

An Economic Perspective on Sex, Marriage and the Family in Contemporary United States

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Introduction. It is a popular activity among public intellectuals to speak about the demise of the family and the decline in marriage as a social institution. No knowledgeable observer would argue that there are no major social ills associated with the functioning of the American family. Consider children: many children are being reared in sub-optimal settings, many without proper nurturance or even proper nourishment, and too many are abused or harmed physically and psychologically while many more are not given the support and encouragement needed to develop their potential. Or for that matter consider adults: many are living in poverty, even by the poorly measured statistics of the day, and disquietingly many have skill levels inadequate to the demands of meaningful jobs and thus lack the capacity to earn an adequate living in our technologically advanced economy.

But for most of the dire statistics that can be cited about the decline in marriage or the family, there is a different interpretation that is just as valid. Take for example the oft-cited correct fact that at today's rate of marital instability, half of all marriages will end in divorce. Now, all marriages end, and the two ways they do so are dissolution or death. Today, as has

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been the case since 1975 without much variation over the past quarter-century, the annual rate of divorce is about 2-per-100 marriages. That level of “risk,” when experienced for thirty-five years, does yield a likelihood of divorce of about 0.50.¹ Yet, that same fact suggests that each year, averaged across all married couples, forty-nine out of every fifty married couples choose to remain married, despite the relative ease with which a divorce can be legally obtained today. Divorce rates are historically high by U.S. standards and higher here than in most any other developed country, but 2-percent per year for the past quarter-century does not sound like an epidemic.

Or consider the fact that our conference overview tells us that “from 1975 to 2000, roughly one-quarter of all pregnancies were aborted.” It is equally true that despite the relatively low cost of abortion today and the relatively easy access to effective contraceptives and available sterilization procedures, for the past 20 years or so about 4 million babies have been born annually in the U.S., and the education level of their mothers in 2000 is much higher than that of the mothers of babies born in the U.S. a half century earlier.²

From my perspective as an economist the interesting question is what functions are served by the social institutions of formal marriage and the broader unit of the family and how these institutions compare to alternatives in performing those functions. The theme of this paper is that these two institutions serve important functions for adults and for children, and while there have been significant changes in those functions over the past half century, there is not clear evidence available to support the claim that the family or the institution of marriage is passé. If other institutions come along that better meet the objectives these institutions serve, then they might well become obsolete, but there is no evidence for thinking this is likely in the foreseeable future. The changes we observe in these institutions reflect changes in circumstances that alter their relative attractiveness, but I am getting ahead of my story.

¹ The probability of the event occurring is equal to $1 - (1 - 0.02)^{35}$.

² For example, the percent of the U.S. female population with less than 12 years of schooling was about 62% in 1950 but by 2000, the percent of the female population over 25 who were not a high school graduate was as low as 16%. Similarly, at the other end of the spectrum, in 1950 about 5% of the female population held college degrees but by 2000 24% had at least a college degree.

The Lens of Economics The purpose of this paper is to discuss some of the changes in family, marriage and sexual behavior in recent decades in the U. S. and to do so through the lens of economics. To begin, therefore, it is useful to discuss what the social science discipline of economics can and cannot contribute to our understanding. Economics is best characterized, I believe, not by its subject domain but by its way of thinking about human behavior.³ It attempts to provide understanding about behavior and institutions through a few premises, supported by empirical evidence. The key premise is that choices or actions are strategic or purposive, best understood as the outcome of seeking some objective but constrained by scarcity of one or more elements. The objectives reflect deeply held values; they typically include several distinct items that may be competitive and may even be conflicting. The elements of the relevant constraints may be material resources like money income, or skills, or health, or information, or many other things necessary to achieve those objectives. The elements of the constraints have prices that reflect their value and these prices are set by formal or implicit “markets” through interactions among those competing to use those elements. These prices reflect the collective judgment of the value of those resources, and are important since they guide the use of those resources. These markets that set prices and allocate resources among competing objectives are what make the choices or actions social phenomena and make economics a *social* science.

This description of economics may seem very abstract, but it emphasizes the fact that economics is all about scarcity, about getting the best outcomes from our limited resources and know-how. As a science of choices, economics is quite neutral about whether those objectives have inherent value or ethical worth. As a discipline it cannot help us explain why we have the “tastes” or preferences we have, but can tell us how, given those preferences, certain changes in circumstances will affect behavior. As an inductive or empirical science, economics can help us understand why we behave the way we do, but in doing so, it is not necessarily providing us a defense of the status quo, just an explanation. Economists differ probably neither more nor less than any other group in what they value, and much of the touted differences in policy pronouncements by economists reflect the fact that they have these different opinions. For

³ This discussion basically follows Becker’s essay on the issue, Becker 1976, Chapter 1.

example, some see the inequality in household income in the U.S. and think it should be lessened through governmental policy. Others see that inequality as a necessary byproduct of the incentives that have generated the remarkable engine of technical progress characteristic of the U.S. economy in the past century. However, much of the difference in policy advocacy by economists comes from a different source -- trying to address questions on which the evidence and the understanding is just too thin to sustain a clear answer. This essay may, alas, suffer that ill as well.

Nonetheless, economics can help us understand the changes in family and marriage by application of its premises to these social institutions.⁴ I hope to back up this claim by first discussing the way an economist might use his disciplinary tools to understand what each of these institutions does, then consider how changes in the broader environment might impact how these institutions do what they do. For now, I'll leave the point a bit obscure and seek patience while I review the social institutions that are our focus here and describe their recent trends in the United States.

Marriage Let's begin by considering formal marriage. The core idea here is that each of us spends much of our time either working for pay to get income or actually producing useful commodities in the nonmarket sector for our own consumption. These productive activities in the home, in leisure activities, in educational setting, etc, typically use money, time, effort, and know-how or technology. We are, in fact, engaged in productive activities most of the time, and even sleeping or dining can be viewed as activities that are producing one of those elements we call an objective—good health results in part from adequate sleep and good nourishment, so we are “producing” health as we sleep and eat. We can do most of these nonmarket productive activities alone, but for a lot of the products it is also feasible to engage in these productive activities with other people and that can be more efficient as well as more

⁴ The interested reader is encouraged to look at Becker's 1991 *A Treatise on the Family*, a dense but thoroughly insightful and highly influential book that brings together many of Becker's important essays on aspects of marriage, divorce and family behavior. Few scholars in any field of which I have familiarity so dominate the basic statements and insights as does Becker. Literally hundreds of useful studies have been undertaken to amplify, explore, qualify and check on points in Becker's treatise and for a few summaries of aspects of this literature, see Weiss 1997, and Hotz, Klerman and Willis 1997.

pleasant. Cooking a dinner is an example – one can do that alone, but for much less than double the effort or double the cost we can cook for two and save some time and money for some other purpose. There are a host of these “economies of scale” that help motivate us to live with others to achieve these gains. These scale economies are one of the reasons for marriage, or at least for living together.

