DETERMINANTS OF THE SOARING GROWTH OF U.S. NON-MARITAL BIRTHS

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ABSTRACT

Between 1970 and 2006 the number of non-marital births in the U.S. almost quintupled and the percentage of non-marital to total births almost quadrupled rose from 10.7 percent to 38.5 percent. In early 1973 when the Supreme Court announced the Roe v Wade decision, few would have expected such a development. Discussions in both the popular press and technical literature have pointed to several possible factors: the weakening of the stigma attached to children born out of wedlock, the fall in the proportion of "shotgun marriages," the rising divorce rate, the diminishing ratio of suitable men to marriageable women in certain minority groups, and the growing financial independence of women as more entered the work force. As noted below, non-marital births have been increasing in most industrialized nations, so similar discussions on the issue can be found in many languages.

This analysis focuses on the issue of whether the increase in non-marital births in the U.S. is due to a rising number of women entering cohabitating unions and then bearing children or, alternatively, to the increased fertility of unmarried women. For this purpose, women fifteen and over are separated into three groups: married, single and cohabiting, and single, non-cohabiting. Then it is shown that it is not a rising fertility rates of any of these groups that primarily accounts for the rising percentage of non-marital births (in fact, quite the reverse), but rather the rising incidence of non-marital cohabitation. Factors adduced by others, such as a changing ethnic/racial composition of the population, play only a very minor role in the increasing rate of non-marital births.

The analysis is straightforward. After outlining the basic trends and discussing the possible underlying causes of the changes, the discussion turns to two basic questions: Why are now so many couples cohabiting? And why has the birth rate of cohabiting women declined? **JEL Classification**: J1

THE BASIC TRENDS

Table 1 shows that the rate of live babies born per 1000 women between fifteen and forty-four fell between 1950 and 1980 and has remained relatively constant since then. Among African-Americans, it has slightly fallen. The share of non-marital births has been rising, but at a decelerating rate until 2000 when it accelerated again.² Between 1970 and 1980, the increase of this ratio was 72 percent; between 1980 and 1990, 52 percent; and between 1990 and 2000, 19 percent. Non-marital birth ratios for African-American as well as Hispanic and Latina women were considerably higher than the rate for white women

(of all ethnicities), but these gaps were slowly narrowing. Surprisingly, the percentage of non-marital births to women under twenty in all groups has declined dramatically, especially before 1990, while the non-marital birth rates of women twenty-five and over have considerably increased, especially before 1990 as well. This suggest an important ideological shift that deserves greater attention.

The legalization of abortions might be expected to reduce the rate of non-marital births. Table 2 shows that the rate of abortions has unexpectedly fallen since 1980 for all ages, races, and ethnic groups, even though the rate of non-marital births has risen. Of importance to this analysis, the abortion rate has particularly declined among unmarried women. Such data might mean that most non-marital babies were wanted, a conclusion supported in part by other findings on the relatively low share of unwanted pregnancies of this group.³ In turn, this suggests that measures to reduce non-marital births may not prove to be very effective. The relative constancy of the birth rate between 1900 and 2006, combined with the falling abortion rate, could have occurred as a result of more effective contraception.

POSSIBLE CAUSAL FACTORS

As shown in Table 1, some minority groups have a higher rate of non-marital babies than the white population and some have suggested that the changing racial composition of the U.S. population has had an impact on the overall share of non-marital births. If the racial composition had not changed between 1980 and 2000, the overall rate of non-marital births would have been only 6 percent less. Clearly the changing racial composition does little to explain the rising share of non-marital births.

We learn much more by looking at Sweden or Iceland, which recently have had non-marital birth ratios of over 50 percent (Kiernan 2001, 2004).⁴ In these countries, most of these couples accounting for the non-marital births have been cohabiting for a relatively long term. As argued below, ideas about marriage and non-marital births in the U.S. are moving in the same direction.

