

The Uneven Retreat from Marriage in the U.S., 1950-2010

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1. Introduction

Since 1950, there have been dramatic changes in patterns of marriage and divorce in the United States. Americans now marry later and are more likely to divorce. More men and women, though still a small minority, do not marry at all. Cohabitation as a precursor to marriage (or as an alternative), has become commonplace. A great deal of attention has focused on the apparent decoupling of marriage and parenthood, as a growing fraction of births take place outside marriage, and on the marked divergence in marriage and parenting patterns across both racial and ethnic groups and across education and income groups. The implications of this uneven retreat from marriage for the wellbeing of children and the intergenerational transmission of economic disadvantage are of primary concern.

In this chapter, we make two claims about marriage. First, we claim that intertemporal commitment is central to understanding marriage as an economic institution. Second, we claim that in early 21st century in America intertemporal commitment is valuable primarily because it facilitates investment in children. These claims are distinct, but together they imply that the desire to invest in children as a joint project has become a primary motive for marriage, and that differences in the expected returns to these investments explain the uneven retreat from marriage.

We revisit the literature on the economics of marriage, distinguishing between explanations that involve intertemporal commitment and those that do not. The “quiet revolution” in women’s economic status since 1970 led to a wholesale redefinition of men’s and women’s roles in the household that reduced the value of earlier commitments between wage-earning men and their stay-at-home wives. Changes in social norms and family law have weakened the strength of the marriage commitment, making divorce easier to obtain and blurring the social importance of the legal distinction between cohabitation and marriage. Many commentators and researchers have focused on the cultural significance of marriage as the source of its persistence as a goal and ideal. Our claim is that because cohabitation now provides a socially and legally acceptable way to achieve the benefits of coresidential intimacy and economic cooperation, a desire for intertemporal commitment is central to an economic explanation for marriage.

Investment in children is clearly not the only reason couples have ever made intertemporal commitments, nor do we claim that it is the only reason couples do so now. In particular, not all couples that marry intend to have children,¹ and some married couples may have other motives for

¹ Abma and Martinez (2006) find that only 4 percent of married women aged 35 to 44 in the 2002 National Survey of Family Growth are voluntarily childless, and that rates of voluntary childlessness are lower in the 2002 wave of NSFG than in the 1988 and 1992 waves.

commitment. Women who marry after menopause will not, in general, intend to have additional children; for many older couples, the relevant marital commitment may be to provide care for each other in old age. The current debate over same-sex marriage is best understood as primarily a contest over social recognition and acceptability, with considerations involving children playing a secondary role. We argue that during the last half of the 20th century the importance of investment in children has increased, particularly for the most advantaged families, while the importance of other reasons for making intertemporal commitments has diminished more broadly.

2. The Retreat from Marriage, 1950-2010

“The family in the Western world has been radically altered—some claim almost destroyed--by the events of the last three decades” (Gary Becker, 1981).

In her 2006 Ely Lecture, Claudia Goldin traces the “quiet revolution” in American women’s careers, education, and family arrangements that began in the 1970s, and the “evolutionary” changes in the labor force that preceded it (Goldin, 2006). Evolving patterns of marriage and divorce in the United States are linked to these changes in women’s status and identity, as well as historic changes in fertility rates and in women’s participation in the labor market. As the post-war baby boom came to an end and fertility rates fell in the 1960s, and as women’s intermittent employment turned into lifetime commitments to market work and careers, marriages changed as well. Marriage was delayed to accommodate higher education and smaller families, divorce rates rose rapidly, and for many coresidence without marriage became an acceptable precursor if not a replacement for marriage.

The median age at first marriage was at historic lows during the height of the baby boom in the 1950s—just over age 20 for women, and about age 23 for men. A modest delay in first marriage during the 1960s was followed by a rapid increase in marriage age that continued for the next four decades (Figure 1). Part of this delay was due to additional years spent in school: the college attendance of young men and women rose steadily until the 1980s, when improvements in men’s educational attainment stalled while women’s continued to increase. The proportion of young adult women with college degrees equaled, and then exceeded, that of men in the 1990s. Beginning in the 1980s, increases in premarital coresidence by young couples become another important factor—stabilizing the age at which households are first formed while further delaying age at marriage (Bailey, Guldi, and Hershbein, this volume).

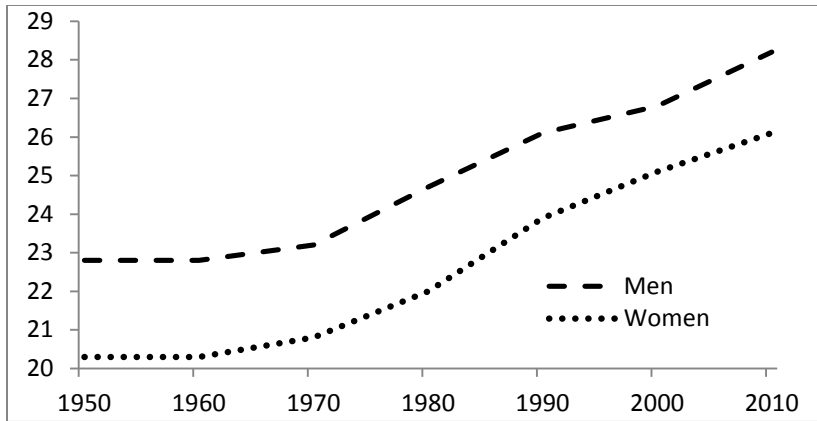


Figure 1: Median Age at First Marriage

(Source: U.S. Bureau of the Census)

Marriage delay itself reduced the fraction of young men and women who were currently married (or ever married) in their twenties, but the prevalence of marriage began to decline in the 1970s even for older groups of men and women. Figure 2 shows this decline for men and women aged 30 to 44. Much of this decrease in marriage is accounted for by an increase in cohabitation, which is not easily tracked in government data sources such as the American Community Survey. The National Survey of Family Growth (NSFG) does permit the tracking of trends in cohabitation from the first wave in 1982 to the last in 2006-2010. Over this period, the 8 percent decline in the fraction of 15 to 44 year old women currently married (from 44 to 36 percent) is exactly offset by the increase in the proportion cohabiting (from 3 to 11 percent).²

The gap between the proportion of 30 to 44 year-olds currently married (now about 60 percent) and ever-married (80 percent for women, 74 percent for men) has widened due to increases in divorce (Figure 2). The annual divorce rate (the number of divorces per thousand married couples) more than doubled between 1960 and 1980—from less than 10 to more than 20. In part a transitory response to liberalized divorce laws, the divorce boom has since subsided, falling by more than 25 percent since the peak in 1979. Stevenson and Wolfers (2007) argue that current rates are consistent with a long-term pre-war trend of rising divorce.³

² Copen, Daniels, Vespa, and Mosher (2012) find, not surprisingly, similar trends for men.

