Love, Marriage, and the Baby Carriage

The Rise in Unwed Childbearing

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EXECUTIVE SUMMARY

The most intimate and central form of associational life is the family—an institution with primary responsibility for nurturing children and transmitting values, knowledge, aspirations, and skills to subsequent generations. A healthy family life is the foundation for a healthy associational life. Children can overcome the negative consequences of being raised in unhappy or unstable families, but many start out the game of life already behind in crucial ways. More profoundly, weakened family life portends a diminished ability of a people to promote and nurture the civil society and pro-social norms that facilitate happiness and prosperity.

One important way in which family life has weakened in America is reflected in the increasing share of births that occur to unmarried couples. This trend has left fewer children in families mutually planned by parents with the intention of permanence, and more children in the care of parents unconstrained by the commitments of marriage. The share of births to unwed mothers stands at 40 percent—up from 5 percent in 1960. We estimate that nearly half of births start as an unwed pregnancy, including two-thirds of first births to women under 30.

This report explores the rise in unwed childbearing over the past 60 years, examining trends that have interacted to accelerate the unwed share of births. While many changes have played a role, we find that the most important have been the increase in the pool of never-married women (expanding the number of potential unwed mothers) and the decline in post-conception, pre-birth marriage ("shotgun marriage"). These two trends appear much more consequential than increases in nonmarital sexual activity, declines in marital fertility, or changes in the likelihood of obtaining an abortion.

Nonmarital sexual activity has risen substantially since the mid-twentieth century. The share of teen-age women who are sexually active, for example, is 2.5 times higher today than in the early 1960s. Increasing use of reliable contraception has mitigated the effect on unwed childbearing. Over the same period, the share of women having used contraception the first time they had sex outside marriage more than doubled. But while marital pregnancy rates have fallen in half as a result of the contraceptive revolution, because of higher rates of sexual activity, improper contraceptive use, and the increasing acceptability of unwed childbearing, nonmarital pregnancy rates are over one-third higher than in the early 1960s.

As for abortion, pregnant women—married or single—are less likely to obtain an abortion than they were before the Roe v Wade decision. That decline also reflects the declining stigma around unwed childbearing and a drop in unintended pregnancy. Since at least the early 1980s, a rising share of births from nonmarital pregnancies are from pregnancies that were intentional; today, half of births from nonmarital pregnancies are intended.

Three times as many births today are from unwed pregnancies than in the early 1960s, and only 9 percent of these pregnancies are followed by a shotgun marriage—down from 43 percent in the early 1960s.

We trace these trends to the rising affluence of the mid-twentieth century, when a greater prioritization of nonmaterial needs (especially among women, who saw greatly expanded opportunities) met a rising ability to fulfill them. The effect of affluence was felt in the discovery of penicillin (which dramatically reduced the incidence of syphilis); the introduction of the pill (which expanded women's opportunities by allowing them to control their fertility); the development and increasing affordability of labor-saving home appliances, processed food, and paid child care (which gave women the opportunity to work longer hours outside the home, raising the opportunity cost of childbearing); and the nation's expansion of a safety net for single mothers (facilitating childbearing without marriage among more disadvantaged women). Rising affluence is an undeniably beneficial development that we should not want to reverse, but it has also led to less stable family circumstances for an increasing number of children. We must find ways to channel future affluence in service of healthier families and a more healthy associational life.

INTRODUCTION

Of all the social relationships that shape people throughout our lives, none is so formative and consequential as the one children have with their parents. For most of us, it is primarily the nuclear family that socializes us into the adult world, develops in us secure attachment and emotional maturation, and transfers to us the values and skills that shape the rest of our lives. No source of social capital matters more—whether for individuals or for society as a whole.

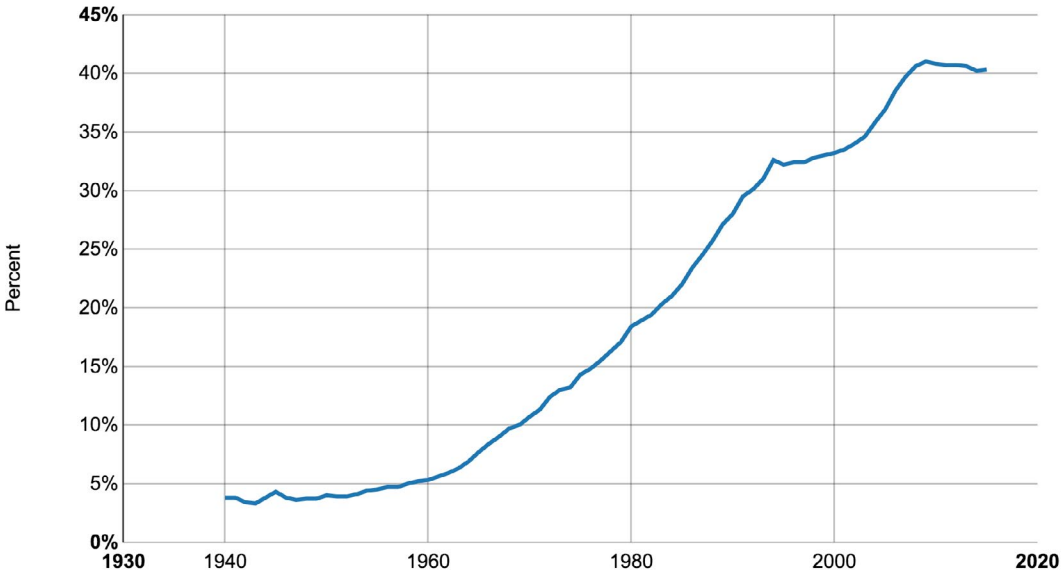
It is no denigration to parents or children in other types of family arrangements to recognize that the married-parent family is unsurpassed as an institution for child development. Statistical comparisons tell a very consistent story: on average, children raised outside of married-parent families generally have poorer outcomes compared to their peers raised in married-parent families. They have worse relationships with their parents, on average, particularly with their fathers.[1] They are also far more likely to experience physical, emotional or sexual abuse.[2] They have poorer health, display more aggression, are more likely to engage in delinquent behavior, have lower levels of educational achievement, and earn less as adults.[3] They are also far more likely to live in poverty.[4]

Statistical tendencies cannot tell us what is best for individual children in specific circumstances.[5] But they reinforce what common sense suggests: that children are likelier to be happy and successful when their parents intend to conceive a child together and subsequently maintain a healthy marriage.[6] While children intentionally born into married families can subsequently experience divorce, unwed childbearing is particularly worrisome because it often signals both unintended pregnancy and an unstable parental relationship. Children born outside of marriage are more likely to experience a series of parental relationships and to have fathers whose resources are split between multiple families.[7]

This report examines the rise in unwed childbearing as an indicator of declining social capital. Historically, unwed childbearing was rare in the United States, but the share of births to unmarried women began climbing in the mid-twentieth century and has increased dramatically (Figure 1). While just 5.3 percent of births were to unwed women in 1960, over 40 percent have been since 2008.[8] Today, nearly six in ten first births to women under the age of 30 take place outside of marriage, and two in three first births are from nonmarital conceptions.[9]

This state of affairs reflects several developments that came to a head in the 1960s and that reflect affluence even as they have weakened the social circumstances into which children are born. Americans, on the whole, have embraced these societal changes, appreciating the personal freedom and opportunities they have brought. But the downside has been reduced family stability, affecting children into adulthood and eroding no less than the social foundations of modern society.

Figure 1. Share of Births that Occur to Unmarried Women, 1940-2015



Source: Centers for Disease Control and Prevention, National Center for Health Statistics, various National Vital Statistics Reports. See Source Notes at the end of the paper for details.

Trends Contributing to Unwed Childbearing

The rise in unwed births shown in Figure 1 could reflect any number of trends related to marriage and childbearing. In particular, any of the following changes would have pressured the unwed birth share up:

1. Changes among single people that increase unwed births:
    - Increased sexual activity,

- Declining use or effectiveness of birth control methods among sexually active single people,
- Fewer pregnant single women choosing an abortion, and
- Fewer "shotgun marriages" to pregnant single women.

2. Changes among married people that reduce marital births:

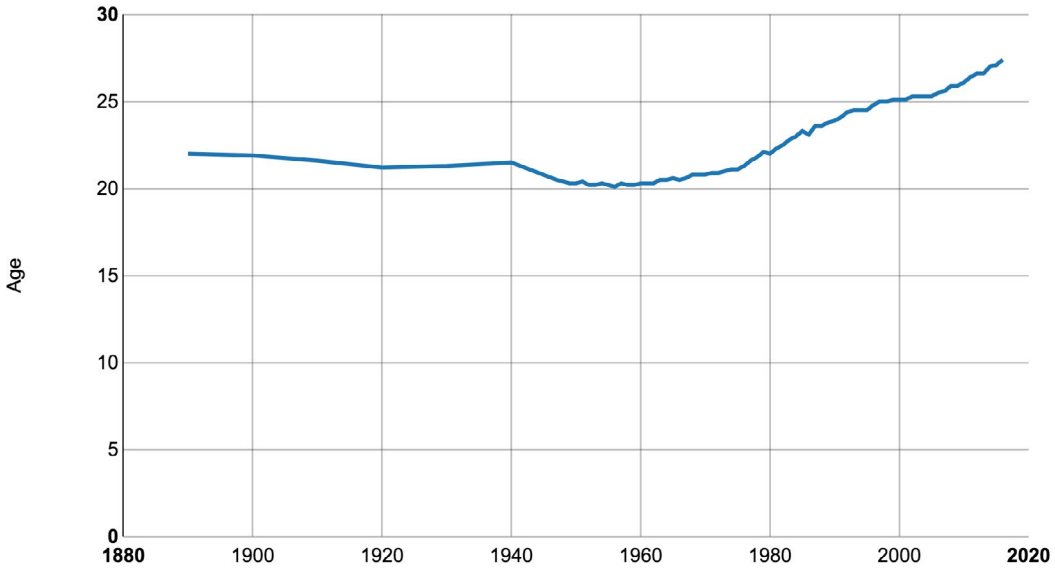
- Reduced sexual activity,
- Increasing use or effectiveness of birth control among sexually active married couples, and
- More pregnant married women choosing an abortion.

3. Increasingly delayed marriage and/or rising divorce, which increases the number of single women and thereby increases the number of unwed pregnancies.

CHANGES IN MARRIAGE AND DIVORCE

Taking these possibilities in reverse order, adults are less likely to be married today than in the past. Median age at first marriage began to rise after 1956, increasing modestly for the next 20 years (Figure 2). After 1975, however, the increase accelerated. Today, the median age at which a woman first marries is 27, up from 20 in 1956.

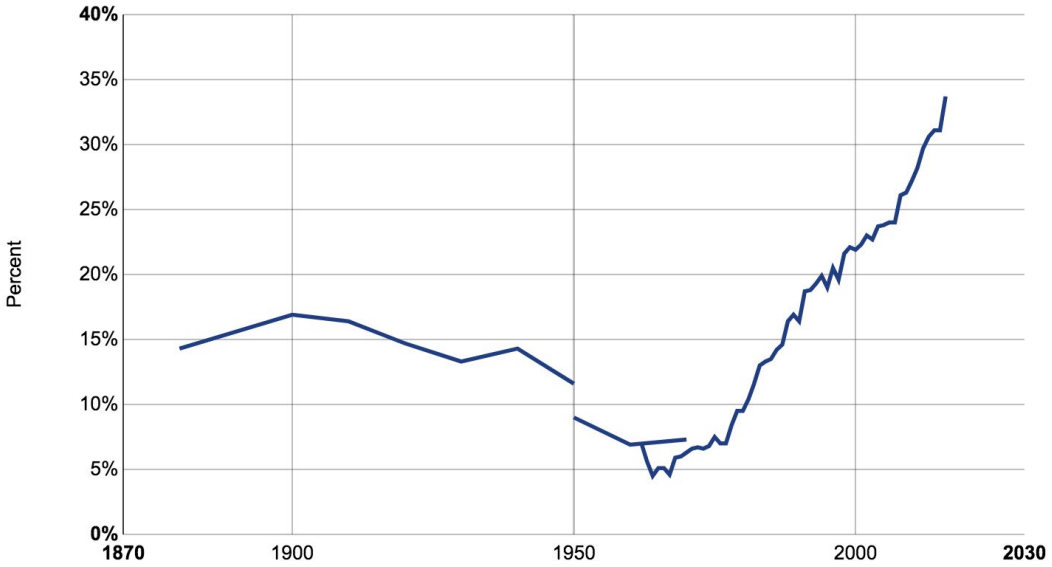
Figure 2. Median Age at First Marriage among Women, 1890-2016



Source: US Bureau of the Census, Historical Marital Status Tables, Table MS-2, https://www2.census.gov/programs-surveys/demo/tables/families/time-series/marital/ms2.xls.