Although exploring non-marital births by examining trends in cohabitation in the U.S. is crucial, some serious data problems arise. When the Census Bureau began to estimate cohabitation, they labeled this statistic "POSSLQ" (persons of opposite sex sharing living quarters), measuring it inferentially from information on household composition: any household containing just two unrelated adults over fifteen years and of the opposite sex were classified as POSSLQ. This definition, however, missed those couples in group living arrangements, as well as cohabiting couples with children over fifteen; and, in addition, may have erroneously included simple roommates, roomers, and live-in servants. Casper and Cohen (2000) developed an improved measure (adjusted POSSLQ) to take account of some of these failings, and by the mid-1990s this measure was about 17 percent higher than the Census Bureau's POSSLQ, The most accurate estimates of cohabitation have recently been derived from the Integrated Public Use Microdata Series (IPUMS) from various censuses by Fitch, Goeken, and Ruggles (2005). Since these estimates cover only census years, it is necessary to interpolate or extrapolate (beyond 2000) for other years, using the "adjusted POSSLQ" estimates for this purpose. In the mid-1990s the Census Bureau took another approach and began to directly ask unmarried householders if they were partners, but this measure appears to have some serious flaws.⁵

For 2002 we have five estimates of U.S. cohabiting couples (in millions): 4,898

POSSLQ), 6,731 (adj. POSSLQ), 4,193 ("unmarried partners"), 5,578 (National Study of Family Growth), and my estimate of 4,720 derived from Fitch et al. (2005). Although the Fitch estimates

are the second lowest, they also show an increase between 1980 and 2006 of 310 percent, in contrast to 238 percent and 202 percent respectively for the first two.

Table 3 allows us to determine what part of the rise in non-marital births has been due to fertility changes and what part to changes in the relative number of married women, cohabiting women, and single, non-cohabiting women. Part A of the table shows a declining share of married women and a rising share of cohabiting women among the female population, although the share of the latter was still small. Part B shows the percentage of births attributable to the three groups of women. The share of births to married women declined, as we would expect, while those to cohabiting women dramatically increased and was responsible for the major share of increase in non-marital births. Part C of Table 3 shows that the birth rate of cohabiting women showed an uneven pattern but, nevertheless, declined in the two decades since 1980, while that of single, non-cohabiting women reveals an uneven increase.

The major conclusion to be drawn from Table 3 is that the rising share of cohabiting women is primarily responsible for the explosion in non-marital births, not their rising fertility. Births to single, non-cohabiting women have also increased considerably. Also noteworthy is that the birth rate per 1,000 women is much higher among women in cohabiting than married unions. Partly this is because cohabiting couples are much younger on average than married couples. Furthermore, their coital frequency is much higher, other factors such as age held constant (Rao and Demaris 1995; Yabiku and Gager 2009). But such information tells us little about trends in the key variables under examination.

Answers to two crucial questions examined below are necessary to understand the rising number and ratio of non-marital births: Why has cohabitation increased? And why have the birth rates of married and cohabiting women declined?

WHY ARE MORE COUPLES COHABITTING?

The literature on factors underlying a couple's choice to cohabit rather than marry is large,⁶ but it usually focuses on these decisions at a single point in time. This brief discussion explore those factors that might allow us to make predictions about future trends.

Cultural Influences

A common explanation of the rising rate of cohabitation is cultural change: it is more acceptable now for couples to live together outside of marriage. For instance, from 1980-81 to 1997-98, the percentage of U.S. women who agreed with the statement that it is "all right" for an

unmarried couple to live together as long as they plan to eventually marry rose from 33 to 59 percent; for men, the percentage rose from 47 to 67 (Thornton, and Young-DeMarco). Such an attitude may underlie explanations cohabiting couples give for their living arrangement, presenting their cohabitation as a screening device for eventual marriage. Since "eventual marriage" is vague, this excuse might also cover couples who are cohabiting simply for convenience. In his very useful history of U.S. attitudes toward marriage, Cherlin (2009: 137) takes a more radical view, noting that a critical puzzle is not "why there is so little

marriage in the U.S., but why there is so much of it...[W]hy does anyone bother to marry anymore?"

Cohabitation in the U.S. is, however, somewhat different than in other countries. Comparing nine OECD nations, we see that the U.S. had a higher percentage of cohabiting unions that dissolved within five years than in any of the others countries; but it also had the highest percentage of surviving unions that survived and converted to marriage within five years (Kiernan 2004, Table 1). It might appear that cohabitation may have become more common because it is increasingly viewed as "preparation for marriage," rather than as an alternative life style.