³ Taking a different approach, Rotz (2011) shows that, given the strong negative relationship between the probability of divorce and age at marriage, the delay in marriage age since 1980 may be a major proximate cause of the decrease in divorce propensity during that period.

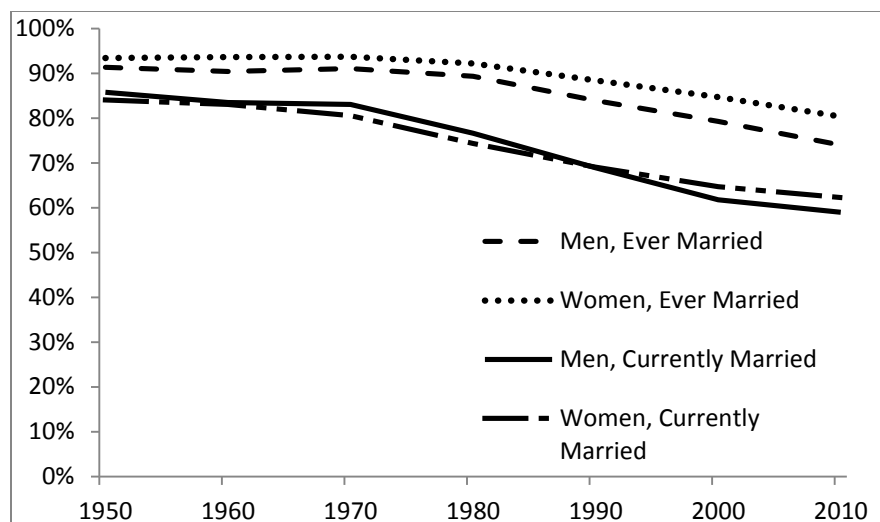


Figure 2: Proportion of Men and Women Ever Married and Currently Married, Ages 30-44
 (Source: Census 1950-2000, American Community Survey 2010)

In recent decades, the social and legal significance of the distinction between marriage and cohabitation has eroded. Supreme Court decisions in the 1960s and 1970s increased the rights of children born out of wedlock to financial support and inheritance.⁴ Marriage became less important as a determinant of obligations for paternal child support as the introduction of in-hospital voluntary paternity establishment programs by states (following a federal mandate) during the 1990s reduced the costs of legal paternity establishment. By 2005, the ratio of paternities established to nonmarital births had risen to nearly 90 percent (Rossin-Slater, 2012). The costs of exiting marriage fell as unilateral divorce regimes became, in one form or another, universal across the United States and the expectation that divorced women will work led to the virtual end of alimony. Social norms have also played a role: the stigma associated with nonmarital sex, cohabitation, nonmarital fertility, and divorce have declined dramatically (Thornton and Young-DeMarco, 2001). And finally, spells of cohabitation became longer and more likely to involve children (Kennedy and Bumpass, 2008).

Rising rates of nonmarital fertility in the United States and the pronounced race/ethnic gaps in these rates (Figure 3) have received a great deal of attention from researchers and policymakers. The median age at first marriage has been rising more rapidly than the median age at first birth and in 1991 the two trends crossed and continued to diverge. In 2009, the median age at first birth was more than one year lower than the median age at first marriage (Arroyo, Payne, Brown, and Manning, 2012). The

⁴ Stevenson and Wolfers (2007) provide a summary of these rulings.

circumstances in which nonmarital births take place have been changing, however. England and Wu (forthcoming) show that, for women who reached childbearing age in the 1950s through the mid-1960s, the primary cause of rising premarital births was an increase in premarital pregnancies that were brought to term (and in all probability an increase in premarital sex). During the subsequent two decades, however, the principal driver of the trend in premarital childbearing was a reduction in the propensity to marry following a premarital conception—a decrease in “shot-gun” marriages.⁵ The proportion of nonmarital births that are to lone mothers has also been decreasing: 52 percent of nonmarital births now occur within cohabiting unions, many of them the outcome of a “shot-gun cohabitation” (Manlove, Ryan, Wildsmith, and Franzetta, 2010; Lichter, 2012).

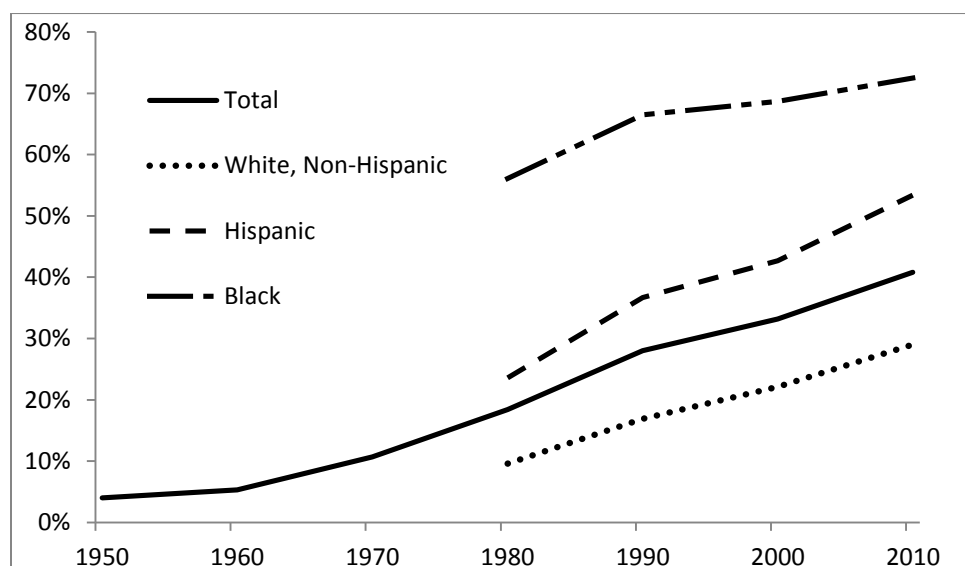


Figure 3: Nonmarital Births as a Proportion of All Births, by Race and Ethnicity
(Source: Child Trends Data Bank)

Compared with other wealthy countries, the U.S. is an outlier in many dimensions of family dynamics. The level of fertility that occurs outside any union—marital or cohabiting—is high, and both marital and cohabiting unions are very unstable (Cherlin, 2009). In many northern European countries, cohabitation has progressed further in the direction of becoming a replacement for marriage: a much smaller proportion of the population ever marries, rates of cohabitation and proportions of births within cohabiting unions are much higher, and unions are much more durable. There is a socioeconomic

⁵ Akerlof, Yellen and Katz (1996) attribute this change to endogenous norms regarding nonmarital sex and responsibility for unintended pregnancies. They argue that the increasing availability of the birth control pill in the 1960s and the nationwide legalization of abortion in 1973 led to a new equilibrium in which nonmarital sex was more readily available because competition for the attention of men increased the pressure on unmarried women to have sex and responsibility for contraception (and unintended pregnancies) shifted to women.

gradient in family structure in most European countries, with low levels of education associated with more cohabitation and higher rates of nonmarital childbearing⁶ but these discrepancies are more pronounced in the U.S.