Trends in the share of women never marrying show a similar pattern. (As we will see, many trends related to family and fertility appear to change around 1960.) In 1964, after a long period of rising marriage rates dating to the turn of the century, fewer than five percent of women between the ages of 30 and 34 had never been married (Figure 3). By 2016, however, the proportion of women in their early thirties having never married was up to an all-time high of one in three.

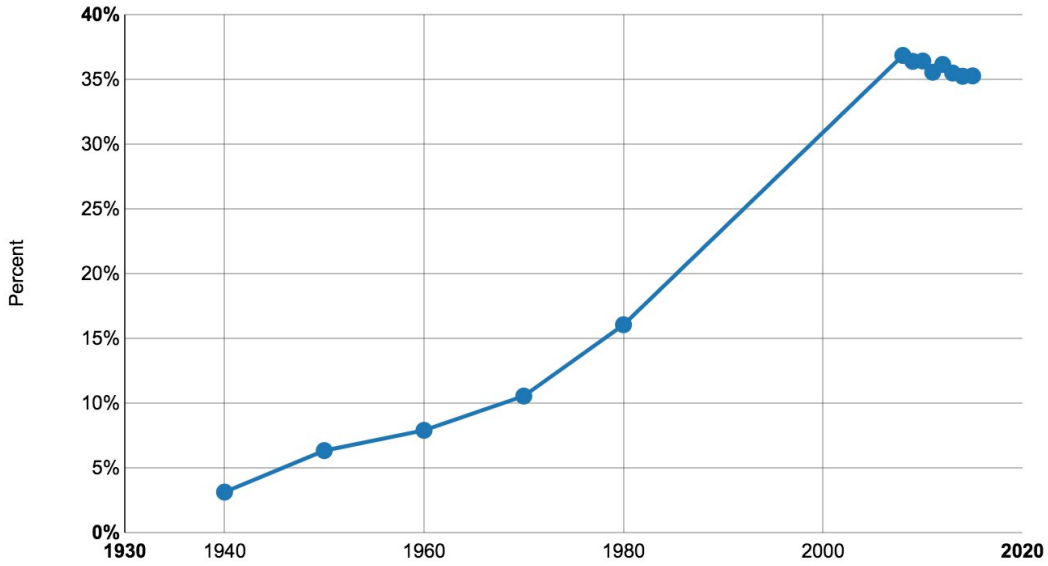
Figure 3. Percentage of Women Ages 30-34 Never Married, 1880-2016



Source: Social Capital Project analyses of decennial census and Current Population Survey data. See Source Notes at the end of the paper for details.

Marriages are also much less stable than in the past. The divorce rate (divorces per 1,000 married women) rose sharply between 1958 and 1979. It has fallen since, but it remains above 1970 levels.[10] Since married women face these high divorce rates year after year, the share of ever-married women ages 50-54 with a marriage that ended in divorce has climbed more dramatically, from below 10 percent during the mid-twentieth century to 35 percent today (Figure 4).

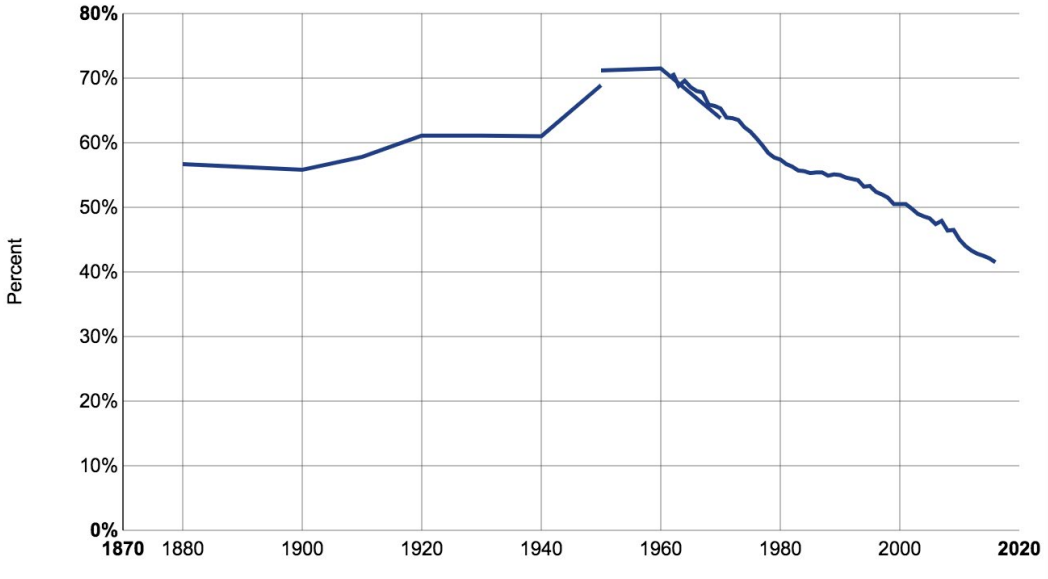
Figure 4. Percentage of Ever-Married Women Ages 50-54 Who Ever Divorced, 1940-2015



Source: Social Capital Project analyses of Integrated Public Use Microdata Series microdata from the decennial census and American Community Survey. See Source Notes at the end of the paper for more details.

The decline of marriage means there are more single women who potentially might get pregnant. While 71.5 percent of women ages 15-44 were married in 1960, just 41.5 percent were in 2016 (Figure 5). All else equal, this change would increase the share of births that occur to unmarried women.

Figure 5. Percentage of Women Ages 15-44 Who are Married, 1880-2016

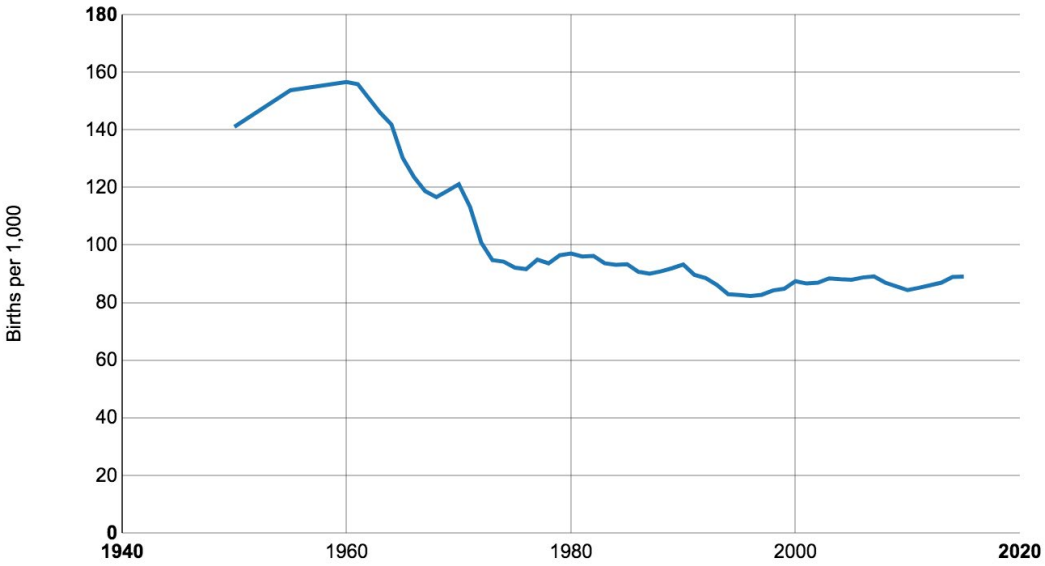


Source: Social Capital Project analyses of decennial census and Current Population Survey data. See Source Notes at the end of the paper for more details.

CHANGES IN BEHAVIOR AMONG MARRIED COUPLES

Not only are fewer adults choosing to enter into marriage or stay married; when they marry, fewer married couples choose to have children (and they choose to have fewer children if they do start a family). Between 1960 and 1996, the number of births to married couples per 1,000 married women fell nearly in half, and it remained low thereafter (Figure 6). Since the share of births to unwed mothers is affected by the number of marital births, the decline in marital fertility has increased the relative prevalence of unwed childbearing.

Figure 6. Births to Married Couples per 1,000 Married Women, 1950-2015



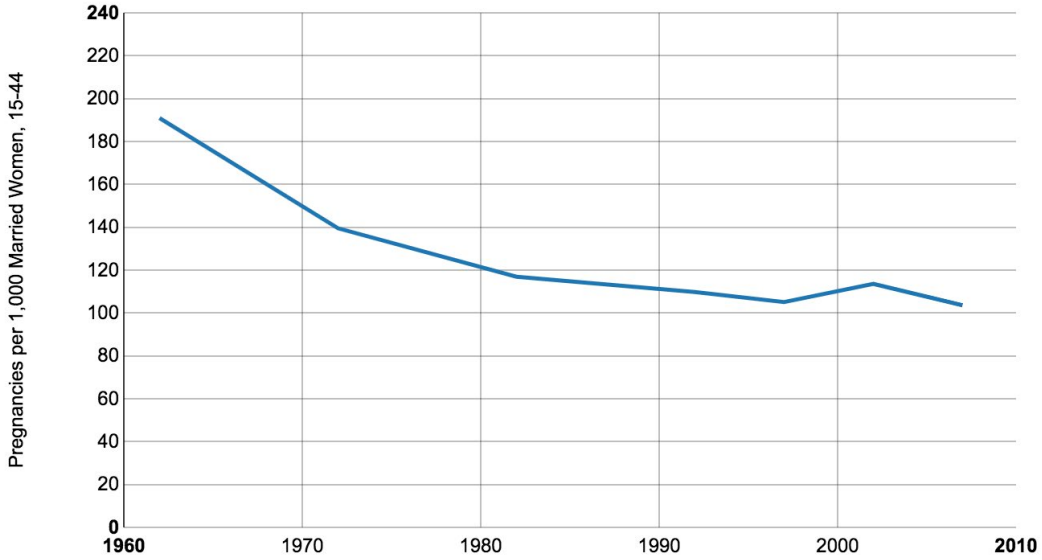
Source: Centers for Disease Control and Prevention, National Center for Health Statistics, various National Vital Statistics Reports. See the Source Notes at the end of the paper for more details.

Why did the marital birth rate decline? Understanding the drop requires distinguishing three kinds of pregnancy outcomes: marital conceptions that end in marital births, nonmarital conceptions that end in marital births (after a "shotgun marriage"), and abortions obtained by married women.

The first point to grasp is that pregnancies per married woman have declined over time (Figure 7). This drop reversed a trend of rising marital pregnancy that probably extended back at least to the early 1930s.[11] Compiling these trends is surprisingly difficult. Past research has counted marital pregnancies as the sum of births to married women and abortions obtained by married women. But because of shotgun marriage, some women who are married when they deliver were single when they became pregnant.

The fact that pregnancies declined hints that abortion may be a negligible part of the explanation for falling marital birth rates. Abortions were relatively difficult to obtain prior to *Roe v. Wade*, but that is when the largest decline in marital birth rates occurred. And, in fact, abortion is rarer today among pregnant married women than it was before Roe.[12]

Figure 7. Pregnancy Rates among Married Women, 1960-64 to 2005-09



Source: Social Capital Project analyses. See the Source Notes at the end of the paper for more details.