Take this idea of producing commodities that give us satisfaction a step further, and apply the production principles that work so well in a manufacturing plant, for example: it is resource-saving if two workers specialize in separate tasks so that they become more skilled in them and avoid having to be equally good in all tasks. Similarly, in the home, it is efficient for one person to be organized in paying the bills and keeping track of the checking account, for example, while another focuses on gourmet menus or keeping the couple’s social calendar straight. Specializing in some skills while avoiding having to keep up in others makes sense if the two partners are going to be together for a long time, and there we see the reason why longer-term marriage has some value over and above the simple scale economies. Specialization in skills only pays off if the time horizon is long enough. Moreover, if we do make these investments in certain skills and dispense with others, then we become dependent on having a partner with skills that complement our own. This then is a second reason for gains from marriage: specialization in the division of labor, selective investment in complementary household skills. These are most important in activities where one person can effectively substitute for another, as is the case in the simple examples described above.

There is yet a third type of gain from a marriage and it seems almost contradictory to the point about specialization. There are many activities in which one’s time isn’t substitutable for another’s, but rather the time of one person in the activity enhances the usefulness of another person’s time in that same activity. Examples of these complementarities include having a good conversation, playing a good game of tennis, raising one’s own child, or having sex. Here, investments are made in developing skills that complement, not substitute for, the partner’s time. But like the substitutable skills, these investments also only pay off if the partnership remains in tact; at least if it does not, one has an incentive to find a new partner who has the same interests and skills as the last one lest those investments in specific skills lose their value.

So, viewed through the lens of economics, one of the major functions served by a marriage is that it facilitates these several gains in home production and protects the coordinated investments in skills that partners make. The reason a person would marry is that there are gains from doing so, and these gains result from simple scale economies (the air conditioning or the heat in the home can accommodate two almost as cheaply as one), from each partner's investment in specialized skills and then trading the products from the uses of those skills, and from investing in complementary skills used in productive activities together, enhancing the produce and satisfaction for both.

A skeptic might ask why, if these gains are so substantial, we don't see communes or groups larger than two adults as the norm. There are two forces working against this. First, the quid-pro-quo from an equitable distribution of tasks and benefits in the home makes it difficult to oversee the trades and insure their fairness in all the dimensions and subtleties of family life when many traders become involved. (For instance, "I'll put up with your if you'll agree to let me choose ..." becomes nearly impossible if its my in-laws, your housing location preferences, and someone else's choice of artwork on the walls.) It is easier then to invest in nearly fully specialized skills and trade their use for generalized money and that's just how it works in the labor market, but not in the home. In the home the currencies of the many trades between partners are quite varied and are valued differently by the different traders, so there isn't a simple transitivity of payoff in one metric to one person for another currency to a third person. If we cannot use a common medium of exchange like money, we are better off not having too many people involved in the negotiation. The second reason for dyadic partnerships not threesomes-or-more is that one of the most tangible, delicate, and vital joint-products is one's own children, and this is a production process that biologically takes two, a heterosexual two, but not more.

The Family Before exploring what this view of marriage tells us about the changes taking place in marital behavior, let's consider the other social institution, the family. While marriage involves two relatively equal adults, the family involves pairs or groups connected by blood or contract and often across generations. Using the demographer's notion of a nuclear

family as the marriage partnership and its offspring living under one roof, then let's consider the whole family as a within- and across-nuclear family and intergenerational blood-related unit. I will discuss three types of relationships here and view them through the lens of economics. The first is the relationship between parents and children; the second among related nuclear families at one time point such as adult siblings; the third across family members over a wide span of time, i.e., intergenerational relationships. Terms like "family values" refer to one or several of these distinct family relationships.

The relationship between parents and children is frequently explored and of great importance. Here, I will limit the discussion to a few specific activities: one set of productive activities involves the nurturing, training, and caring for the dependent children from birth onward. Few obligations are of greater importance than that of parenting, of providing for the healthy development of the child in psychological, social, economic, and many other dimensions. Adults chose to have children because of the satisfaction they bring, and the parental expenditures of time and effort, of money and inconvenience, of patience and encouragement are all part of the productive activities of parenthood. Parents differ, of course, in the resources they have to provide their children, in their innate capabilities, their psychological traits as well as their material resources; they differ as well in their inclinations to use their resources in behalf of their children. While the child's strict dependence on parents declines with age, in probably most families the flow of parental support and guidance continues throughout the lifetime. Children also make analogous expenditures of resources, patience, and efforts in behalf of parents, differing of course in "age-appropriate" ways as both the children and the parents age. From a lifecycle perspective it is not essential that at each year a quid pro quo balance is met as parent and child interact, but over the lifetime, the flows of benefits and of costs may well balance out. There is much fascination within economics of the concept of an implicit contract between the generations that calls for parental investments in the younger generation during the period of the former's greatest earnings capabilities and the latter's greatest dependency as youth, in exchange for a pay back during the period of the latter's adulthood when the parents experience dependency in their old age. The nature of the economic functioning between these parent-child relationships is one of investment in the youth and caring for dependents as youth and as elderly.

The relationship among nuclear units within one family, as among the families of adult siblings, can be characterized as one of pooling resources to insure against risks and enhancing efficiency in overcoming constraints. Given the long term nature of the family bond and the depth of understanding, trust, and affection among these units, borne of a lifetime of common experiences and commitments, the extended family is well-suited to provide support in times of unexpected or unusual need. This functioning is analogous to an insurance plan in which one pays in premiums in order to pool risk and relies on the plan to help out if specific adverse events occur. That market solution of formal insurance has an informal analog in the extended family. There, albeit often less specific as to payment or protection and perhaps even unstated as to the function, the family can often be counted upon for that same support during times of stress. The function of overcoming financial constraints is of a similar nature: if one brother has a business venture that entails risk and requires financial backing to get underway, or a family member needs a little more financing to make the down payment on the new home or make the tuition payment, he can often count on his extended family to help out. Altruism and affection are only part of the reason why. The long term nature of the family bond suggests that the lender knows the borrower far better than a banker would, and therefore can have more (not complete, but more) confidence in repayment, and typically has better access to detect shirking than a market lender would. So the extended family can provide the insurance and the lending that the market might offer but only at a higher cost. These, then, are two of the important functions of the extended family.

The third level of family functioning is across family members over a wider span of time. Here the social biology of promoting one's genes in the gene pool, of a family dynasty that reflects the social status of the unit, or less grandly, the idea of a family culture or the reputation of the family name is pertinent. The traditions, expectations, and standards that are associated with a family have value and motivate actions by members of that family. We read much today about the "culture" of this corporation or of that college campus, about the core behaviors of this ethnicity or the motivating beliefs of that religion. There may be a comparable "culture" to a family – the way that family raises its children, the way it treats its elders, the occupations, avocations, and style of the members of that family. Biographies of famous individuals often

stress family expectations and intergenerational relationships in explaining their subject, fictional novels routinely do the same. It is a mark of pride to be a member of some families, a point of embarrassment to be identified as a member of other families. If there were no traditions that separated families and their reputations, our ideas about “the family” would be much less elevated or rich.

