Trends in “Shotgun” and Premarital First Births in the United States: Cohort, Period, and Education Differences in Premaritally Conceived Births

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ABSTRACT

Are yesterday's shotgun births today's nonmarital first births? Or do trends in both phenomena reflect increases in the sexual activity of young adults prior to marriage? In this paper, we document trends in shotgun and premarital first births by decomposing trends into age, cohort, and period components, and by estimating educational gradients in these outcomes. We focus on trends in both shotgun and nonmarital first births because these outcomes reflect a conception outside of marriage, with the conception in both cases taken to term. We argue that decomposing trends in shotgun births is, more complicated than has typically been acknowledged in past studies by the nature of the phenomena, which can be affected by trends and compositional shifts in childlessness, in the timing of a first birth, and in the timing of a first marriage. We improve upon previous research by 1) separating cohort from period effects on the age-specific rates, and 2) recognizing the competing risks to either outcome. Our multivariate results proceed in two steps, both involving modeling cohort, period, and education effects upon age-specific hazards. First, we model the competing risks of the transition to a premarital conception (taken to term) versus a first marriage by a woman who is not pregnant. Second, with only women experiencing a premarital conception in the risk set, we model the competing risks of marrying before the first birth (hence, having a “shotgun birth”) or having a nonmarital first birth. All models are run separately for non-Hispanic Whites and Blacks. We provide speculative interpretions of these results.

INTRODUCTION

The increase in nonmarital births as a proportion of all births is a major theme in recent demographic literature (Ventura et al. 1995, Wu et al. 2001, Smith et al. 1996), and a minor theme has been the decrease in the proportion of nonmarital conceptions resolved with what is colloquially called a "shotgun marriage," one where the bride was pregnant at marriage, and the pregnancy presumably drove the decision to marry. Several data sets ask women their fertility and marital histories, collecting dates to the month; this has allowed identification of what we will call shotgun births, if we assume that births following a marriage by less than six or seven months represent nonmarital conceptions resolved by marriage. Published papers on shotgun births generally use data from CPS June fertility supplements to provide period trends on proportion of first births that were nonmaritally conceived, and the proportion of those nonmarital conceptions leading to a birth that involved a "shotgun marriage" (O'Connell and Rogers 1984; O'Connell and Moore 1980; Bachu 1999).

Our analysis responds to methodological limitations of past research that has: 1) relied on assessing period differences rather than assessing period *and* cohort trends, and 2) largely ignored thethe competing risks of marriage and a premarital conception (for one notable exception, see Neal 2004). With respect to the first issue, while most studies provide trends by period, our analysis will separate age, period, and cohort components of both marriage and a premarital conception brought to to term. With respect to the second issue, we acknowledge explicitly that a never-married woman faces the competing risks of a nonmarital pregnancy vs. a first marriage prior to conception, and, that women who have a nonmarital first conception that is taken to term face the competing options of resolving this pregnancy in a shotgun or nonmarital first birth.[1] Recognizing that trends in shotgun first births can be affected by trends and

[1] A limitation of our analysis is that an abortion is also a competing risk, but we only have data on live births.

compositional shifts in childlessness, in the timing of a first birth, and in the timing of a first marriage, we model two stages of competing risk: a) the competing risks of a nonmarital conception that leads to a first birth versus a first marriage that precedes first conception, and b) taking those having a nonmarital conception and taking the pregnancy to term as the risk set, the competing risks of a nonmarital birth versus a shotgun birth. We also examine the educational gradient on all these risks, as well as, where possible education interactions with period or cohort effects.

PAST LITERATURE

Limiting analysis to births to women under 30, a recent U.S. government report using June CPS data (Bachu 1999) showed that the proportion of first births to white women that were conceived premaritally went from 15% in the 1930s to 45% in the early 1990s. Among Blacks, comparable figures were 43%% in the 1930s and 86% in the 1990s. Increases were roughly monotonic. Wu (2005) provides cohort estimates of trends in nonmarital births.As far as we know, no one has decomposed trends in nonmarital *conceptions* into period and cohort effects.