It is also unlikely that married couples are having less sex today (or were having less sex in the mid-1970s) than in the early 1960s, when the relative absence of effective birth control regulated sexual activity. Though long-term trends are difficult to find for married women, contraception became more common over time among those engaging in premarital sex, as we will see below, as did use of the pill. Married women had much greater access to the pill than unmarried women prior to the early 1970s. Between the early 1980s and early 2010s, contraceptive use among married women specifically rose and then fell but was largely flat.[13]

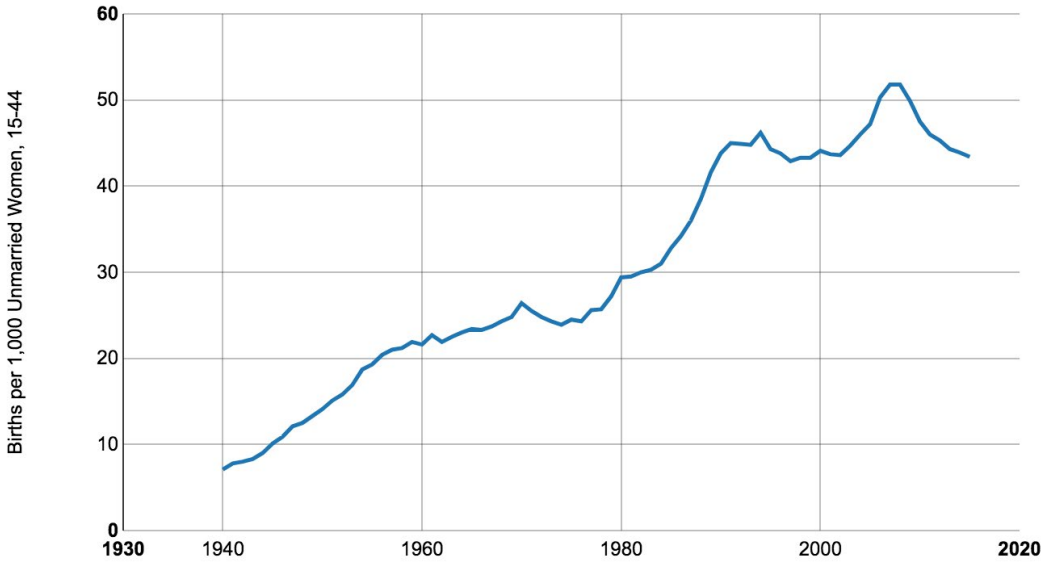
CHANGES IN BEHAVIOR AMONG SINGLE ADULTS

Different people may have varying levels of concern about the long-term declines in marrying and having children after getting married. Much ought to hinge on the extent to which these trends reflect the preferences of men and women. The decline in *staying* married is more worrisome, especially to the extent children are affected. But the last set of changes affecting the share of unwed births is perhaps the most concerning: the increased rate at which children are born to couples who share no marital bond.

It should be noted that many "single" women—and many more than in the past—are cohabiting with a partner to whom they are not married. Indeed, more than half (58 percent) of unmarried women live with the father of their child at the time of the child's birth.[14] However, cohabiting relationships are far less stable than marriage. For example, about half of children born to cohabiting parents experience at least one maternal breakup by the time they turn three years old, compared to only 13 percent of children born to married parents.[15]

As shown in Figure 8, single women have grown far more likely to give birth over time. (The estimates in this chart compare single-mother births to the number of single women, while those in Figure 1 compare single-mother births to the number of total births.) Compared with 1940, single women were over seven times as likely to give birth in 2007. The rate declined temporarily in the early 1970s and in the 1990s, and it has fallen back to 1990s levels since the onset of the Great Recession. But the upward march has been otherwise relentless.

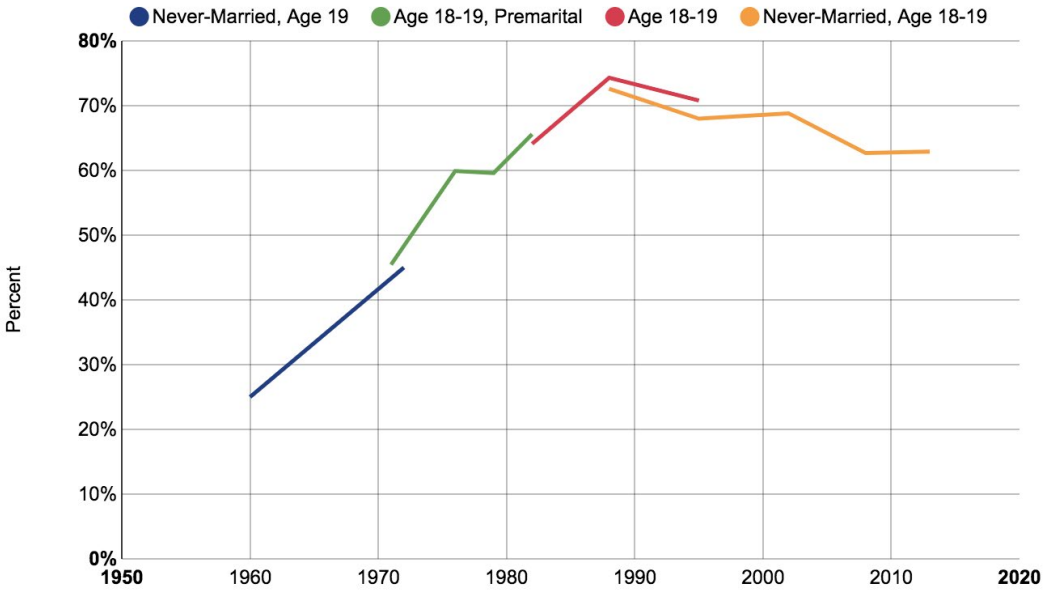
Figure 8. Births to Single Mothers per 1,000 Single Women, 1940-2015



Source: Centers for Disease Control and Prevention, National Center for Health Statistics, various National Vital Statistics Reports. See the Source Notes at the end of the paper for more details.

Why did more and more single women give birth over time? For starters, sexual activity among single women increased. Data are most readily available for teenagers, though the increase seems to have been larger for older women. The share of never-married 19-year-old women who were sexually experienced began rising around 1960, when roughly one in four reported they had ever had sex. The figure was 45 percent by 1972 (see Figure 9). From 1972 to 1982, the share of 18- to 19-year-old women ever having had premarital sex rose from 45 percent to 66 percent. Teenage sexual activity peaked in 1988 before it began to steadily decline. Today, teen sex is probably near or below its early 1980s levels, though still much higher than levels in the 1960s and early 1970s.[16] In 2013, 43 percent of 15- to 19-year-olds had already had sex, and 63 percent of never-married 18- to 19-year-olds had.[17]

Figure 9. Percent of Teenage Women Who Have Ever Had Sex, 1960-2015



Source: Various previously published estimates. See the Source Notes at the end of the paper for more details. "Never-Married, Age 19" refers to never-married 19-year-olds and "Never-Married, Age 18-19" refers to never-married 18- and 19-year-olds. "Age 18-19, Premarital" and "Age 18-19" refer to 18- and 19-year-olds regardless of marital status. "Age 18-19, Premarital" refers only to premarital sex, unlike the other estimates.

Long-term trends in the share of single adults *of all ages* who are sexually active are elusive. Federal data on sexually transmitted diseases indicate that they were over twice as common in 1990 as in 1960 and nearly three times as common in 2015.[18] Survey estimates show that the share of unmarried women between the ages of 15 and 44 having had sex with three or more partners in the past year has risen since the late 1980s.[19] The share of unmarried women between the ages of 15 and 44 who were using contraception rose from 19 percent in 1982 to 33 percent in the early 2010s.[20] All of these trends suggest that sexual activity among

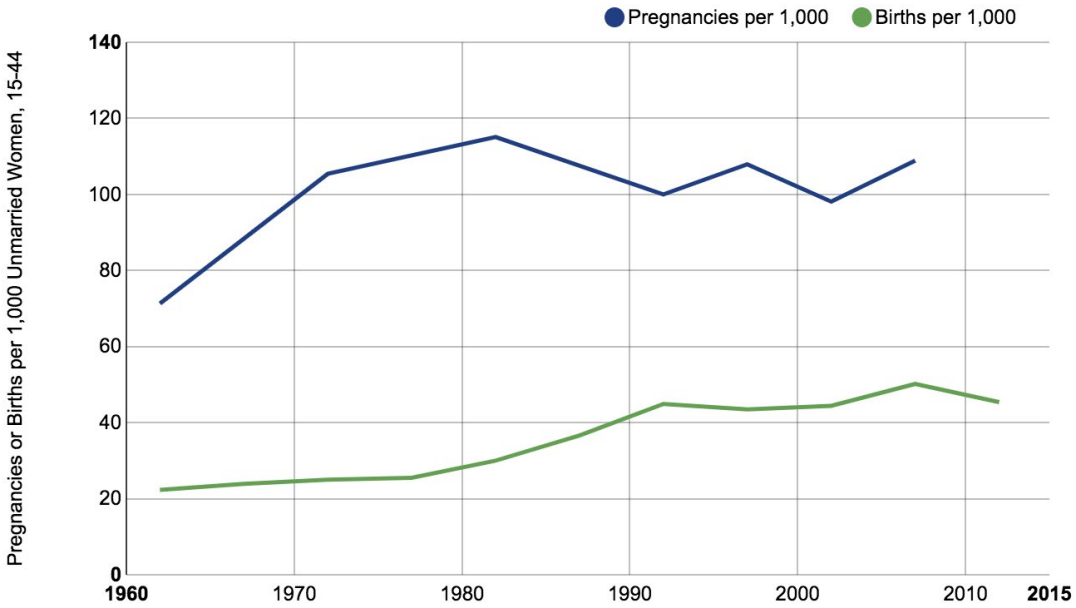
unmarried women generally has continued to rise even as it has fallen among teens. (The share of unmarried women ages 15-44 having had any sex in the past year shows no clear trend since the late 1980s, but no obvious decline.[21])

Further evidence comes from changes in sexual attitudes. In 1969, according to Gallup, 68 percent of American adults agreed that pre-marital sexual relations were wrong. Just four years later in 1973, that number had dropped to 47 percent, a decline of nearly one-third,[22] and as of 2016, only 33 percent agreed that sex between an unmarried man and woman is wrong.[23] Similarly, General Social Survey data shows that in 1972, just 27 percent of adults said that having sex before marriage is "not wrong at all," compared to 60 percent in 2016 who said that sex before marriage is "not wrong at all."[24]

Unwed birth rates could also have risen if unmarried women who were sexually active became less likely to use effective contraception over time. But that did not happen. In the early 1960s, about 40 percent of women having had premarital sex used contraception the first time they did so, a figure which rose to 65 percent by the mid-1980s and which is above 80 percent today. The share using the pill rose from 4 percent to 12 percent and then to about 20 percent.[25] Another study looked at unmarried women "at risk" of pregnancy (meaning women contracepting or not contracepting but sexually active in the past three months). In 1982, 80 percent of these women were using contraception, and 86 percent were in the late 2000s.[26] Finally, there is no evidence that women are choosing less effective contraception methods over time. The share of contracepting unmarried women using a hormonal method such as the pill or an intrauterine device was constant at around 50 percent over the period.[27]

Though single women were using contraception more and using more effective methods, because more of them were having sex, more became pregnant. As shown in the upper line of Figure 10, unwed pregnancy rates rose through the early 1980s. The good news is that the rate then flattened or even declined, reversing a trend that dated at least to the early 1930s.[28] This reversal could reflect the impact of the HIV epidemic, which may have scared many people into having less sex (see the teen trend in Figure 9) or using condoms more consistently. The bad news is that unwed pregnancy stabilized at roughly the 1970 rate, significantly higher than the rates that prevailed through most of the 1960s and earlier. Once pregnancy rates leveled off, birth rates eventually decelerated. However, the lower line of Figure 10 (showing five-year averages of the data in Figure 8) shows that unwed births rose during the 1980s while pregnancy rates fell.

Figure 10. Pregnancy and Birth Rates among Unmarried Women, 1960-64 to 2010-14



Source: The top series shows unwed pregnancy rates. The bottom series shows unwed birth rates. See the Source Notes at the end of the paper for more details.