Sex While legal marriage and the broader dimensions of family are social institutions that perform specific functions and have value because they do so, “sex” is not analogous. Sex is an activity typically undertaken in a dyadic partnership or alone, but it is not a social institution. It too serves several functions or yields several products. Elsewhere I have suggested six jointly produced outcomes of sexual activity. These are physical pleasure, emotional satisfaction, intimate bonding with one’s partner that may promote love, reputation or peer judgment, the probability of pregnancy, and the probability of transmission of disease. (Michael 2001 p.466)

One might think that the functions of sex are transparent, and their relationship to marriage and the family self-evident, but I argue this is not so. First, a plug for research and attention by scholars, researchers and public intellectuals: There has been a persistent, many-decade political effort to discourage social scientific research about sexual behavior and as a result there is remarkably little known about this salient aspect of our lives. (see Laumann et al 1994) Those who have worked on understanding sexual behaviors have often found it useful to couch their work in terms of a medicalization of sex and so the work tends to focus on various adverse outcomes from sex: disease, unwanted fertility and dysfunction. All this attention has given sex a bad name: the joys of sex are private and, probably blessedly, remain so, while many of the adverse consequences of sexual behavior become public and impose costs on us all. Thus, “the joys of sex we keep to ourselves; the woes of sex we proclaim publicly.” But sex is an important aspect of one’s life and its successful management is important for well-being. Individuals, personal advisors of all sorts, and policy makers must all make judgments about aspects of sexual life and should have better and more complete sources of information. The list

of issues on which research is needed is quite long, but the absence of good data resources for their study makes this a challenging domain for research.⁵

While “sex” is prominent in the title of this conference, there is much more focus on marriage and the family. How does sex impact marriage and family? I first consider four domains that link sex and marriage, then consider links between sex and the extended family. One important linkage involves the quality of the partnership. The intimacy associated with partnered sexual behavior promotes a bond between partners as it affirms trust when one chooses to be exposed to risk of harm and the revelations of body and desires. This trust promotes love and affection. The respectful and effective use of this trust in giving pleasure expresses and promotes love. {Similarly, the disrespectful misuse of this trust is probably why there is so close an association between sexual behavior and personal ethics or social reputation. It is the exercise of sex in the absence of this delicate vulnerable intimacy and trust that is what is so unappealing about the contemporary depiction of sex in popular culture.} The qualities of the marital partnership and of the sexual partnership are not identical but surely they are closely related in most cases. The sexual dimension of a partnership is a factor in promoting its stability. The convenience, ease, safety, and effectiveness of sexual experience within the partnership is one of the important functions served by marriage and linking the two.

A second domain is investment in sexual skills, a topic seldom addressed and analogous to the issue of specialization in skills within the home. Like those more general skills that it behooves a couple to parcel out, specialize in, and gain from the efficiency of coordinating, there are surely specific sexual skills that are effective with a partner that may not be so with another partner. Learning these spouse-specific skills in loving, and disinvesting in other sexually related skills like the skill of attracting a partner when one has been secured, involves the same incentives as any skill-acquisition. The more focused the investment, the more effective it is, but only with the partner toward whom it is directed, while some of those skills may have little value

⁵ The list includes, sex as an expression of adulthood; intimacy and sex and sex without intimacy; the connections between ethics and sexual behavior, the role of sex in maintaining the quality of a partnership, the production and maintenance of sexual skills; the reasons for the differences in salience of sex among adults; and personal sex (thinking about it, fantasizing, etc).

in any other circumstance. Thus, the decision to make those spouse-specific investments promotes longer duration partnerships. But the corollary is that if the duration is expected to be short, or the risk of dissolution is great, the incentives to make these spouse-specific sexual skill investments are weak.

A third domain linking sexual and marital behaviors, of course, is fertility. Fertility is a byproduct of sexual activity and it has traditionally been linked to marriage in large part because of the association with fertility. If the children are to be raised within the marital union, and if they are a likely result of sex, then it makes sense to organize the sexual behavior around the context in which the childrearing can be effectively accomplished, that is, within marriage. Fourth and finally, just as logically, and opposite in its influence, if promiscuous sexual behavior is highly risky in terms of transmission of infectious diseases, then sexual behavior within the bounds of a monogamous partnered relationship minimizes that risk and offers yet another function linking sex and marriage.

Sex plays a different role in family behavior. The main role is as a transmission of family culture or family values. For reasons left unexplored here, sexual behavior has major influence on one's own and one's peers' assessment of the quality of one's character. Mostly through example or indirect instruction, parents inform their children of what is appropriate sexual behavior, not so much in instruction about specific sexual skills, to be sure, but in the basics of respect for others, sensitivity to others, avoidance of exploitation of trust, and in many similar ways. Where families do not instruct children about the values they place in these behaviors, and where the children therefore do not receive that instruction from within their family, and unavoidably get their exposures through peers, and through public institutions such as the media, they do not acquire a sense of their family's position or values on appropriate sexual behavior. They formulate their own independent judgments that then have little tie to any family-based view except a *laissez faire* view. In the absence of instruction, guidance, encouragement in how these relationships should be managed, the sexual practices can be destructive and the ability to form and sustain lasting partnerships or friendships can be compromised. This is part of the nature of the culture of a family, its values as reflected in and transmitted to its offspring. The intimacy that typifies a family setting also has within it the capacity for abuse of the trust among

members; in a small percentage of cases there is pathology as the intimacy and trust within the family is violated through child or sexual abuse.

What has changed over the past half century? So the stage is set: I have sketched, from an economic perspective, several functions of marriage, of the family and the role sex plays within these two domains. The questions before us, then, are what has changed over the past half century in the patterns of these social institutions, and why? Obviously, this is not a pair of questions that can be given a simple, definitive answer, but I will attempt to sketch the outlines of a partial response. First, we must choose to focus on a few key changes in the pattern of these institutions, so I first briefly describe what some of the changes have been over the half century from 1950 to 2000.