Of those taking the premarital first pregnancy to term before age 30, the government report mentioned above (Bachu 1999) shows that the percent who married before the birth went from 61% to 29% among whites and 27% to 10% among blacks across the same period. But these decreases were not monotonic; in fact, there was little decrease until the 1960s, after which the proportion of nonmarital first conceptions resolved by marriage plummeted. Parnell et al. (1994) used successive NSFG surveys and document a similar period decline in shotgun marriages conditional upon nonmarital conception. In an analysis that adds abortion numbers to the denominator, Akerloff et al.(1996) show similar period declines in the proportion o,f nonmarital pregnancies resolved by a shotgun marriages since the 1960s. (This analysis used successive NSFG cross-sections for fertility, abortion, and marriage histories, and supplemented the number of abortions, known to be under-reported in NSFG, with data from abortion provider sources.)

Akerloff et al. (1996) argue that it was the advent of the pill in the 1960s and the legalization of abortion in 1973 that undermined the custom of the shotgun marriage; the idea is that once women could contracept or abort, men felt no obligation to marry a pregnant partner, and that the demise of the shotgun marriage explained a good share of the increase in nonmarital births. This implies a period effect on whether nonmarital pregnancies are resolved with marriage, though none of the analyses reporting trends in such ratio test between period and cohort effects. If effects were period effects, it would be consistent with a long line of fertility research showing that period has dominated cohort effects in fertility change (see, e.g., Morgan and Hagewen 2005). However, the literature lacks analyses of both period and cohort influences on the resolution of a premarital pregnancy in a shotgun birth, the retreat from marriage and the rise in nonmarital births, despite sophisticated analyses of cohort trends in, for example, marriage (Goldstein and Kenney 2001).

Nonmarital births have long been higher for women with less education (Ellwood and Jencks 2004) and for African Americans (Bachu 1999; Ellwood and Jencks 2004; Wu 2005). But we know little about the education gradient on yesterday's premarital conceptions or shotgun marriages; this lack is part of what motivates this project. One reason for these advantage gradients may be earlier age at first intercourse for low SES and black youth (Wu and Thomson 2001). Another may be the greater tendency of women with less education to have unplanned relative to planned conceptions (Musick et al. 2005). More careful abstinence or contraception by the well educated may reflect either the greater opportunity cost of any reduction in their employment time, or differences by education in contraceptive efficacy or self-regulation. One reason for the educational gradient in nonmarital conceptions in recent data may be that women with more education have access to more "marriageable" men and, while they may wait longer to marry, they have better odds of eventually marrying (Goldstein and Kenney 2001), and thus more motivation to hold off on childbearing till marriage. This greater access to "marriageable" men (men with decent jobs) may also explain why, conditional on a nonmarital conception, several studies find that women with higher education are more likely to have a "shotgun" marriage

(Bachu 1999). The greater career prospects of women with more education may explain why nonmaritally pregnant teens whose parents have more education are more likely to have an abortion (Cooksey 1990).

DATA AND METHODS

The data used in these analyses pool information contained in the retrospective marital and fertility histories from the June 1980, 1985, 1990, and 1995 Current Population Survey (CPS). The CPS sample universe consists of the U.S. non-institutional civilian population aged 15 and older and hence provide a largely nationally representative sample of U.S. women (and of their births) that span a long historical period. The June 1980, 1985, 1990, and 1995 CPS contain additional questions on fertility and marriage asked of married women aged 15 or older and never-married women aged 18 or older. The June supplements begin by asking respondents about their marital history, including the number of marriages, followed by data on the timing (calendar month and year) for the dates of the first two and most recent marriage---data on when their marriage began and, if a marriage ended, the dates (as relevant) of widowhood, separation, and divorce in the 1980, 1985, and 1990 June CPS. In June 1995, data obtained in these marriage histories were altered slightly to encompass the first three, and most recent, marriages. Thus, these data provide complete retrospective marital histories for respondents in the 1980, 1985, and 1990 June CPS who had three or fewer marriages as of the date of survey; likewise, for respondents in the 1995 CPS, we can construct a complete marital history for those with four or fewer marriages at survey. Unfortunately, the retrospective histories in the June CPS supplements are limited to formal marriages, with these data providing no information on cohabiting unions.

After providing retrospective marital histories, respondents were then queried about their childbearing histories. Women in 1980, 1985, and 1990 June CPS were first asked about the number of children ever born, with coded responses of none, 1, ..., 9, and 10+, while in 1995 the item was modified slightly to allow responses of 0 through 20.} and then prompted for the dates of birth (in calendar month and year) for their first four and most recent child, thus yielding a complete fertility history for women with five or fewer children.