Changes in the Frequency of Abortion

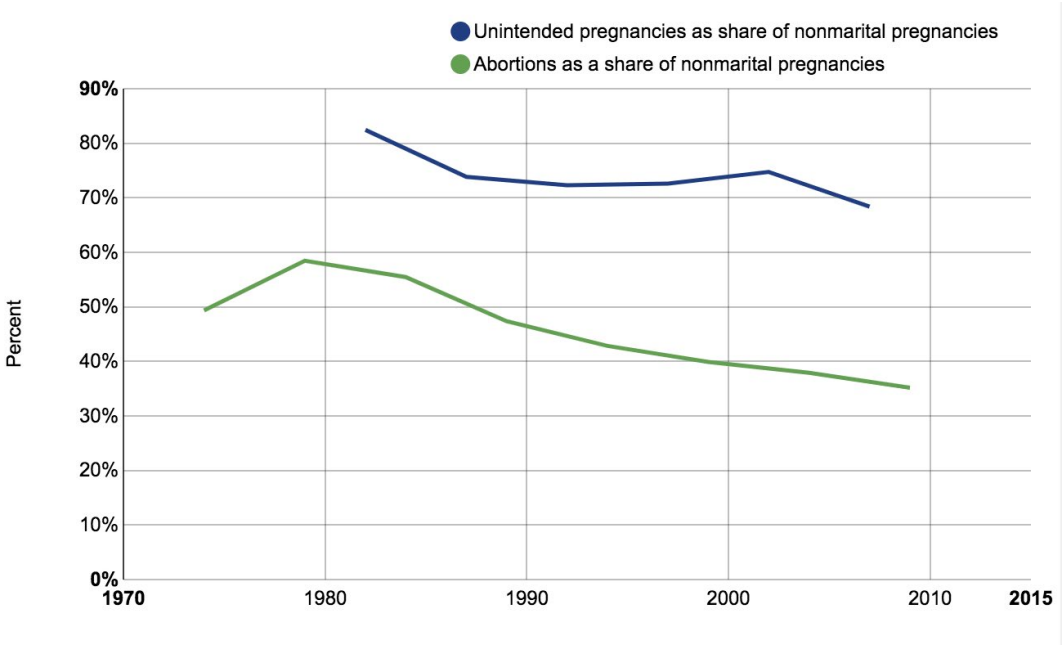
What explains the divergence between the unwed pregnancy and birth rates? The answer is that unwed pregnancies do not always end in a birth or an unwed birth, and both abortion and shotgun marriage have grown much rarer over time. The fact that unwed pregnancies increased much more than unwed births in the late 1960s and 1970s partly reflects the rising rate of abortion. The ratio of abortions to births among women unmarried at conception appears to have peaked in the late 1970s and then to have fallen steadily.[29] Today, single women who become pregnant are roughly one-third less likely to obtain an abortion than their counterparts at the time Roe was decided.[30]

What is behind the drop in abortion? The number of abortion providers appears to have fallen by about the same amount as the number of abortions performed; if it had fallen by more, that might indicate that declining access was behind the drop in abortions.[31] Public opinion regarding abortion has been remarkably steady over time, so it is also unlikely that changing views about the acceptability of abortion have been behind the decline.[32]

The drop in abortion partly reflects a decline in unintended pregnancies, however among unmarried women, the latter was not as steep as the former (Figure 11). The other change that appears to have reduced abortion is that having a baby

while unmarried has become more acceptable. In 1988, 61 percent of adults ages 18 to 44 (and 54 percent of single parents) agreed that "People who want children ought to get married."[33] Only 20 percent disagreed (and only 26 percent of single parents). By 2012, however, just 50 percent of adults (and just 38 percent of single parents) agreed that marriage was a prerequisite to having children (26 percent and 32 percent disagreeing, respectively).

Figure 11. Unintended Pregnancies and Abortions as a Share of Pregnancies among Unmarried Women, 1974-2009



Source: Social Capital Project analyses of data from the National Survey of Family Growth, the Current Population Survey, and the Guttmacher Institute. See the Source Notes at the end of the paper for more details.

Despite the fact that unintended pregnancies are more likely to end in a birth today than in the 1970s, unintended births are a smaller share of all births from nonmarital conceptions. That is to say, a rising share of births from nonmarital conceptions are intended. Today, half of births to unmarried women ages 15-44 from nonmarital conceptions are from intended pregnancies.[34]

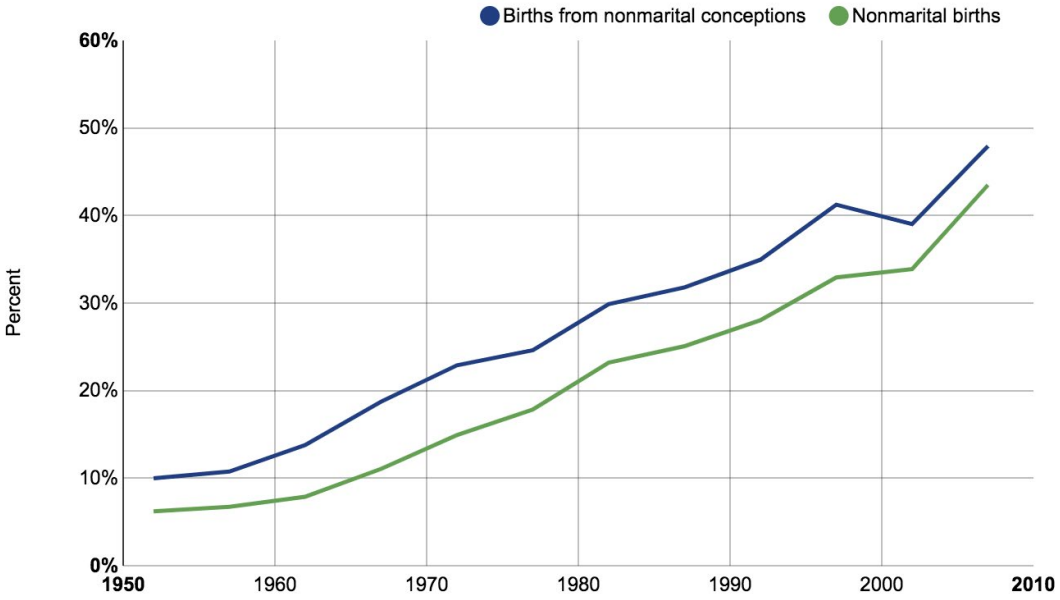
Changes in Shotgun Marriage

Even when carried to term, an unwed pregnancy does not necessarily lead to an unwed birth. In the past, it was common for an unwed couple to marry if they became pregnant, or colloquially, to have a "shotgun marriage." Today, this

response to an unwed pregnancy has all but disappeared. The decline in shotgun marriage has played a major role in the rise of unwed births.

As we have seen, marital pregnancy is less common and nonmarital pregnancy more common than in the past. The top line of Figure 12 conveys the consequence—that more and more births arose from unwed pregnancies. Between the early 1950s and the late 2000s, the share of births resulting from unwed pregnancies rose from 10 percent to nearly 50 percent. (The low point likely occurred in the early 1940s.)[35] At the end of the 2000s, two in three births to previously-childless women under age 30 were to women who were not married when they became pregnant (not shown).[36]

Figure 12. Percent of Births to Women that Began as Unwed Pregnancies and Percent of Unwed Births, 1950-54 to 2005-09

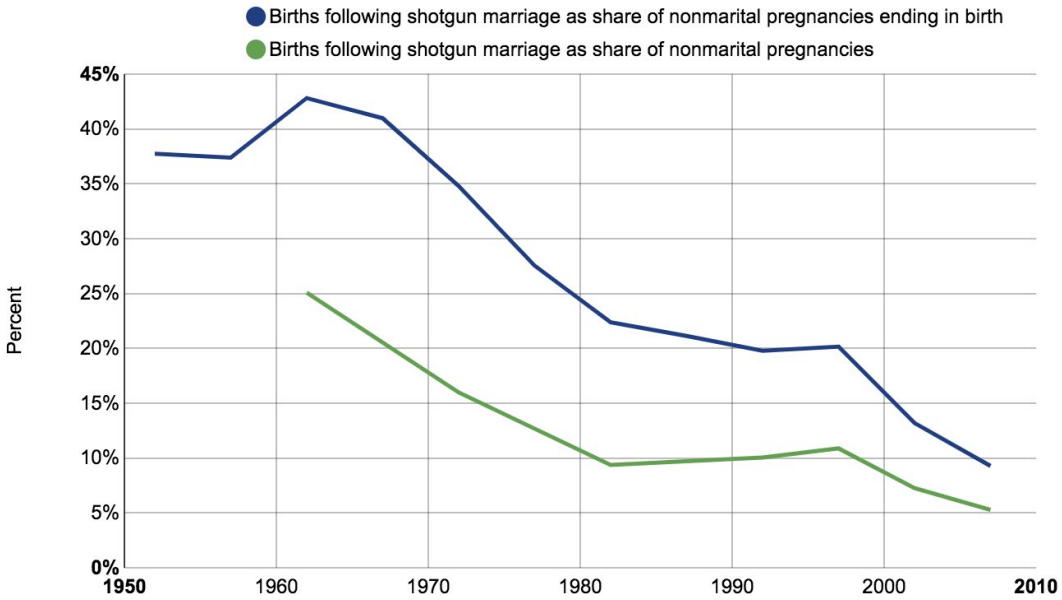


Source: Social Capital Project analyses. See the Source Notes at the end of the paper for more details.

The bottom line of Figure 12 shows the percentage of births that were to a woman unmarried when she delivered. Because both lines involve births, the gap between them is unaffected by changes in abortion; the difference reflects the rate of shotgun marriage. In the 1950s and 1960s, many unwed pregnancies were followed by a shotgun marriage, and so they ended in a marital birth. That was much less true in the late 2000s.

The decline in the shotgun marriage rate is shown in Figure 13. In the early 1960s, 43 percent of births from nonmarital conceptions occurred to women who married before delivering. That rate fell to 9 percent in the late 2000s. Among previously childless women under 30 who became pregnant while single, the shotgun marriage rate fell from 60 percent to 11 percent (not shown).[37] The lower line in Figure 13 shows the trend is similar if births following a shotgun marriage are compared to all unwed pregnancies (not just those resulting in births).

Figure 13. Shotgun Marriage Rate, 1950-54 to 2005-09



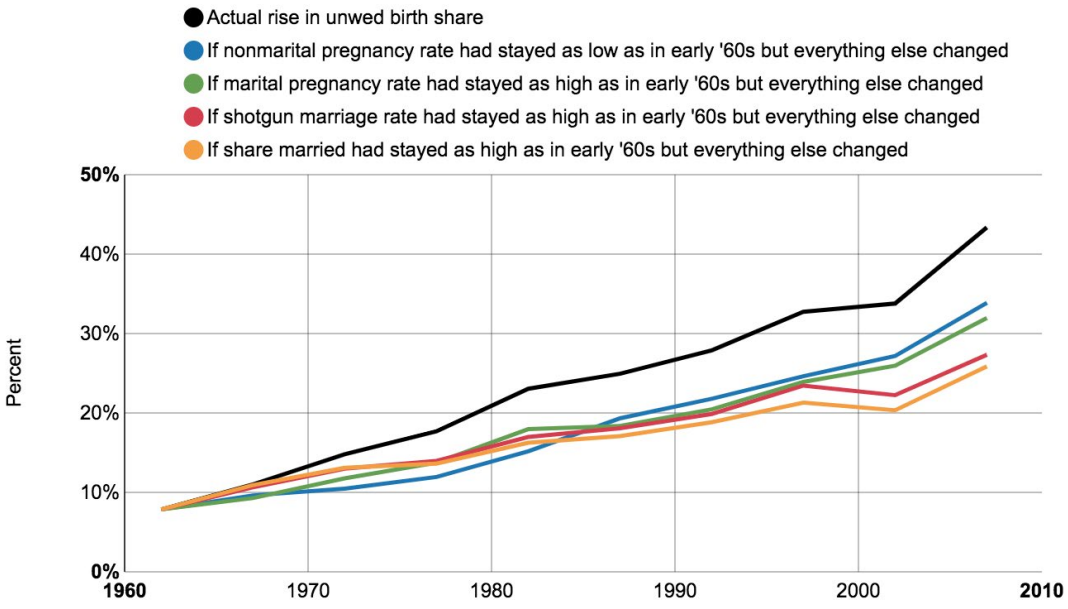
Source: Social Capital Project analyses. See the Source Notes at the end of the paper for more details.

WHICH CHANGES HAVE MOST AFFECTED THE SHARE OF BIRTHS TO UNWED WOMEN?

To review, the past 60 years have seen more unmarried women and more of them engaged in sexual activity, leading more of them to become pregnant, even as fewer married women today get pregnant or give birth. Shotgun marriage has declined, and over the past 40 years declining rates of unintended pregnancy among unmarried women and rising acceptability of unwed childbearing have led to fewer abortions. Rising unwed pregnancies, declining shotgun marriage, and falling abortion produced more unwed births. All of those trends increased the share of births to unmarried women.

How important were each of these changes in raising the share of births that occur to unmarried women? We can roughly simulate counterfactual scenarios in which some factors changed as they actually did while others are kept at their early 1960s levels. In Figure 14, the top line shows the estimated increase in the share of births that were to unwed mothers from the early 1960s to the late 2000s, an increase from 8 percent to 43 percent. Many people might be inclined to see this rise and attribute it to an increase in pregnancy among single women. But the next line down indicates that this factor is a minor one. It shows that the share of births to unwed mothers would still have risen to 36 percent if the nonmarital pregnancy rate had stayed as low as it was in the early 1960s while everything else changed—the share of women who were married, marital pregnancy rates, marital abortion rates, nonmarital abortion rates, and shotgun marriage rates. (In all these analyses, for simplicity, we hold rates at which pregnancies end in miscarriages or stillbirths constant. The results are not meaningfully affected. See the note to Figure 14 in the Source Notes at the end of the paper.)