Over that fifty years the inclination to marry, the proportion currently married, and the stability of existing marriages all declined. The rate of marriage per 1,000 unmarried women age 15-44 in the U.S. declined from 166 to 82; the median age at first marriage for women in the U.S. rose dramatically from age 20 to age 25; the percentage of the population age 15 and older that is currently married fell from 66% to 55%, and the annual divorce rate rose from 1% of marriages to 2%.⁶ (See Table 1)

A similarly dramatic pattern of change is found when we consider descriptions of the American family. The percent of all households that are in fact “families” (i.e., groups bound by blood or contract, as distinct from other households) declined from 89% to 69%; the principle product of the family, its fertility, also declined – the fertility rate (the number of births per 1,000 women age 15-44) fell from 106 to 68. And much of the fertility now takes place outside the traditional marital union: the percent of births to unmarried women rose from about 4% to 33%; the percent of children under age 18 living with two-parents fell from 88% in 1960 to 69% by 2000. While the overall fertility rates have declined dramatically over the half-century, the fertility rate among the unmarried has risen just as dramatically, even beginning to approach

⁶ Most of the statistics cited in Tables 1, 2, and 5 are from general sources that include U.S. Census Bureau, 2001 and U.S. DHHS, 2002.

parity with the marital fertility rate. Finally, the Labor Force Participation Rate of married women with children under the age of six rose from 12% to 63%. (See Table 2)

Regarding sexual behavior, it is much more difficult to get reliable data on trends since the subject has not been a focus of quantitative research, and government agencies and statistical surveys have typically avoided capturing information about sexual behaviors. One of the few dimensions of sexual behavior that has been documented over time is the typical age at which cohorts begin having sex. We know that this age has declined over the past several decades as age at puberty has correspondingly declined and as the onset of partnered sex has increasingly become disconnected from formal marriage. Only within the past decade, however, has data become available that shows the sexual behaviors of the general population, so few trends can be documented, unfortunately. Using a recent nationally representative data set with detailed information about sexual behavior, and relying on retrospective survey responses by adults at all ages up to 60 about their sexual behavior during adolescence, we can track a few aspects of sex and related fertility outcomes over much of the past half-century. (See Table 3.) There we see both the rise in incidence of partnered sex before age 18, and the offsetting associated rise in fertility control. That evidence shows, interestingly, that while rates of sexual activity have risen, rates of avoidance of conception and of pregnancy termination have also risen yielding practically no change over the decades in rates of teenage births. This absence of a trend in the rate of teenage child bearing mirrors the national fertility data on this matter, despite all the public discourse about the subject. The pronounced trend toward younger age of first intercourse seen in Table 3 from retrospective reports, is also seen in many other, contemporary surveys as well: for example the percentage of women who report having had sex by age 18, for cohorts who were age 20 in the intervals 1958-60, 1970-72, 1985-87, and 1990-94 were: 27%, 35%, 52%, and 55%, respectively (See U.S. DHHS, 2002, p.255)

Explanations for these Changes Looking for explanations, the challenge is to identify forces that are not themselves determined by the changes we want to understand. It is too easy, and ultimately unsatisfactory, to claim for example that a social custom changed the value of marriage and promoted greater instability. That's nearly tautological and not informative. Similarly, without a cogent explanation for its development it is not very enlightening to suggest

that a social movement like feminism somehow promoted women's entering the workforce in the third quarter of the twentieth century and thereby caused the growth in female-headed families. One wants to identify independent or exogenous changes in key forces within the system. An economist will typically look for changes in key prices and levels of wealth as influential factors since these reflect value and constrain behaviors. So the question becomes what are the major trends over the past half century in income and wealth and what have been the major forces altering prices of key products or services?

At the risk of disregarding a host of relevant other factors, I identify three key changes within the economy that will illustrate the argument that typifies the view of economists. First, household income rose substantially over the fifty years. Second, the U.S. became, soon after 1950, the first economy dominated by the production of services not physical goods, and this, together with the century-long growth in the role of technology embedded in the machinery with which workers engage in production, increased the demand for technologically skilled workers whose human capital was far more important than their physical strength, thus neutralizing the earlier labor market preference for male workers. Third, the role of the government as a player in our lives expanded, both setting important rules by which we live and performing some of the tasks we need addressed, notably in funding and providing formal education, and in extending its role in income security and old age security.

These three changes – in household income, in labor market demand for skills, and in government provision of a few services – are all reasonably “exogenous” to the pattern of family structure and marital decisions. How do they affect the social institutions of marriage and family? First, consider the growth of real income. As incomes rise, the demand for goods and services increases, but the demand does not rise in the same proportion for all items. Among the items with large relative increases in their demand – “luxuries” – are services and more expensive or “higher quality” goods. The increase in services fuels the growth in the market demand for service workers and encourages the substitution of some household production into market production. This means that tasks that were formerly done at home when incomes were lower, are now brought in the marketplace. This, in turn, encourages homemakers to enter the job market. This is one of several factors encouraging and facilitating the movement of women

into the labor market and into larger investments in their human capital. The shift into the labor market by many married women diminishes one of the key elements of specialization within marriage, the “traditional” roles of one partner earning the dough, while the other partner bakes the bread. When both partners earn the income with which the bread is purchased, the benefits of a coordinated partnership decline. The decline in “gains” from that specialization between spouses diminishes one of the incentives for being married. Along the same lines, another “luxury” that can be afforded at higher levels of income is privacy, and so the “gains” from economies of scale, another reason for marrying, also decline as one’s own privacy becomes more affordable.

A principle product from marriage is one’s own children, and as income rises couples choose to spend more on each of their children. At higher levels of income, the couple spends more on their own consumption and on human capital investments, and they also do the same for their children. In effect, the “price” of a child rises with family income because of the choice of spending more per child. But that has the effect of discouraging having more children. This pattern is not limited to children, it is seen as well in the pattern of purchases of many consumer durable goods: as income rises the percentage increase in the *number* of units of houses and cars, for example, is much smaller than the percentage increase in the *spending on each* of those units: a tripling in income doesn’t lead to a three times the number of houses or cars, even if it does lead to spending three-or-more-times the magnitude on houses or cars. That applies to children too: most of the extra spending goes into greater spending per child, not into more children.

The improvements in marketplace technology increased the demand for skills in workers and diminished the demand for physical strength. That, in turn, increased the incentive to invest in one’s own and one’s children’s human capital, raising wage rates, time values and income. These labor market changes are the mirror image of the changes accompanying the rise in household income and they led to at least three important developments affecting marriage and families. First, the higher wages for all workers meant a greater incentive to enter the workforce for the second adult in the family. This lowered the gains from specialization within the marriage -- the “old-fashioned specialization” of Ozzie-employed-for-pay and Harriet-engaged-in-household-tasks gave way to less partner specialization. This transformation of the demand

for labor to meet the growing needs of the service sector and the higher skill standards, promoted further education and the employment of women. Second, this lowered the costs of becoming divorced since there was no longer one spouse with no market skills wholly dependent on the other for livelihood. Third, these higher wages and the move into the work force increased the cost of bearing and raising children. So the number of children desired by many couples declined, fueling the half-century decline in birth rates and in the number of children per marriage.

So these developments lower the gains from being married because some functions move into the marketplace, because the incentives to specialize in household tasks are reduced, because there is greater personal not familial security as each adult has market skills and earning potential, and because child rearing commitments are lessened when there are fewer children. There may have been salutary effects on individual economic security and on self-identity, but these developments diminish the role of formal marriage and reduce the incentives to invest so heavily in spouse-specific skills that lose their value if divorce occurs. The attractiveness of the institution of marriage declined because many of the functions it served in 1950 it no longer served by 2000. The gains from marriage are lowered, not eliminated however, so marriages continue to take place, to be sure, because there are still important “gains” from marriage. But with these gains lowered, any unexpected perturbations that come along that undermine the gains from a marriage are more likely now to render the “net gain” from marriage negative, making divorce more likely -- there is a smaller buffer or “gain” in the marriage, so the risk of divorce is higher, but that discourages the type of spouse-specific investments that might further discourage divorce. Couples hedge a bit on making those spouse-specific skill investments that add gain to this marriage but are lost if this marriage dissolves, and so the incentives not to dissolve decline and the rates of dissolution rise.