Strong evidence, however, also suggests that social class and rising class divisions also play a crucial causal role. Murray (2012) defines "social class" in terms of the education of the mother and, if she or the household head are employed, by the prestige rating of the occupation. He shows that in the forty years since 1970, the rate of non-marital births of white women falls as the social class of the mother rises; and, moreover, the increase of the non-marital birth rate follows the same pattern.

Regarding cohabitation, tor the entire population between 15 and 44 Goodwin et al., (2010) show that in 2002 as the educational level of the mother rose, the share of women who were married increased and the share women who were cohabiting fell, a trend also apparent in previous decades as well (Bumpass and Lu 2000). It has been hypothesized that for women, low income men with poor education do not make potentially good marriage partners. But education and income have other effects as well. One factor is the rising share of families in which the woman has more education and more income than the man (Fry and Cohn 2010). In the mid-1990s women became the majority of college graduates and by 2007, 28 percent of women had more education than their husbands, in contrast to the 19 percent of husbands who had more education than their husbands, in contrast to the 19 percent of husbands who had more education than their wives. In the same year 22 percent of wives earned more than their husbands. Such trends mean that in recent years marriage offers relatively fewer economic advantages to woman than formerly. Moreover, despite the easing of divorce, if the relationship sours, a cohabiting union remains easier to escape from than a marriage. Both the declining economic advantage of marriage to women and the relative ease of dissolution encourage cohabitation.

Some have suggested that other cultural factors have also played a causal role. For instance, simple cross-section regressions of data from U.S. states show that church adherence (depending on the denomination) may partly explain different cohabitation rates (Wydick 2007). In contrast, panel regressions to explain cohabitation show no influence of religion (ibid.). Since attitudes toward religion change very slowly, it does not seem likely that religion, if it has any impact, will have much influence on cohabitation rates in the future.

Micro-cultural factors also influence divorce. For instance, according to some international studies, a woman who experienced her parent's divorce as a child is more likely to cohabit and also to bear children at an earlier age (Haveman, et al. 2001; Kiernan 2001, 2004). Although divorces per 1000 marriages in the U.S. rose until 1980, the rate has declined since then. If divorce is indeed a factor in the rising rate of cohabitation in past years in the U.S., it should play an ever smaller role in the future. On the other hand, children of cohabiting couples are themselves more likely to cohabit (Hetherington and Elmore, 2004) and the currently rising rate of cohabitation should lead to an even higher cohabitation rate in the future, other things equal.

Other micro-cultural influences include the rising age of marriage for both men and women. For men in 1980, the average age was 24.7 and by 2006, it was 27.5; for women

these averages were respectively 22.0 and 25.5 (U.S. Bureau of the Census 2010b). Since younger people have less knowledge of their potential marriage partner and of marriage itself and, at the same time, have a stronger sex drive, cohabitation seems to provide a solution to both problems. Finally, the delay of marriage might have influenced some cohabiting couples wishing children to have their first child before wedlock.

Other studies of cohabitation rates (summarized Lillard, Brian and Waite 2003) reveal still other cultural influences. A serious problem of most of these studies is that cohabitation, marriage, and divorce are endogenous to each other and it is difficult to separate the various causal strands (<u>ibid.</u>; Walters and Ressler 1999). And from the discussion above, we see that macro- and micro-cultural forces are sometimes operating in opposite directions, so that firm conclusions about their combined influences are often difficult to draw.

Exogenous Influences

Three exogenous factors deserve brief mention: the legalization of abortion in 1973, the introduction of the birth-control pills in the late1950s, and easing of divorce laws.

Legalization of abortion. As shown in Table 2, the abortion rate has declined since 1980 at the same time as non-marital births have soared. No believable causal connection is apparent, so the impact of legalized abortions on future rates of non-marital births should not be significant.⁸

The Pill. The diffusion of oral contraceptive pills around 1960 made both cohabitation and marriage more attractive by allowing closer planning (and prevention) of births. But the absence or the planned lack of children also makes dissolution of both types of living arrangements easier as well. Table 2 shows that unwanted pregnancies (as measured by the abortion rate) are more common among unmarried women than married women and somewhat greater among single, non-cohabiting women than cohabiting women, so the birth control pill probably led to more non-marital sex and cohabitation.