Figure 14. Increase in the Share of Births to Unwed Mothers, and Counterfactual Scenarios, 1960-64 to 2005-09



Source: Social Capital Project analyses. See the Source Notes at the end of the paper for more details.

In fact, the fall in the *marital* pregnancy rate appears to be a more important factor; if that rate had remained at its high early-1960s level while everything else changed (including the nonmarital pregnancy rate), the share of births to unwed mothers would have risen only to 32 percent. (See the third line from the top in Figure 14.) Holding both marital and nonmarital pregnancy rates at their initial levels, the unwed share of births would have risen to only 26 percent—half the actual rise (not shown).

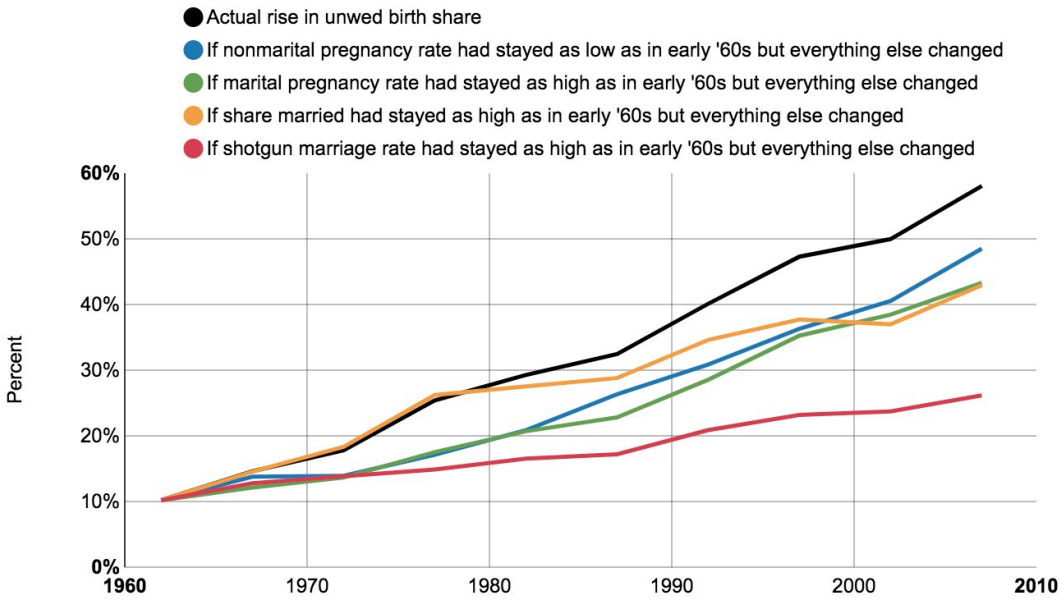
Changes in either marital or nonmarital abortion explain none of the rise in the share of births to unwed mothers, so Figure 14 omits those counterfactuals.[38] There are two reasons for this absent effect. First, marital abortions, relative to marital births, were as rare in the late 2000s as in the 1960s, when abortion was illegal in most cases. We estimate that 7 percent of pregnancies (excluding miscarriages and stillbirths) ended in abortion in both periods. Nonmarital abortions were more frequent in the late 2000s than in the 1960s, but it appears not by much. While we have less confidence in our early 1960s estimate, we find the share of pregnancies ending in abortion rose from 33 percent to 35 percent. In sensitivity analyses, we find that the rise may actually have been from as low as 23 percent. Regardless, holding nonmarital abortion at its early 1960s level then would make the share of unwed births rise, not fall.[39]

The decline in shotgun marriage has been a bigger factor than changes in either nonmarital or marital pregnancy rates taken individually (and about as important as changes in both taken together). The fourth line in Figure 14 indicates that the unwed birth share would have risen only to 27 percent if shotgun marriage rates had stayed as high as in the early 1960s while everything else changed.

The biggest single factor in raising the share of births that were to unwed mothers seems to be the decline in marriage, which has expanded the pool of potential unwed mothers. Had the share of women ages 15-44 who were married stayed at its early-1960s level while everything else changed, just 24 percent of births would have been to single mothers in the late 2000s. The decline in marriage primarily reflects an increase in never-married women rather than divorced or widowed women (not shown).

When the analyses are confined to previously childless women between the ages of 15 and 29, the picture changes. Figure 15 reveals the decline in shotgun marriage to be the single most important factor driving up the share of births to unwed mothers for this age group. The estimates rise from 10 percent in the early 1960s to 58 percent in the late 2000s, but holding shotgun marriage at its early 1960s level, the increase is only to 26 percent—just one third as large.

Figure 15. Increase in the Share of Births That Are to Unwed Mothers, and Counterfactual Scenarios, Previously Childless Women 15-29, 1960-64 to 2005-09



Source: Social Capital Project analyses. See the Source Notes at the end of the paper for more details.

WEAKENED FAMILY STABILITY: A DOWNSIDE OF AFFLUENCE

A review of the charts displayed in this paper reveals that many trends related to childbearing reversed or accelerated during the 1960s. The rise in the share of births that occurred to unwed mothers steepened during that decade. Median age at first marriage began to rise around 1960. The share of 30- to 34-year-old women who had yet to marry started to increase in the late 1960s. The year 1960 is a rough inflection point at which the increase in the share of older women who have been divorced accelerates. The share of women who are married and the marital birth and pregnancy rates all began falling around 1960. Teen-age sex began rising around the same time, and shotgun-marriage rates began to fall.

The timing of these changes suggests that much of the rise in the share of births that are to unwed mothers reflects the interaction of two developments that came to a head in the 1960s: an increase in the weight given to the fulfillment of nonmaterial needs (especially among women, whose opportunities were harshly constrained relative to those of men) and an increasing ability to fulfill those needs. Both of these developments, in turn, are rooted in rising affluence.

The effect of affluence on unwed childbearing is reflected in a variety of ways. Fundamentally, it was affluence that allowed Americans to devote less attention

to basic needs like food, shelter, and safety and more attention to higher-order needs like esteem, status, recognition, personal gratification, and self-actualization.[40] Men and women alike came to place greater value on such goods as higher learning, professional success, fulfilling romantic relationships, and sexual gratification. The demand for better professional opportunities was particularly strong among women, whose plight during the mid-twentieth century as second-class citizens is vividly captured in cultural references ranging from *The Feminine Mystique* to *Mad Men*.

Affluence brought a proliferation of novel ways to enjoy leisure time and fed a growing pay-off to enrolling in higher education. Marrying early, having children early, staying in unfulfilling marriages, and having large families became more costly relative to the available alternative ways to achieve fulfillment, whether through pursuit of a humanities Ph.D. or sexual gratification.[41] The result was an increase in the pool of single people and a decline in marital birth rates.

At the same time that women began to demand more educational and economic opportunities, rising affluence facilitated the expansion of the two-earner family. The introduction of more and more labor-saving home appliances and types of processed food reduced the amount of time necessary for housework. As family incomes rose, more and more couples could afford paid child care, meals outside the home, and other services that replaced the considerable work housewives had traditionally undertaken.

Rising affluence also was responsible for the development of reliable contraception. The pill, in particular, allowed women to control their own fertility and facilitated family planning around career considerations. This new ability greatly increased the appeal to women of professional pursuits.[42]

Affluence and technological development facilitated the decoupling of sex and marriage, which increased nonmarital sexual activity and elevated unwed pregnancy rates. Penicillin brought an end to the syphilis crisis that regulated sexual activity through much of the first half of the twentieth century.[43] The pill provided a way to dramatically reduce the chance of an unintended pregnancy. And abortion became safer, fueling rising demand for legal abortion services that culminated in the *Roe* decision.

As nonmarital sex became safer and its consequences less severe, more single men and women became sexually active. This trend became self-reinforcing. Normative regulation of sexual activity among single men and women loosened. In 1969, 68 percent of American adults agreed that pre-marital sexual relations were wrong. Just four years later in 1973, that number had dropped to 47 percent, a decline of nearly one-third, and as of 2016, only 33 percent agreed that sex between an unmarried man and woman is wrong.[44] What is more, pressure increased on ambivalent single women to engage in sex in order to win and maintain the affection of romantic partners and potential husbands.[45]

As we have seen, despite advances in birth control (or, paradoxically, because of those advances), more sexual activity led to higher rates of unwed pregnancy. While wider use of more effective birth control might have been expected to reduce pregnancy rates, it may be that the greater availability of contraception itself increased sexual activity. Regardless of the reasons behind this increase, not all sexually active couples used effective methods of birth control or used them consistently. Many couples, in the pre-pill past, would have been poor contraceptors but were not sexually active. But as nonmarital sex became more common, their reproductive fates became more tied to their ability to prevent sexual intercourse from leading to pregnancy.[46] In this regard, relatively disadvantaged women suffered disproportionate consequences from the more general changes in societal norms around nonmarital sex.

The availability of the pill and legal abortion also affected shotgun marriage, which further contributed to the rise in unwed childbearing. Previously, single women could expect a promise of marriage from their boyfriends in the event of pregnancy. Men, after all, generally would have to make a promise of marriage in any other relationship. But over the course of the 1960s and 1970s, given the diminished risk of unintended pregnancy, more and more single women were open to sex without a marriage promise. That weakened the bargaining power of single women who preferred not to engage in sex without the promise of marriage in the event of pregnancy. Some of these women subsequently became pregnant and were willing to become single mothers. Further, the availability of effective contraception and abortion may have led many men (and their friends and family) to reason that since women have a degree of control over whether they get pregnant or choose to carry a pregnancy to term, a man who impregnates a single woman is not obliged to marry her.[47]

The decline of shotgun marriage, too, became self-reinforcing. As unwed childbearing became more common, the societal ideal that childbearing should only take place within marriage fell away. In earlier decades, a child born outside of marriage was a sign that moral norms had been violated. Thus, it was expected that a couple would wed in the case of an unwed pregnancy. As sexual behaviors changed, having a child outside of marriage became less stigmatized.[48]

The increase in nonmarital sexual activity and decline of shotgun marriage particularly affected disadvantaged women. The opportunity cost of becoming pregnant—the foregone alternatives—was much lower for such women. Absent the imperative of remaining childless in pursuit of educational and professional goals, they were relatively less likely to avoid pregnancy at all costs.

Finally, affluence also made it more affordable to be a single mother relative to the era before World War II. Socioeconomically advantaged women could better afford to raise children on one income, sometimes with child support from their former partner. Disadvantaged women could draw on an expanded federal safety net that reflected the rising wealth of American taxpayers. That safety net afforded a fairly meager lifestyle on its own, but in combination with their own earnings

and assistance from family, friends, and partners, women could increasingly make it work (especially if they had only known an impoverished living standard themselves growing up).

However, the particular way that American safety nets were designed often disincentivized women from marrying or staying married, since benefits were generally even less generous to two-parent families. That led to increases in unwed childbearing too.[49] (There is some evidence to suggest that the state and federal welfare reforms of the 1990s—in conjunction with an expansion of work supports—were behind the flattening out of unwed birth rates after the 1980s seen in Figure 8.)[50]

WHAT ABOUT MARRIAGEABILITY?

The idea that affluence is behind the rising share of births to unwed mothers may sound strange to those who hold a more negative view of the American economy. The prevailing wisdom is that unwed childbearing has been driven by the deteriorating position of male workers.[51] Poor, working- and middle-class men, it is claimed, have seen lower pay over time, reflecting globalization, deindustrialization, and automation. The weak labor market has driven an increasing number of men out of the labor force entirely. Thus, some reason that the reduction in the share of potential male partners who women consider "marriageable," combined with a persisting value placed on motherhood, explains why women have increasingly chosen to have children without getting married.

There are a number of problems with this position, however. For starters, most of the trends discussed above that have contributed to a rising unwed birth share began or began to accelerate in the 1960s. Nonmarital birth rates were rising in the 1940s and 1950s, and perhaps earlier. The increase in the unwed birth share itself started in the 1950s and accelerated beginning in the 1960s. In other words, these trends generally extend back at least to the "Golden Age" of twentieth-century America—when productivity and wage growth were much stronger than after the 1960s, and when household incomes were rising faster in the bottom half of the income distribution than above it.[52]

Second, rather than seeing declines in pay, men have generally seen flat or modestly rising compensation since the 1960s.[53] That certainly has been a disappointment compared with the strong wage growth of the 1950s and 1960s, but it remains the case that men are mostly doing at least as well as their 1960s counterparts, and so it is unclear why they should seem less marriageable than in the past. A rising share of working-age men have left the labor force, but most of them tell federal surveyors that they do not want a job.[54] Their inclusion in hourly compensation data would dampen the trend in pay to some extent, but only modestly.[55] Meanwhile, as a future Social Capital Project blog post will show, the share of births that are from unwed pregnancies has risen even for women with a

four-year college degree, and it has risen for whites and blacks, Hispanics and non-Hispanics. Similarly, the shotgun marriage rate has declined for all of these groups.