The growth in government services furthered this process. I will not review here the reasons for the growth in public provision of services, but will discuss at least two of these. The provision of education for children and of subsidized higher education in the form of state colleges and guaranteed student loans, etc., further encouraged the acquisition of marketable skills by all adults. As the instruction and education of young people and the care of pre-school

children becomes the responsibility of the schools or the government, the role of the family in these tasks declines. When governments attempt to supplement the family's efforts with their children—through school lunch programs, after-school efforts, sex education curricula, or any other program—that provision typically offsets some of the efforts by the family and diminishes that function by the family, at least at the margin. It has always been the predicament and the challenge of social policy that in providing support to those who have little, and making eligibility for that support conditioned on having little, that very policy is exactly what one would devise as a strategy for encouraging, not discouraging, being in that condition – a subsidy payable only if one has little encourages one to have little in order to be eligible to get that subsidy. The logic here is quite clear. If a couple has made its decisions and allocated its resources and its efforts as best it can across all the things that matter to it, and then an outside force like the local government provides a little more of one of those many things, there will be an adjustment within the family.

Similarly, the government provisions of income security lower the economic risks of being un-partnered and un-employed, especially when welfare policies provide some greater payments to single parents. Similarly, the provision of old age security to those who have paid into social security through payroll deductions, made it feasible to enter the job market, earn, and secure retirement income with no reliance on own children or ones extended family. While that governmental provision may have great value to the couple, it will prompt a reallocation of some of the family's own efforts to other tasks to reestablish the right balance among all its competing ends. So a dollar spent by the outside group on one task does not in general yield a dollar's increment in that outcome, even if the value of the dollar is fully realized by the family. (Many times, the dollar spent has a smaller value for any of several reasons, but my point here is that even without any difference in the evaluation, the final impact of the transfer will generally involve a reallocation among several ends.) In the process, however, the usefulness of the marriage in performing these tasks is lessened, and so the gains from marriage are diminished.

I have focused so far on the effects on marriage, but these three forces also impact the functioning of the broader family. Consider, for example, the second of the three functions discussed above for the family, that of providing insurance and resource pooling across extended

family members. If governments supplement that function, by providing a minimal safety net for those unemployed or in bad health, and if it offers loan guarantees for schooling or start-up entrepreneurship, while this may be designed as supplemental to the private provisions that include those from one family member to another, the fact of their provision diminishes the value of a close family tie. And what of the notion of a family culture across generations, a family dynasty that for the wealthy may mean a family business, a multi-generational influence in a town or an industry, while for families of less financial resources it may mean a family reputation or a set of customs, traditions, habits and expectations? The smaller number of children, the greater instability of marriages, and the increasing “blending” of families through remarriage and step-children and half-siblings surely undercuts the incentives or raises the costs of securing these cross-generational family assets.

To take stock of the argument to this point, the three exogenous changes have affected marriage and the family because they have altered the functions those social institutions perform. As governments have taken over some of the tasks of providing some income security for low-income families and for the elderly, these functions of the family and the marital partnership lose some of their importance. As the job market has attracted more second-partners from marital unions and created incentives for greater skill acquisition, the gains from specialization in marriage have declined making marriage somewhat less attractive and making divorce a somewhat more attractive option. As incomes have risen, the benefits from economies of scale have lost some of their importance as adults can afford to live separately and enjoy their privacy. This is part of the story.

And what about sex? There is an important collateral and complementary story, I believe, about the role of sex over the past half century. The important changes here too were initiated by an exogenous technological development that was begun just after 1950. That was when the first application for a U.S. patent on the oral contraceptive was made. Approved by the early 1960's, and accompanied by the widespread medical adoption of the IUD, followed by the early 1970's by the national legalization of abortion and the uses of both male and female sterilization, the “contraceptive revolution” wholly transformed the risk of pregnancy among sexually active fertile adults. To make clear just what a transformation this was for sexually

active women, consider this: using the best available contraceptive method in 1960 (the condom or diaphragm) at its observed use-effectiveness with an average frequency of sex, the probability of getting pregnant each month was 0.012, whereas using the oral contraceptive available by 1970 at its observed use effectiveness, with the same frequency of sex, the probability of getting pregnant each month was 0.0008. That means that if a fertile woman used that pre-pill technology for a 20-year period of sexual activity, her expected number of conceptions was 2.3 and with 95-percent confidence she could expect to have between zero and 4.9 conceptions in that 20 years – that is a lot of uncertainty!⁷ If instead a fertile woman used the pill technology for 20 years of sexual activity, her expected number of conceptions was 0.2 and with a 95-percent confidence she could expect to have between zero and one conception.⁸ The pill technology transformed the degree of uncertainty a woman faced and the availability of legal abortion and sterilization reduced that uncertainty essentially to zero.

This transformation had, I have suggested elsewhere (Michael 1988), four major effects on the family: first, it provided women with the incentive to make expensive investments in their human capital since now they could, if they chose, be sexually active and not have a serious risk of bearing a child for any length period they did not want a pregnancy to interfere with their career. The growth in higher education of women, prompted by the changes in the labor market demand, was greatly facilitated by the technological feasibility of the effective elimination of

⁷ These are calculated in this manner. Let p_i be the monthly probability of getting pregnant using contraceptive method i at its observed use-effectiveness. If no contraception is used, p is usually thought to be 0.2 per month for sexually active fertile couples. The mean length of the reproductive cycle, from the beginning of sexual activity to conception, through pregnancy, and post-partum infertility and back to the beginning of a fertile period once more, is $\mu_i = [(1 - p_i)/p_i] + s$, where s is that period of infertility from conception through post-partum infertility. The length of s is often assumed to be 17 months, so for a fertile couple with no contraception, $\mu_{\text{none}} = (0.8/0.2) + 17 = 21$ months. Now, the expected number of children born to a woman with μ_i for 20 years or 240 months, is $\mu_{N_i} = 240/\mu_i$ and its variance is $\sigma^2_{N_i} = 240[(1 - p_i)/p_i^2]/\mu_i^3$.