Abstracting from race/ethnic differences in marriage behavior by focusing on non-Hispanic whites with different levels of education, we can see that the retreat from marriage has been much more rapid for men and women with lower levels of education (Figures 4 and 5). The change in the proportion of men aged 30 to 44 who are currently married (reflecting both marriage and divorce behavior) has been almost flat for men with a college degree, but has declined substantially for men in lower education groups. Women with college degrees were less likely to be married than women with less education until 1990, and more likely to be married since then. Both marriage and remarriage rates have risen for women with college degrees relative to women with less education, and the fall in divorce rates since 1980 has been much larger for the college-educated (Isen and Stevenson, 2010). This implies that long-term marital stability also has an education gradient: the probability that a first marriage will remain intact for 20 years is sharply higher for women with a college degree (78 percent) than for women with a high school diploma (41 percent) or some college (49 percent) (Copen et al., 2012).⁷

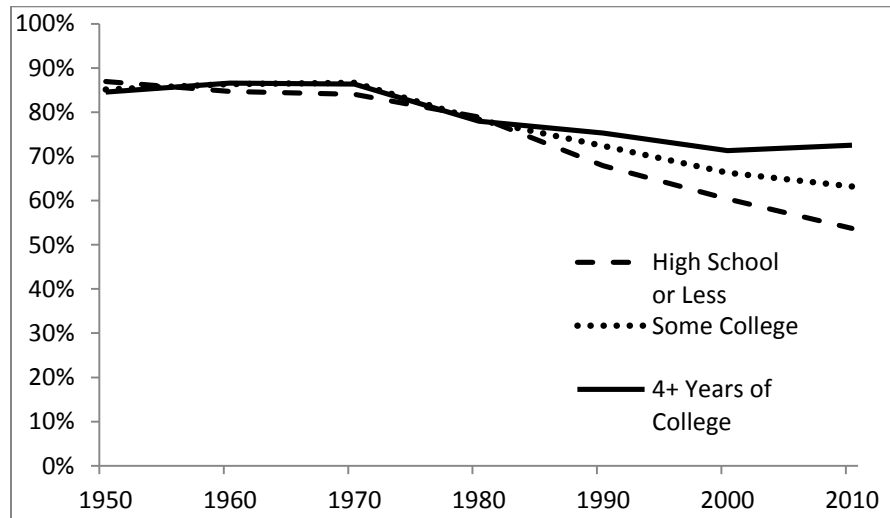


Figure 4: Proportion of White Men Currently Married, Age 30-44
 (Source: Census 1950-2000, American Community Survey 2010)

⁶ Perelli-Harris, Sigle-Rushton, Kreyenfeld, Lappegård, Berghammer, and Keizer (2010) also find that the negative educational gradient of childbearing within cohabitation is significantly steeper than that of marital births in four of the eight countries they study.

⁷ They also find that the education gradient in divorce probability is much less steep for men than for women.

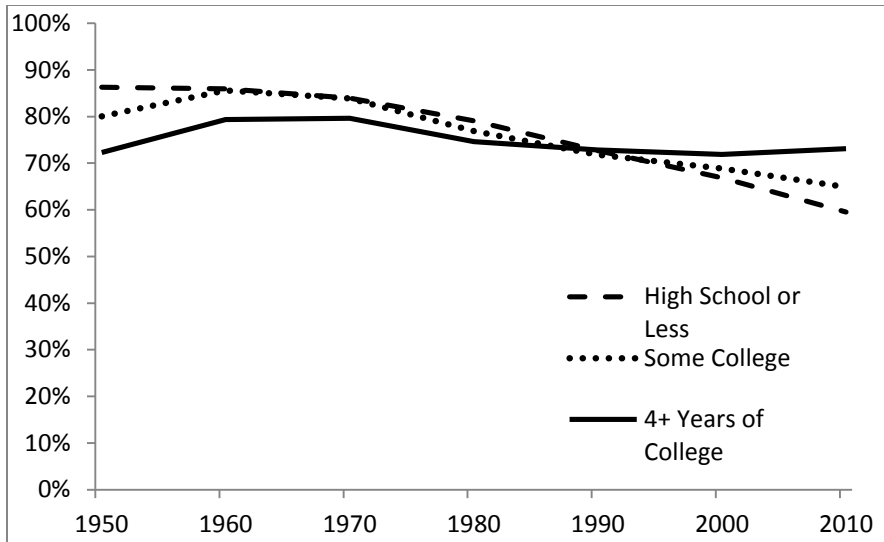


Figure 5: Proportion of White Women Currently Married, Age 30-44

(Source: Census 1950-2000, American Community Survey 2010)

The prevalence of cohabitation is strongly decreasing in education (Table 1) and cohabitation tends to play different roles in the marital lifecycles of women with high and low levels of education. For high SES couples, cohabitation is usually a precursor to marriage—a part of courtship or a trial marriage that rarely includes childbearing. Serial cohabitation⁸ is much more prevalent among economically disadvantaged men and women and, for low income and low education groups, cohabiting unions are less likely to end in marriage than in dissolution (Lichter and Qian, 2008). Though serial cohabitation increased in the late 1990s and early 2000s along with cohabitation more generally, a substantial majority of women only cohabit with the men they eventually marry (Lichter, Turner, and Sassler, 2010).

⁸ Serial cohabitation is defined as multiple premarital cohabiting relationships (Lichter et al., 2010).

	First marriage	Second or higher marriage	Cohabiting	Never in a Union	Formerly married
No high school diploma or GED	36.6	7.7	20.2	19.1	16.5
High school diploma or GED	39.5	9.2	15.5	20.3	15.6
Some college	42.1	7.4	11.6	26.4	12.6
Bachelor's degree	58.3	3.3	6.8	25.5	6.1
Master's degree or higher	63.0	4.4	5.5	20.1	7.0

Table 1: Current Union Status among Women Aged 15-44 Years, 2006-2010

(Source: Copen et al., 2012, from National Survey of Family Growth)

The growing divergence in marriage, cohabitation, and fertility behavior across educational groups has potentially important implications for inequality and the intergenerational transmission of economic disadvantage. In her Presidential Address to the Population Association of America in 2004, Sara McLanahan (2004) showed how the rise in single-parent families and widening gaps in maternal age and divorce rates were leading to growing disparities in the parental resources, both time and money, received by the children of more- and less-educated mothers. The sociologist Andrew Cherlin (2009) also emphasizes the costs imposed on children, and particularly the children of the non-college-educated, by the instability in living arrangements and parental ties inherent in the American "marriage-go-round." Focusing on non-Hispanic whites, Charles Murray's 2012 book on the class divide in family arrangements and economic status makes a similar point from a different social and political perspective.