Third, to the extent that men's labor market outcomes have worsened, this could reflect the increase in unwed childbearing rather than the former causing the latter. Research finds that married men have better labor market outcomes than single men, even accounting for the fact that they may be more marriageable.[56] If partners, families, and society writ large have come to accept single parenthood, it is likely that their expectations of nonresident fathers have diminished as well, which could have reduced the effort those men put into optimizing their economic status. This may be particularly true in disadvantaged communities where single parenthood is common. Alternatively, the legal or moral obligation to pay child support may lead some absent fathers to avoid the formal labor market and rely on family, friends, informal work, and the underground economy.

Even the "marriageable man" hypothesis ultimately presumes a baseline level of affluence that, historically speaking, is a recent phenomenon. The argument that because men are less marriageable, women are delaying or foregoing marriage but still choosing to have children presumes that many women are able to afford single motherhood. If not for increased female earnings potential relative to the past or a more generous government safety net, it would matter little if men became less marriageable. Women would be unable to afford single motherhood, and rather than seeing rising unwed childbearing we would simply see reduced childbearing.

CONCLUSION

Social phenomena are complicated and have multiple causes, but our read of the evidence—and we are by no means alone—is that negative economic trends explain little of the overall rise in unwed childbearing.[57] Instead, we think it is more likely that, as with other worsening aspects of our associational life, rising family instability primarily reflects societal affluence, which reduced marriage and marital childbearing, increased divorce and nonmarital sexual activity and pregnancy, and reduced shotgun marriage.

This does not mean we should lament rising affluence. There is no reason we must choose between having healthier families and communities or having stronger economic growth. Indeed, it is possible to imagine a future in which rising affluence will allow more women and men alike to work less and less and spend more time with children, families, friends, neighbors, and fellow congregants.
But to date, we have tended to spend additional wealth to pursue individual and personal priorities. That has eroded our associational life—including the stability of our families, especially among disadvantaged families who have enjoyed the fruits of rising affluence less than others have. Continuing to make the same choices with our ever-higher purchasing power threatens to diminish the quality of life for rich and poor alike.

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SOURCE NOTES

Note that in all analyses, “unmarried” includes women cohabiting with a romantic partner who is not her husband. “Married” includes couples in which one spouse is absent from the home and (except where noted) separated couples.

Figure 1. Share of Births that Occur to Unmarried Women, 1940-2015

1940-1999 estimates are from U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *Nonmarital Childbearing in the United States, 1940-99, National Vital Statistics Reports* 48(16), by Stephanie J. Ventura and Christine A. Bacharach, October 18, 2000 “Number, rate, and percent of births to unmarried women and birth rate for married women: United States, 1940-99,” Table 1, accessed December 5, 2017, https://www.cdc.gov/nchs/data/nvsr/nvsr48/nvs48_16.pdf.

2000-2014 estimates are from U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *Births: Final Data for 2014, National Vital Statistics Reports* 64(12), by Brady E. Hamilton et al., December 23, 2015, “Births and birth rates for unmarried and married women: United States, 1980, 1985, 1990, 1995, and 2000–2014” Table B, accessed December 4, 2017, https://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_12.pdf.

2015 estimate is from U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *Births: Final Data for 2015, National Vital Statistics Reports* 66(1), by Joyce A. Martin, Brady E. Hamilton, Michelle J.K. Osterman, Anne K. Driscoll, and T.J. Mathews, January 5, 2017, "Births and birth rates for unmarried women, by age and race and Hispanic origin of mother: United States, 2015," Table 15, accessed December 5, 2017, https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_01.pdf.

Figure 2. Median Age at First Marriage among Women, 1890-2016

U.S. Census Bureau, Historical Marital Status Tables, "Estimated Median Age at First Marriage: 1890 to present," accessed December 5, 2017, https://www2.census.gov/programs-surveys/demo/tables/families/time-series/marital/ms2.xls.

Figure 3. Percentage of Women Ages 30-34 Never Married, 1880-2016

1880-1970 estimates are from Social Capital Project analyses of decennial census data, using the Integrated Public Use Microdata Series Online Data Analysis System, accessed December 5, 2017, http://sda.usa.ipums.org/cgi-bin/sdaweb/hsda?harcsda+all_usa_samples. (Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek, *Integrated Public Use Microdata Series: Version 7.0* [dataset], [Minneapolis: University of Minnesota, 2017], accessed December 5, 2017, https://doi.org/10.18128/D010.V7.0.)

The 1850-1950 trend includes women who are separated, as it is not possible to distinguish them from never-married women prior to 1950. The 1950-1970 trend excludes separated women.

1962-2016 estimates are from Social Capital Project analyses of data from the Annual Social and Economic Supplement to the Current Population Survey, using the Integrated Public Use Microdata Series Online Data Analysis System, https://sda.cps.ipums.org/cgi-bin/sdaweb/hsda?harcsda+all_march_samples. (Sarah Flood, Miriam King, Steven Ruggles, and J. Robert Warren. *Integrated Public Use Microdata Series, Current Population Survey: Version 5.0* [dataset], [Minneapolis: University of Minnesota, 2017], accessed December 5, 2017, https://doi.org/10.18128/D030.V5.0.) Separated women are excluded.

Figure 4. Percentage of Ever-Married Women Ages 50-54 Who Ever Divorced, 1940-2015

1940-1980 estimates are from Social Capital Project analyses of data from the decennial census and the American Community Survey, using the Integrated Public Use Microdata Series Online Data Analysis System, http://sda.usa.ipums.org/cgi-bin/sdaweb/hsda?harcsda+all_usa_samples. (Ruggles et al., 2017.) It is not possible to distinguish previously widowed from previously divorced women, unless either occurred after the most recent marriage (in which case their marital status at the time of the survey indicates divorced or widowed). We assume the ratio of ever divorced to ever widowed women among those with two or more marriages to be the same in each year as the ratio of currently divorced to currently widowed women 50-54. This approach misses some widows who also have been divorced and thereby undercounts ever-divorced women (if our assumption is otherwise correct). Estimates are unavailable in the 1990 and 2000 decennial censuses or in the American Community Survey prior to 2008.

Figure 5. Percentage of Women Ages 15-44 Who are Married, 1880-2016

1880-1970 estimates are from Social Capital Project analyses of decennial census data, using the Integrated Public Use Microdata Series Online Data Analysis System, http://sda.usa.ipums.org/cgi-bin/sdaweb/hsda?harcsda+all_usa_samples. (Ruggles et al., 2017.)

The 1850-1950 trend excludes women who are separated, as they are combined with never-married women in the data prior to 1950. The 1950-1970 trend includes separated women.

1962-2016 estimates are from Social Capital Project analyses of data from the Annual Social and Economic Supplement to the Current Population Survey, using the Integrated Public Use Microdata Series Online Data Analysis System, https://sda.cps.ipums.org/cgi-bin/sdaweb/hsda?harcsda+all_march_samples. (Flood et al., Integrated Public Use Microdata Series, Current Population Survey: Version 5.0, 2017.) Separated women are included.

Figure 6. Births to Married Couples per 1,000 Married Women, 1950-2015

1950-1989 estimates are from Ventura et al., *Nonmarital Childbearing in the United States*, 1940-99, Table 1.

1990-2000 estimates are from U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations, 2000 and 2001: United States*, *National*

Vital Statistics Reports 51(12), by Brady E. Hamilton, Paul D. Sutton, and Stephanie J. Ventura, August 4, 2003, "Birth rates for married women, by age, race, and Hispanic origin of mother: United States, 1990–2001," Table 8, accessed December 5, 2017, https://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51_12.pdf.

2001-2014 estimates are from U.S. Department of Health and Human Services, 2015 "Births and birth rates for unmarried and married women: United States, 1980, 1985, 1990, 1995, and 2000–2014," Table B.

2015 estimate is U.S. Department of Health and Human Services, 2017, "Trends in marital and nonmarital birth rates: United States, 2005–2015," Figure 4.

Figure 7. Pregnancy Rates among Married Women, 1960-64 to 2005-09

These rates combine estimates of births from marital conceptions, abortions obtained by married women, and miscarriages and still births experienced by married women. Births from marital conceptions are from our analyses of the 1980 and 1995 Fertility and Marital History Supplements to the June Current Population Survey (CPS) and of various cycles of the National Survey of Family Growth (NSFG). We pool births from five-year intervals (e.g., 1960-1964 and 2005-2009) but show data points in the chart at years ending in "2" and "7" (e.g., 1962 and 2007).

The 1960-1964 estimate relies on the 1980 CPS data, the 1970-1974 estimate is an average from both the 1980 and 1995 CPS, the 1980-1984 estimate is an average from the 1995 CPS and the 1988 NSFG, the 1990-1994 estimate is an average from the 1995 CPS and 1995 NSFG, the 1995-1999 estimate is from the 2002 NSFG, the 2000-2004 estimate is from the 2006-2010 NSFG, and the 2005-2009 estimate is an average from the 2011-2013 and 2013-2015 NSFG.

These specific surveys were selected for specific birth cohorts because they are representative of women who were between the ages of 15 and 44 at the time of their child's birth (or reasonably close to representative). The 1980 CPS supplement included women as old as 75, which means that birth cohorts from as recently as 1979 are represented, as are cohorts from 1949 (when 75-year-old women taking the survey would have been 44 years old). The 1995 CPS supplement included women as old as 65, meaning it covers birth cohorts from 1974 to 1994. We chose to analyze the 1960-1974 cohorts using the 1980 CPS and the 1970-1994 cohorts using the 1995 CPS. (For the 1970 cohort, the 1995 CPS only captures births to women who were 15-40, for the 1971 cohort only births to women 15-41, and so on up to 15-44 for the 1974 cohort. The results were very similar to the 1970-1974 estimates using the 1980 CPS.)

For the NSFG surveys, which only include women up to age 44, the birth cohorts are somewhat less representative. In the 1988 NSFG, for instance, not all 1988 births to 44-year-old women will have occurred. More problematically, if one would like to capture the 1980 birth cohorts, one will miss 1980 births to women age 37 or higher, because those women were older than 44 in 1988 and thus excluded from the NSFG. The 1984 birth cohort will exclude births to women older than 40 for the same reason.

As a rule of thumb, we used an NSFG survey to represent a five-year birth cohort if births to all women 34 years old or younger were represented in the survey. In 2015, 84 percent of all births occurred to women under 35 years old, and 97 percent occurred to women under 40 years old, while just 56 percent occurred to women under 30 years old. (See U.S. Department of Health and Human Services, 2017.) We arrived at this rule after comparing estimates produced by different NSFG surveys for the same five-year birth cohorts. Estimates from surveys that excluded births to women, say, older than 42 were consistently similar to estimates from surveys excluding births to women, say, older than 36. In addition, estimates of the share of births that were to single mothers consistently were close to estimates from vital statistics data. In contrast, estimates from surveys excluding births to women, say, older than 29 indicated notably fewer births and yielded a higher share of births to single mothers.

The most uncertain of these estimates is the one for 2005-2009, which averages five-year estimates from the most recent two NSFG surveys. The two surveys provided consistent estimates—44 percent and 43 percent of births were to single mothers—but those estimates were somewhat higher than in vital statistics data (39 percent).

The analyses using the CPS modify the approach in an earlier Census Bureau report. (See U.S. Census Bureau, *Trends in Premarital Childbearing: 1930-1994, Current Population Reports*, by Amara Bachu, October 1999, https://www.census.gov/prod/99pubs/p23-197.pdf.) That report compares the timing of first births to that of first marriages for women 15-29. We generalize to all births to women of all ages. For each woman in the data, we compare dates for up to five births to dates of up to three marriages and up to three marriage terminations. For each birth, we characterize it as coming from a nonmarital conception leading to a nonmarital birth (births occurring while a woman was single), a nonmarital conception followed by a shotgun marriage (births occurring less than eight months subsequent to a marriage), or a marital conception (births occurring eight months or more after a marriage).