⁸ A second fact that I find similarly compelling is the following. Studying the probability of a birth in the year, for women who had borne six children, Sanderson (1974) calculates that probability to have practically no variation in it from the period 1930 through 1960 despite the fact that that period included the very low birth rates of the Great Depression, the period of World War II and the Post-War Baby Boom – that probability of a seventh birth, indexed relative to 1960=100, remained in the range for a little over 100 to a little under 100 for each year despite the wide swings in fertility. But Sanderson shows that the index began to fall when the oral contraceptive came available and as quickly as 1966 that index of births to women with six live births had plummeted to 0.46.

risk of unwanted pregnancy. It had a profound influence on this fifty-year interval. Second, that contraceptive revolution was unexpected, or its implications were surely not well-understood by couples who married during the fifteen years or so following 1950. The unexpected nature of the changes was, as unexpected events of all types always are, highly destabilizing to marriages. Couples form marriages based on their best information about themselves, their partner, and the circumstances in which they will conduct their married lives; much evidence suggests that any subsequent unexpected event is destabilizing to the match – it typically implies at least one spouse could do better in the competition for a spouse and the terms on which the marriage choice was made need to be renegotiated and that frequently leads to dissolution. My estimate was that about half of the doubling of the divorce rate from 1 percent to 2 percent in this fifty-year period (all of which occurred in a ten year interval from 1965 to 1975) was associated with the unexpected nature of the contraceptive revolution. (Michael 1988 p.385)

Third, the improved contraceptive technology helped couples reduce their fertility, and this lowered the benefits from marriage. Forth, the lowered risk of pregnancy lowered the risks, at least one of the important risks, from non-marital sexual behavior. Thus, it facilitated or lowered the costs of sexual activity outside of marriage, for both unmarried adults and for married ones as well. This further diminished the “gains” from marriage, because in the earlier times sexual experiences were highly risky outside of marriage and so sex was one of the benefits from being married. And “extensive extra-marital” partner searching, made less costly by the reduced risks of pregnancy raises the likelihood that a preferred partner will be discovered as well as diminishing the incentives to invest in this-partner-specific skills. Perhaps the social and legal acceptance of greater diversity in sexual behavior and the increased public nature of explicit sexual behaving have affected the functions of both marriage and the family.

The contraceptive revolution also gave women increased control over their fertility since it required less cooperation from their partner (or even their knowledge of its use). That, and the additional education and enhanced career prospects for women, altered the balance of power toward women in their negotiations with men. While providing women a stronger bargaining position that probably enhanced their well-being, this greater control over aspects of their lives also lowered the benefits from the traditional (1950’s vintage) arrangements in marriage and

made divorce more likely. It also increased income inequality across households by raising the income of two-earner families while creating many more lower income female-headed families (See Treas & Walther 1974). The assessment of these structural changes on general welfare will differ if we look only at money income and the rise in its inequality or if we look also at the reduced inequality in individual security, control and self-fulfillment. This is an example of what has been called “the money illusion” -- if we assess circumstances only in terms of their easily-measured monetary aspects, we fail to recognize many equally important but more difficult-to-measure features (see Michael, 1996).

Changed Functions but still Functional It may now appear that we have come full circle: these three basic forces of technology, income growth and expanded government may seem to have wholly undermined the institutions of marriage and the family. Those public intellectuals who talk about the demise of the family may seem to be correct after all. But I do not think that is correct. The functions of marriage have changed and some have been taken over by the marketplace and the state, but there is nonetheless much evidence that marriage remains an important social institution that has substantial payoff. Consider the following four pieces of evidence about marriages.

First, while age at first marriage has risen dramatically, no birth cohort has yet reached the end of its period of fertility without a very large proportion having been married. For the most recent cohort for which I found data (from the 2001 Statistical Abstract), women aged 50-54 at that most recent year, 1990, 95.5 percent had married. The median age at first marriage has risen to unprecedented heights but nearly all U.S. women have married at some point before they turn 50, at least for now – that may well change as the younger cohorts of today age, but we will just have to wait and see.

Second, while divorce rates are high by historic standards, the remarriage rates are also high. To cite but one statistic, similar to the one just mentioned, in 1990, of those women age 50-54 who had ever divorced, 63.0 percent of them had also remarried, at least once. So after having experienced being married and then ending that marital partnership, two-out-of-three

women chose to marry again. That may be seen as a pretty strong endorsement of the institution. Of course, again these 50-54 year old women in 1990 were in their early 30's in 1970, which is early in the period of strongly declining rates of marriage. So the picture may look quite different when we see the behavior of the currently 20-year-olds in old age, but for now there has not yet been a cohort that passed through their fertile ages without a very large proportion marrying and doing so again if the marriage ended.

Third, the decline in formal marriage does not imply a comparable decline in the formation of dyadic heterosexual partnerships. Today, however, many of those partnerships are cohabitational unions instead of formal marriages. While there are substantial differences between the two types of partnerships, there is nevertheless evidence of continued strong propensity to pair off in adult living arrangements. Based on data collected in 1992 and asking adults up to the age of 59 if and at what age and in what form (marriage or cohabitation) they first formed a dyadic partnership with someone of the opposite sex, the pattern is quite revealing. If we only look at formal marriages, women born in the decade 1933-1942, compared to those born in the years 1963-1974, were far more likely to marry at a young age; their reported behavior mirrors the official demographic statistics. But if we define the union to include both formal marriages and informal cohabitations, there is practically no difference in the proportions that have paired off by age 25 in those cohorts of women born three-decades apart. (See Table 4)

Fourth, there is evidence that is only suggestive and is subject to censoring that might explain it away, but married partners do report better sexual experiences than non-married adults, and they have more sex as well. While sexual partnering outside of marriage has become far more commonplace, the institution of marriage continues to serve the function of sexual activity and sexual satisfaction more effectively than any other. (See Michael et al, 1994 p.112-125, and see Waite & Galligher 2000)

So, for several reasons it may be too early to claim that marriage is passé. The evidence just cited suggests that many, even most, adults still choose to become married and if the notion is expanded to include cohabiting couples, then there is not overwhelming evidence of a reduced

commitment to the institution of a paired live-in relationship, and in terms of the sexual aspect of their lives, those with a monogamous long-term partner report being relatively satisfied with their lover and with their sex lives, compared to other adults. What explains this revealed preference for marriage? The logic of the economic perspective is that while the functions of the institution may have changed over the past half century, they remain many and important: there are still the economies of scale even though they may have less salience for adults with high levels of income, the complementarity and incentives to form a dyadic partnership and make investments in interests and skills that yield satisfaction from the interaction with that partner still exist and still have considerable value, and sexual experiences are but one of these domains. While the state has taken over some of the functions once expected of the partnership or the family, it has not wholly replaced those familial functions, especially with respect to children. Marriage is still popular because marriage still meets many of the basic desires of adults.

In Conclusion. I will avoid the temptation to offer projections about the institution of marriage and the family.⁹ But lest my message be interpreted as unduly positive, let me note two broad, current circumstances that are unequivocally disturbing. The first is the substantial inequality in economic well-being within the nation. The degree of earnings inequality has risen over the past quarter century so much as to offset the gains in reduced inequality over the preceding three-quarters of the twentieth century. (see Golden & Katz 2002) While the average, and even the median, level of income has risen and is high by any comparative standard, the number of households that are considered impoverished is also disquietingly high.

