.9% for births before 1968 to 42.8% for births after 1982. Likewise, better educated Blacks had a significant decline in cumulative marriage rates for the later cohort (57.7%) relative to the earlier cohort (81.9%). For both education groups, the hazard curves comparing the earlier and later periods were significantly different from each other. Moreover, because of the large decline in marriage for better educated Blacks, they had marriage rates that were clearly distinct from better educated Whites, with significantly different hazard curves ($\chi^2 = 48.09$; $Pr > \chi^2 = .000$). The hazard curve for better educated

Table 1. Sample Means, by Year of Child's Birth and Race (N = 15,353)

	White						Black					
	1960-1967	1968-1974	1975-1981	1982-1988	1989-2004		1960-1967	1968-1974	1975-1981	1982-1988	1989-2004	
Nonmarital ^a	.12	.15	.19	.23	.26		.50	.56	.62	.67	.73	
Education at birth												
No high school diploma	.47	.44	.46	.41	.41		.62	.57	.56	.46	.48	
High school	.41	.41	.39	.45	.47		.31	.34	.35	.46	.43	
Some college	.11	.12	.11	.09	.07		.06	.08	.08	.06	.06	
Bachelor's degree or more	.01	.03	.04	.05	.05		.00	.01	.01	.03	.04	
Education at interview												
No high school diploma	.21	.15	.14	.14	.17		.32	.25	.22	.19	.20	
High school	.40	.39	.43	.38	.35		.40	.36	.36	.37	.34	
Some college	.26	.31	.29	.35	.38		.21	.31	.33	.36	.39	
Bachelor's degree or more	.14	.16	.14	.12	.10		.07	.08	.09	.08	.07	
Age at birth	18.7	18.8	19.4	20.2	20.6		18.5	18.2	18.9	20.1	20.1	
Teen birth	.63	.61	.58	.51	.49		.66	.73	.65	.50	.53	
Unweighted n	1,234	1,375	1,440	1,809	3,236		914	1,019	1,104	1,224	1,998	

^aProportion of all births that were nonmarital.

Table 2. Cumulative Proportion of Unmarried Mothers Who Marry, by Race and Year of Child's Birth (n = 9,521)

	Years Since Birth							n ^a
	1	2	3	4	5	10	15	
White								
Early: 1960–1967	18.5	33.5	45.3	54.2	61.9	79.4	86.1	1,234
Late: 1982–2004	14.3	24.6	32.9	40.3	46.8	71.0	81.6	5,045
% decline	22.6	26.4	27.4	25.7	24.4	10.5	5.3	
Black								
Early: 1960–1967	13.1	22.2	31.8	38.2	44.3	60.7	67.0	914
Late: 1982–2004	4.7	8.2	12.8	16.7	20.7	36.3	47.4	2,328
% decline	63.9	63.1	59.7	56.1	53.3	40.2	29.3	

^aUnweighted sample size.

FIGURE 1. CUMULATIVE HAZARD OF MARRIAGE FOR WOMEN WITHOUT HIGH SCHOOL DIPLOMA, BY RACE (n = 4,833).

Note: All curves differed significantly from each other at the .01 level.

Blacks in the later period more closely resembled the hazard curve for less well-educated Blacks than the curve for better educated Whites.

The second set of findings depicted in the figures is that delays in marriage were just as noticeable as declines. With the exception of less well-educated Blacks, a majority of mothers in the later period eventually married, as 85% of Whites and nearly 60% of better educated Blacks had married within 15 years. At the same time, the percentage of mothers who married within a few years had declined markedly. This trend was most pronounced for less well-educated Blacks, in which the cumulative portion of marriages that occurred within the first 3 years of the child's life decreased from 28.5% in the early period to 9% in the late period. But declines in the

percentage of mothers who married within a few years of a birth are also seen for better educated Blacks and less well-educated Whites. Leaving aside better educated Whites, the results suggest that the number of children who will experience their mother's marriage within the first few years of their life has dropped substantially.

Table 3 presents the median survival times between first birth and first marriage for each racial and educational group. Results again suggest that racial differences in marriage trends were more pronounced than educational differences. Whites exhibited relatively modest differences over time, whereas median survival times grew dramatically for Blacks. Less well-educated White mothers' median survival times (e.g., time from first birth to first marriage)

FIGURE 2. CUMULATIVE HAZARD OF MARRIAGE FOR WOMEN WITH BACHELOR'S DEGREE OR MORE, BY RACE ($n = 1,064$).

Note: The curve for Black births after 1982 was statistically significant different from all other curves at the .001 level. Other curves were not statistically significantly different from each other.