The causes of post-war changes in marriage behavior, both the general retreat from marriage and the SES divergence, are more difficult to establish than their likely consequences. The question we address here is whether these changes can be reconciled with an economic model of marriage.

3. Economic Models of Marriage and Commitment

“From an economic point of view, marriage is a voluntary partnership for the purpose of joint production and joint consumption.” (Yoram Weiss, *The New Palgrave Dictionary of Economics*, 2008)

Economic models treat marriage as a choice by individuals who evaluate the gains to marriage, relative to the alternative—remaining single. These models generally ignore cohabitation as a possible living arrangement and assume that the only route to lone parenthood is through divorce. Thus, never married individuals will be childless.⁹ For example, in Becker's *Treatise on the Family* (Becker, 1981, 1991) and in Yoram Weiss's important survey article on "The Formation and Dissolution of Families..." (Weiss, 1997), the feasible set contains exactly two elements, marriage and living alone without children. In the mid-20th century, when cohabitation and nonmarital childbearing were rare and stigmatized, this truncation of the feasible set bought analytical simplicity at a relatively low cost. But in recent decades, changes in technology, social norms and laws have increased the attractiveness and prevalence of alternative family arrangements including cohabitation and lone parenthood.¹⁰

The economics of the family has recognized two broad categories of potential gains from marriage: joint production and joint consumption. Production gains come from the “division of labor to exploit comparative advantage or increasing returns” (Weiss, 2008) and are based on Becker’s household production model. Consumption gains come from the joint consumption of household public (non-rival) goods (Lam, 1988). Stevenson and Wolfers (2007) expanded the joint consumption category to include shared leisure activities as well as household public goods and coined the phrase "hedonic marriage" to describe modern marriages in which there is little gender-based division of labor and consumption benefits are paramount.

The economics of the family has long acknowledged the centrality of children in models of marriage. For example, Becker (1991, p. 135) writes "...the main purpose of marriage and families is the production and rearing of own children." Similarly, Weiss (1997, p. 82) writes, “the production and rearing of children is the most commonly recognized role of the family.” The presence of children enhances the gains to marriage in two ways: they are themselves public goods that generate utility for

⁹ And possibly celibate—for the most part, family economics is silent about sex.

¹⁰ Few theoretical papers in economics model nonmarital fertility. Willis (1999) and Neal (2004) develop models in which nonmarital fertility leads to lone parenthood; neither paper discusses cohabitation. Willis (1999) also analyzes men's multiple-partner fertility as an equilibrium outcome.

each of their parents, and the coresidence of their caring parents permits the coordination of an efficient quantity of childcare (Weiss and Willis, 1985).

How can we use these traditional models of marriage to explain the retreat from marriage over the past 60 years? The increasing attractiveness of living alone and the falling gains to specialization and exchange as women have entered the workforce are two key factors.

Though much of the increase in the age at first marriage for very recent cohorts can be attributed to increases in premarital cohabitation, the pronounced delay in marriage between 1970 and 1990 was associated with an extended period of singlehood. Increases in tertiary education, particularly for women, contributed to marriage delay, and so did the greater availability of sex outside marriage or cohabiting unions caused by improvements in contraceptive technology and the legalization of abortion and reinforced by changes in norms: delaying “union formation” no longer required choosing between abstinence and the risk of unwanted pregnancy.¹¹ Goldin and Katz (2002) show the interrelation of these changes: state law changes in the 1970s that made oral contraceptives (and thus reliable fertility control) available to young single women were important drivers of delayed first marriages and the entry of women into professional education programs.

The relative attractiveness of living alone was also enhanced by the greater availability of market substitutes for commodities that used to be produced within the household (e.g., home cooked meals; childcare) and improvements in household technology (e.g., microwaves; electric washing machines) that reduced the time and skill required by the remaining household tasks (Greenwood, Seshadri, and Yorukoglu, 2005). These developments in applied technology and in markets were, to a large extent, endogenous—a response to the growing number of single-person households as well as to increased market work by women. This is one way that living alone creates positive externalities for others who live alone; the increased density in single social networks is undoubtedly another.

As living conditions for singles have improved, the incremental value of joint production in multiple-person households has fallen. Gender specialization in married couple households has decreased dramatically during the past 60 years (Lundberg and Pollak, 2007). The labor force participation rate for women aged 25 to 54 has increased from 37 to 75 percent between 1950 and 2010, while the participation rate for prime-age men has fallen from 97 to 89 percent. Though married women still report more weekly hours of housework than married men, women’s housework hours

¹¹ Sex does provide a rationale for marriage if sex outside marriage is strongly stigmatized. For example, those who believe that sex outside marriage is a sin may marry early, especially in communities that readily accept divorce and remarriage. Cherlin (2009) argues that the acceptance of divorce and remarriage, especially by evangelical Protestants, has been an important factor in what he calls the American “Marriage-Go-Round.”

have fallen by 10 hours per week since 1965 and men's have increased by about 4 hours per week (Aguilar and Hurst, 2007). As women's educational attainment, wages, and hours of market work have risen relative to men's, the opportunities for gains from trade within a household, which depend to a large extent upon the segregation of men and women in separate home and market spheres, have diminished.

As long as the family economics literature continues to assume that unmarried men and women face a two-element feasible set--{marriage, living alone}--it must explain the delay and increased instability of marriage in terms of the increasing attractiveness of living alone or the decreasing attractiveness of marriage. The expansion of the feasible set to include cohabitation, with or without children, substantially changes the economic analysis of marriage.

Cohabitation provides many but not all of the sources of marital surplus identified in traditional economic models of marriage. In particular, a cohabiting couple can exploit most of the joint production advantages (e.g., specialization and the division of labor; economies of scale) and the joint consumption advantages (e.g., shared leisure and household public goods, including children). Many of the gains that economists usually ascribe to "marriage" are, in fact, gains to multiple-person households that pool resources and coordinates production. For many couples cohabitation can be simply a solution to the roommate problem, unrelated to children or to marriage, but for others cohabitation can be a precursor to marriage or a substitute for it. What distinguishes marriage from cohabitation in an economically meaningful way?

Marriage is more costly to exit than cohabitation, and this higher exit cost enables marriage to act as a commitment device that encourages cooperation between partners. Commitment is valuable in any shared household because of transactions costs—even roommates must rely on one another to pay a share of next month's rent—and all commitments, including marriage, are limited. Marriage represents a stronger commitment because the social and legal costs of exit are greater than those facing roommates or cohabitants, even when the cohabitants have shared children. The legal costs of marital exit have decreased as fault-based or mutual consent grounds for divorce have been replaced by state laws permitting unilateral divorce, and the social stigma attached to marital dissolution has declined as divorce has become commonplace. Nevertheless, a theme of much of the social science literature on the retreat from marriage is that divorce is seen as a personal failure to be avoided, if necessary, by delaying or avoiding marriage (Edin and Kefalas, 2005; Gibson-Davis, Edin, and McLanahan, 2005). The cultural significance of marriage in America and the public commitment to a

permanent and exclusive relationship that marriage involves contributes to a distinction between marriage and cohabitation, which often begins informally and without an explicit discussion of terms or intentions (Manning and Smock, 2005).