The implications of that inequality can be seen in many ways, and one perspective is to consider the discrepancies in circumstances by race/ethnicity. Table 5 does so for a few of the same demographic circumstances reported above for 2000, but here displayed by race/ethnicity; it also shows 2000 median incomes and impoverishment rates for these groups. The levels of income by family type are far lower for blacks and Hispanics than for the non-Hispanic whites.

⁹ Making successful projections about the future require two things: a reliable model of the determinants of phenomenon of interest, (i.e., if we are interested in the future pattern of X, we first need a good relationship of $X = f(Y_1, Y_2, Y_3)$), and equally importantly we need a reasonable understanding of the pattern of the explanatory variables into the future, (i.e., the trends forward in Y_1 and Y_2 and Y_3). In the current context we have neither, so I won't offer any projections.

And even these figures hide part of the discrepancy since the distribution of the black households among the family categories shows much larger proportions in low income categories: that is, for blacks, 28.2 percent of households are female-headed families while for whites only 8.4 percent are, and their income levels are low. For blacks, 34.0 percent of all households are non-family units while for whites only 11.3 percent are non-family units and their income levels are lowest of all. By contrast, for blacks, 32.1 percent of the households are married couple families while for whites 55.0 percent are, and their income levels are high.¹⁰ If the fertility behaviors reported for the nation as a whole in the earlier tables were of concern, they are far more so for the blacks since Table 5 shows the birth rates for very young women to be three times as high for blacks.

The second circumstance I note is the well-being of many of the children today. Again, there is enormous disparity among children. Many are doing phenomenally well in their schooling and in their social and emotional development; these children have prospects that are breathtakingly favorable. But children at the other end of the continuum are in very poor shape with bleak prospects. Look at the disparity in Table 5 for children, again displayed by race/ethnicity, in terms of income or growing up in a two-parent family. Citing three general conclusions from social science research about children: (1) evidence is strong that children benefit from being raised in family structures with two adults, especially their biological parents. (See Duncan & Brooks-Gunn 1997); (2) evidence is strong that investments in skills are far more efficacious when made at very young ages and not made remedially at post-schooling ages since “learning begets learning.” (See Heckman 1999) (3) there is evidence that children “wanted” or planned prior to conception have better outcomes – higher birthweight, less infant mortality, fewer developmental problems, less abuse and neglect and greater investments and more parental attention. (See the excellent summary in Brown & Eisenberg 1995, Chapter 3, and also see Grossman & Joyce, 1990a, 1990b).

¹⁰ The numbers are these: whites: 6,681,000 female-headed families, 43,624,000 married couple households and a total of 79,375,000 white households in 2000; blacks: 3,762,000 female-headed families, 4,290,000 married couple households and a total of 13,355,000 households. Note, however, that the statement is still incomplete since the non-family units are smallest and the married couple units are the largest, so since the incomes reported here don't control for family size, they must be interpreted accordingly.

While 75 percent of white children live in 2-parent families and of these only 3.7 percent are considered below poverty, 62 percent of African American children live in female-headed families and of those 41.0 percent are in poverty. These children are growing up apart from at least one of their natural parents and in a circumstance considered to be inadequate in terms of meeting the financial needs of those families. I suggested above at several points that our government has over the past half century provided “some” economic security against low income and the needs of old age, and has thereby taken over some of that function traditionally performed by the family. But perhaps the amount of that governmental support has been “enough” to undercut the functioning of the family but not enough to meet the needs of those whose traditional families have weakened. It is not clear that “more” government support is the best answer, since the family performs so many functions that are additional to the basic economic ones, so addressing the one need through a governmental program, without also addressing the diminished functionality of the family is not an attractive strategy. I suggest that it may be that the reduction in the basic economic functions of the family, as supplemented by government transfer programs, have undermined the institution that effectively performs these other nurturing, care-giving and love-encouraging duties. That is why I think it is premature to consider the family as outmoded. Over the past half-century some of its functions have been reassigned to collective action through governments, but not all, and not some of the most important ones. Further, the demands and attractiveness of the job market have encouraged changes that may have enhanced well-being for adults, but not so clearly for children. There remain many critically important functions that, to put the point neutrally, have not yet been reassigned or assumed by any non-family social institution. Until they are, there are important functions for the family and for the institution of marriage, albeit maybe redefined a bit to include some of those shorter-duration unions.

What is the role of public policy in this arena? A key goal of social policy is to set incentives and procedures to promote the common good. The most difficult challenge for social policy makers related to issues of the family is not how to achieve a specific objective, but is rather what we consider to be the common good. The care of children is a fine example of this. Since 1996 it has been the focus of federal social welfare policy to encourage parents to find employment and to encourage mothers to earn and therefore to utilize substitute childcare. This

may be beneficial from the standpoint of the social cost of welfare transfers but may not be beneficial from the standpoint of children's well-being (but see the recent *Science* essay by Chase-Lansdale et al 2003). As another example, consider that it would be technically relatively easy to lower the incidence of divorce in the U.S. if that were the social objective. It could be accomplished by making divorce "more costly" in legal, material, and psychological terms through a variety of strategies. But is that in the interest of the common good? It may imply that youthful errors of judgment result in long periods of psychological or physical harm to one of the partners in a marriage. It may thwart the full expression of the individual's potential, unanticipated at the time of the marriage formation. Few would argue that the currently historically high rate of marital instability is itself an attractive or appealing circumstance, yet many believe it to be a better circumstance than one in which errors of marital choice are irreversible. (See Steiner's (1981) discussion of the futility of setting a family policy.) It is one of the attributes of the discipline of economics that it facilitates analysis of alternatives such as these. It can help analyze the social policy choices and can help provide guidance about the achievement of a specified objective, but economics does not offer guidance about the ranking of social values nor provide justification for the expressed values reflected in behaviors. That is the business of the "religions of the Book," explored throughout this conference volume.