Table 3. Median Survival Time Until Marriage, by Year of Child's Birth and Race ($N = 15,353$)

Year of Birth	White			Black		
	Full	No High School Diploma	Some College or More	Full	No High School Diploma	Some College or More
1960–1967	4	4	5	7	8	6
1968–1974	5	4	7	9	9	12
1975–1981	6	6	9	14	15	11
1982–1988	6	5	6	16	19	14
1989–2004	6	6	6	— ^a	— ^a	10
Unweighted n	9,094	3,984	1,142	6,259	3,326	506

^aMedian survival time not calculable because more than 50% of cases remained unmarried.

increased from 4 years for births before 1968 to 6 years for births after 1975, but then remained relatively flat. Among Whites with more education, results were U-shaped, reaching a maximum of 9 years for births that occurred between 1975 and 1981, before declining to 6 years for births that occurred after 1982. Black survival time more than doubled from 7 years for births before 1968 to 16 years for births after 1982. Moreover, median survival times for Black marriages that occurred after 1989 could not be calculated because more than 50% of mothers remain unmarried. The survival time for low educated Blacks nearly doubled from 11 to 19 years (and median survival rates for births that occurred after 1989 could not be calculated). The median survival times for better

educated Blacks increased twofold between 1967 and 1988, rising from 6 to 14 years, before decreasing to 10 years for marriages that occurred from 1989 onward.

Table 4 present Cox regressions on first marriage; results are presented for Whites (Panel A) and Blacks (Panel B), categorized by educational attainment at the time of the birth. Models also included controls for mother's age at birth, her individual educational attainment, and panel membership (results not shown). The omitted category was births that occurred after 1989; odds ratios greater than 1 represent increased odds of marriage relative to births after 1989.

Results indicated that mothers in all birth cohorts, when compared to mothers in the 1989–2004 cohort, had increased odds of

Table 4. Cox Proportional Regression Models for Marriage, by Race and Educational Level (N = 15,353)

	Full			High School Diploma or Less			At Least Some Postsecondary Education		
	<i>B</i>	<i>SE B</i>	<i>e^B</i>	<i>B</i>	<i>SE B</i>	<i>e^B</i>	<i>B</i>	<i>SE B</i>	<i>e^B</i>
Panel A: Whites									
Year of child's birth									
1960–1967	.19***	(.05)	1.21	.31***	(.07)	1.37	–.26	(.14)	.77
1968–1974	.09	(.05)	1.09	.21**	(.07)	1.23	–.45***	(.12)	.64
1975–1981	–.03	(.04)	.97	.04	(.06)	1.04	–.46***	(.11)	.63
1982–1988	.03	(.04)	1.03	.19***	(.06)	1.21	–.16	(.10)	.85
1989–2004	omit	omit	omit	omit	omit	omit	omit	omit	omit
Unweighted <i>n</i>	9,094			3,984			1,142		
Person-years	57,560			23,862			8,609		
Panel B: Blacks									
Year of child's birth									
1960–1967	.72***	(.07)	2.06	.94***	(.11)	2.56	.65**	(.22)	1.91**
1968–1974	.58***	(.07)	1.79	.88***	(.10)	2.42	.05	(.21)	1.05
1975–1981	.29***	(.07)	1.33	.55***	(.10)	1.73	.04	(.20)	1.04
1982–1988	.11	(.07)	1.12	.27*	(.11)	1.31	–.22	(.20)	.80
1989–2004	omit	omit	omit	omit	omit	omit	omit	omit	omit
Unweighted <i>n</i>	6,259			3,326			506		
Person-years	62,046			34,640			4,546		

Note: All models control for age of mother at birth and SIPP panel membership (omitted from the table). Models for the full sample control for educational attainment at time of birth. Models for those with some college control for having at least a bachelor's degree. *e^B* = exponentiated *B*.
* *p* ≤ .05. ** *p* ≤ .01. *** *p* ≤ .001.

marriage, with the notable exception of White mothers with more education. Among less well-educated Whites, mothers in the 1960–1967 birth cohort, when compared to the 1989–2004 birth cohort, had 37% higher odds of marriage (*B* = .31, *e^B* = 1.37, *p* < .001). Notably, even mothers who had a birth between 1982 and 1988 had one fifth higher odds of marriage when compared with the 1989–2004 birth cohort (*B* = .19, *e^B* = 1.21, *p* < .001). It is unclear why the results for the 1975–1981 cohort are so attenuated, though the coefficients are in the same direction as the other cohort groups. In contrast to the results for low educated White mothers, the results for better educated White mothers indicated decreased probabilities of marriage for births that occurred before 1989; these coefficients were not always statistically significantly different from the 1989–2004 cohort.