Models of marriage as a commitment device that fosters cooperation and encourages marriage-specific investments have been based on this additional cost. Matouschek and Rasul (2008) construct alternative models of marriage and cohabitation in which divorce costs enable marriage to serve as either a commitment device or as a signal of perceived match quality. They show that, if marriage facilitates commitment, a decrease in divorce costs can lead to an improvement in the average match quality of married couples (lower divorce costs weaken marriage as a commitment device, leading low-match-quality couples to cohabit instead of marrying) and their empirical evidence supports this theory over an alternative model in which the willingness to marry acts as a signal that match quality is expected to be high. A plausible theory of marriage must explain not only why commitment is valuable in generating a demand for marriage rather than cohabitation but also, given the substantial heterogeneity in marriage patterns across education/income groups, why some couples value it more than others.

Traditional marriage models have emphasized long-term intertemporal commitments to support the production benefits of specialization and exchange. Becker (1991, p. 30/31) provides a clear statement of the marital contract: "Since married women have been specialized to childbearing and other domestic activities, they have demanded long-term 'contracts' from their husbands to protect them against abandonment and other adversities. Virtually all societies have developed long-term protection for married women: one can even say that 'marriage' is defined by a long-term commitment between a man and a woman." In its strongest form, the standard model assumes and rationalizes a traditional marriage with strong sector specialization: the wife works exclusively in the household sector and the husband works exclusively in the market sector. This pattern of sector specialization leaves the wife vulnerable because she fails to accumulate market human capital. Marriage, and in particular the costs of exiting marriage, protects her.¹² Specialization and vulnerability provide a plausible account of most marriages in the 19th and early 20th centuries but are less and less plausible as a rationale for contemporary American marriage in the face of the converging economic lives of men and women.

Weiss' taxonomy of gains from marriage includes two others that are explicitly intertemporal in nature: providing credit that facilitates investment (one partner works while the other is in school) and

¹² Cigno (2012) argues that the effectiveness of marriage as a commitment device depends, not on the exit cost per se, but upon the property division regime, which can be designed to compensate domestic specialists.

risk pooling (one works while the other is sick or out of work). Other benefits (and costs) of marriage depend on policy structures and laws, including the tax code (e.g., joint taxation vs individual taxation), eligibility for social security (e.g., spousal and survivor benefits) and eligibility for employer benefits (e.g., health insurance). Credit and investment activities require intertemporal commitment, but one spouse investing in the other's human capital has become less common as student loans have become more important and age at marriage has increased.¹³ Risk pooling also requires intertemporal commitment and often involves extended families as well as marital partners.

Our claim that intertemporal commitment is central to marriage implies that one-period models, no matter how elegant and sophisticated, cannot account for marriage once cohabitation is recognized as a socially and legally acceptable alternative. For example, increasing returns to scale or the assumption that individuals' time inputs are perfect substitutes in household production provide a rationale for multiple-person living arrangements (e.g., marriage; cohabitation; roommates) rather than living alone, but cannot account for the choice among alternative multiple-person living arrangements.¹⁴ Household production models can provide a rationale for intertemporal commitment only in the context of multiperiod models that include physical or human capital.

Hedonic/consumption theories of marriage focus on shared leisure and household public goods. Their starting point is the recognition that production theories with their emphasis on specialization and the division of labor fail to provide a satisfactory account of contemporary marriage. Stevenson and Wolfers (2007, 2008) sketch a one-period hedonic/consumption theory which can be extended to a multiperiod theory in order to provide a rationale for commitment and, hence, for marriage. Intertemporal commitment stories based on shared leisure, however, seem too insubstantial to provide a plausible account of marriage.¹⁵ If shared leisure requires the purchase of physical capital (e.g., ski equipment) and the resale market is weak, or investment in activity-specific human capital (e.g., "skiing human capital"), then intertemporal commitment may be useful.

Lam's notion of household public goods provides a more promising rationale for intertemporal commitment. Weiss (1997, p. 86) observes that "Some of the consumption goods of a family are

¹³ Because marriage is a limited commitment with divorce always an outside option, such investments are risky. How risky depends on the divorce laws of the state, and Stevenson (2007) finds that spouses are less likely to invest in each other's human capital in states where the investing spouse has less legal protection. For a discussion of the optimal treatment of human capital in divorce, see Borenstein and Courant (1989).

¹⁴ For discussions of the perfect substitutes assumption, see Becker (1991, Ch. 2), Lundberg (2008) and Pollak (2012).

¹⁵ The weasel word "seem" is deliberate. The findings of Buckles, Guldi, and Price (2011) on the effect of state blood test requirements for marriage imply that modest increases in the cost of marriage can deter couples near the margin between marriage and nonmarriage.

nonrival and both partners can share them. Expenditures on children or housing are clear examples.” With household public goods, multiple-person living arrangements may dominate living alone. When the household public good is housing, intertemporal commitment is valuable only in the presence of market imperfections, transaction costs, or search frictions. If the rental market for housing were frictionless, an individual could share housing with one person today and another tomorrow. If the market for owner occupied housing were perfect, an individual could buy a house in one period, live in it, and sell it in the next. Even with transaction costs, it is reasonable to ask where these costs are high enough to motivate marriage: cohabiting couples, after all, do own houses together.

Children are different: parents tend to be extremely attached to their “own” children, whether possession is defined by birth or adoption, and child wellbeing is enhanced by stability and consistency in parenting. If a principal role of marriage is as a commitment device that enables parents to commit themselves and their partners to intense and long-term investments in their children, then we would expect differences in marriage patterns across education and income groups and, particularly, differences in the timing of marriage and childbearing to be associated with differences in parental investment strategies.

4. Marriage and Investments in Children

“Middle-class parents tend to adopt a cultural logic of childrearing that stresses the concerted cultivation of children. Working-class and poor parents, by contrast, tend to undertake the accomplishment of natural growth...”

(Annette Lareau, *Unequal Childhoods: Class, Race, and Family Life*, 2003, p. 3)

Patterns of marriage and childbearing across education groups are consistent with the existence of a close connection between the decision to marry and childrearing strategies across education/income groups. Within each race/ethnic group, the rate of nonmarital childbearing is sharply declining in mother’s educational attainment, and for white, non-Hispanic college graduates (who are most likely to have the earnings and benefits that would enable them to support a child alone), single or cohabiting motherhood is very rare (Table 2). As Bailey, Guldi, and Hershbein (this volume) show, most women in all education groups eventually marry—the proportions of women in the upper and lower education quartile who marry by age 35 are close to 80 percent for recent cohorts. However, the age at first birth has risen along with the age at first marriage for high-education women, while the age at first birth for women in the lowest education group has remained essentially constant for decades (Bailey,

Guldi, and Hershbein). The so-called “decoupling” of marriage and childbearing has simply not occurred for the most advantaged women. A closer look at the Vital Statistics data summarized in Table 2 reveals additional evidence that high-education women wait for marriage until the clock runs out— for college-educated women in their early 40s, the rate of nonmarital childbearing nearly doubles to 10 percent.