Akerlof and his colleagues (1996) raise the interesting argument that the Pill and the easing of abortion might in some cases actually increase non-marital births since the increased availability of abortion "decreases the incentives to obtain a promise of marriage if premarital sexual activity results in pregnancy ." (ibid.: 280). Since a woman who does not want an abortion is placed at a competitive disadvantage with other women in snaring a husband, any accidental and unwanted pregnancy is more likely to be carried to term. Moreover, they also argue that that the pill (and the easier availability of abortion) reduces the number of "shotgun marriages," a controversial claim that is supported by data from Ventura and Bachrach (2000) showing that the share of marriages involving pregnant women declined considerably after 1960. Both these lines of argument suggest that the Pill leads to an increase in non-marital births and cohabitation. Nevertheless, since the Pill has been around long enough to be taken for granted, it should not play a significant role in any change in the rate of cohabitation in the years to come.

Divorce. Wydick (2007) argues that liberalization of divorce law in the last half of the twentieth century makes marriage commitment more difficult and the consequences of marital failure less harsh. That is, couples enter into marriage more casually and have less incentive to make the marriage last. Although he argues that easier divorces would have a favorable impact on cohabitation, cross-section empirical studies of both U.S. states and counties show few significant relations between these variables. Moreover, his own regressions over time to explain changes in cohabitation in U.S. states also show no impact of divorce law on cohabitation, so this factor does not seem to have an important impact on

future non-marital unions.

Economic Influences

Almost all studies of the rising rate of cohabitation point to the increasing role of women in the labor force and their growing non-household incomes, a phenomenon reducing the economic advantage of the traditional division of labor between men and women. Many also mention the incomes of poorly educated males are falling ever behind the median income and their employment record is more sporadic, both of which do not make them desirable marriage partners for higher earning females.

Wydick's (2007) cross-country and cross-state regressions explaining cohabitation, as well as his regressions explaining changes in cohabitation by state between 1990 and 2000, provide important evidence for a positive relationship between female labor force participation and cohabitation. In contrast, Sayer and Bianchi (2000) find only weak empirical support for this hypothesis, once the quality of the cohabiting relationship is held constant. That is, if the relationship between the partners deteriorates, the woman is more likely to start working outside the household. Although serious questions of two-way causation arise, what is important for this analysis is the positive correlation between female labor force participation and cohabitation, whatever the cause of this correlation may be.

Several mechanisms have been proposed to explain the linkage between female labor force participation and cohabitation. Most importantly, marriage-age women are economically less dependent on men, so that for an increasing number, marriage is no longer necessary for their economic security. Using a game-theoretic approach, Wydick (2007) argues that women's labor force participation lowers the gains from household specialization (that is, the dollar value of a woman's time doing household chores versus a man's income) and thus lessens the benefits of mutual dependency. It also increases the payoff from non-cooperation in marriage (lack of economic dependency) and increases the independence that a woman can achieve in non-household activities.

The impact of female employment on future rates of cohabitation is probably slight. Although the participation of women in the labor force increased steadily over the second half of the twentieth century, it remained relatively constant after 2000. The U.S. Department of Labor projects that by 2016 this participation rate should be little different from the rate in 2000. (U.S. Bureau of the Census 2010, Table 575). This suggests that the rate of cohabitation should have risen up to 2000 and very slowly tapered off thereafter.

Finally, although the tax structure penalizes marriage, investigations by Alm and Whittington (2003) suggest that this tax issue played a very minor role in the initial decision to marry or cohabit. They do suggest, however, that tax consequences have a more important influence in the decision to move from cohabitation to marriage.

WHY HAVE BIRTH RATES OF COHABITATING WOMEN DECLINED?

Although a rising fertility rate of cohabiting women was not the cause of the increase in non-married births, the uneven downward trend in the birth rate of married and cohabiting women shown in Table 3 raises some puzzles whose solution might have some impact on the future of such births. Both psychological studies of why single women want babies (e.g., Hertz, 2006) and several theoretical studies (e.g., Akerlof et al. 1996; Wu et al.

1999; Willis 1999) look at the question for a single year. But none of these explains why the fertility rate would change over time.