We emphasize that the instrument provides no lead-in instructions that would alert respondents to the marital and fertility substantive content in the June supplemental. As a result, the standard CPS items (labor force participation, hours worked, etc.) are followed immediately by the marital and fertility supplement, with a woman's marital history obtained before her fertility history. Thus, because respondents have no knowledge while responding to the marital history items that these items will be followed by a fertility history, this ordering in which marital and fertility histories is likely to reduce the tendency of women to under-represent premaritally conceived births to the extent that women will easily recall and accurately report the birthdays (month and year) of her children.

We use the educational attainment of women (less than high school, high school only, some college, and college graduate) to ascertain “class” gradients on hazards of interest and to adjust for marked shifts in the educational attainment of women over time. However, a limitation of the data are that education is measured as of the survey year, which may be decades after the first conception, marriage, or birth being modeled. In particular, if a marriage or birth interrupted a woman’s schooling, we will be treated education inappropriately as exogenous. However, given our lack of knowledge about education gradients in shotgun births, we think it is worthwhile to perform the analysis, particularly since, for many women, educational plans or attainments affect the outcomes of interest, and since education is often fairly stable over time. We hope to augment our CPS analyses with examinations of other data sources (e.g., the 1995 and 2001 NSFG), in which the timing of educational attainment is available, albeit for a much more restricted range of cohorts and historical periods.

The CPS data are largely self-weighting and employ no oversampling of racial or ethnic minorities; however, the very large sample sizes provide sufficient sample sizes in analyses even when stratifying by race and ethnicity and period. Table 1 presents descriptive data on all births recorded in the retrospective fertility histories from pooled data in the June 1980, 1985, 1990, and

1995 CPS. Unweighted estimates are presented throughout. As Table 1 shows, a distinct advantage of these data are that they provide lies in the very large samples of births, even when disaggregated by period and the race and ethnicity of mother, where we have coded the racial/ethnic categories of white, black, and Hispanic to refer non-Hispanic whites, non-Hispanic blacks, and Hispanics, with these three categories being mutually exclusive.

MODELS AND METHODS

Because a shotgun birth involves both a premarital conception and marriage shortly after conception, trends in shotgun births will be affected by trends (and compositional shifts) in childlessness, sexual activity prior to marriage, contraceptive technologies, and abortion availability, as well as trends affecting a woman's entry into parenthood and marriage. In the preliminary results presented in this extended abstract, we do not model changes in sexual activity, raceptive technology, or abortion, but we do implicitly control for trends in childlessness and entry into parenthood and marriage. We do so by modeling the: (1) competing risks of a premarital conception that results in a first birth vs. a first marriage , (2) the competing risks given a premarital conception of resolving this conception in a shotgun or nonmarital first birth, and (3) the competing risks given marriage but no premarital conception of a first birth within a first marriage. Figure 1 illustrates these various competing risks.

[Figure 1 about here]

We employ a standard continuous-time competing risk framework to model women's age -specific risks of a premarital conception vs. a first marriage, and we use this model to examine both cohort and period influences on these age-specific by specifying a series of non-time-varying cohort dummy variables (born 1929 or earlier, 1930-34, 1935-39, …, 1975 or later) and a series of time-varying period dummy variables (at risk 1929 or earlier, 1930-34, …, 1990-94) for the periods at which a woman is at risk for the various competing events. Identification is obtained from: (1) from the nonlinear form of age dependence in the transitions to a premarital conception or marriage, and (2) from variation within a given cohort across the period dummies in the timing of events. In modeling a premarital conception in which we observe a resulting first birth, we invoke the strong assumption that the conception occurred nine months prior to the birth for *all* births and women. In these results, we have also employed a definition of a shotgun first birth as a first birth occurring within the first five months of a first marriage and likewise assume that all first births occurring at six or more months following a first marriage are marital first births, not shotgun first births. Many other authors in this literature use a 7-month definition of a shotgun birth, and we plan to examine the sensitivity of our results to alternative definitions of a shotgun birth.

RESULTS

Table 2 presents life table estimates for successive ten-year birth cohorts of the proportion experiencing the competing risks of a shotgun first birth, nonmarital first birth, and first marriage by age 25, 30, and 35 (the latter only for first marriage). Note that because these are estimates from a competing risk life table framework (including an implicit fourth category of women who have not had either a first birth or first marriage), the percentages in Table 2 will not, in general, sum to one, but instead are more correctly interpreted as the proportions who would have experienced the event in question under the counterfactual in which the other alternative transitions were eliminated. As a consequence, the results in Table 2 are somewhat more easily understood within a column than across columns.