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Table 1: Trends in Marriage 1950-2000

	1950	1960	1970	1980	1990	2000
Rate of Marriage (per 1000 unmarried women age 15-44)	166.4	148.0	140.2	102.6	91.3	81.5*
Median Age at First Marriage (women)	20.3	20.3	20.8	22.0	23.9	25.1
% of Pop. Currently Married (women age 15+)	65.8	65.9	61.9	58.9	56.9	54.7
Rate of Divorce (per 1000 marriages)	10.3	9.2	14.9	22.6	20.9	19.5*

[* 1996]

Table 2: Trends in Fertility and Family Behavior 1950-2000

	1950	1960	1970	1980	1990	2000
% of Households that are Families:	89.2	85.0	81.2	73.9	70.8	68.8
Fertility Rate (births/1000 ♀ age 15-44)	106.2	118.0	87.9	68.4	70.9	67.5
Unmarried ♀ (age 15-44)	14.1	21.6	26.4	29.4	43.8	45.2
Births per 1000 Women 15-19	--	89.1	68.3	53.0	59.9	49.6*
% of Births to Mothers under 18	--	--	6.3	5.8	4.7	4.1
% of Births to Unmarried Women	3.9	5.3	10.7	18.4	28.0	33.2
% of Children under 18 who Live with Two Parents:						
All	--	87.7	85.2	76.7	72.5	69.1
Whites	--	90.9	89.5	82.7	79.0	75.3
Blacks	--	67.0	58.5	42.2	37.7	37.6
Hispanics	--	--	77.7	75.4	66.8	65.1
Labor Force Participation Rate of Married Women with Children under Six	11.9	18.6	30.3	45.1	58.9	62.8

[*1999]

Table 3: A Few Trends in Sexual Behaviors. Subsets of 1950-2000

	1950	1960	1970	1980
Women, before their 18 th birthday, the probability of having:				
A Birth	11.7	10.5	9.6	12.9
Sex	29.2	30.9	44.4	63.1
Conception, if sex	40.0	38.3	27.9	33.7
Abortion-Miscarriage, if conception	0.0	11.2	22.6	39.3

[Probability of Birth = $P_S * P_{CIS} * (1 - P_{AMC})$]

Source: retrospective reports of women in NHLS; Michael & Joyner 2001, p.83)

Table 4: Women Forming Dyadic Heterosexual Partnerships, by Age for two Birth Cohorts

Birth Cohort	Percent Married		Percent Married or Cohabiting	
	1933-42	1963-74	1933-42	1963-74
Age				
15	5	1	5	3
17	19	4	19	16
19	46	13	46	35
21	65	25	68	56
23	78	38	80	72
25	83	51	85	84

[Source: NHSLs; see Michael, et al. 1994, p.98.]

Table 5: A 2000 Snapshot of Disparity by Race/Ethnicity

	Total	White*	Black	Hispanic
Median Income (in thousands of dollars)				
All Households	\$42.2	45.9	30.4	33.5
All families	51.8	57.2	36.1	36.6
Married-couples	59.3	62.1	50.7	41.1
Male-only	42.1	45.7	37.0	39.0
Female-only	28.1	33.2	21.7	23.7
All non-families	25.4	26.3	20.6	21.3
Percent in Poverty				
All Families	8.7%	5.4%	19.3%	19.2%
All Mar'd Couples w/ Chldrn	6.0	3.7	6.7	16.8
All Children	16.2	9.1	31.2	28.4
Birth Rate: women 15-17	27.4	15.8	52.0	60.0
women 18-19	79.2	56.8	125.1	143.6
Percent of Births to:				
Unmarried Women	33.2	22.1	68.7	42.7
Mothers under 18	4.1	2.6	7.8	6.3

[* Non-Hispanic Whites]

References

- Becker, Gary S. 1976. *The Economic Approach to Human Behavior*. Chicago: University of Chicago Press.
- Becker, Gary S. 1991. *A Treatise on the Family*. Cambridge: Harvard University Press.
- Brown, Sarah S. & Leon Eisenberg, eds. 1995. *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*. Washington: National Academy Press.
- Chase-Lansdale, P. L. et al. 2003. "Mothers' Transitions from Welfare to Work and the Well-Being of Preschoolers and Adolescents" *Science*. 299(March 7):1548-52.
- Duncan, Greg J. & Jeanne Brooks-Gunn, eds. 1997. *Consequences of Growing Up Poor*. NY: Russell Sage.
- Goldin, Claudia & Lawrence F. Katz. 2002. "Decreasing (and Then Increasing) Inequality in America: A Tale of Two Half-Centuries." in Finis Welch, ed. *The Causes and Consequences of Increasing Inequality*. Chicago: University of Chicago Press. Pp.37-82
- Grossman, Michael & Theodore J. Joyce. 1990a. "Unobservables, Pregnancy Resolutions, and Birthweight Production Functions in New York City." *Journal of Political Economy*. 98 (5, Part 1): 983-1007.
- Grossman, Michael & Theodore J. Joyce. 1990b. "Pregnancy, Wantedness, and the Early Initiation of Prenatal care." *Demography*. 27 (1): 1-17.
- Heckman, James J. 1999. "Policies to Foster Human Capital." *Research in Economics*. 54:3-56.
- Hotz, V. Joseph, Jacob A. Klerman and Robert J. Willis. 1997. "The Economics of Fertility in Developed Countries: A Survey." Chapter 7 in Mark R. Rosenzweig & Oded Stark, eds. *Handbook of Population and Family Economics*. Vol.1A. NY:Elsevier Press. pp.275-342.
- Laumann, Edward O., John H. Gagnon & Robert T. Michael. 1994. "A Political History of the National Sex Survey of Adults." *Family Planning Perspectives*. 26(Jan/Feb):34-38.
- Michael, Robert T. 1988. "Why did the U.S. Divorce Rate Double within a Decade?" in T. Paul Schultz, ed. *Research in Population Economics*. Greenwich, CT: Jai Press. (6):367-399.
- Michael, Robert T. 1996. "Money Illusion: The Importance of Household Time Use in Social Policy Making." *Journal of Family and Economic Issues*. 17 (3/4): 245-260.
- Michael, Robert T. 2001. "Private Sex and Public Policy" in Edward O. Laumann & Robert T. Michael, eds. *Sex, Love, and Health in America: Private Choices and Public Policies*. Chicago: University of Chicago Press.

Michael, Robert T., John H. Gagnon, Edward O. Laumann & Gina Kolata. 1994. *Sex in America*. NY: Little Brown.

Michael, Robert T. & Kara Joyner. 2001. "Choices Leading to Teenage Births." in Edward O. Laumann & Robert T. Michael, eds. *Sex, Love, and Health in America: Private Choices and Public Policies*. Chicago: University of Chicago Press.

Sanderson, Warren C. 1974. *Towards Understanding the Fertility of American Women, 1920-1966*. Ph.D. dissertation, Stanford University.

Steiner, Gilbert Y. 1981. *The Futility of Family Policy*. Washington: Brookings Institution.

Treas, Judith & Robin Walther. 1978. "Family Structure and the Distribution of Family Income." *Social Forces*. 56(3):866-880.

U.S. Census Bureau. 2001. *Statistical Abstract of the United States: 2001*. (121st Edition) Washington: GPO.

U.S. Department of Health and Human Services. 2002. *Trends in the Well-Being of American's Children and Youth: 2001*. Office of the Assistant Secretary for Planning and Evolution. Washington: GPO [<http://aspe.hhs.gov>]

Waite, Linda, J. & Maggie Gallagher. 2000. *The Case for Marriage*. NY:Doubleday

Weiss, Yoram. 1997. "The Formation and Dissolution of Families: Why Marry? Who Marries Whom? And What Happens upon Divorce?" in Mark R. Rosenzweig & Oded Stark, eds. *Handbook of Population and Family Economics*. Vol. 1A. NY: Elsevier Press. pp.81-123.

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