The NSFG analyses compare reported marital status at the time of conception to marital status at the child's birth. We confirmed that our methodology produced a very similar number of births and distribution of

births by marital status at conception by marital status at birth as in U.S. Census Bureau (1999) for the same birth cohorts.

We use the distribution of births estimated from these samples, averaged across samples as indicated, and divide the number of births (sometimes averaging across samples first) by five so that we can add births to annual estimates of abortion.

To estimate abortions by marital status, we begin with abortion ratios (abortions divided by the sum of abortions plus births) for married and unmarried women age 15-44. For 1974, 1984, 1994, 1999, and 2004, those ratios are from the Guttmacher Institute. (See Stanley K. Henshaw and Kathryn Kost, "Trends in the Characteristics of Women Obtaining Abortion, 1974 to 2004," Guttmacher Institute, August 2008, https://www.guttmacher.org/sites/default/files/report_pdf/trendswomenabortions-wtables.pdf.)

For 2008, we compute the abortion ratios for women age 15-44 from abortion and birth estimates. Abortion estimates are computed by multiplying the number of abortions by the marital and nonmarital share of abortions. (See Rachel K. Jones and Jenna Jerman, "Abortion Incidence and Service Availability in the United States, 2014," *Perspectives on Sexual and Reproductive Health* 49, no. 1[2017], 17-27, Table 1.) Birth estimates are from U.S. Department of Health and Human Services, 2015, Table B and Table 1.

For 1960-1964 and 1965-1969, we begin with an estimate of abortions (legal and illegal) in 1969 from a 1982 study. (See Willard Cates, "Legal Abortion: The Public Health Record," *Science* 215, no. 4540(1982), 1586-1590, Figure 1.) The illegal estimate (700,000) is the midpoint of a wide range estimated for 1955 (200,000-1,200,000). (See Mary S. Calderone, ed., *Abortion in the United States* (New York: Harper and Brothers, 1958.) It is also very close to the number implied by a 1968 study of central, urban North Carolina (698,914), which used an inventive methodology that allowed an estimate of abortions to be obtained from the overall results of those surveyed without any individual in the study having to admit to having one. (See James R. Abernathy, Bernard G. Greenberg, and Daniel G. Horvitz, "Estimates of Induced Abortion in Urban North Carolina," Demography 7, no. 1[1970], 19-29.) Applying this North Carolina study's estimates to the 1967 population of women produced an estimate of around 829,000 abortions. Thus, 700,000 (or 722,000 adding in legal abortions) is likely an underestimate for 1969, and it is likely somewhat of an underestimate for 1960-1964 and 1965-1969.

We then compute the 1969 abortion ratio using birth estimates from U.S. Department of Health and Human Services, 2015. Finally, we distribute these births between married and unmarried women by comparing the overall abortion ratio in 1974 to the marital and nonmarital abortion ratios in 1974 and applying those ratios of ratios to the overall abortion ratio

for 1969. We assume the 1969 abortion ratios for married and unmarried women apply to 1960-1964 and to 1965-1969. As a check against this approach, we re-estimated the marital and nonmarital abortion ratios using 1979 ratios instead of 1974 ones, which produces significantly smaller nonmarital abortion ratios for the 1960s. None of the results discussed in the paper are qualitatively different in any important way using these estimates.

Once we have the abortion ratios for each year, we then apply the ratios by marital status to the number of births by marital status at birth, using the estimates from the CPS and NSFG (births following a shotgun marriage included with marital births). For example, the 1974 abortion ratios are applied to births to married and unmarried women from 1970 to 1974, the 1984 ratio to births from 1980 to 1984, etc.

We add births from marital conceptions to marital abortions and births from nonmarital conceptions to nonmarital abortions. We convert these to rates by dividing by married and unmarried women. These come from our analyses using the Integrated Public Use Microdata Series Online Data Analysis System, using decennial census data for 1960-1964, http://sda.usa.ipums.org/cgi-bin/sdaweb/hsda?harcsda+all_usa_samples and data from the Annual Social and Economic Supplement to the Current Population Survey for 1970-2009, https://sda.cps.ipums.org/cgi-bin/sdaweb/hsda?harcsda+all_march_samples. (Ruggles et al., 2017; Flood et al., 2017.) For 1960-1964, the estimate is interpolated between census years by multiplying the intercensal population change from 1960 to 1970 by 0.2 (corresponding roughly to a 1962 estimate). The estimates for 1970-2009 are actually five-year averages (1970-74,..., 2005-09). These estimates are adjusted by adding one quarter of births that come from a shotgun marriage to the number of unmarried women and subtracting them from the number of married women. This roughly reflects the fact that in the CPS data from which the 1970-2009 estimates are drawn, the survey takes place primarily in March, and at that point, one quarter of any year's shotgun marriages might be expected to have taken place.

For "fetal death rates" (miscarriages and still births) by marital status, we begin with 1990-2004 estimates of fetal loss rates by marital status from U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, "*Estimated Pregnancy Rates by Outcome for the United States, 1990-2004, National Vital Statistics Reports* 56(15), by Stephanie J. Ventura, Joyce C. Abma, William D. Mosher, and Stanley K. Henshaw, April 14, 2008, "Pregnancy, live birth, and induced abortion rates by marital status and race and Hispanic origin: United States, 1990–2004," Table 5, https://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_15.pdf.

We use 2009 fetal loss rate estimates by marital status from U.S. Department of Health and Human Services, Centers for Disease Control

and Prevention, National Center for Health Statistics, *Pregnancy Rates for U.S. Women Continue to Drop, Data Brief* no. 136, by Sally C. Curtin, Joyce C. Abma, Stephanie J. Ventura, and Stanley K. Henshaw, December 2013, "Pregnancy rates, by outcome and marital status: United States, 1990, 2000, and 2009," Figure 5, https://www.cdc.gov/nchs/data/databriefs/db136.pdf.

We compute 1980 rates by subtracting (for each marital status) the live birth rates and the induced abortion rates from the pregnancy rates, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *Trends in Pregnancies and Pregnancy Rates by Outcome: Estimates for the United States, 1976-96, Vital Health Statistics* 21(56), by Stephanie J. Ventura, William D. Mosher, Sally C. Curtin, Joyce C. Abma, and Stanley K. Henshaw, January 2000, "Pregnancy, live birth, and induced abortion rates by marital status and race and Hispanic origin: United States, 1980 and 1990–95," Table 6, https://www.cdc.gov/nchs/data/series/sr_21/sr21_056.pdf.

Getting fetal loss rate estimates by marital status for 1960-1964 and 1970-1974 was more difficult. Fetal losses of at least 20 weeks gestation per 1,000 live births or fetal losses for women with "legitimate" and "illegitimate" pregnancies are available for 1945, 1955, and 1960 from U.S. Department of Health, Education, and Welfare, Public Health Service, National Center for Health Statistics, *Vital Statistics Rates in the United States 1940-1960*, by Robert D. Grove and Alice M. Hetzel, 1968, "Fetal mortality ratios by legitimacy status, age of mother, and color: Reporting States, 1945,1966-60," Table 36, https://www.cdc.gov/nchs/data/vsus/vsrates1940_60.pdf. The same source provides the same fetal loss rates for white and black women, which closely match the rates for, respectively, "legitimate" and "illegitimate" pregnancies. This fact is useful because fetal loss rates for whites and blacks are available from this source for 1960, 1970, and 1980 too. Substituting white and black rates for married and unmarried rates per 1,000 live births or fetal losses, and using births per 1,000 married and unmarried women from U.S. Department of Health and Human Services (2000), we computed fetal losses of at least 20 weeks gestation per 1,000 married and unmarried women for 1960, 1970, and 1980. What we need are fetal losses *from pregnancies of any length* per 1,000 married and unmarried women. We compute the ratios of the 1960-to-1980 rates for fetal losses of at least 20 weeks gestation (separately for married and unmarried women) and of the 1970-to-1980 rates. Finally, we apply these ratios to our 1980 fetal loss rates by marital status from above.

Adding fetal loss rates to the pregnancy rates involving live births or abortions yields overall pregnancy rates. We use 1960, 1970, and 1980 fetal loss rates for our 1960-1964, 1970-1974, and 1980-1984 pregnancy rates, and we use 1992, 1997, 2002, and 2009 rates for 1990-1994, 1995-1997, 2000-2004, and 2005-2009.

Figure 8. Births to Single Mothers per 1,000 Single Women, 1940-2015

1940-1989 estimates are from U.S. Department of Health and Human Services, 2000, Table 1.

1990-2000 estimates are from U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations, 2000 and 2001: United States, National Vital Statistics Reports* 51(12), by Brady E. Hamilton, Paul D. Sutton, and Stephanie J. Ventura, August 4, 2003, "Birth rates for unmarried women, by age, race, and Hispanic origin of mother: United States, 1990–2001," Table 7, https://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51_12.pdf.

2001-2014 estimates are from U.S. Department of Health and Human Services, 2015, Table B.

2015 estimate is from U.S. Department of Health and Human Services, 2017, Table 15.

Figure 9. Percent of Teenage Women Who Have Ever Had Sex, 1960-2015

1960-1972 "Never-Married 19" estimates (never-married women age 19) are taken from Claudia Goldin and Lawrence F. Katz, "The Power of the Pill: Oral Contraceptives and Women's Career and Marriage Decisions," *Journal of Political Economy* 110, no. 4, 730-770. We eyeballed the estimates shown in the "before 19" line in Figure 6. The 1941 birth cohort would have been 19 in 1960, so we use the estimate for that cohort as our "1960" estimate. Similarly, the 1953 cohort would have been 19 in 1972.

1971-1982 "Age 18-19, Premarital" estimates are from Sandra L. Hofferth, Joan R. Kahn, and Wendy Baldwin, "Premarital Sexual Activity Among U.S. Teenage Women Over the Past Three Decades," *Family Planning Perspectives* 19, no. 2(1987), 46-53, Table 2. We calculate the simple average of the 18- and 19-year-old rates. The rates indicate the share of all women 18-19 (married or unmarried) who ever had had *premarital* sex.

1982-1995 "Age 18-19" estimates are from Susheela Singh and Jacqueline E. Darroch, "Trends in Sexual Activity Among Adolescent American Women: 1982-1995," *Family Planning Perspectives* 31, no. 5(1999), 212-219, Table 2, https://www.guttmacher.org/sites/default/files/article_files/3121299.pdf.

1988-2008 "Never-Married 18-19" estimates are from U.S. Department of Health and Human Services, Centers for Disease National Center for Health Statistics, Control and Prevention, National Center for Health Statistics, G. Martinez, C.E. Copen, and J.C. Abma, *Teenagers in the United States: Sexual*

Activity, Contraceptive Use, and Childbearing, 2006–2010 National Survey of Family Growth, Vital Health Statistics 23(31), October 2011, "Never-married females and males aged 15–19 who have ever had sexual intercourse: United States, 1988, 1995, 2002, and 2006–2010," Table 1, https://www.cdc.gov/nchs/data/series/sr_23/sr23_031.pdf.

2013 "Never-Married 18-19" estimate is from U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *Sexual Activity and Contraceptive Use Among Teenagers in the United States, 2011–2015, National Health Statistics Reports* no. 104, by Joyce C. Abma and Gladys M. Martinez, June 22, 2017, "Percentage of never-married females and males aged 15–19 who have ever had sexual intercourse: United States, 2002, 2006–2010, and 2011–2015," Table 1, https://www.cdc.gov/nchs/data/nhsr/nhsr104.pdf. The estimate is actually a five-year average from 2011-2015.

Figure 10. Pregnancy and Birth Rates among Unmarried Women, 1960-64 to 2010-14

1962-2007 nonmarital pregnancy estimates are from Social Capital Project analyses. See note to Figure 7.

1962-2007 nonmarital birth estimates are five-year averages of the estimates in Figure 8. For example, "1962" is the average of the 1960-1964 rates.

Figure 11. Unintended Pregnancies and Abortions as a Share of Pregnancies among Unmarried Women, 1974-2009

1974-2009 nonmarital abortion estimates are from Social Capital Project analyses. See the note to Figure 7.

1980-1984 to 2005-2009 nonmarital unintended pregnancy estimates are from Social Capital Project analyses. We estimate nonmarital unintended pregnancies ending in a birth using data from the National Survey of Family Growth. We use the 1988 NSFG for the 1980-1984 estimate, the 1995 NSFG for the 1985-1989 and 1990-1994 estimates, the 2002 NSFG for the 1995-1999 estimate, and the 2006-2010 NSFG for the 2000-2004 estimate. We average 2005-2009 estimates from the 2011-2013 and 2013-2015 NSFG. See the note to Figure 7 for our rationale.