The second panel of Table 2 shows steady rises in the life table probability of a nonmarital first birth with cohort for both white and black women. By contrast, the life table estimates for a shotgun first birth exhibit a less obvious trend with cohort; note, in particular, that estimates for black women rise from 8.7 percent for the cohorts of black women born before 1929 to a peak of 13.2 percent for the cohort born between 1940 and 1949, and declines for subsequent cohorts. Similarly, the life table estimates for first marriage, while exhibiting a rough decline in marriage by cohort, also show some nonmonotonic patterns, especially for white women, with the life table estimates of first marriage by age 30 for white women hovering around 90 percent for the cohorts of women born 1949 or earlier, declining to 84.9 percent for white women born between 1950 and 1959, and increasing slightly to 89.8 percent for the most recent cohort of white women.

The life table estimates in Table 2 provide cohort trends, but ignore period trends and other possible compositional changes. To explore both period and cohort trends, we present highly preliminary estimates from the competing risks of a premarital conception vs. a first marriage (absent a premarital conception) in Table 3. For this extended abstract, we have omitted results for how a premarital conception is resolved (via a shotgun first birth vs. a nonmarital first birth), although such results will be an integral part of our PAA presentation. (In other results, not reported, we have estimated an alternative model for three competing risks: [1] a shortgun first birth, [2] a nonmarital first birth, and [3] a first marriage for those who have not had a premarital conception. We prefer the conceptual model presented in Figure 1 to modeling these three competing risks both on conceptual grounds and because in the period following a premarital conception, women at risk of outcomes [1] and [2] will not be at risk of of outcome [3]. In work we plan to present at PAA, we will contrast results from these various models.)

[Table 3 about here.]

Because our results are highly preliminary, we omit an extended discussion of them, instead emphasizing only key aspects of the analyses and a few notable findings. First, the coefficients for cohort and period in all models reflect contrasts relative to the most recent cohort and period (women born after 1965, i.e., those born after the baby-boom, and the period of risk beginning in 1980). Given these contrasts, then, the pattern of negative coefficients in Table 3 for a premarital conception, which decline with successve cohorts, indicate an upward trend with cohort in premarital conceptions, net of other variables in the model. Second, trends are typically more marked when we control for education, a finding that may reflect increases over time and with cohort in the educational attainment of women. Third, in these preliminary analyses, we observe a pattern in which the influence of both cohort *and* period coefficients on the age-specific risks of a premarital conception or a first marriage without a premarital conception are often large and statistically significant Thus, for these outcomes, the usual difficulties in identifying APC-type specifications is not present, due in part (as noted above) to the highly non-linear form of the baseline risks of these outcomes, to the large samples of women in these data, and to variation within given cohorts and periods in the timing of these outcomes. Fourth, in the results for marriage for both black and white women and in the results for a premarital conception for black women, we observe a negative cohort coefficients that decline in absolute magnitude with cohort, but positive period coefficients that also decline in magnitude with period. Thus, for these groups and outcomes, the cohort and period coefficients will offset one another to varying degrees, and determining overall aggregate trends will require calculations using fitted values and simulations for specific cohorts.

As noted earlier, the results we present here are highly preliminary and thus substantially incomplete. We expect to have completed a number of additional analyses by PAA; these include the following possibilities:

- Conditional on a nonmarital conception, whether the conception is resolved in a shotgun or nonmarital birth. Given the short durations between a shotgun conception and the ensuing marriage, we may employ a simple logistic regression framework in these analyses.
- Interactions of education with cohort and/or period.
- Decomposition exercises to reconcile our findings with those of previous studies. As noted above, many previous studies (e.g., Akerloff et al. 1996; Bachu 1999; O'Connell and Moore 1980; O'Connell and Rogers 1984; Wu 2005) have documented trends in shotgun or nonmarital births using period or cohort measures, but none of these studies decompose trends into period and cohort components simultaneously. We plan a series of (presumably) straightforward decomposition exercises that should show how, for example, conditioning on marriage (as done by Akerloff et al.) affects conclusions about trends in shotgun births.
- Decompositions to further understand the components of change in these competing risks. We will, as appropriate, examine changes in the educational composition; how trends towards later age at first marriage, and the resulting

longer exposure to risk of a premarital conception, affects these competing outcomes; to what degree changes in childlessness have influenced trends in shotgun or nonmarital first births; and counterfactuals in which period trends are as observed but cohort trends are absent, in which marital regimes are held at early levels but nonmarital conceptions rise, and so forth.