For the full Black sample, mothers in the 1960–1967 birth cohort had odds of marriage that were twice as high as odds of

marriage for the 1989–2004 cohort (*B* = .72, *e^B* = 2.06, *p* < .001). Effects were more pronounced among the less well educated, and a significant increase in marriage odds is evident for all birth cohorts when compared to the 1989–2004 cohort. As for Whites, marriage rates among Blacks continued to fall between the 1980s and the 1990s; less well-educated Black mothers who gave birth in the 1982–1989 cohort had odds of marriage that were 30% higher than less well-educated Black mothers who gave birth between 1989 and 2004 (*B* = .27, *e^B* = 1.31, *p* < .05). Results for better educated Blacks generally indicated increased probabilities of marriage for all cohorts when compared to the 1989–2004 cohort, but the sample sizes were small, and the results should be interpreted cautiously.

As for the other control variables (results not shown), mothers who were not teenagers when they gave birth were less likely to marry than were mothers under the age of 19; these

results were most pronounced among less well-educated Whites. In addition, mothers with more education at the time of the birth were also more likely to marry.

DISCUSSION

An emerging sociocultural view of out-of-wedlock childbearing and marriage has suggested that women view births and marriages as distinct end points (Edin & Kefalas, 2005; Gibson-Davis, 2009). In part because of changing social norms that sanction sexual intimacy and childbearing outside of marriage (Thornton & Young-DeMarco, 2001), the once-close connection between marriage and fertility has loosened (Ellwood & Jencks, 2004). This decreased connection has led individuals to develop different motivations and expectations regarding marriage and fertility. Marriage, though highly desired, has become associated with a set of relational and economic standards, and it can be delayed until those standards have been achieved (Gibson-Davis, et al., 2005). Individuals can also delay marriage as long as they wish without forgoing sexual intimacy and childbearing. Childbearing, in contrast, may be viewed as a meaning-making activity and is not held to the same set of economic standards as marriage is (Edin & Kefalas, 2005). Individuals, therefore, do not delay childbearing, but they delay marriage until they feel they have met its economic prerequisites.

This theoretical perspective has suggested that increased delays between childbearing and marriage should mark trends in marriage among unwed mothers but that mothers should not be forgoing marriage altogether. The results found here were consistent with that interpretation, as delays in marriage (with the exception of less well-educated Blacks) are arguably more pronounced than declines in marriage. As compared to mothers who gave birth in the 1960s, mothers who gave birth in the 1990s and early 2000s are much less likely to marry in the years immediately following a birth. The percentage of White women who married within 3 years of an out-of-wedlock birth decreased by 27%; for Blacks, the decrease was 60%. But excluding lower educated Black mothers, a majority of mothers eventually married, which suggests that mothers are not avoiding marriage entirely. These results are consistent with other studies that have found that the majority of Americans still marry, but

many do so at later ages (Ellwood & Jencks, 2004; Goldstein & Kenney, 2001).

There were declines in marriage rates overall: less well-educated Whites and Blacks of all educational levels who gave birth between 1989 and 2004 were significantly less likely to marry than were their peers who gave birth between 1960 and 1967. In some cases, the declines are quite substantial: marriage odds for a Black mother in the 1960–1967 cohort were twice as great as marriage odds for a Black mother in the 1989–2004 cohort. Moreover, the decline in marriage odds for less well-educated women is evident not only when comparing the marital behavior of 1960s mothers to 1990s mothers but also when comparing the marital behavior of mothers in the 1980s to mothers in the 1990s. Nevertheless, the overall picture that emerges is that many unwed mothers will eventually become wives, but it may take them several years to do so.

Because this study is descriptive in nature, it cannot rule out the influence of other factors in shaping marital behavior, such as a decline in the economic benefits of marriage or participation in the welfare system. Declining male earnings and cash welfare receipt may account for the avoidance of marriage, but they cannot account for the delay in marriage or why it is that some women have a child first and then wait several years before marrying (Ellwood & Jencks, 2004). At the very least, this study suggests that future efforts to investigate the marital behavior of unwed mothers should account for both declines and delays in marriage.