Table 2: Nonmarital Births as a Proportion of All Births by Mother’s Education, 2010

	White, Non-Hispanic	Black	Hispanic, All
High School or Less	53.6	83.5	59.6
Some College	31.0	68.7	45.3
College Graduate or more	5.9	32.0	17.4

(Source: Centers for Disease Control and Prevention. National Center for Health Statistics. VitalStats <http://www.cdc.gov/nchs/vitalstats.htm>.)

Direct evidence on parental investments in children also shows pronounced and increasing inequality. Kornrich and Furstenberg (2013) find that expenditures on children increase with income, and that both parental spending and the inequality of this spending has risen from the early 1970s to the late 2000s (Figure 6). To a large extent, this increase in spending inequality across income deciles has been driven by the increase in income inequality during this period, but expenditures on children as a percentage of income have been rising overall (particularly in the 1990s), particularly for the top two income deciles. Kornrich and Furstenberg note that increased parental spending “may reflect growing pressures to invest in children,” particularly for middle- and upper-class parents. Although affluent and highly educated parents spend a lot on their children, the marginal effect on child outcomes of additional expenditures when the initial level is high are unclear. Money may buy a house in a better neighborhood and with it access to better schools, but imputing some portion of housing expenditures to the child and measuring its effect on the child's educational or labor market outcomes is difficult.

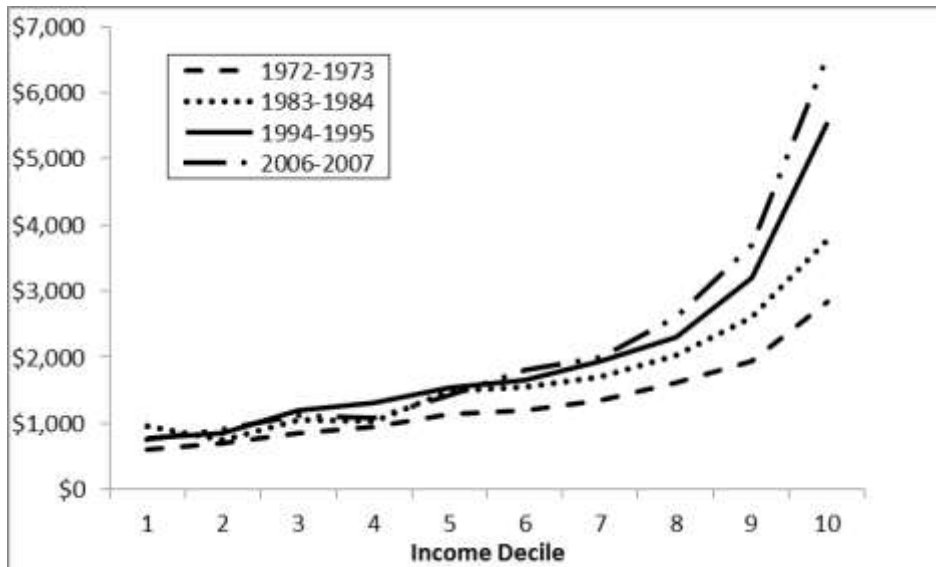


Figure 6: Spending per Child, 1972-2006

(Source: Kornrich and Furstenberg, 2013, from Consumer Expenditure Survey)

Note: Dollar figures adjusted to year 2008 dollars using the CPI-U-RS.

During the past few decades, parental time with children has been increasing, despite increasing rates of maternal employment (Bianchi, 2000; Bianchi, Robinson, and Milkie, 2006, Aguiar and Hurst, 2007). Guryan, Hurst and Kearney (2008) show that there is a positive relationship between parental education and time with children: despite their higher rates of employment, mothers with a college education spend about 4.5 hours more with children than mothers with a high school degree or less. This pattern holds for working and non-working mothers, and also for fathers in the U.S., and across a sample of 14 other countries. Ramey and Ramey (2010) examine the trends in U.S. childcare time separately by parental education, and find that the increase in childcare time that began in the mid-1990s was particularly pronounced for college-educated parents. They attribute this change to increased competition for admission to selective colleges. In comments, both Hurst (2010) and Sacks and Stevenson (2010) show that the relative increase in childcare time is particularly large for mothers with younger children, which casts some doubt on the Ramey and Ramey explanation and suggests that the increased polarization of parental time with very young children may have other explanations, including an increase in early investments by high-income parents as the returns to human capital rise. Figures 7 and 8 show that the widening gap between the childcare time of parents whose youngest child is under 5 is particularly pronounced for fathers.¹⁶

¹⁶ Parents with some college and college graduates are combined for the high education sample to avoid very small samples sizes for some years.

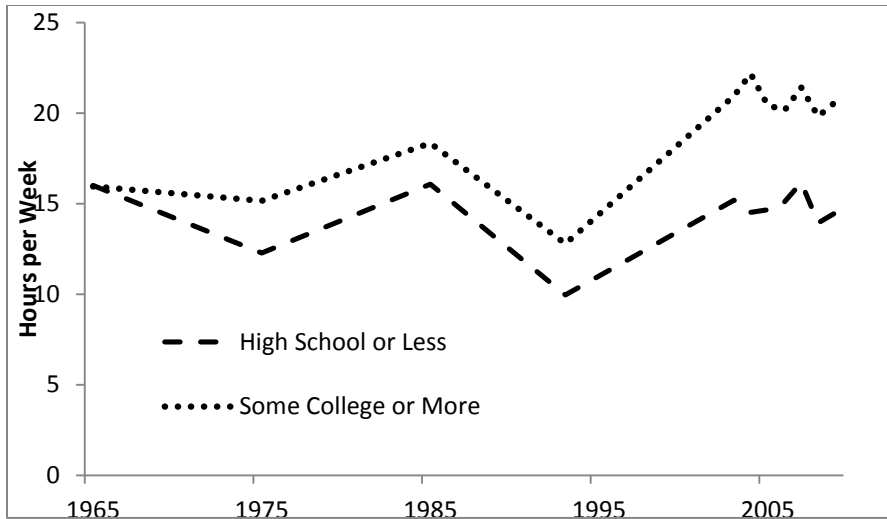


Figure 7: Childcare Time of Mothers with Children Under 5 (under 4 in 1965)
 (Source: 1965-1966 America’s Use of Time, 1975-1976 Time Use in Economics and Social Accounts, 1985 Americans’ Use of Time, 1992-1994 National Human Activity Pattern Survey, and the 2003-2010 waves of the American Time Use Survey)