- Black/white decompositions. We will examine, for example, whether imposing white marriage patterns over time substantially alters predicted black trends in shotgun or nonmarital births. Similar decompositions with respect to trends in premarital conceptions and the resolution of such conceptions may shed light on both cross-sectional and over-time differences between black and white marital and fertility regimes.
- Exploration of competing risk models using auxiliary data. We will explore the possibility of incorporating available time-series data, for example, time-series of aggregate abortions over time using Guttmacher data. In such models, we may be able to achieve identification, for example, if there is sufficient yearly variation in the time-series abortion data within our five-year period variables for exposure to risk. As appropriate, we will explore a similar strategies with respect to data from sources such as the GSS regarding attitudes towards premarital sexual activity, abortion, contraception, divorce, and so forth. In such exercises, we may also be able to utilize prediction equations (paralleling the available demographic characteristics of CPS respondents) to generate predicted GSS attitudes for a given CPS respondent.

REFERENCES

Akerlof, George.A., Janet. L. Yellen, and Michael. L. Katz. 1996. “An Analysis of Out-of-Wedlock Childbearing in the United States.” *Quarterly Journal of Economics* 111:277-317.

Bachu, A. 1999. *Trends in Premarital Childbearing: 1930-1994.* (P23-197). Washington, D.C.: U.S. Bureau of the Census.

Ellwood, David T. and Christopher Jencks. 2004. " The Spread of Single-Parent Families in the United States Since 1960." Pp. 25-65 (Chapter 2) in *The Future of the Family*, edited by D. P. Moynihan, T. M. Smeeding, and L. Rainwater. New York: Russell Sage Foundation.

Goldin, Claudia and Lawrence F. Katz. 2002. “The Power of the Pill: Oral Contraceptives and Women’s Career and Marriage Decisions.” *Journal of Political Economy* 110:730-770.

Goldstein, Joshua R. and Catherine T. Kenney. 2001. “Marriage Delayed or Marriage Forgone? New Cohort Forecasts of First Marriage for U.S. Women.” *American Sociological Review* 66:506-519.

Knab, Jean and Kristen Harknett. 2006. ““Shotgun” Marriages and Relationship Outcomes.” Presented at the 101st Annual Meeting of the American Sociological Association in Montreal, Canada.

Morgan, S. Philip and Kellie J. Hagewen. 2005. “Fertility.” Pp. 229-250 in Dudley L. Poston and Michael Micklin (Eds.), *Handbook of Population.* New York: Springer.

Musick, Kelly, Paula England, Sarah Edgington, and Nicole Kangas. 2005. “Education and Class Differences in Intended and Unintended Fertility.” Presented at meeting of RC 28, UCLA.

Neal, Derek. 2004. “The Relationship Between Marriage Market Prospects and Never-Married Motherhood.” *Journal of Human Resources* 39: 938-57.

O'Connell, Martin and C. Rogers. 1984. “Out-Of-Wedlock Births, Premarital Pregnancies and Their Effect on Family Formation and Dissolution.” *Family Planning Perspectives* 16 (4): 157-162.

O'Connell, Martin and M. Moore. 1980. “Legitimacy Status of First Births to United-States Women Aged 15-24, 1939-1978.” *Family Planning Perspectives* 12 (1): 16.

Parnell, Alan M, C. Gray. Swicegood, and Gillian. Stevens. 1994. “Nonmarital

Pregnancies And Marriage In The United-States." *Social Forces* 73:263-87.

Preston, Samuel H., and John Mcdonald. 1979. "the Incidence of divorce within Cohorts of American Marriages Contracted since the Civil War." *Demography* 16:1-25.

Ryder, Norman B. 1965. "The Cohort as a concept in the study of Social Change." *American Sociological Review* 30:843-61.

Smith, Herbert L., S. Philip Morgan, and Tanya Koropeckyj-Cox. 1996. "A Decomposition of Trends in the Nonmarital Fertility Ratios of Blacks and Whites in the United States, 1960 to 1992." *Demography* 33:141-52.

Ventura, Stephanie, Christine A. Bachrach, Laura Hill, Kelleen Kaye, Pamela Holcomb, and Elisa Koff. 1995. "The Demography of Nonmarital Childbearing." Pp. 3-133 in *Report to Congress on Out-of-Wedlock Childbearing*, Department of Health and Human Services.