As previously mentioned, the rising age of marriage might have some impact on cohabitation and non-marital births, but this should increase, not decrease the fertility rate of cohabiting women. Similarly, the growing social acceptance of non-marital births would explain why the fertility rates of unmarried women, whether cohabiting or single, might rise, but in the case of cohabiting women we actually see a fall between 1980 and 2001. It is possible that the increasing cost of raising children might account for the lower fertility of cohabiting (and married) women, but this remains to be proven. In short, this fertility puzzle remains unsolved.

A PERSPECTIVE

The soaring ratio of non-marital births to total births can be primarily explained by the growth in the number of cohabiting couples and, at the same time, the decline in both the relative number of married couples and their fertility. Changing fertility rates of married and cohabiting women do not account for the growing proportion and number of non-marital births. Given the strong relation between female labor force participation and cohabitation, it seems likely that if current labor force trends continue, the rising non-marital birth ratio will finally taper off.

It seems unlikely that incremental public policy will reduce the rate of non-marital births. For instance, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 not only eliminated Aid for Dependent Children payments to unwed mothers but offered \$100 million to the five states with the largest reduction of non-marital births. Non-marital births went up anyway, in part to the relatively small incentives offered in the program. ¹⁰ Moreover, neither public officials nor the public has shown the will to carry out more drastic incentive programs to curtail non-marital births. ¹¹ In brief, the potential for the government to carry out effective programs to reduce non-marital births seems low.

In sum, it is argued that the rise in non-marital births can be traced primarily to a shift in the proportion of married and cohabitating couples, and to the greater fertility of the latter. In turn, the rise in cohabitation can be explained in part by the greater education and labor force participation of women and by a change in attitudes toward non-marital births. In the near future, non-marital births should continue to increase.

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Table 1
Births by Married and Unmarried Women

Year Live births per 1000 women 15-44				Live births per 1000 unmarried women 15-44			
Total	White	African	Hispanic	Total	White	African	Hispanic
		Ameri-	or Latina			Ameri-	or Latina
		can				can	
1950 106.2							
1960 118.0							
1970 87.9				10.7	5.5	37.5	n.a.
1980 68.4	65.6	84.7	95.4 18.4	4 11.2	56.1	23.6	
1985 66.3	64.1	78.8	n.a.	22.0	14.7	61.2	n.a.
1990 70.9	68.3	86.8	107.7 28.0	0 20.4	66.5	36.7	
1995 64.6	63.6	71.0	98.8 32.	3 25.3	69.9	40.8	
2000 65.9	65.3	70.0	95.9 33.	2 27.1	68.5	42.7	
2006 68.5	68.0	72.1	101.5 38.	5 33.3	70.2	49.9	

Percent of live births per 1000 unmarried women >14 by Age of Mother
Year Age of mother

	<20	20-24	>24
19705	0.1%	31.8%	18.1%
19804	0.8	35.6	23.5
19853	3.8	36.3	29.9
19903	0.9	34.7	34.4
19953	0.9	34.5	34.7
20002	8.0	37.4	34.6
20062	2.7	38.1	39.2

Sources: Center for Disease Control and Prevention. 2009. Health, United States, 2009. Tables 4 and 9/ < www.cdc/gov/nchs/data/hus/hus09.pdf>. The data for whites includes Hispanic and Latina.

Table 2
Recorded Abortions per 100 Live Births

Total By age of mother				r					
		All ag	es <15	15-19	20-24	25-29	30-34	35-39	>39
	1980	43.0	139.7	71.4	39.5	23.7	23.7	41.0	80.7
	1985	42.3	137.6	68.8	38.6	21.7	19.9	33.6	62.3
	1990	38.7	81.8	51.1	37.8	21.8	19.0	27.3	50.6
	1995	34.9	66.4	39.9	34.8	22.0	16.4	22.3	38.5
	2000	37.5	70.8	36.1	30.0	19.8	14.5	18.1	30.1
	2005	34.3	76.4	35.8	28.3	18.7	14.0	16.8	27.8
	By rac	e/ethnic	group			By mar	ital statu	s	
White African-			Hispanic or Married Unma			d Unmarr	arried		
		Ameri	can Latin	a					
	1980	33.2	54.3				10.5	147.6	
	1985	27.7	47.2				8.0	117.4	
	1990	25.8	53.7				8.7	86.3	
	1995	20.3	53.1		27.1		7.6	64.5	
	2000	16.7	50.3		22.5		6.5	57.0	
	2005	15.8	46.7		20.5		5.8	48.5	

Sources: The data come from the Center of Disease Control and Prevention. op. cit., table 14 and were collected by the Alan Guttmacher Institute. The data for whites include Hispanic and Latina abortions.