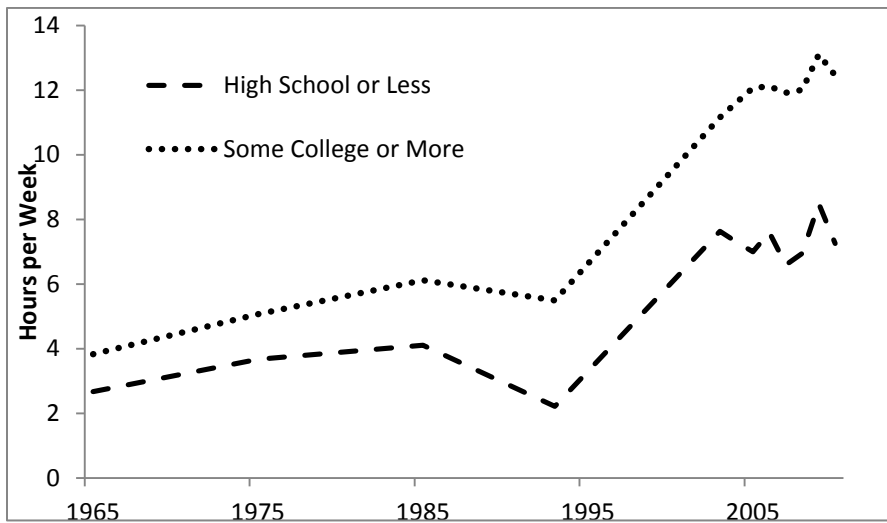


Figure 8: Childcare Time of Fathers with Children Under 5 (under 4 in 1965)
 (Source: See Figure 7)

The differences in time and money inputs to childrearing are reflected in parenting practices and attitudes more generally. In her ethnographic research, the sociologist Annette Lareau (2003) has documented pronounced class differences in childrearing practices.¹⁷ Concerted cultivation of middle-class children includes parental involvement in recreational and leisure activities as well as school and schoolwork, and is one source of the large SES gaps in skills and behavior that are present when children

¹⁷ Lareau's analysis is based on intensive observation of small samples of families.

enter school (Duncan and Magnuson, 2011). In Lareau's analysis, these childrearing practices reflect parents' class-determined "cultural repertoires" for childrearing. Concerted cultivation is the childrearing script consistent with the advice of "experts" and is designed to foster children's cognitive and social skills. Working-class and poor families consider the consistent provision of food, shelter, and other basic support to be successful parenting and, given their time and resource constraints, many do not attempt deliberate cultivation.¹⁸ Sociologists Kathryn Edin and Maria Kefalas (2005), in their ethnographic study of low-income single mothers, conclude that in the face of economic hardship poor mothers "adopt an approach to childrearing that values survival, not achievement" (p. 166).

A central question that highlights the different approaches of economics and sociology is whether to interpret social class differences in practices such as childrearing as reflecting cultural repertoires that are pre-determined or as reflecting parental choice. Economists tend to believe that childrearing practices reflect choice, and that choices depend on preferences and opportunities. In treating parenting practices as a choice, we are assuming that parents are forward looking and that outcomes for children are among the arguments of parents' utility functions, while parental opportunities depend on prices, wages, and the household technology, including the technology for producing the skills and traits of children.

Parents, therefore, choose different child investments strategies because their preferences and opportunities differ. First, parents may differ in the kind of children that they want to produce. If all parents love and are attached to their children, then they will want their children to be happy and economically successful, but also to remain emotionally close (and possibly physically close) and to share their social and cultural values. For high SES parents, these objectives are more or less consistent; economically successful children are likely to accept their family's culture and values. For low SES parents, these objectives may conflict: children who are economically successful may reject their family's culture and values and, for this reason, low SES parents may be ambivalent about what they want for their children.¹⁹ Thus, faced with the same opportunity set, high SES and low SES parents might rationally choose different childrearing practices.

Prospective parents with different levels of education and different incomes also face different opportunities. Higher wages will increase the opportunity cost of parental time with children for high-SES parents. On the other hand, the time that high-SES parents spend with their children may be more

¹⁸ Lareau raises the question of whether concerted cultivation requires a two-parent family but cannot, with her small sample, attempt an answer.

¹⁹ The children may also be ambivalent, but economists generally assume that the parents are the decision makers and children are passive.

productive in enhancing child skills (Becker and Murphy, 2007). A productivity effect may occur because parents possess a higher level of the skills they wish to impart, or because they have better information about how children learn: parents with higher levels of education may be better able to read with a child or help with homework. Finally, parents' skill levels may affect their enjoyment of cognitively-stimulating activities with children (e.g., reading). The balance between the wage rate effect and the productivity effect is theoretically indeterminate, but the empirical education gradient in parental time suggests that the latter dominates.

The impact of purchased inputs, and therefore income levels per se, on child outcomes is contested. Susan Mayer (1997) argues that the correlation between income and child achievement is accounted for by parental education and unobserved heterogeneity rather than a causal impact of income, but more recent studies using natural experiments or policy-driven changes in family income find significant effects of income increases on the test scores and school achievement of children, particularly at low income levels and for young children (Dahl and Lochner, 2012; Duncan, Morris, and Rodriguez, 2011; Løken, Mogstad, and Wiswall, 2012).

Recent work in economics has modeled and estimated dynamic production functions for children's human capital or "capabilities" in which child development is treated as a cumulative process beginning with a child's initial ability (or "endowment") and including a full history of parental and school-based investments (Heckman, 2000; Todd and Wolpin, 2003, 2007). A key feature of these models is complementarity between the child's stocks of human capital and the productivity of subsequent investments. Cunha and Heckman (2007) construct a multi-period model in which parental investments in different periods are complements in the production of human capital, and Aizer and Cunha (2012) find evidence of dynamic complementarities in the effects of preschool on children with different stocks of early human capital. These complementarities suggest that parental investments (and also formal schooling) will be more productive for children who have early cognitive and health advantages, whether these are due to genetic endowments, prenatal environmental conditions (Currie, 2011) or early post-natal investments. The increasing evidence that "skill begets skill" (Heckman, 2000) indicates that even if the time inputs of high SES parents are not inherently more productive, payoffs to parental, and in particular paternal, investments will be highest for the most advantaged children. In a period of rising returns to skill in the labor market and growing income inequality, this can accentuate the class divergence in child investments.

Even if parents at different education and income levels have identical goals and equal concern for their children, socioeconomic status differentials in parental resources and the productivity of parental

time, combined with complementarities between early and later investments, can produce the kind of parenting strategy divides that Lareau and others have observed. If parents differ in their motivation to make intense investments in their children's human capital, they may also differ in their desire to enter into the kind of long-term and cooperative joint parenting arrangement that marriage facilitates. If marriage is a mechanism by which parents support a mutual commitment to continue to invest in their children's human capital, then for parents who adopt a relatively low investment strategy for their children, the benefits of marriage before childrearing will be substantially lower than for high-investment parents.