Wu, Lawrence L. 2005. "Cohort Estimates of Nonmarital Fertility for U.S. Women." Paper presented at the 2005 annual meeting of the PAA, Philadelphia, Pennsylvania.

Wu, Lawrence L., Larry L. Bumpass, and Kelly Musik. 2001. "Historical and Life Course Trajectories of Nonmarital Childbearing." Pp.1 -48 in Lawrence L. Wu and Barbara Wolfe (Eds.), *Out of Wedlock: Trends and Consequences of Nonmarital Fertility*. New York: Russell Sage Foundation.

Wu, Lawrence L., and Elizabeth Thomson. 2001. "Racial Differences in Family Change and Early Sexual Initiation. *Journal of Marriage and the Family* 63: 682-96

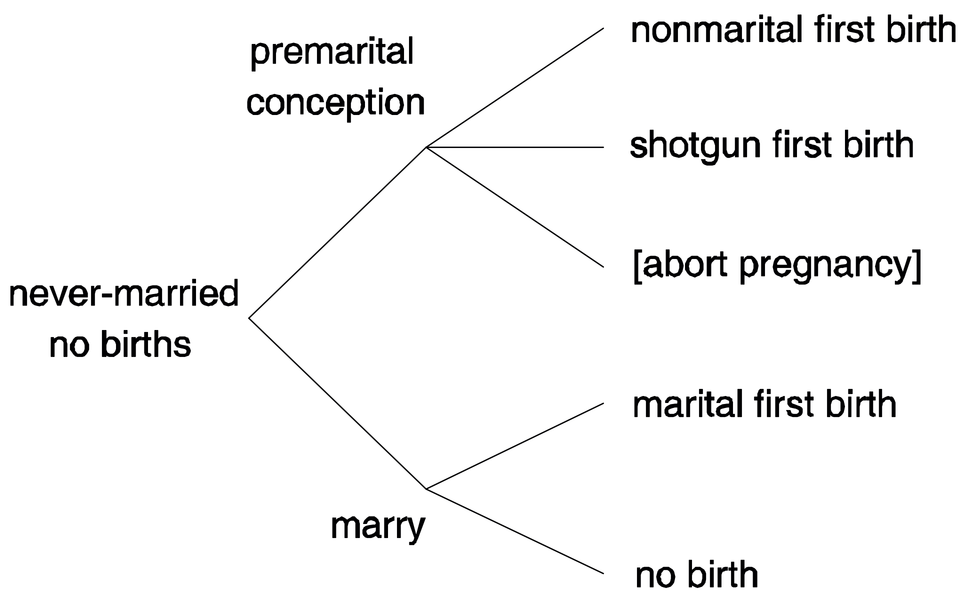

FIGURE 1: Conceptual model of competing risks for first births conceived outside and within marriage.

Table 1: Descriptive statistics on births by period, race, and ethnicity. June 1980, 1985, 1990, and 1995 Current Population Surveys.

	All births	White	Black	Hispanic	Other
before 1945	14,057	11,627	1,534	526	370
1945-49	20,701	17,354	2,002	805	540
1950-54	31,417	26,178	3,063	1,363	813
1955-59	40,741	33,492	4,093	2,002	1,154
1960-64	43,384	34,959	4,641	2,434	1,350
1965-69	42,300	32,964	5,008	2,775	1,553
1970-74	42,204	31,926	5,124	3,369	1,785
1975-79	43,179	31,903	5,534	3,803	1,939
1980-84	32,058	23,459	4,118	2,962	1,519
1985-89	20,768	14,682	2,770	2,232	1,084
1990-95	9,100	6,193	1,171	1,168	568
Total	339,909	264,737	39,058	23,439	12,675

Table 2: Life table proportions for the competing risks of experiencing a shotgun first birth, nonmarital first birth, and first marriage by ages 25, 30, and 35 (first marriage only) for ten-year birth cohorts of white and black women. Kaplan-Meier estimates, June 1980, 1985, 1990, and 1995 Current Population Surveys.