Table 3
Women, 15 and Over, Classified by Marital Status, Births, and Fertility

Demographic Gr	oup			
Married		Cohabiting	Single, not col	nabiting
A. Marital status				
1980	59%	19	% 40%	
1990-1994	56	3	40	
1997-2001	55	4	41	
B. Percentage of	<u>births</u>			
1980	82%	59	% 13%	
1990-1994	72	11	1 17	
1997-2001	69	14	17	
C. Fertility in the	three demograph	ic groups: B	irths per 1000 women	į
1980	56	1:	56 13	
1990-1994	44	12	29 17	
1997-2001	44	1 30	5 16	

Sources: For marital status: Bureau of the Census (2010b), Table MS-1. For births, U.S. <u>Census</u>. "Live Births, Deaths, Marriages, and Divorces," Table 77 at www.census.gov/prod/2007pubs/08abstract/vitstat.pdf. For births of cohabiting and single non-cohabiting women, Bumpass and Lu (2000); Table 4 for 1980 and 1990-94; and from Martinez, et al., 2005, Tables 18, 19. and 21 for 1997-2001. Cohabiting couples: 1980 and 1990 data from Fitch, et al. (2005), interpolated and extrapolated as described in the text.

ENDNOTES

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ⁱ The counterargument of Akerlof et al. (1996) that in some cases abortion and the availability of the Pill increased non-marital births is reviewed below.

ⁱⁱ The trend in the ratio of non-marital births is has been rising at least since 1940, according to Ventura and Bachrach (2000).

Drawing upon the National Survey of Family Growth, Martinez et al. (2005), Table 20, shows that the percentages of unwanted pregnancies for married women in 2002 was 13.8, for cohabiting women, 21.7 for unmarried and non-cohabiting women, 17.0, and for formerly married but not cohabiting women, 23.0. The conclusion in the text is stated tentatively, because the number of "mistimed pregnancies in the same year were respectively 22.3, 26.8, 14.7 and 27.8 percent, obtained by subtracting "unwanted" from "unwanted or mistimed" births. The original source has higher estimates for mistimed births, apparently because the respondents included certain unwanted births among the mistimed births. Of course, the difference between "mistimed" and "unwanted" is not clear.

^{iv} Deparle and Tavernise (2012) report that in the U.S. in 2012, non-marital births account for more than half for women in their twenties.

^v The resulting data on cohabiting couples show unbelievable increases. For instance, between 2006 and 2007 the number of unmarried partners rose 29 percent, which was faster than the POSSLQ increased between 2000 and 2005.

vi Thornton, et al. (2007) provide a useful overview.

vii These women could, of course, live singly, but since two can live more cheaply together than separately, they can save money by cohabitation and, in addition, also gain other benefits.

viii Some have suggested that legalized abortion might have caused pro-life advocates to ramp up their advocacy effects for alternatives, such as increased adoptions. Little evidence on adoptions to support this hypothesis.

ix As previously noted, cohabiting is a way for an unmarried man and woman to save money. Nevertheless, no evidence suggests that this cost savings has increased in recent years or that the need for such cost savings has grown, so these factors cannot serve as an explanation for the growing rate of cohabitation.

^x Foster and Hoffman (2001) review the literature on the effect of AFDC on non-marital births and show that the effect was small or negligible, at least in econometric studies using panel data to take unobserved heterogeneity of the subjects into account

xi Such negative incentives could be financial, e.g., reductions in food stamps, payments from the Temporary Assistance for Needy Families program, or Medicaid payments. Or they could be non-financial, e.g., removing the children from the homes of single mothers or of cohabiting couples, or requiring unmarried parents to undergo therapy sessions with trained by trained social workers. The incentives could also be positive, e.g., subsidized abortions or birth control devices or intensive abstinence education in the schools, or various government campaigns to promote healthy marriages and responsible parenthood. The probable effectiveness of any of these measures (such as the ill-fated "healthy marriage initiative" proposed by President George W. Bush) appears low, if history is our guide.