5. Marriage Trends and Class Divergence

“Couples rarely referred to their children when discussing marriage, and none believed that having a child was a sufficient motivation for marriage. Furthermore, no parent talked about marriage enhancing the life chances of their child.”

(Christina Gibson-David, Kathryn Edin, and Sara McLanahan, “High Hopes but Even Higher Expectations: The Retreat from Marriage Among Low-Income Couples,” 2005).

One of the most striking aspects of the trends in marriage behavior documented in section 2 is the relative stability of traditional patterns of marriage and childbearing among the highly-educated, compared to the pronounced retreat from marriage and marital childbearing among men and women with a high school diploma or less and, to a lesser extent, among those with some college. If couples choose marriage rather than cohabitation to enable a greater degree of commitment, this is consistent with a fall in the returns to gender specialization in households that is being offset by increased returns to joint investments in children for the high-education couples, but not for low-education couples. Intensive investment is both a characteristic parenting pattern among the well-off and, according to evidence on time and money inputs, increasing. These increases are probably due to some combination of rising returns to human capital as income inequality rises, increasing real incomes at the top of the distribution, improved information about the payoffs to early child enrichment activities and, perhaps, evolving social norms.

Further down in the income distribution, a child's limited prospects for upward mobility combined with falling real resources, particularly those of fathers with little education, precludes an intensive investment strategy for parents and limits the value of marriage and the commitment it

implies.²⁰ Kearney and Levine (2012) offer a related explanation for the very high rate of teenage childbearing in the United States, attributing it to a limited expectation of economic success caused by high inequality and low mobility, and leading to “choices that favor short-term satisfaction—in this case, the decision to have a baby when young and unmarried.” This analysis focuses on the young mother’s own prospects for upward mobility; in our view, limited parental investments and low marriage rates can be caused by the child’s limited prospects for economic success and low expected returns to that investment.

At least three other factors are often advanced as contributing to or causing the uneven retreat from marriage: the decline in the marriageability of men with low levels of education; the availability of government welfare benefits; and the increasing cultural significance of marriage to low SES women. To some extent, we view these as complements to rather than substitutes for our emphasis on marriage as a commitment to invest in children.

The marriageability explanation emphasizes the decline in the employability of men with low levels of education and the fall in their wages relative to those of the women they would have married a generation or two earlier. Wilson (1987) pointed to the decline in industrial jobs in inner-city neighborhoods as the cause of a shortage of marriageable men and, since then, this shortage has been exacerbated in black marriage markets by the rise in incarceration (Charles and Luoh, 2010). The decline in men’s wages clearly makes them less attractive as husbands, but it also makes them less attractive as fathers and as cohabiting partners, limited their contribution to investments in children. Marriage to less employable men may imply additional costs if it entails a commitment to a partner who is more prone to substance abuse or violence, or who holds traditional views about the gender division of labor.

In two books, almost three decades apart, Charles Murray argues that welfare benefits caused the retreat from marriage. In the earlier book, Murray argued that both the value of welfare benefits and conditioning eligibility for benefits on not having a man in the house caused poor women to substitute away from marriage and toward welfare dependency as a way of providing for children. In the more recent book, Murray argues that the availability of welfare benefits sapped the moral fiber of the working poor and triggered a cascade of bad behaviors. Neal (2004) also treats the provision of government aid as a necessary condition for widespread single motherhood, reinforced by the declining economic prospects of less-educated men. Most studies, however, find a very small effect of welfare

²⁰ Autor and Wasserman (2013) provide a compelling summary of the declining economic prospects of non-college men in the United States.

benefits on female headship or nonmarital childbearing, and the erosion of the real value of welfare benefits in the 1980s and beyond did not slow the increase in nonmarital childbearing.²¹

Based on their ethnographic work, Edin and Kefalas (2005) offer a cultural or sociological account of the decline in marriage, arguing that poor women have unrealistically high aspirations for marriage and that this is the outcome of a change in the meaning of marriage in low-income communities. Marriage is no longer closely connected to parenting, but is about “the white picket fence dream” and good stable jobs and maturity are prerequisites. Cherlin (2004) also asserts that, as the “practical significance” of marriage has diminished, its “cultural significance” has grown. The practical significance of marriage, in our framework, is the role of marriage as a commitment device that supports specialization and investments in children. In communities in which, for many or most couples, that significance is minimal, the survival of an expressed reverence for the institution of marriage seems like an artifact.

6. Conclusion

Since 1950 the sources of the gains from marriage have changed radically. As the educational attainment of women overtook and surpassed that of men and the ratio of men's to women's wage rates fell, the traditional pattern gender specialization and division of labor within the household weakened. The sources of the gains to marriage shifted from the production of commodities to investment in children. As a result, the gains from marriage fell sharply for some groups and may have risen for others.

For some, the decline in the male-female wage ratio and the weakening of traditional patterns of gender specialization meant that marriage was no longer worth the costs of limited independence and potential mismatch. Cohabitation became a socially and legally acceptable living arrangement, although cohabitation serves different functions among the poor and less educated than among the affluent and highly educated. Among the less educated, the much-remarked decoupling of marriage and parenthood has occurred, although the extent of this decoupling is often exaggerated.²² Among college- educated, marriage and parenthood remain tightly linked. More educated men and women have delayed marriage

²¹ Moffitt (2001) concludes that labor market factors have played the most important role in the rise in female headship but, after controlling for male and female wages, he finds a residual that follows the same pattern as real welfare benefits remains.

²² Half of white women with a high school education or less are still marrying before the birth of their first child.

and typically cohabit before marriage, but they marry before conceiving children and their marriages are relatively stable.²³

This class divergence in patterns of marriage and parenthood is associated with class differences in childrearing. Lareau characterizes the childrearing practices of poor and working class parents as one of "natural growth," which she contrasts with middle class practices of "concerted cultivation." Time use data are consistent with Lareau's ethnographic findings: college graduate mothers and fathers spend considerably more time interacting with their children than mothers and fathers with less education.

How do we understand these class differences (and divergence) in marriage, parenthood, and childrearing? We have suggested that different patterns of childrearing are the key to differences in marriage and parenthood. Rising returns to human capital, dynamic complementarities in human capital production, and diverging diverging parental resources across the income distribution have increased the returns to joint investments in children in high income, relative to low income, households. Marriage can be seen as the commitment mechanism for this joint project, and it will be more valuable for parents who adopt a high-investment strategy for their children.

²³ We have focused on non-Hispanic whites in documenting differences by education. Black marriage and childbearing patterns are substantially different, and these race differences are the subject of an enormous literature in themselves.

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