Shotgun first birth

	white women		black women	
	age 25	age 30	age 25	age 30
born 1929 or earlier	3.9	4.6	7.8	8.7
born 1930-39	5.5	6.3	10.3	11.3
born 1940-49	7.9	8.6	12.0	13.2
born 1950-59	7.6	8.7	7.1	7.9
born 1960-69	7.7	10.1	5.0	7.6
born 1970 or later	22.5		12.5	

Nonmarital first birth

	white women		black women	
	age 25	age 30	age 25	age 30
born 1929 or earlier	4.9	5.9	22.5	24.9
born 1930-39	6.1	7.4	28.8	31.9
born 1940-49	7.7	9.0	36.4	38.9
born 1950-59	9.1	11.2	45.3	49.8
born 1960-69	13.9	17.8	51.9	61.5
born 1970 or later	53.8		80.3	

First marriage

	white women			black women		
	age 25	age 30	age 35	age 25	age 30	age35
born 1929 or earlier	78.3	89.9	93.4	72.2	83.3	88.2
born 1930-39	84.5	92.5	94.7	72.8	82.9	87.3
born 1940-49	82.5	91.0	93.5	67.8	78.4	82.4
born 1950-59	72.0	84.9	90.8	xxxx	xxxx	xxxx
born 1960-69	64.9	89.8		37.9	62.3	

Table 3: Coefficients for the competing risks of a first nonmarital conception and first marriage. U.S. women, June 1980, 1985, 1990, and 1995 Current Population Survey.

FIRST NONMARITAL CONCEPTION

	White women		Black women	
	(1)	(2)	(3)	(4)
less than HS		.87***		.52***
some college		-.59***		-.44***
college or higher		-1.54***		-1.29***
born before 1925	-.67***	-1.25***	-2.06***	-2.56***
born 1925-29	-.59***	-1.06***	-1.84***	-2.19***
born 1930-34	-.62***	-.97***	-1.49***	-1.74***
born 1935-39	-.53***	-.73***	-1.34***	-1.50***
born 1940-44	-.48***	-.54***	-1.06***	-1.15***
born 1945-49	-.59***	-.52***	-.84***	-.82***
born 1950-54	-.58***	-.44***	-.62***	-.51***
born 1955-59	-.45***	-.35***	-.46***	-.36***
born 1960-64	-.33***	-.27***	-.29***	-.22***
born 1965 or later	--	--	--	--
period before 1930	-1.39*	-1.21*	1.89***	2.07***
period 1930-34	-.59**	-.52**	1.12***	1.24***
period 1935-39	-.66***	-.56***	1.08***	1.20***
period 1940-44	-.67***	-.56***	.88***	.98***
period 1945-49	-.31*	-.24*	.83***	.88***
period 1950-54	-.27*	-.24*	.69***	.73***
period 1955-59	-.11	-.12	.74***	.76***
period 1960-64	-.01	-.04	.45***	.46***
period 1965-69	.13*	.11	.37***	.35***
period 1970-74	.11*	.08	.26***	.23***
period 1975-79	-.08*	-.13***	.09	.05
period 1980 or later	--	--	--	--

Table 3 (continued)

	White women		Black women	
	(1)	(2)	(3)	(4)
FIRST MARRIAGE				
less than HS		.21***		.10
some college		-.24***		-.11
college or higher		-.65***		-.60***
born before 1925	-.83***	-.96***	-1.69**	-1.76**
born 1925-29	-.66***	-.76***	-1.14*	-1.17*
born 1930-34	-.43***	-.49***	-.89*	-.89*
born 1935-39	-.20***	-.22***	-.56	-.55
born 1940-44	-.05	-.04	-.22	-.19
born 1945-49	.03	.09**	.05	.11
born 1950-54	.06*	.13***	-.08	.00
born 1955-59	.11***	.14***	-.12	-.06
born 1960-64	.03	.04*	-.06	-.04
born 1965 or later	--	--	--	--
period before 1930	1.74***	1.69***	4.13***	4.10***
period 1930-34	1.74	1.20***	4.13***	2.41***
period 1935-39	1.27***	1.05***	2.45***	2.00***
period 1940-44	1.12***	1.13***	2.03***	2.31***
period 1945-49	1.20***	1.20***	2.34***	1.84***
period 1950-54	1.27***	1.03***	1.88***	1.79***
period 1955-59	1.10***	.84***	1.83***	1.52***
period 1960-64	.91***	.58***	1.56***	1.34***
period 1965-69	.65***	.40***	1.39***	1.01***
period 1970-74	.45***	.29***	1.05***	.76***
period 1975-79	.33***	-.02	.79***	.23
period 1980 or later	--	--	--	--

p < .05 *
p < .005 **
p < .0005 ***