I had hypothesized that changes in marital behavior would be greater for less well-educated and Black women, who have had marked declines in their overall marriage rates (Goldstein & Kenney, 2001) and who have been to be less likely to marry following an out-of-wedlock birth (Ellwood & Jencks, 2004; Graefe & Lichter, 2002). In addition, if mothers are waiting to marry until they have achieved the economic prerequisites, then it may be more difficult for economically marginalized groups to realize those prerequisites. Results confirmed the hypotheses. Marital decline and delay over time were greater in magnitude for less well-educated mothers and were more pronounced for Blacks than for Whites.

Yet results also indicated that racial differences were just as pronounced as educational differences because the cumulative marriage

rates for better educated Blacks more closely resembled less well-educated Blacks than better educated Whites. Scholars have found that Black mothers were less likely to marry than White mothers (Bennett et al., 1995; Carlson et al., 2004; Lichter & Graefe, 2001), in part because Black women faced a more proscribed marriage pool and had a harder time finding economically viable partners (Wilson, 1987; Wilson & Neckerman, 1986). It is possible that well-educated Black mothers have a particularly difficult time finding suitable matches, but this result bears further investigation.

The results for better educated White mothers were intriguing, insofar as they were the only group with increased odds of marriage over time. The qualitative studies that informed this current work (Edin & Kefalas, 2005; Gibson-Davis et al., 2005) concentrated on the disconnect between first marriage and first births among low-income mothers and had little to say about the marital behavior of women with more education. One possibility is that there have been compositional shifts in the types of better educated White women who have an out-of-wedlock birth. Perhaps births to White, better educated mothers in the 1989–2004 cohort were more likely to be in the context of a committed relationship than were births to mothers with the same demographic characteristics in earlier birth cohorts. Unfortunately, no data exist to either refute or affirm this hypothesis, but the results are consistent with this interpretation.

It is likely that compositional shifts in the types of women who have an out-of-wedlock birth have occurred more generally and that these shifts confounded estimates of changes in marital trends. The fact that the SIPP collected only minimal demographic data on mothers at the time of the birth exacerbated the problem. Results suggested, though, that mothers who gave birth in the past decade were relatively more advantaged (in terms of education and age) than mothers who gave birth several decades ago. If the pool of unwed mothers has become less negatively selected over time, then results presented here most likely understate declines and delays in marriage. In addition, results showed that the marriage odds of mothers continue to decrease, even if the comparison was between mothers giving birth in the 1990s to mothers giving births in the 1980s. Compositional shifts should be less pronounced in comparisons of mothers in

back-to-back decades than in comparisons of mothers across several decades.

In addition to describing trends in marriage, an additional goal of this study was to highlight how the experiences of children born into unwed parent homes have changed over time. The median time from first birth to first marriage for Blacks, for example, rose from 8 to 16 years, suggesting that many Black children may be teenagers before their mothers marry. The age at mother's marriage has implications for child well-being, as marriage may affect children differently if that marriage occurs when they are in elementary school rather than high school. As one example, longer exposure to an unwed-parent home may increase the probability that a child experiences family instability. Family instability has been linked to adverse outcomes for children, with children who experienced multiple transitions particularly at risk (Osborne & McLanahan, 2007). In addition, unmarried mothers, whether cohabiting or single, had higher poverty rates and lower levels of economic resources than married mothers (Lerman, 2002). Later age at mothers' marriage implies that children will spend more time in a potentially poor environment; given the importance of resources in early child development (Duncan et al., 1998), later age at marriage may not convey the same advantages to children as marriage at an earlier age.

Moreover, the increasing age for children at their mother's first marriage raises important issues and questions for policies aimed to promote marriage. For example, if a primary goal of marriage promotion is to reduce poverty among children, then the results here suggest such a strategy may be of limited effectiveness if the mother waits several years before marriage. The increased delay between first birth and first marriage also raises the issue of whom the mother should marry: From a policy perspective, is it more important that the mother marry the biological father when the child is younger or that she marry a stepfather when the child is older? What if by waiting the mother makes a better match that is more stable? Should we trade off an early marriage for a higher quality marriage when the child is older?

As these questions make clear, there is still much we do not know about mothers' marital behavior. Future research should consider, for example, whether the probability of an unwed mother getting divorced has gone down over

time; researchers may be less concerned if mothers delay marriage if such matches are longer lasting. In addition, it would be informative to know whether mothers have other nonmarital births before marriage, the percentage of mothers who marry the biological father as opposed to another man, and how their children are affected by their mothers' eventual marriages. Addressing these issues will more fully inform marriage promotion policies. This article has taken an important first step by describing how mothers' marriage patterns have changed over time and by highlighting the ever-increasing separation between first birth and first marriage among American women. The increased disconnect between first birth and first marriage is likely to have implications not only for the well-being of children but also for society as a whole.

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