To these unintended births, we add estimates of nonmarital abortions among women 15-44. Then we divide by estimates of the number of nonmarital pregnancies among women 15-44. See the note to Figure 7 for details on both of these calculations. Unlike in our other analyses, we use only the NSFG to estimate births when we compute the number of nonmarital pregnancies (ignoring the CPS completely).
These estimates are shown in the chart at 1972, 1977, 1982, 1987, 1992, 1997, 2002, and 2007.

Figure 12. Percent of Births to Women that Began as Unwed Pregnancies and Percent of Unwed Births, 1950-54 to 2005-09

Estimates are from Social Capital Project analyses of CPS and NSFG data. See the note to Figure 7.

Figure 13. Shotgun Marriage Rate, 1950-54 to 2005-09

1950-2009 estimates of the share of unwed births that follow a shotgun marriage are from Social Capital Project analyses of CPS and NSFG data. See the note to Figure 7.

1960-2009 estimates of the share of unwed pregnancies that end in a post-shotgun-marriage birth are from Social Capital Project analyses. The computation begins with the nonmarital pregnancy rates estimated for Figure 7 (see the note to that figure). We multiply the rates by the number of unmarried women (including as unmarried women a number equal to one-fourth of births following a shotgun marriage) to get nonmarital pregnancies (rather than rates). We then divide the number of nonmarital births following a shotgun marriage (see the note to Figure 7) by the number of pregnancies.

Figure 14. Increase in the Share of Births That Are to Unwed Mothers, and Counterfactual Scenarios, 1960-64 to 2005-09

These estimates are based on those computed for Figure 7 (see the note to that figure). We decompose births from nonmarital conceptions in each year as the product of the number of women ages 15-44, the share of women 15-44 who are single, the nonmarital pregnancy rate per 1,000 women 15-44 (but excluding fetal deaths), and the percentage of nonmarital pregnancies (excluding fetal deaths) that do not end in abortion.

We decompose nonmarital births as the product of births from nonmarital conceptions and one minus the shotgun marriage rate. We decompose births from marital conceptions as the product of the number of women ages 15-44, the share of women 15-44 who are married, the marital pregnancy rate (excluding fetal deaths), and the percentage of marital pregnancies (excluding fetal deaths) that do not end in abortion. We decompose marital births as births from marital conceptions plus the product of births from nonmarital conceptions and the shotgun marriage rate.

Finally, we compute the unwed birth share as unwed births divided by the sum of marital and unwed births. This decomposition allows us to hold any of the component variables mentioned above at early 1960s levels while allowing other component variables to change over time. These decompositions resulted in estimated unwed birth shares of 7.9 percent in the early 1960s and 43.4 percent in the late 2000s (compared with 6.0 averaging vital statistics data estimates from 1960 to 1964 and 39.3 percent averaging 2005 to 2009).

These simulations ignore fetal deaths and thereby assume that they are a constant share of pregnancies over the period. Our estimates suggest that, actually, fetal deaths were 13 percent of nonmarital pregnancies in 1960-1964 and 12 percent in 2005-2009, while they were 28 percent of marital pregnancies in 1960-1964 and 22 percent in 2005-2009. (See the notes to Figure 7.) These changes are too small to qualitatively affect our results.

Figure 15. Increase in the Share of Births That Are to Unwed Mothers, and Counterfactual Scenarios, Previously Childless Women 15-29, 1960-64 to 2005-09

These estimates are based on estimates for childless women ages 15-29 that are analogous to the estimates for all women ages 15-44 computed for the analyses in Figure 7. Beginning with births by marital status at conception and at birth, for 1960-1994 we use estimates taken from U.S. Census Bureau (1999) of the number of births and distribution. For 1995-2009, we produce our own estimates using various NSFG surveys. The 1995-1999 estimates are averages from the 2002 and 2006-2010 NSFG, the 2000-2004 estimates are averages from the 2006-2010 and 2011-2013 NSFG, and the 2005-2009 estimates are averages from the 2011-2013 and 2013-2015 NSFG.

We estimate abortions as for all women ages 15-44, except that we have to assume that the abortion ratios (abortions divided by the sum of abortions and births) for unmarried and married childless women ages 15-29 are the same as for all unmarried and married women ages 15-44.

How valid is this assumption? Abortion ratios for married and unmarried women between the ages of 15 and 29 (childless or not) were close to those for married and unmarried women between the ages of 15 and 44 in 1983 and 1987. The ratio for younger married women was about 15 percent lower than for all married women in both years, and the ratio for younger unmarried women was 1 to 2 percentage points lower. This is reassuring in that the difference between the two age groups is always small and is similar in both years. The discrepancies are not enough to qualitatively change our point-in-time 1980s estimates, but if the bias changed over time, that would affect our trends. See Stanley K. Henshaw, "Characteristics of U.S. Women Having Abortions, 1982-1983," *Family Planning Perspectives* 19, no. 1(1987): 5-9, and Stanley K. Henshaw, Lisa M. Koonin, and Jack C. Smith, "Characteristics of U.S. Women Having Abortions, 1987," *Family Planning Perspectives* 23, no. 2(1991), 75-81.

It is not clear whether the ratios for *childless* younger women are similar to the ratios for all women. Childless women account for a declining share of abortions over time—58 percent in 1980 but just 41 percent in 2014—but so do women 15-29 (82 percent versus 72 percent). See Henshaw et al. (1991) and Jenna Jerman, Rachel K. Jones, and Tsuyoshi Onda, "Characteristics of U.S. Abortion Patients in 2014 and Changes Since 2008," Guttmacher

Institute, May 2016, https://www.guttmacher.org/sites/default/files/report_pdf/characteristics-us-abortion-patients-2014.pdf. It is likely, then, that childless women account for a similar share of women 15-29 over time, which suggests that the abortion ratio for women 15-29 is roughly no better or worse a proxy for the ratio among childless women 15-29 over time.

As for the analyses in Figure 7, our estimates for the number of married and unmarried women come from the Integrated Public Use Microdata Series Online Data Analysis System, using decennial census data for 1960-1964 (http://sda.usa.ipums.org/cgi-bin/sdaweb/hsda?harcsda+all_usa_samples) and data from the Annual Social and Economic Supplement to the Current Population Survey for 1970-2009 (https://sda.cps.ipums.org/cgi-bin/sdaweb/hsda?harcsda+all_march_samples). (Ruggles et al., 2017; Flood et al., 2017.)

We conduct the counterfactual simulations for the results displayed in Figure 15 in the same way as for Figure 14. As in the Figure 14 analyses, these simulations ignore fetal deaths and thereby assume that they are a constant share of pregnancies over the period.

ENDNOTES

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5. Future work from the Social Capital Project will address the question of the causal effects of growing up with married parents.

6. See Sara McLanahan, Laura Tach, and Daniel Schneider, "The Causal Effects of Father Absence," *Annual Review of Sociology* 39 (2013), 399-427. This paper is a summary of the more sophisticated research that has been conducted since the mid-1990s. For a review of the earlier, less rigorous, literature, see Sara McLanahan and Gary Sandefur, *Growing Up with a Single Parent: What Hurts, What Helps* (Cambridge, MA: Harvard University Press, 1997).

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8. For detailed methodologies used to produce the charts in this paper, see the Source Notes at the end of the paper.

9. Social Capital Project computations for 2005-2009 using the 2011-2013 and 2013-2015 National Survey of Family Growth. See the note to Figure 7 in the Source Notes at the end of this paper.

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11. Social Capital Project computations. This conclusion is based on the trend in nonmarital pregnancies among childless women ages 15-29 leading to a first birth. See U.S. Census Bureau, *Trends in Premarital Childbearing: 1930-1994, Current Population Reports*, by Amara Bachu, October 1999, accessed December 4, 2017, https://www.census.gov/prod/99pubs/p23-197.pdf. These estimates ignore miscarriages, stillbirths, and abortions.

    Abortion was relatively rare before the early 1960s, involving perhaps 15 percent of pregnancies ending in birth or abortion by 1960. We estimate that abortions were 17 percent of conceptions that ended in birth or abortion in 1969. Computing this percentage requires estimates of the number of abortions and the number of births for the same group of women.

    We use an estimate of abortions that includes illegal abortions. See Willard Cates, "Legal Abortion: The Public Health Record," *Science* 215, no. 4540(1982),

1586-1590, Table 1. Cates takes as his illegal abortion estimate the midpoint of a range estimated at a 1955 conference sponsored by the Planned Parenthood Federation of America. See Mary S. Calderone, ed., *Abortion in the United States* (New York: Harper and Brothers, 1958). This estimate is somewhat below the number implied by a 1968 study of central, urban North Carolina. See James R. Abernathy, Bernard G. Greenberg, and Daniel G. Horvitz, "Estimates of Induced Abortion in Urban North Carolina," *Demography* 7, no. 1(1970), 19-29.

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12. Social Capital Project computations. We use marital abortions and marital conceptions producing a birth for women ages 15-44 (see note to Figure 7 in the Source Notes at the end of this paper). The resulting abortion ratio differs from previously published estimates in that we exclude births following shotgun marriage from marital births. For trends in conventional abortion ratios by marital status, see Stanley K. Henshaw and Kathryn Kost, "Trends in the Characteristics of Women Obtaining Abortion, 1974 to 2004," Guttmacher Institute, August 2008, Table 2, accessed December 4, 2017, https://www.guttmacher.org/sites/default/files/report_pdf/trendswomenabortions-wtables.pdf.

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between 1989 and 1998. See Lawrence B. Finer, "Trends in Premarital Sex in the United States, 1954-2003," *Public Health Reports* 122, no. 1(2007), 73-78.

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27. *Ibid*. In addition, as discussed below, teen sexual activity rose through the 1980s and then remained elevated, but teen pregnancies declined. That decline must have been due to increased use of effective birth control. Indeed, pregnancies fell even more among sexually experienced teen women than among teen women generally.

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29. In 1974, around 44 percent of nonmarital pregnancies ended in abortion, compared with 52 percent in 1984. Excluding fetal deaths, the estimates were 49 percent in 1974, 58 percent in 1979, and 55 percent in 1984. Social Capital Project computations. See note to Figure 7 in the Source Notes at the end of this paper.

30. In 2009, around 31 percent of nonmarital pregnancies ended in abortion (compared with 44 percent in 1974). Social Capital Project computations. See note to Figure 7 in the Source Notes at the end of this paper.

31. The number of abortion providers nationally fell by 43 percent from 1982 to 2014, while the number of abortions declined by around 41 percent. On the

change in abortion providers, see Lawrence B. Finer and Stanley K. Henshaw, "Abortion Incidence and Services In the United States in 2000," *Perspectives on Sexual and Reproductive Health* 35, no. 1(2003), 6-15, and Rachel K. Jones and Jenna Jerman, "Abortion Incidence and Service Availability in the United States, 2014," *Perspectives on Sexual and Reproductive Health* 49, no.1(2017), 17-27, Table 3. Number of abortions were computed by applying abortion rates to the number of women 15-44. Abortion rates are from Rachel K. Jones and Kathryn Kooistra, "Abortion Incidence and Access to Services in the United States, 2008," *Perspectives on Sexual and Reproductive Health* 43, no. 1(2011), 41-50, Table 1, and Jones and Jerman, "Abortion Incidence and Service Availability in the United States." Number of women is from Social Capital Project analyses of data from the Annual Social and Economic Supplement to the Current Population Survey accessed via the IPUMS-CPS website (Flood et al., *Integrated Public Use Microdata Series, Current Population Survey*).

32. "Abortion," Gallup, In Depth: Topics A to Z, accessed December 4, 2017, http://news.gallup.com/poll/1576/abortion.aspx.

33. Social Capital Project analyses of General Social Survey microdata, 1988-2012 (Smith et al.).

34. Social Capital Project analyses. See note to Figure 7 in the Source Notes at the end of this paper. We estimate the figure at 48 percent in the late 2000s (compared with 49 percent in the early 1980s). Note that intended births from nonmarital pregnancies are a smaller share of nonmarital pregnancies—32 percent—because many unintended pregnancies end in abortion or a fetal death rather than in a birth.

35. Social Capital Project computations. This conclusion is based on the trend in nonmarital pregnancies among childless women ages 15-29 leading to a first birth. See U.S. Census Bureau, "Trends in Premarital Childbearing." These estimates ignore miscarriages, stillbirths, and abortions.

36. Social Capital Project computations. See the note to Figure 15 in the Source Notes at the end of this paper.

37. *Ibid*.

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